

Costa Rica

This document is a compilation of all questions, justifications, and sources used to determine the 2021 Global Health Security Index scores for Costa Rica. For a category and indicator-level summary, please see the Country Profile for Costa Rica.

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Category 1: Preventing the emergence or release of pathogens with potential for international concern

1.1 ANTIMICROBIAL RESISTANCE (AMR)

1.1.1 AMR surveillance, detection, and reporting

1.1.1a

Is there a national AMR plan for the surveillance, detection, and reporting of priority AMR pathogens?

Yes, there is evidence of an AMR plan, and it covers surveillance, detection, and reporting = 2, Yes, there is evidence of an AMR plan, but there is insufficient evidence that it covers surveillance, detection, and reporting = 1, No evidence of an AMR plan = 0

Current Year Score: 1

Costa Rica has in place a national AMR plan for the surveillance and detection of priority AMR pathogens but there is insufficient evidence of reporting. Titled "National Action Plan for Combating AMR" (Plan de Accion Nacional de Lucha Contra La Resistencia a los Antimicrobianos), the plan is for the period 2018-2025 and focuses on surveillance and detection of AMR pathogens for human, animal and plant health. For surveillance, strategic objective 2 mentions the need to strengthen the knowledge and scientific base through surveillance and research, and goal 3 establishes a national surveillance system for antimicrobial resistance. For control (and surveillance), strategic objective 3 establishes surveillance, prevention, control and investigation of infections under the concept of health, while objective 6 establishes a national program for the prevention and control of infections in human, animal and plant health and goal 7 limits the development and spread of AMR outside of healthcare settings by preventing and controlling infections. On detection, objective 10 looks to identify and list the classes of antimicrobials considered critical in order to carry out a specific surveillance of their consumption and the appearance of resistance [1]. There are no further updates to the plan, this was enacted in January 2019 and is still in place [2]. There is no further evidence on reporting.

[1] Ministry of Health (Ministerio de Salud). Undated. "National Action Plan for Combating AMR 2018-2025" (Plan de Accion Nacional de Lucha Contra La Resistencia a los Antimicrobianos 2018-2025").

[<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/resistencia-microbiana/3811-plan-de-accion-nacional-de-lucha-contra-la-resistencia-a-los-antimicrobianos-costa-rica-2018-2025/file>] Accessed 02 January 2021.

[2] Ministry of Health (Ministerio de Salud) Decree 41.385-S [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/resistencia-microbiana/4001-decreto-41385-s-declaratoria-nacional-del-plan-de-accion-de-antimicrobianos/file>] Accessed 02 January 2021.

1.1.1b

Is there a national laboratory/laboratory system which tests for priority AMR pathogens?

All 7 + 1 priority pathogens = 2, Yes, but not all 7+1 pathogens = 1, No = 0

Current Year Score: 1

Costa Rica has a national laboratory system to test for 7 out of the 7+1 WHO defined priority AMR pathogens. The Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA) hosts the National Bacterial Reference Laboratory (Centro Nacional de Referencia de

Bacteriología, CNRB), which tests for E. coli, K. pneumoniae, S. aureus, S. pneumoniae, Salmonella spp. and Shigella spp. (1, 2) In addition, INCIENSA is also home to the National Mycobacterial Reference Laboratory, which tests for mycobacterium TB. (3) There is also a sentinel laboratory network but it only tests for S. pneumoniae (the sentinel sites include the following hospitals: Hospital San Vicente de Paul, Nacional de Niños, Max Peralta and Geriatric Hospital Blanco Cervantes). (1) There is no evidence that CNRB or other relevant INCIENSA laboratories test for N. gonorrhoeae, as it is not disclosed on the INCIENSA website or in its "Guide for laboratories on surveillance of bacterial diseases and other important public health events". (1, 2)

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). May 2010. "Guide for the laboratory surveillance of bacterial diseases and other important public health events" ("Guía para la vigilancia de laboratorio de enfermedades bacterianas y otros eventos de importancia en salud pública").

[http://www.inciensa.sa.cr/ensenanza/ensenanza_documentos/taller_colera/manuales%20y%20procedimientos%20de%20laboratorio/Guia%20de%20vigilancia%20basada%20en%20el%20laboratorio%20de%20enfermedades%20bacterianas%20y%20otros.pdf] Accessed 02 January 2021.

[2] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). "National Bacterial Reference Laboratory" ("Centro Nacional de Referencia de Bacteriología, CNRB"). [http://www.inciensa.sa.cr/inciensa/centros_referencia/bacteriologia.aspx] Accessed 02 January 2021.

[3]. Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). National Mycobacterial Reference Laboratory ("Centro Nacional de Referencia de Micobacteriología"). [http://www.inciensa.sa.cr/inciensa/centros_referencia/tuberculosis.aspx]. Accessed 02 January 2021.

1.1.1c

Does the government conduct environmental detection or surveillance activities (e.g., in soil, waterways) for antimicrobial residues or AMR organisms?

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica conducts environmental detection or surveillance activities (e.g. in soil, waterways, etc.) for antimicrobial residues or AMR organisms. There is no evidence on environmental detection or surveillance activities for AMR in the National Action Plan to Combat Antimicrobial Resistance Costa Rica 2018-2025, nor on websites for the Ministry of Environment and Energy and the Ministry of Health. In the National Action Plan for Combating AMR there is evidence of a strategic intervention for environmental detection or surveillance for AMR (objectives 3.3 and 10.2). There is no sufficient evidence about the implementation of both objectives. [1,2,3,4]. As part of the work for the WHO report "Monitoring Global Progress On Addressing Antimicrobial Resistance (AMR)", Costa Rica confirmed in the WHO Global Database for Antimicrobial Resistance Country Self-Assessment for 2017 - 2018 that the environmental sector is actively involved in developing and implementing the national AMR plan, but there are no additional details about this. [4,5] Academic papers and news articles on the topic are not publicly available.

[1] Ministry of Health (Ministerio de Salud). Undated. "National Action Plan to Fight AMR 2018-2025" (Plan de Acción Nacional de Lucha Contra La Resistencia a los Antimicrobianos 2018-2025").

[<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/resistencia-microbiana/3811-plan-de-accion-nacional-de-lucha-contra-la-resistencia-a-los-antimicrobianos-costa-rica-2018-2025/file>] Accessed 02 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2019.

[3] Ministry of Environment and Energy (Ministerio de Ambiente y Energía). [<https://www.minae.go.cr/>] Accessed 10 January 2019.

[4] World Health Organization. 2018. Monitoring Global Progress On Addressing Antimicrobial Resistance (AMR). [<https://www.who.int/antimicrobial-resistance/publications/Analysis-report-of-AMR-country-se/en/>] Accessed 02 January 2021

[5] World Health Organization. "Global Database for Antimicrobial Resistance Country Self-Assessment. [<https://amrcountryprogress.org/>] Accessed 02 January 2021.

1.1.2 Antimicrobial control

1.1.2a

Is there national legislation or regulation in place requiring prescriptions for antibiotic use for humans?

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

Current Year Score: 1

There is national regulation in place in Costa Rica requiring prescriptions for antibiotic use in humans. Decree N°26984 prohibits the dispensation of antibiotics without prescriptions, except topical antibiotics containing oxitetracycline, neomycin, bacitracin and polymyxin. [1,2] In addition, Costa Rica's National Commission for Combating Antimicrobial Resistance is working on a proposal to use a mandatory national electronic prescription system for antimicrobials, as there is evidence that despite these regulations there are pharmacies in Costa Rica selling antibiotics without prescription, which proves gaps in enforcement. The tool will assist in tracking antibiotic consumption and prescribing patterns in the country. [1] In 2015 the Ministry of Health together with the College of Pharmacists of Costa Rica enacted the "Pharmaceutical Code of Ethics", which abides to the Decrees Nr. 26984-S (1998) and 27407-S (1998) that prohibits pharmacies to sell antibiotics without recipe [3]. In October 2019 the Ministry of Health made of public availability the "Regulations for the surveillance and control of the use of medicines for human use and their application with the national automated system of digital prescription (SINAREDI)", with which they seek to completely regulate the antibiotic market. The Regulation is still in the "System of Simplification of Procedures and Regulatory Improvement - MEIC", thus not yet enacted. Among its content, it states that antibiotics ought only be sold and registered electronically. [4]. There is limited evidence about either the effectiveness or failure of the current ongoing regulations, however, a couple of media articles refer that there is still some pharmacies that sell antibiotics without prescription and that it is "relatively easy" to find one or another willing to sell. [5]

[1] Ministry of Health (Ministerio de Salud). Undated. ""National Action Plan for Combating AMR 2018-2025"" (Plan de Accion Nacional de Lucha Contra La Resistencia a los Antimicrobianos 2018-2025"").

[<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/resistencia-microbiana/3811-plan-de-accion-nacional-de-lucha-contra-la-resistencia-a-los-antimicrobianos-costa-rica-2018-2025/file>] Accessed 07 January 2021.

[2] Costa Rican Legal Information System (Sistema Costarricense de Información Jurídica). ""Decree N° 26984-S Prohibits the dispensation of antibiotics without medical prescription"" (""Decreto N° 26984-S Prohíbe el expendio de antibióticos sin receta médica"").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=59908&nValor3=77724&strTipM=TC] Accessed 07 January 2021.

[3] Pharmaceutical Code of Ethics (2015).

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=81016&nValor3=106915&strTipM=TC]

[4] ""Regulations for the surveillance and control of the use of medicines for human use and their application with the national automated system of digital prescription (SINAREDI)"" [<https://tramitescr.meic.go.cr/formulario/1707>]. Accessed 07 January 2021.

[5] ""Si necesito medicinas, ¿puedo conseguirlas fácilmente en Costa Rica?"" [<https://www.anywhere.com/es/costa->

rica/questions/salud-seguridad/si-necesito-medicamentos-puedo-conseguirlos-facilmente AND ""Some pharmacies in the country sell antibiotics without a prescription"" (2016) https://www.teletica.com/nacional/algunas-farmacias-del-pais-venden-antibioticos-sin-receta-medica_122531. Accessed 07 January 2021."

1.1.2b

Is there national legislation or regulation in place requiring prescriptions for antibiotic use for animals?

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

Current Year Score: 0

There is insufficient available evidence that Costa Rica has legislation or regulation in place requiring prescriptions for antibiotic use for animals. In 2011, the National Service of Animal Health (SENASA) issued Executive Decree DG-D003-2011, which classified medicines using certain antibiotics used in animals (in Spanish, "ivermectina, doramectina, moxidectina o abamectina") as Group II medicines that require prescriptions and can only be purchased in pharmacies. [1] However, there is no additional information about requiring prescriptions for antibiotic use in animals. The National Plan on Combating AMR Resistance (2018-2025) acknowledges that better control is necessary to monitor antibiotic use in humans, animals and plants. One objective of the plan is to implement a registry system to monitor and control for efficient use of antibiotics. The plan does not describe any existing requirements for antibiotic use. [2] The Ministry of Agriculture and Ministry of Health do not have updated information on this, or relevant information on legislations in place [3,4]. In 2019 the "Report From the Presidency of the College of Veterinary Doctors" informed about the bill 21.131 "Amendment to the General Health Law", which clarifies the fields of action between humans, animals and overall veterinary medicines, the latter defined as of sole competence of the veterinary sector. There they argue that they requested to be formally included in the "System of Simplification of Procedures and Regulatory Improvement " so the purchase of medicines and antibiotics are more regulated, however, it was dismissed. Although there is no clear evidence of flaws in the regulations, this information is relevant to presume under regulation of the market as it comes from an official source. [5]

[1] National Service of Animal Health. "Executive Decree DG-D003-2011".

[https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=114253&CurrentCatalogueIdIndex=0&FullTextHash=1&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True] Accessed 07 January 2021.

[2] Ministry of Health (Ministerio de Salud). Undated. ""National Action Plan for Combating AMR 2018-2025"" (Plan de Accion Nacional de Lucha Contra La Resistencia a los Antimicrobianos 2018-2025"").

[<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/resistencia-microbiana/3811-plan-de-accion-nacional-de-lucha-contra-la-resistencia-a-los-antimicrobianos-costa-rica-2018-2025/file>] Accessed 07 January 2021.

[3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 07 January 2021.

[4] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). [<http://www.mag.go.cr/>] Accessed 07 January 2021.

[5] "Report From the Presidency of the College of Veterinary Doctors" <https://colegioveterinarios.or.cr/docs/AsaOrd/58-2020/Informe%20de%20Presidencia%20CMV%202019.pdf>. Accessed 07 January 2021."

[5] "Report From the Presidency of the College of Veterinary Doctors" <https://colegioveterinarios.or.cr/docs/AsaOrd/58-2020/Informe%20de%20Presidencia%20CMV%202019.pdf>. Accessed 07 January 2021."

1.2 ZONOTIC DISEASE

1.2.1 National planning for zoonotic diseases/pathogens

1.2.1a

Is there national legislation, plans, or equivalent strategy documents on zoonotic disease?

Yes = 1, No = 0

Current Year Score: 1

There is public evidence that Costa Rica has a national plan, legislation or strategy in place on zoonosis. The government has issued protocols on surveillance and clinical response for rabies and Ebola and a regulation on brucellosis. [1,2,3] The protocols for Ebola and rabies are essentially national strategies for the control and prevention of the diseases in the country. They outline surveillance, response and risk communication. [1,2] The Regulation on Bovine Brucellosis focuses on the disease in the animal population and does not address risks to human health. [3] Under the umbrella of the National Action Plan to Combat Antimicrobial Resistance Costa Rica 2018-2025, the Ministry of Health and the National Service of Animal Health (SENASA) released the strategic and operational livestock plan to combat resistance in AMR 2017-2022. The document also mentions that SENASA aims for prevention, eradication and veterinary control of zoonoses, and mentions some programs on specific diseases like rabies and brucellosis. In 2020 they released a national report on livestock wellbeing, but zoonosis is only mentioned as an aspect to control but no specific actions. [4,5] The Ministry of Health and Ministry of Agriculture do not have additional information on the issue, and the central government documentation portal does not have evidence of other laws on zoonosis. [6,7,8]

[1] Ministry of Health (Ministerio de Salud). 12 April 2015. "Ebola virus: Protocol on the surveillance and clinical management of Ebola" ("Virus Ebola: Protocolo de vigilancia y manejo clinico"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 02 January 2021.

[2] Ministry of Health (Ministerio de Salud). January 2015. "Rabies: protocol on surveillance and control in humans" (Rabia: protocolo de vigilancia y control en humanos"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2505-protocolo-de-vigilancia-y-control-de-la-rabia-en-humanos/file>] Accessed 02 January 2021.

[3] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). Revised 25 July 2018.

"Regulation on bovine brucellosis. No. 34858-MAG" ("Reglamento para la Intervención de la Brucelosis Bovina. No. 34858-MAG").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=64425&nValor3=74734¶m2=1&strTipM=TC&IResultado=3&strSim=simp] Accessed 02 January 2021.

[4] National Service of Animal Health (SENASA). 2019. "Informe Del Servicio Nacional De Salud Animal (SENASA) 2018 - 2019 En Cumplimiento De La Ley 9398".

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjmv_aDqP3tAhVK3KQKHdMPB4oQFjABegQIAxAC&url=http%3A%2F%2Fwww.senasa.go.cr%2Finformacion%2Fcentro-de-informacion%2Finstitucion%2Forientacion-estrategica-1%2Finformes-institucionales%2F4474-informe-anual-senasa-2018-2019-ley-9398%2Ffile&usq=AovVaw1kBswID2cT8hXoCX9gLD99]. Accessed 02 January 2021.

[5] National Service of Animal Health (SENASA). 06 February 2020. "Servicio Nacional de Salud Animal. PLAN ESTRATÉGICO INSTITUCIONAL 2019 - 2023"

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj9e_Qqv3tAhUSBWMBHYfXCm0QFjAAegQIAxAC&url=http%3A%2F%2Fwww.senasa.go.cr%2Finformacion%2Fcentro-de-informacion%2Finstitucion%2Forientacion-estrategica-1%2Fplan-estrategico-1%2Fplanes-estrategicos-senasa%2F4139-

senasa-2019-2022%2Ffile&usg=AOvVaw3yVM7-t0JAA8YFjspD4E0G] Accessed 02 January 2021.

[6] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 02 January 2021.

[7] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). [<http://www.mag.go.cr/>] Accessed 02 January 2021.

[8] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica).

[http://www.pgrweb.go.cr/scij/avanzada_pgr.aspx] Accessed 02 January 2021.

1.2.1b

Is there national legislation, plans or equivalent strategy document(s) which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient public evidence that Costa Rica has legislation, plans or equivalent strategy documents that include measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. The country has issued protocols on surveillance and clinical response for rabies and Ebola and a regulation on brucellosis. [1,2,3]. The protocols for Ebola and Rabies are essentially national strategies for the control and prevention of the diseases in the country. They outline surveillance, response and risk communication. The 2015 "Rabies: protocol on surveillance and control in humans" explains the way of transmission from animals to humans and how its risk happens in urban settings with pets, and in rural settings in geographic areas where those most at risk are the inhabitants of houses with free entrances to bats along the river basin related to the outbreak.[1,2] The Regulation on Bovine Brucellosis focuses on the disease in the animal population and does not address risks to human health. [3] The Ministry of Health and Ministry of Agriculture do not have additional information on the issue, and the central government documentation portal does not have evidence of other laws on zoonosis. [4,5,6]

[1] Ministry of Health (Ministerio de Salud). 12 April 2015. ""Ebola virus: Protocol on the surveillance and clinical management of Ebola"" ("Virus Ebola: Protocolo de vigilancia y manejo clínico").

[<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 07 January 2021.

[2] Ministry of Health (Ministerio de Salud). January 2015. ""Rabies: protocol on surveillance and control in humans"" (Rabia: protocolo de vigilancia y control en humanos"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2505-protocolo-de-vigilancia-y-control-de-la-rabia-en-humanos/file>] Accessed 07 January 2021.

[3] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica). Revised 25 July 2018.

""Regulation on bovine brucellosis. No. 34858-MAG"" ("Reglamento para la Intervención de la Brucelosis Bovina. No. 34858-MAG").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=64425&nValor3=74734¶m2=1&strTipM=TC&lResultado=3&strSim=simp] Accessed 07 January 2021.

[4] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 07 January 2021.

[5] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). [<http://www.mag.go.cr/>] Accessed 07 January 2021.

[6] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica).

[http://www.pgrweb.go.cr/scij/avanzada_pgr.aspx] Accessed 07 January 2021.

1.2.1c

Is there national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern?

Yes = 1, No = 0

Current Year Score: 1

There is evidence that Costa Rica has guidelines and/or regulations in place for the surveillance and control of multiple zoonotic pathogens of public health concern. The government has issued guidelines on the surveillance and control of Ebola, rabies, and a regulation on brucellosis. In 2015, the government issued "Ebola virus: Protocol on the surveillance and clinical management of Ebola", a national protocol for the surveillance and control of Ebola. The protocol describes detections, notification, laboratory procedures and risk communication around Ebola in the country. [1] Also in 2015, the government issued "Rabies: protocol on surveillance and control in humans", a policy document that outlines surveillance and control procedures for cases of rabies in the human population. [2] In both protocol documents, the Ministry of Health is responsible for implementation of the guidelines. [1,2] In 2018, the Ministry of Agriculture and Livestock issued the Regulation on bovine brucellosis. No. 34858-MAG, which outlines surveillance and control of brucellosis in bovine populations. The regulation includes guidelines for sampling and how to isolate and destroy infected animals and the Ministry of Agriculture and Livestock is responsible for implementation. [3]. Under the umbrella of the National Action Plan to Combat Antimicrobial Resistance Costa Rica 2018-2025, the Ministry of Health and the National Service of Animal Health (SENASA) released the strategic and operational livestock plan to combat resistance in AMR 2017-2022. The document also mentions that SENASA aims for prevention, eradication and veterinary control of zoonoses, and mentions some programs on specific diseases like rabies and brucellosis. In 2020 they released a national report on livestock wellbeing, but zoonosis is only mentioned as an aspect to control but no specific actions. [4,5]

[1] Ministry of Health (Ministerio de Salud). 12 April 2015. "Ebola virus: Protocol on the surveillance and clinical management of Ebola" ("Virus Ebola: Protocolo de vigilancia y manejo clinico"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 02 January 2020.

[2] Ministry of Health (Ministerio de Salud). January 2015. "Rabies: protocol on surveillance and control in humans" (Rabia: protocolo de vigilancia y control en humanos"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2505-protocolo-de-vigilancia-y-control-de-la-rabia-en-humanos/file>] Accessed 02 January 2020.

[3] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). Revised 25 July 2018.

"Regulation on bovine brucellosis. No. 34858-MAG" ("Reglamento para la Intervención de la Brucelosis Bovina. No. 34858-MAG").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=64425&nValor3=74734¶m2=1&strTipM=TC&IResultado=3&strSim=simp] Accessed 02 January 2020.

[4]

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjmvDqP3tAhVK3KQKHdMPB4oQFjABegQIAxAC&url=http%3A%2F%2Fwww.senasa.go.cr%2Finformacion%2Fcentro-de-informacion%2Finstitucion%2Forientacion-estrategica-1%2Finformes-institucionales%2F4474-informe-anual-senasa-2018-2019-ley-9398%2Ffile&usq=AOvVaw1kBswID2cT8hXoCX9gLD99>. Accessed 02 January 2021.

[5]

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj9e_Qqv3tAhUSBWMBHYfXCm0QFjAAegQIAxAC&url=http%3A%2F%2Fwww.senasa.go.cr%2Finformacion%2Fcentro-de-informacion%2Finstitucion%2Forientacion-estrategica-1%2Fplan-estrategico-1%2Fplanes-estrategicos-senasa%2F4139-

senasa-2019-2022%2Ffile&usg=AOvVaw3yVM7-t0JAA8YFjSpD4E0G

1.2.1d

Is there a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient publicly available evidence that Costa Rica has a department, agency or unit dedicated to zoonotic diseases that functions across ministries. The National Animal Health Service (SENASA) is the single institution and authority in place for zoonotic diseases and all what is related to animal (farm, household) health and wellbeing. [1]. They are part of the Ministry of Health, but as independent body agency they are allowed to coordinate, liaise and conduct outreach activities with other national and international institutions. [2] Evidence about its actions specifically on zoonosis is rather limited on the website of the Ministry of Health or the Ministry of Agriculture of this issue [3,4], and the guidelines on rabies and the 2018 regulation on brucellosis do not mention the existence of such a body (or any inter-ministerial effort) on zoonosis [5].

[1] SENASA [<http://www.senasa.go.cr/senasa/sitio/index.php/paginas/view/194>] Accessed 02 January 2021.

[2] SENASA. 6 February 2020. "Servicio Nacional de Salud Animal PLAN ESTRATÉGICO INSTITUCIONAL 2019 - 2023".

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewjI9e_Qqv3tAhUSBWMBHYfXCm0QFjAAegQIAxAC&url=http%3A%2F%2Fwww.senasa.go.cr%2Finformacion%2Fcentro-de-informacion%2Finstitucion%2Forientacion-estrategica-1%2Fplan-estrategico-1%2Fplanes-estrategicos-senasa%2F4139-senasa-2019-2022%2Ffile&usg=AOvVaw3yVM7-t0JAA8YFjSpD4E0G]. Accessed 02 January 2021.

[3] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica). Revised 25 July 2018.

"Regulation on bovine brucellosis. No. 34858-MAG" ("Reglamento para la Intervención de la Brucelosis Bovina. No. 34858-MAG").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=64425&nValor3=74734m2=1&strTipM=TC&IResultado=3&strSim=simp] Accessed 02 January 2021.

[4] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 02 January 2021.

[5]. Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). [<http://www.mag.go.cr/>] Accessed 02 January 2021.

1.2.2 Surveillance systems for zoonotic diseases/pathogens

1.2.2a

Does the country have a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency?

Yes = 1, No = 0

Current Year Score: 1

In Costa Rica, there is evidence of a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency. Livestock owners are required by Law N° 34669-MAG of 2008 to report on a mandatory list of diseases to the Ministry of Agriculture's National Animal Health Service (Servicio Nacional de Salud Animal, SENASA). [1] There is no publicly available evidence of a hotline or portal, but SENASA publishes reports on the state of animal health in the country. [2] SENASA also has an Epidemiological Surveillance System for Animal Health in Costa Rica (Sistema de Vigilancia Epidemiológica de la Salud Animal de Costa), which provides information to optimize decision-making in systems for the prevention, control or eradication of enzootic, exotic and zoonotic animal

diseases, basing the decision-making process on information captured by the maximum possible number of actors. Its organization basically consists of two structural levels: Central Level, which is strictly normative and strategic and Regional Level for coordination and execution. At the regional level, there are 25 decentralized bodies. The Surveillance System is structured in such a way that it has the possibility of receiving health information on a daily basis, from its 25 decentralized bodies distributed at the national level. [3]

[1] Ministry of Agriculture (Ministerio de Agricultura y Ganadería). 8 July 2008. "Mandatory reporting of animal diseases - No. 34669" ("Listado de enfermedades animales de declaración obligatoria - No. 34669").

[<http://www.mag.go.cr/legislacion/2008/de-34669.pdf>] Accessed 02 January 2021.

[2] Ministry of Agriculture (Ministerio de Agricultura y Ganadería). "Estado sanitario".

[<http://www.senasa.go.cr/informacion/centro-de-informacion/informacion/estado-sanitario>] Accessed 02 January 2021.

[3] National Animal Health Service (Servicio Nacional de Salud Animal). "SISTEMA DE VIGILANCIA EPIDEMIOLÓGICA"

[<https://www.senasa.gob.pe/senasa/sistema-de-vigilancia-epidemiologica/>] Accessed 11 February 2021.

1.2.2b

Is there legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners)?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has laws or guidelines safeguarding the confidentiality of information generated through surveillance activities for owners of animals. There is no such information on the websites of the Ministry of Agriculture or Health [1,2]. An enacted decree 35752 "Documentary Information Policies for the Costa Rican Agricultural Sector" on its article 4 mentions about the confidentiality in the gathering, handling and use of information/data. This, however, is not clear on its scope or if it applies to surveillance actions. [3]

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 02 January 2021.

[2] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). [<http://www.mag.go.cr/>] Accessed 02 January 2021.

[3] National Agricultural Information Network of Costa Rica <http://www.mag.go.cr/rednia/Politic.html>. Accessed 02 January 2021.

1.2.2c

Does the country conduct surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors)?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that Costa Rica conducts surveillance of zoonotic disease in wildlife. The National Service of Animal Health (SENASA) established a national rabies surveillance and control program in the 1980s that monitors domesticated animals and wildlife, specifically hematophagous bats ("murciélagos hematófagos"), which are known carriers of rabies. A 2016 research paper from Hutter et al affirmed that "surveillance today is still compulsory and includes cattle, horses, small ruminants, pigs, dogs, cats, or wild animals with neurological signs." [1] The Ministry of Health's protocol on rabies surveillance in humans confirms that SENASA is responsible for monitoring rabies in animals, including bats. [2] A 2014 news report confirms that SENASA officials were capturing bats in a region where rabies was confirmed. [3] There is also no information about vector surveillance in the work of the Ministry of Health's vector control program, launched in 2016. [4]

The website for SENASA does not have additional relevant information. [5] Furthermore, the "Zoonotic Commission" (Comisión de Zoonosis) is an institutional body that allows collaboration between the Ministry of Health, the Veterinary service and SENASA to monitor zoonotic diseases such as rabies and equine viral encephalitis. [6]

[1] Hutter, Sabine., et al. "Rabies in Costa Rica: Documentation of the Surveillance Program and the Endemic Situation from 1985 to 2014". [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4841904/>] Accessed 03 January 2021.

[2] Ministry of Health. "Rabia - Protocolo de vigilancia y control en humanos".

[<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2505-protocolo-de-vigilancia-y-control-de-la-rabia-en-humanos/file>] Accessed 03 January 2021.

[3] La Nacion. "Senasa caza murciélagos para bajar riesgo de infección por virus de rabia". [<https://www.nacion.com/el-pais/salud/senasa-caza-murcielagos-para-bajar-riesgo-de-infeccion-por-virus-de-rabia/QHRX2BT5WFB25E3BLROQMJVY/story/>] Accessed 03 January 2021.

[4] Ministry of Health (Ministerio de Salud). 26 January 2016. "Ministry of Health issues directive about vector control program ("Salud emite directriz sobre programa de control de vectores").

[<https://www.ministeriodesalud.go.cr/index.php/noticias/noticias-2016/843-salud-emite-directriz-sobre-programa-de-control-de-vectores>] Accessed 03 January 2021.

[5] SENASA. "Inicio". [<https://www.senasa.go.cr/>] Accessed 03 January 2021.

[6] WHO/PAHO, FAO, OIE. Section of case studies - Costa Rica (pp.133)

[https://www.oie.int/fileadmin/Home/esp/Media_Center/docs/pdf/PortailOH/ES_TripartiteZoonosesGuide_webversion.pdf]. Accessed 03 January 2021.

1.2.3 International reporting of animal disease outbreaks

1.2.3a

Has the country submitted a report to OIE on the incidence of human cases of zoonotic disease for the last calendar year?

Yes = 1 , No = 0

Current Year Score: 0

2019

OIE WAHIS database

1.2.4 Animal health workforce

1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: 26.31

2018

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: 3.94

2018

OIE WAHIS database

1.2.5 Private sector and zoonotic

1.2.5a

Does the national plan on zoonotic disease or other legislation, regulations, or plans include mechanisms for working with the private sector in controlling or responding to zoonoses?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has mechanisms for working with the private sector in controlling or responding to zoonoses. The country does not have a national plan or legislation on zoonoses, the Ministry of Health and Ministry of Agriculture do not have information on this [1,2], and the various protocols and/or regulations in place on different zoonoses (brucellosis, rabies and Ebola) namely the 2015 Ebola virus: Protocol on the surveillance and clinical management of Ebola, the 2015 Rabies: protocol on surveillance and control in humans and the 2018 Regulation on bovine brucellosis. No. 34858-MAG do not mention working with the private sector in controlling or responding to incidents of outbreak. [3,4,5]. Although there is some evidence of collaboration from official sources "National Animal Health Service (SENASA) Report 2019-2020", there is no publicly available evidence of any such plans or mechanisms to collaborate with the private sector [6].

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.

[2] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[3] Ministry of Health (Ministerio de Salud). 12 April 2015. "Ebola virus: Protocol on the surveillance and clinical management of Ebola" ("Virus Ebola: Protocolo de vigilancia y manejo clinico"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 03 January 2021.

[4] Ministry of Health (Ministerio de Salud). January 2015. "Rabies: protocol on surveillance and control in humans" (Rabia: protocolo de vigilancia y control en humanos"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2505-protocolo-de-vigilancia-y-control-de-la-rabia-en-humanos/file>] Accessed 03 January 2021.

[5] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). Revised 25 July 2018.

"Regulation on bovine brucellosis. No. 34858-MAG" ("Reglamento para la Intervención de la Brucelosis Bovina. No. 34858-MAG").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=64425&nValor3=74734¶m2=1&strTipM=TC&lResultado=3&strSim=simp] Accessed 03 January 2021.

[6] Servicio Nacional de Salud Animal. 13 April 2020. "SERVICE REPORT NATIONAL HEALTH ANIMAL (SENASA) 2019 - 2020 IN COMPLIANCE WITH LAW 9398". (pp.60). INFORME DEL SERVICIO NACIONAL DE SALUD ANIMAL (SENASA)2019 - 2020 EN CUMPLIMIENTO DE LA LEY 9398.

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiXv5zf0v_tAhVEahQKHcsPBmQQFjAl egQlChAC&url=http%3A%2F%2Fwww.senasa.go.cr%2Finformacion%2Fcentro-de-informacion%2Finstitucion%2Forientacion-estrategica-1%2Finformes-institucionales%2F4467-informe-anual-senasa-2019-2020-ley-9398%2Ffile&usg=AOvVaw0kVP8PmID11Vm4Fmkbvc6p] Accessed 03 January 2021.

1.3 BIOSECURITY

1.3.1 Whole-of- government biosecurity systems

1.3.1a

Does the country have in place a record, updated within the past five years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has in place a record, updated within the past 5 years, of the facilities in which especially dangerous pathogens and toxins are stored or processed. While a 1992 broad-based law on the VERTIC database requires the registration of all toxic and dangerous substances (Article 47), including pathogens, no evidence could be found of such a registry nor that it has been updated within the last 5 years. [1] There is no information about the existence of such a record on the website of the Costa Rican Institute of Research and Teaching in Nutrition and Health (INCIENSA) and its National Reference Laboratory System, including its protocol on bioterrorism [2]. No information could be found on the websites of the Ministry of Health, the Ministry of Public Security or Ministry of Agriculture. [3,4,5] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [6]

[1] VERTIC. 22 June 1992. "Regulation on the Registration of Toxic and Dangerous Substances - No. 21406-S" ("Reglamento Registro Control Sustancias Toxicas y Sustancias Peligrosas - No. 21406S").

[http://www.vertic.org/media/National%20Legislation/Costa_Rica/CR_Reglamento%20No.%2021406-S%20sobre%20el%20Registro%20Control%20Sustancias%20Toxicas%20y%20Sustancias%20Peligrosas_1992.pdf] Accessed 03 January 2021.

[2] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). January 2011. "Bioterrorism protocol" ("Protocolo de bioterrorismo").

[http://www.inciensa.sa.cr/vigilancia_epidemiologica/Protocolos_Vigilancia/Protocolo%20Bioterrorismo.pdf] Accessed 03 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.

[4] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[5] Ministry of Public Security (Ministerio de Seguridad Pública). "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 03 January 2021.

[6] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

1.3.1b

Does the country have in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has in place legislation and/or regulations related to biosecurity addressing requirements such as physical containment, operation practices, failure reporting systems and cybersecurity of facilities where especially dangerous pathogens and toxins are stored or processed. According to the VERTIC Database, Costa Rica does have a regulation on the management of infectious bio-waste produced by medical facilities as well as research laboratories. The regulation details measures on discarding the waste, including packing and transportation, not on biosecurity measures specifically. [1] In addition, the VERTIC database also indicates that Costa Rica has in place a law requiring the registration of toxic and other dangerous substances, and while it includes pathogens, the law is not intended to address biosecurity measures such as containment and operation practices and does not address failure reporting systems or cybersecurity facilities. [2] No information could be found on the websites of the Ministry of Health, the Ministry of Public Security or Ministry of Agriculture. [3,4,5] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [6]

[1] VERTIC. Revised 7 January 2005. "Regulation on the management of infectious-contagious waste generated by healthcare establishments" ("Reglamento sobre la gestión de los desechos infecto-contagiosos que se generan en establecimientos que presten atención a la salud y afines").

[http://www.vertic.org/media/National%20Legislation/Costa_Rica/CR_Reglamento_de_desechos_bioinfecciosos_30965-S_de_2003.pdf] Accessed 03 January 2021.

[2] VERTIC. 22 June 1992. "Regulation on the Registration of Toxic and Dangerous Substances - No. 21406-S" ("Reglamento Registro Control Sustancias Toxicas y Sustancias Peligrosas - No. 21406S").

[http://www.vertic.org/media/National%20Legislation/Costa_Rica/CR_Reglamento%20No.%2021406-S%20sobre%20el%20Registro%20Control%20Sustancias%20Toxicas%20y%20Sustancias%20Peligrosas_1992.pdf] Accessed 03 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.

[4] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). "Inicio". [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[5] Ministry of Public Security (Ministerio de Seguridad Publica). "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 03 January 2021.

[6] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

1.3.1c

Is there an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that there is an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations in Costa Rica as it does not have in place biosecurity legislation and regulations. The

Ministry of Health, Ministry of Public Security, and Ministry of Agriculture does not have additional information on this subject. [1,2,3] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [4] . There is no relevant information on VERTIC's database on legislations on biological weapons and materials [5] .

[1] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.

[2] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). "Inicio". [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[3] Ministry of Public Security (Ministerio de Seguridad Publica). "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 03 January 2021.

[4] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

[5] VERTIC. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>] Accessed 11 February 2021.

1.3.1d

Is there public evidence that shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has taken measures to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. There is no information on this issue on the websites of the Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA), the Ministry of Health, Ministry of Agriculture or Ministry of Public Security. [1,2,3,4] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [5] There is no relevant information on VERTIC's database on legislations on biological weapons and materials [6] .

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [www.inciensa.sa.cr] Accessed 03 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.

[3] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). "Inicio". [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[4] Ministry of Public Security (Ministerio de Seguridad Publica). "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 03 January 2021.

[5] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

[6] VERTIC. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>] Accessed 11 February 2021.

1.3.1e

Is there public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)–based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has in-country capacity to conduct PCR-based diagnostic testing for anthrax or Ebola. The Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA), which houses the country's national reference laboratory system, released its protocol on bioterrorism in 2011. The protocol confirms that samples of anthrax and Ebola are to be sent by INCIENSA for PCR diagnostic testing to an international reference center, as Costa Rica does not have the domestic capacity for PCR testing. [1] There is no updated information on the availability of PCR testing for either pathogens on INCIENSA's website or on the websites of the Ministry of Health, Ministry of Agriculture or Ministry of Public Security [2,3,4]. Finally, the World Animal Health Organization's website on Costa Rica's laboratory capabilities shows that testing for anthrax is done by "pathogenic agent isolation on culture" at the Bacterial Laboratory of the School for Veterinary Medicine (Laboratorio de Bacteriología de la Escuela de Medicina Veterinaria). [5] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [6]

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). January 2011. "Bioterrorism protocol" ("Protocolo de bioterrorismo"). [http://www.inciensa.sa.cr/vigilancia_epidemiologica/Protocolos_Vigilancia/Protocolo%20Bioterrorismo.pdf] Accessed 03 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.

[3] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[4] Ministry of Public Security (Ministerio de Seguridad Pública). "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 03 January 2020.

[5] World Animal Health Information System Interface. "Laboratory capability - Costa Rica". [http://www.oie.int/wahis_2/public/wahid.php/Countryinformation/countrylaboratoris/countrylabdetails?recordid=340] Accessed 03 January 2021.

[6] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

1.3.2 Biosecurity training and practices

1.3.2a

Does the country require biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica requires biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. There is no information on this

subject on the websites of the Ministry of Health, in the Costa Rican Institute of Research and Teaching in Nutrition and Health's Bioterrorism Protocol or on its website (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA), or on the websites of the Ministry of Public Security or Ministry of Agriculture. [1,2,3,4] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [5] There is no relevant information on VERTIC's database on legislations on biological weapons and materials [6].

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.

[2] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). January 2011. "Bioterrorism protocol" ("Protocolo de bioterrorismo"). [http://www.inciensa.sa.cr/vigilancia_epidemiologica/Protocolos_Vigilancia/Protocolo%20Bioterrorismo.pdf] Accessed 03 January 2021.

[3] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[4] Ministry of Public Security (Ministerio de Seguridad Pública). [<https://www.seguridadpublica.go.cr/>] Accessed 03 January 2021.

[5] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

[6] VERTIC. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>] Accessed 11 February 2021.

1.3.3 Personnel vetting: regulating access to sensitive locations

1.3.3a

Do regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks?

Personnel are subject to all three of these checks = 3, Personnel are subject to two of these checks = 2, Personnel are subject to one of these checks = 1, Personnel are not subject to any of these checks = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has regulations or licensing conditions specifying that security and other personnel with access to especially dangerous pathogens, toxins or biological materials with pandemic potential are subject to any checks. Costa Rica's General Health Law does not address the hiring of personnel. The law specifies that, to open a "chemical or microbiological establishment", the Costa Rican College of Clinical Microbiologists and Chemists must certify that its installations and professional and auxiliary personnel are accredited, but it does not detail any of the checks and there is no information about subsequent hiring conditions (Article 84). [1] The Ministry of Health's Regulation on the Registration, Classification, Importation and Control of Biomedical Materials and Equipment does not address personnel hiring conditions. [2] The websites of the Ministry of Health, Ministry of Agriculture and Ministry of Public Security do not have further information on this issue. [3,4,5] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [6] There is no relevant information on VERTIC's database on legislations on biological weapons and materials [7].

- [1] Ministry of Health (Ministerio de Salud). 30 October 1973. "General Health Law - No. 5395" ("Ley General de Salud - N. 5395").
[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=6581&nValor3=96425&strTipM=TC] Accessed 03 January 2021.
- [2] Ministry of Health (Ministerio de Salud). 3 March 2008. "Regulation on the Registration, Classification, Importation and Control of Biomedical Materials and Equipment - N° 34482-S" (" Reglamento para el registro, clasificación, importación y control de equipo y material biomédico - N° 34482-S").
[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=62959&nValor3=72139&strTipM=TC] Accessed 03 January 2021.
- [3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 03 January 2021.
- [4] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). [<http://www.mag.go.cr/>] Accessed 03 January 2021.
- [5] Ministry of Public Security (Ministerio de Seguridad Pública). [<https://www.seguridadpublica.go.cr/>] Accessed 03 January 2021.
- [6] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.
- [7] VERTIC. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>] Accessed 11 February 2021.

1.3.4 Transportation security

1.3.4a

Does the country have publicly available information on national regulations on the safe and secure transport of infectious substances (specifically including Categories A and B)?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient publicly available information on national regulations on the safe and secure transport of infectious substances (specifically including Categories A and B) in Costa Rica. Costa Rica has in place national regulations on the safe and secure transport of infectious substances, but the legislation does not specifically mention Category A and B substances. The legislative framework for the transport of dangerous substances is set by the 1995 Regulation on the Ground Transportation of Dangerous Goods ("Reglamento para el Transporte Terrestre de Productos Peligrosos- N° 24715-MOPT-MEIC-S") and 1998 Technical Regulation on the Ground Transportation of Dangerous Goods and Signage for Transportation Carrying Dangerous Chemical Materials and Goods" ("Reglamento técnico: RTCR 305:1998 Transporte terrestre de productos peligrosos. Señalización de las unidades de transporte terrestre de materiales y productos químicos peligrosos - N° 27008 MEIC- MOPT"). [1,2] The 1995 regulation does not mention infectious substances or Categories A and B. [1] The 1998 technical regulation does list infectious substances, which are classified as Class 6.2 products carrying biological risks, but does not specifically define Category A and B substances. [2] There is no additional relevant information from the Ministry of Transport, Ministry of Health, Ministry of Public Security, Ministry of Commerce and Ministry of Agriculture. [3,4,5,6,7] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [8] On a new update the Ministry of Health included a link to the "Guidelines for the Safe Transport of Infectious Substances and Diagnostic Specimens" from the WHO, which could be understood as an endorsement of such policies and protocols, however there is no further evidence of applications in place. [9]. There is no relevant information on VERTIC's database on legislations on biological weapons and materials [10].

- [1] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 10 June 1995. "Regulation on the Ground Transportation of Dangerous Goods" ("Reglamento para el Transporte Terrestre de Productos Peligrosos- N° 24715-MOPT-MEIC-S").
[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=40953&nValor3=80233&strTipM=TC] Accessed 18 March 2019
- [2] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 20 March 1998. "Technical Regulation on the Ground Transportation of Dangerous Goods and Signage for Transportation Carrying Dangerous Chemical Materials and Goods" (" Reglamento técnico: RTCR 305:1998 Transporte terrestre de productos peligrosos. Señalización de las unidades de transporte terrestre de materiales y productos químicos peligrosos - N° 27008 MEIC- MOPT")
[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=30431&nValor3=32130&strTipM=TC] Accessed 18 March 2019.
- [3] Ministry of Transport (Ministerio de Obras Publicas y Transporte). "Inicio".
[https://www.mopt.go.cr/wps/portal/Home/inicio!/ut/p/z1/hY7LDolwEEW_hQVbZihojLuSKFFJfLAQuyFgasEUSkqF35fgCoNxdvfmnNwBBgmwOutKkZlS1Zkc8o0t090pRPfgYxS6WxfpmWlcb4iHxIfrCOCPowjsn89G5NsLLiTwEMMjmQUmE3tgQqr88y6tc28lgGn-4Jpr56WHujCmadc22tj3vSOUePl7d1XZOKcUqjWQTEloqgSfC9lF1LLe7pVRYg!/dz/d5/L2dBISEvZ0FBIS9nQSEh/] Accessed 18 March 2019.
- [4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 18 March 2019.
- [5] Ministry of Public Security (Ministerio de Seguridad Publica). "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 18 March 2019.
- [6] Ministry of the Economy, Industry and Commerce (Ministerio de Economía, Industria y Comercio). "Inicio". [<https://www.meic.go.cr/meic/>] Accessed 18 March 2019.
- [7] Ministry of Agriculture (Ministerio de Agricultura y Ganaderia). "Inicio". [<http://www.mag.go.cr/>] Accessed 18 March 2019.
- [8] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 17 March 2019
- [9] "Guidelines for the Safe Transport of Infectious Substances and Diagnostic Specimens"
<https://www.ministeriodesalud.go.cr/index.php/679-tramites/autorizaciones-y-certificaciones?start=12>
- [10] VERTIC. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>] Accessed 11 February 2021.

1.3.5 Cross-border transfer and end-user screening

1.3.5a

Is there legislation and/or regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins, and pathogens with pandemic potential?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has in place national legislation, regulation or other guidance in place to oversee the cross-border transfer and end-user screening of dangerous pathogens, toxins and pathogens with pandemic potential. The Ministry of Health only references the World Health Organisation's 1995 Guidelines for the Safe Transport of Infectious Substances and Diagnostic Specimens on its own portal for the import and export of disease samples. [1] There is no additional evidence of domestic measures for end-user screening of dangerous pathogens on the websites of the Ministry of Transport, Ministry of Health, Ministry of Public Security, Ministry of Commerce, Ministry of Agriculture and Ministry of Science, Technology and Telecommunications. [2,3,4,5,6,7]. Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is

restricted, and its contents are not publicly available and there is no evidence of additional information. [8] On a new update the Ministry of Health included a link to the "Guidelines for the Safe Transport of Infectious Substances and Diagnostic Specimens" from the WHO, which could be understood as an endorsement of such policies and protocols, however there is no further evidence of applications in place. [9]. There is no relevant information on VERTIC's database on legislations on biological weapons and materials [10].

- [1] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 10 June 1995. ""Regulation on the Ground Transportation of Dangerous Goods"" (""Reglamento para el Transporte Terrestre de Productos Peligrosos- Nº 24715-MOPT-MEIC-S"").
[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=40953&nValor3=80233&strTipM=TC] Accessed 18 March 2019
- [2] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 20 March 1998. ""Technical Regulation on the Ground Transportation of Dangerous Goods and Signage for Transportation Carrying Dangerous Chemical Materials and Goods"" ("" Reglamento técnico: RTCR 305:1998 Transporte terrestre de productos peligrosos. Señalización de las unidades de transporte terrestre de materiales y productos químicos peligrosos - Nº 27008 MEIC- MOPT"").
[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=30431&nValor3=32130&strTipM=TC] Accessed 18 March 2019.
- [3] Ministry of Transport (Ministerio de Obras Publicas y Transporte). "Inicio".
[https://www.mopt.go.cr/wps/portal/Home/inicio!/ut/p/z1/hY7LDolwEEW_hQVbZihojLuSKFFJfLAQuyFgasEUSkqF35fgCoNxdvfmnNwBBgmwOutKkZIS1Zkc8o0t090pRPfgYxS6WxfpmWlcb4iHxIfrcCOPowjsn89G5NsLLiTwEMMjmQUmE3tgQqr88y6tc28lgGn-4Jpr56WHujCmadc22tj3vSOUepI7d1XZOKcUqjWQTEloqgSfC9IF1LLe7pVRYg!!/dz/d5/L2dBISEvZ0FBIS9nQSEh/] Accessed 18 March 2019.
- [4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 18 March 2019.
- [5] Ministry of Public Security (Ministerio de Seguridad Publica). "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 18 March 2019.
- [6] Ministry of the Economy, Industry and Commerce (Ministerio de Economía, Industria y Comercio). "Inicio". [<https://www.meic.go.cr/meic/>] Accessed 18 March 2019.
- [7] Ministry of Agriculture (Ministerio de Agricultura y Ganaderia). "Inicio". [<http://www.mag.go.cr/>] Accessed 18 March 2019.
- [8] Biological Weapons Convention Implementation Support Unit. ""Costa Rica"". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 17 March 2019
- [9] ""Guidelines for the Safe Transport of Infectious Substances and Diagnostic Specimens""
[<https://www.ministeriodesalud.go.cr/index.php/679-tramites/autorizaciones-y-certificaciones?start=12> "] Accessed 17 March 2019
- [10] VERTIC. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>] Accessed 11 February 2021.

1.4 BIOSAFETY

1.4.1 Whole-of-government biosafety systems

1.4.1a

Does the country have in place national biosafety legislation and/or regulations?

Yes = 1, No = 0

Current Year Score: 1

There is evidence that Costa Rica has in place national biosafety regulations. The 2005 "Regulation on the management of infectious bio-waste generated by healthcare establishments" which includes clinics, hospitals and clinical and research laboratories, details measures on discarding infectious bio-waste, including personal protective equipment and safe and secure handling, packing and transportation. [1] In addition, the country has in place a rule that codified the Ministry of Health's biosafety manual for healthcare institutions. [2] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [3] The Ministry of Health has a link to the "Guidelines for the Safe Transport of Infectious Substances and Diagnostic Specimens" from the WHO, but there is no evidence of applications of the guidelines in place. [4].

[1] VERTIC. Revised 7 January 2005. "Regulation on the management of infectious-contagious waste generated by healthcare establishments" ("Reglamento sobre la gestión de los desechos infecto-contagiosos que se generan en establecimientos que presten atención a la salud y afines").

[http://www.vertic.org/media/National%20Legislation/Costa_Rica/CR_Reglamento_de_desechos_bioinfecciosos_30965-S_de_2003.pdf] Accessed 03 January 2020

[2] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica). 8 October 2012. "Officializes biosafety manual for all healthcare and related establishments" ("Oficializa Manual de Bioseguridad para establecimientos de salud y afines - Nº 37552 -S").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=74310&nValor3=91709¶m2=1&strTipM=TC&IResultado=2&strSim=simp] Accessed 03 January 2020.

[3] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2020.

[4] "Guidelines for the Safe Transport of Infectious Substances and Diagnostic Specimens"

<https://www.ministeriodesalud.go.cr/index.php/679-tramites/autorizaciones-y-certificaciones?start=12>" Accessed 03 January 2020.

1.4.1b

Is there an established agency responsible for the enforcement of biosafety legislation and regulations?

Yes = 1 , No = 0

Current Year Score: 1

Costa Rica has established an agency responsible for the enforcement of biosafety regulations. Article 28 of the 2005 "Regulation on the Management of Infectious-Contagious Waste Generated by Healthcare Establishments" specifies that the Ministry of Health's Directorate for the Protection of the Human Environment (Dirección de Protección al Ambiente Humano) is responsible for enforcing the regulation. The Ministry of Health through SENASA are in charge of the overall regulations and response. [1]. Regarding genetically modified organisms (GMO), note that a National Technical Commission on Biosafety was created in 2013 as a follow up to the Phytosanitary Protection Law, but that deals exclusively with GMO, and is under the auspices of the Ministry of Agriculture. [2] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [3]

[1] VERTIC. Revised 7 January 2005. "Regulation on the management of infectious-contagious waste generated by healthcare establishments" ("Reglamento sobre la gestión de los desechos infecto-contagiosos que se generan en establecimientos que presten atención a la salud y afines").

[http://www.vertic.org/media/National%20Legislation/Costa_Rica/CR_Reglamento_de_desechos_bioinfecciosos_30965-S_de_2003.pdf] Accessed 03 January 2021.

[2] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 26 August 2013. "Conforming the National Technical Commission on Biosafety" ("Conforma la Comisión Técnica Nacional de Bioseguridad - N° 008-2013-MAG").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=76183&nValor3=95000¶m2=1&strTipM=TC&lResultado=1&strSim=simp]. Accessed 03 January 2021.

[3] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

1.4.2 Biosafety training and practices

1.4.2a

Does the country require biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rica requires biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. The Costa Rican Social Security System, which is responsible for national public health, issued a Biosafety Manual in 2012 (adapted from the National Biosafety Manual), and it shows that biosafety training for personnel is not standardized; instead, it is up to each individual laboratory director to ensure that personnel are trained. The Manual does mention that Level 4 laboratories require advanced training, but there is no publicly available evidence on whether that training is standardized. According to the manual, general biosafety training should include awareness of biological, physical and chemical risks, personal protective equipment, disinfecting and decontamination measures, safe management and transportation of dangerous waste products, among others. [1] There is no additional relevant information from the Ministry of Health, Ministry of Agriculture, and Ministry of Science. [2,3,4] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [5] There is no relevant evidence in the VERTIC's database of biological weapons and materials. [6]

[1] Costa Rican Social Security (Caja Costarricense de Seguro Social). 2012. "Biosafety manual" ("Manual de bioseguridad"). [<http://www.binasss.sa.cr/bioseguridad.pdf>] Accessed 03 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 03 January 2021.

[3] Ministry of Agriculture (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed 03 January 2021.

[4] Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnología y Telecomunicaciones). "Inicio". [<https://www.micit.go.cr/>] Accessed 03 January 2021.

[5] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 03 January 2021.

[6] Vertic. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 03 January 2021

1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

1.5.1 Oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

1.5.1a

Is there publicly available evidence that the country has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual use research. An interdisciplinary and interagency Advisory Commission on the Detection and Prevention of Biological and Chemical Weapons was created by decree in 2001 (Decree 29893-S, Gaceta No. 205) but there is no publicly available evidence whether it has conducted an assessment to determine whether ongoing research is occurring on these issues. [1] Separately, the Ministry of Health's portal for the National Authority for the Prohibition of Chemical Weapons suggests that it has conducted an assessment on chemical weapons (determining that there are none in the country) [2], but neither the Ministry of Health, nor the Ministries of Public Security or Agriculture have relevant information on biological weapons and no information about the existence of a similar authority for biological weapons. [3,4,5] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [6] There is no relevant evidence in the VERTIC's database of biological weapons and materials. [7] There is no evidence of any studies or articles conducting an assesment to determine ongoing research on dangerous pathogens or dual-use research.

[1] Ministry of Health (Ministerio de Salud). Undated. "Advisory Commission on the Detection and Prevention of Biological and Chemical Weapons" ("Comission Asesora en Deteccion y Prevention de Armas Biologicas y Quimicas"). [https://www.ministeriodesalud.go.cr/gestores_en_salud/riesgos/comisionasesoradetencionarmasbiologicas.pdf] Accessed 04 January 2021.

[2] Ministry of Health (Ministerio de Salud). "National Authority for the Prohibition of Chemical Weapons" ("Autoridad Nacional para la Prohibición de las Armas Químicas"). [<https://www.ministeriodesalud.go.cr/index.php/293-empresas/autoridad-de-prohibicion-de-armas-quimicas?start=4>] Accessed 04 January 2021.

[3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 04 January 2021.

[4] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). [<http://www.mag.go.cr/>] Accessed 04 January 2021.

[5] Ministry of Public Security (Ministerio de Seguridad Publica). [<https://www.seguridadpublica.go.cr/>] Accessed 04 January 2021.

[6] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 04 January 2021.

[7] Vertic. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 16 February 2021

1.5.1b

Is there legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has a national policy requiring oversight of dual use research. Costa Rica does have a single mechanism in place to oversee the use of dual use materials for the development of biological, as well as chemical and nuclear weapons. In 2018, in line with the Arms Trade Treaty, Costa Rica established its "National Control System and Governing Body for the Implementation of the Arms Trade Treaty." The National Control System has the authority to "oversees dual use products, which may contribute to the total or partial development, production, functioning, maintenance, storage, detection, identification or propagation of chemical, biological and nuclear weapons." The protocols and lines of action for the National Control System and Governing Body have not been published as of early 2021. [1]. There is no additional information on the oversight of dual use research on the websites of the Ministry of Health, Ministry of Agriculture or Ministry of Public Safety. [2,3,4] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [5] There is no relevant evidence in the VERTIC's database of biological weapons and materials. [6] There are no studies or articles mentioning legislation on the issue.

[1] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 24 April 2018. "National Control System and Governing Body for the Implementation of the Arms Trade Treaty - N° 41084-RE-MP-MSP" ("Establecimiento del Sistema Nacional de Control y creación de su Ente Rector para la implementación del Tratado sobre el Comercio de Armas - N° 41084-RE-MP-MSP").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC¶m2=1&nValor1=1&nValor2=86461&nValor3=112188&strTipM=TC&lResultado=2&nValor4=1&strSelect=sel] Accessed 04 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 04 January 2021.

[3] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). [<http://www.mag.go.cr/>] Accessed 04 January 2021.

[4] Ministry of Public Security (Ministerio de Seguridad Publica). [<https://www.seguridadpublica.go.cr/>] Accessed 04 January 2021.

[5] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 04 January 2021.

[6] Vertic. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 16 February 2021

1.5.1c

Is there an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rica has an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual use research. The Ministry of Health (MOH) has a webpage that describes the National Authority for the Prohibition of Chemical Weapons (Autoridad Nacional para la

Prohibición de las Armas Químicas, ANAQ), but there is no additional information about dual use research in general. Although Costa Rica does not manufacture chemical weapons, it is a party to the Convention on Chemical Weapons and has created ANAQ as body within the MOH to supervise dual use research. ANAQ oversees the use of industrial gases, pharmaceuticals and other chemicals. [1] The Ministry of Public Works and Transport is responsible for overseeing the transport of dangerous substances, including biological specimens, but there is no mention of overseeing research. [2] There is no additional information from the Ministry of Public Security, Ministry of Health or Ministry of Agriculture. [3,4,5] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [6] There is no relevant evidence in the VERTIC's database of biological weapons and materials. [7] There are no studies or articles that mentions a responsible agency.

[1] Ministry of Health (Ministerio de Salud). "National Authority for the Prohibition of Chemical Weapons" ("Autoridad Nacional para la Prohibición de las Armas Químicas"). [<https://www.ministeriodesalud.go.cr/index.php/293-empresas/autoridad-de-prohibicion-de-armas-quimicas?start=4>] Accessed 04 January 2021.

[2] Government of Costa Rica. "Reglamento técnico: RTCR 305:1998 Transporte terrestre de productos peligrosos. Señalización de las unidades de transporte terrestre de materiales y productos químicos peligrosos".

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi1q63-se_uAhXeG7kGHSm0AsQQFjAAegQIARAC&url=http%3A%2F%2Fwww.sica.int%2Fbusqueda%2Fbusqueda_archivo.aspx%3FArchivo%3Dleys_7120_1_28032006.pdf&usg=AOvVaw1vOMxXAnyFj0HEmHNJPNf] Accessed 04 January 2021.

[3] Ministry of Public Security. "Inicio". [<https://www.seguridadpublica.go.cr/>] Accessed 04 January 2021.

[4] Ministry of Health. "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 04 January 2021.

[5] Ministry of Agriculture and Livestock. "Inicio". [<http://www.mag.go.cr/>] Accessed 04 January 2021.

[6] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [<https://bwc-ecbm.unog.ch/state/costa-rica>] Accessed 04 January 2021.

[7] Vertic. "Costa Rica". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 16 February 2021

1.5.2 Screening guidance for providers of genetic material

1.5.2a

Is there legislation and/or regulation requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has legislation, regulation, policy or other guidance requiring the screening of synthesized DNA before it is sold. There is no information on screening of DNA on the websites of the Ministry of Agriculture, Ministry of Health, Ministry of Works and Transportation and Ministry of Science. [1,2,3,4] DNA legislation is covered under legislation related to GMO and there is no explicit requirement for screening of synthesized DNA before it is sold. [5] Although Costa Rica is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 2001. Access to the most recent report from 2001 is restricted, and its contents are not publicly available and there is no evidence of additional information. [6] There is no relevant evidence in the VERTIC's database of biological weapons and materials. [7] There are no studies or articles with available evidence on legislations on the issue.

[1] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 04 January 2021.

[2] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed

04 January 2021.

[3] Ministry of Public Works and Transportation (Ministerio de Obras Publicas y Transporte). "Inicio". [www.mopt.go.cr] Accessed 04 January 2021.

[4] Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnologia y Telecomunicaciones). "Inicio". [https://www.micit.go.cr/] Accessed 04 January 2021.

[5] Costa Rican System of Legal Information (Sistema Costarricense de Informacion Jurídica). 3 May 2005. "Legal Opinion: 054-J" (Opinion Jurídica 054-J").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/pronunciamiento/pro_ficha.aspx?param1=PRD¶m6=1&nDictamen=13134&strTipM=T] Accessed 04 January 2021.

[6] Biological Weapons Convention Implementation Support Unit. "Costa Rica". [https://bwc-ecbm.unog.ch/state/costa-rica] Accessed 04 January 2021.

[7] Vertic. "Costa Rica". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/]. Accessed 16 February 2021

1.6 IMMUNIZATION

1.6.1 Vaccination rates

1.6.1a

Immunization rate (measles/MCV2)

Immunization rate (measles/MCV2), 95% or greater = 2, 80-94.9% = 1, Less than 80%, or no data = 0

Current Year Score: 1

2019

World Health Organization

1.6.1b

Are official foot-and-mouth disease (FMD) vaccination figures for livestock publicly available through the OIE database?

Yes = 1 , No = 0

Current Year Score: 1

2020

OIE WAHIS database

Category 2: Early detection and reporting for epidemics of potential international concern

2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

2.1.1 Laboratory testing for detection of priority diseases

2.1.1a

Does the national laboratory system have the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests?

Evidence they can conduct 5 of the 10 core tests and these tests are named = 2, Evidence they can conduct 5 of the 10 core tests and the tests are not named = 1, No evidence they can conduct 5 of the 10 core tests = 0

Current Year Score: 2

Costa Rica's national laboratory system has the capacity to conduct diagnostic testing for at least 5 of the 10 WHO defined core tests. The National Reference Laboratories of the Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA) can conduct polymerase chain reaction (PCR) testing for Influenza virus (flu) [1], virus culture for poliovirus (polio) [1], serology (ELISA and Western Blot) for HIV [2], microscopy for mycobacterium tuberculosis [3]; rapid diagnostic testing (real time PCR) for plasmodium spp. [4], and bacterial culture for Salmonella enteritidis serotype Typhi (typhoid) [5]. There is no evidence that the country has publicly defined the four country-specific tests.

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). "Services" ("Servicios"). <http://www.inciensa.sa.cr/servicios/Matriz%20R40.pdf>. Accessed 04 January 2021.

[2] Ministry of Health (Ministerio de Salud). 2016. "Strategic Plan on HIV/AIDS - 2016-2021" ("Plan Estratégico en VIH y SIDA 2016-2021"). [<https://www.ministeriodesalud.go.cr/index.php/biblioteca-de-archivos/963-plan-estrategico-nacional-pen-vih-sida/file>] Accessed 04 January 2021.

[3] Ministry of Health (Ministerio de Salud). 9 December 2016. "Manual of norms and technical procedures for the bacterial diagnosis of tuberculosis" ("Manual de normas y procedimientos técnicos para el diagnóstico bacteriológico de la tuberculosis"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/inmunoprevenibles/3185-norma-de-laboratorio-tuberculosis/file>] Accessed 04 January 2021.

[4] Science Postprint 1

[2]. 30 April 2015. Calvo N et al. "Re-emergence of Plasmodium malariae in Costa Rica". [<http://www.spp-j.com/spp/1-2/spp.2015.04A0004#sthash.ohuau1FQ.dpbs>] Accessed 04 January 2021.

[5] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). 30 July 2014. "Epidemiological Surveillance, Salmonella" ("Vigilancia Epidemiológica, Salmonella") [https://www.inciensa.sa.cr/vigilancia_epidemiologica/informes_vigilancia/2014/Bacterias/Vigilancia%20basada%20en%20laboratorio%20de%20Salmonella,%20Costa%20Rica,%202013.pdf] Accessed 04 January 2021.

2.1.1b

Is there a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing?

Yes, there is evidence of a plan, and it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 2, Yes, there is evidence of a plan, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 1, No evidence of a plan = 0

Current Year Score: 0

There is no publicly available evidence of the existence of a national plan, strategy or similar document for conducting testing during a public health emergency, nor of a plan that includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing. Despite the fact that Costa Rica's laboratory system has the capacity to conduct different diagnostic testing, there are no mentions about laboratory testing detection plans or improvements to target novel pathogens. The National Health Plan (Plan Nacional de Salud 2017-2020) only refers to HPV, HIV and other common communicable diseases [1,2] There is no evidence about special considerations for testing for novel pathogens in the "National Action Plan Against Antimicrobial Resistance 2018-2025", specifically on the Strategic Objective No. 2 "Strengthening knowledge and the scientific base through surveillance", which seeks to develop laboratory capacity to produce high quality microbiological data for the management of surveillance support activities in the human, animal and plant health sectors. There it states the need to strengthen the national reference laboratories as well as the network [3]. On the website of the INCIENSA, section about epidemiological surveillance, there is no mention about surveillance or testing for novel pathogens [4]. The "National Guidelines for Surveillance for COVID-19 disease" present information mostly on who is indicated to test for Covid-19 and guidelines for testing for health institutions, and provides information on restrictions or obligatory testing for certain groups (tourists, truck drivers, etc.), but does not provide a plan that exemplifies goals of testing or plan to expand testing. [5] The Ministry of Agriculture and Ministry of Health has no other relevant information on this [6,7]

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). "Services" ("Servicios").

[<https://www.inciensa.sa.cr/servicios/index.aspx>]. Accessed 04 January 2021.

[2] Costa Rican National Health Plan 2017-2020 (pp.134). <https://www.ministeriodesalud.go.cr/index.php/biblioteca-de-archivos/sobre-el-ministerio/politicas-y-planes-en-salud/planes-en-salud/964-plan-nacional-de-salud-2016-2020/file>. Accessed 06 January 2021.

[3] National Action Plan Against Antimicrobial Resistance 2018-2025

<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/resistencia-microbiana/3811-plan-de-accion-nacional-de-lucha-contra-la-resistencia-a-los-antimicrobianos-costa-rica-2018-2025/file>. Accessed 06 January 2021.

[4] INCIENSA, epidemiological surveillance: https://www.inciensa.sa.cr/vigilancia_epidemiologica/index.aspx. Accessed 06 January 2021.

[5] Ministry of Health (Ministerio de Salud). 31 March 2021. "National Guidelines for Surveillance for COVID-19 disease"

[https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/ls_vs_001_version_19_vigilancia_covid19_31032021.pdf] Accessed 30 April 2021.

[6] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 16 February 2021.

[7] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). [<http://www.mag.go.cr/>] Accessed 16 February 2021. 2021.

2.1.2 Laboratory quality systems

2.1.2a

Is there a national laboratory that serves as a reference facility which is accredited (e.g., International Organization for Standardization [ISO] 15189:2003, U.S. Clinical Laboratory Improvement Amendments [CLIA])?

Yes = 1 , No = 0

Current Year Score: 1

There is public evidence that national laboratory that serves as a reference facility is accredited. The Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA)'s National Reference Laboratories are accredited to INTE-ISO / IEC 17025 and INTE-ISO / IEC 17043. [1] These are national accreditation standards that are based on ISO 17025 and ISO 17043, which cover general proficiency and competence of testing laboratories. [2,3,4]. Although universities are considered as independent bodies, laboratories from national universities and research facilities could be seen as well as part of the national laboratory network. Thus, the hospital laboratory of the Costa Rica National University (UNC) holds such accreditation since 2012 [5].

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). "Accreditations" (Acreditación")

[<http://www.inciensa.sa.cr/inciensa/Calidad/Acreditacion.aspx>] Accessed 04 January 2021.

[2] Costa Rica Accreditation Entity (Ente Costarricense de Acreditación). "Acreditación de Laboratorios de Ensayo y Calibración" [http://www.eca.or.cr/lab_desc.php] Accessed 04 January 2021.

[3] International Standard for Organisation. "ISO/IEC 17025:2005". [<https://www.iso.org/standard/39883.html>] Accessed 04 January 2021.

[4] International Standard for Organisation. "ISO/IEC 17043:2010". [<https://www.iso.org/standard/29366.html>] Accessed 04 January 2021.

[5] Accreditation of the UNC hospital laboratory. <https://www.ucr.ac.cr/noticias/2012/12/07/laboratorio-clinico-de-ucr-acreditado-por-el-eca.html>. Accessed 04 January 2021.

2.1.2b

Is there a national laboratory that serves as a reference facility which is subject to external quality assurance review?

Yes = 1 , No = 0

Current Year Score: 1

The Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA)'s National Reference Laboratories are subject to external quality assurance review. According to its website, the National Bacterial Reference Laboratory (Centro Nacional de Referencia de Bacteriología, CNRB), is "regularly evaluated by international organizations for quality assurance" and both the CNRB and the National Virology Reference Laboratory (Centro Nacional de Referencia de Virología, CNRV) participate in the Integrated Institutional Quality Management System (Sistema Integrado de Gestión de Calidad Institucional) in line with INTE-ISO 17025 and the Costa Rican Accreditation Body. [1]

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). "National Bacterial Reference Laboratory" ("Centro Nacional de Referencia de Bacteriología, CNRB"). [http://www.inciensa.sa.cr/inciensa/centros_referencia/bacteriologia.aspx] Accessed 04 January 2021

2.2 LABORATORY SUPPLY CHAINS

2.2.1 Specimen referral and transport system

2.2.1a

Is there a nationwide specimen transport system?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has a system for transporting specimens from the site of collection to a laboratory for testing, either a public or private courier system. The Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA) publishes information on how to send specimens to its facilities and it simply states that the transportation used should be labelled correctly. Even for the most dangerous pathogens, those specified in INCIENSA's Bioterrorism Protocol, "the chosen transportation should be the fastest option available", with no public or private courier option mentioned. The rules for transporting, importing and exporting biological specimen from human and animal sources are detailed in the Ministry's website and refer to the National Public Health Law (Ley 5395). [1] Websites for the Ministry of Health, Ministry of Agriculture and Livestock, Ministry of Public Works and Transport and Ministry of Science do not share additional information about this. [2,3,4,5]

[1] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). January 2011. "Bioterrorism protocol" ("Protocolo de bioterrorismo").

[http://www.inciensa.sa.cr/vigilancia_epidemiologica/Protocolos_Vigilancia/Protocolo%20Bioterrorismo.pdf] Accessed 04 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/index.php/679-tramites/autorizaciones-y-certificaciones/651-autorizaciones-para-muestras-biologicas>] Accessed 04 January 2021.

[3] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed 04 January 2021.

[4] Ministry of Public Works and Transport (Ministerio de Obras Públicas y Transporte). "Inicio". [https://www.mopt.go.cr/wps/portal/Home/inicio!/ut/p/z1/hY7LDolwEEW_hQVbZihojLuSKFFJfLAQuyFgasEUSkqF35fgCoNxdvfmnNwBBgmwOutKkZlS1Zkc8o0t090pRPfgYxS6WxfpmWlcb4ihxlfrcOCPowjsn89G5NsLLiTwEMMjmQUmE3tgQqr88y6tc28lgGn-4Jpr56WHujCmadc22tj3vSOUepI7d1XZOKcUqjWQTEloqgSfC9IF1LLe7pVRYg!/dz/d5/L2dBISevZ0FBIS9nQSEh/] Accessed 04 January 2021.

[5] Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnología y Telecomunicaciones). "Inicio". [<https://www.micit.go.cr/>] Accessed 04 January 2021.

2.2.2 Laboratory cooperation and coordination

2.2.2a

Is there a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak?

Yes = 2 , Yes, but there is evidence of gaps in implementation = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of the existence of a plan in place among the Costa Rican Government to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up

testing during an outbreak. In 2016 the Ministry of Health enacted the "General Regulation for Authorizations and Sanitary Permits of Operation" Nr. 39472-S, which aims to regulate and establish the requirements and procedures that must be fulfilled by public and commercial establishments to develop industrial, commercial and service activities. Laboratories are included, however there is no evidence of any amendment or addition to rapidly authorize the licensing process of laboratories [1]. In the "Guide of Authorizations and Sanitary Permits for Industrial, Commercial and Service Establishments" issued by the Ministry of Health there is no mention of exceptions targeting the laboratory network in case of an outbreak [2]. Due to the COVID-19 pandemic, eight private laboratories were authorized to perform COVID-19 tests in an effort to supply and scale-up the testing capacity. However, there is no evidence that the former measure is part of a nationwide plan or can be used in the event of a different disease outbreak. [3]

[1] "General Regulation for Authorizations and Sanitary Permits of Operation Granted by the Ministry of Health" Nr. 39472-S (2016).

http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=81043&nValor3=103191&strTipM=TC. Accessed 08 January 2021.

[2] Authorizations and Sanitary Permits for Industrial, Commercial and Service Establishments. Ministry of Health.

<https://www.ministeriodesalud.go.cr/index.php/tramites-ms/permisos-a-establecimientos-ms>. Accessed 08 January 2021.

[3] Eight private laboratories authorized to perform COVID-19 tests

<https://www.presidencia.go.cr/comunicados/2020/03/ocho-laboratorios-privados-con-autorizacion-para-realizar-pruebas-covid-19/>. Accessed 08 January 2021."

2.3 REAL-TIME SURVEILLANCE AND REPORTING

2.3.1 Indicator and event-based surveillance and reporting systems

2.3.1a

Is there evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease?

Yes, there is evidence of ongoing event-based surveillance and evidence that the data is being analyzed on a daily basis = 2,

Yes, there is evidence of ongoing event-based surveillance, but no evidence that the data are being analyzed on a daily basis

= 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica's is conducting ongoing event-based surveillance and analysis for infectious disease. The country's national emergency center, the "National Liaison Center" (Centro Nacional de Enlace), was established in 2009 and is located within the Ministry of Health's Directorate on Health Surveillance. The Center is responsible for elaborating the national contingency plan for any national health emergency and works with national, regional and local institutions and other inter-ministerial offices (e.g.: Ministry of Agriculture's National Animal Health Service, SENASA). The Center's website does not have any information about whether it conducts event-based surveillance, however, it is possible to find the official reports that correspond to the alerts. These does not meet the criteria as stated in the guidance section to the indicator. [1,2] There is no additional relevant information from the Ministry of Health and Ministry of Agriculture. [3,4]

[1] Ministry of Health (Ministerio de Salud). "National Liaison Center" ("Centro Nacional de Enlace").

[<https://www.ministeriodesalud.go.cr/index.php/centro-nacional-de-enlace>] Accessed 05 January 2021.

[2] Database of emergencies and alerts as per their occurrence.

https://www.cne.go.cr/preparativos_respuestas/alertas/historicoalertas.aspx

[3] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 05 January 2021.

[4] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed 05 January 2021.

2.3.1b

Is there publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica reported a potential public health emergency of international concern to the WHO within the last two years. Websites for the Ministry of Health; the Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA); and the National Animal Health Service (SENASA) do not report notifying the WHO about infectious diseases within the last two years. [1,2,3] The Disease Outbreak News page and local WHO office do not report that Costa Rica has sent notification about infectious disease in the last two years. [5] The country through the "National Liaison Center" publish all the alerts nationwide. Costa Rica confirmed its first case of COVID-19 on March 6, 2020, after the WHO had declared Coronavirus as a public health emergency of international concern (PHEIC) on January 30, 2020. [6, 7, 8].

[1] Ministry of Health. "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 05 January 2021.

[2] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). "Inicio". [<https://www.inciensa.sa.cr/>] Accessed 05 January 2021.

[3] SENASA. "Inicio". [<https://www.senasa.go.cr/>] Accessed 24 May 2019

[4] WHO. 2019. "Emergencies preparedness, response". [<https://www.who.int/csr/don/archive/country/cr/en/>] Accessed 05 January 2021.

[5] WHO Costa Rica. "Inicio". [<https://www.paho.org/cor/>] Accessed 05 January 2021.

[6] Alerts from the National Liaison Center. https://www.cne.go.cr/preparativos_respuestas/alertas/historicoalertas.aspx. Accessed 05 January 2021.

[7] GardaWorld. 06 March 2020. "Costa Rica: Government confirms first case of COVID-19 March 6".

[<https://www.garda.com/crisis24/news-alerts/320411/costa-rica-government-confirms-first-case-of-covid-19-march-6>] Accessed January 21, 2021.

[8] WHO. 31 July 2020. "Rolling updates on Coronavirus disease (COVID-19)".

[<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>] Accessed January 21, 2021.

2.3.2 Interoperable, interconnected, electronic real-time reporting systems

2.3.2a

Does the government operate an electronic reporting surveillance system at both the national and the sub-national level?

Yes = 1 , No = 0

Current Year Score: 1

Costa Rica's government operates an electronic reporting surveillance system at the national level. At the local level, the Ministry of Health's protocols on the mandatory reporting of diseases detail that a form (VE01) must be submitted by physicians either in physical form or electronically (if the establishment has electronic submission capabilities) within 24 hours of detection. [1,2] After the initial notification at the local level, the forms are printed out manually and sent to the Ministry of Health, where they are digitized and entered into a national electronic system called the National System on

Health Surveillance (Sistema Nacional de Vigilancia de Salud, SINAVIS). SINAVIS is in the process of being reworked for improved data collection and cohesion. [2] Further information about the legal and organizational framework of the SINAVIS and other systems are also public available on the web of the Ministry of Health. [3]

[1] Ministry of Health (Ministerio de Salud). December 2016. "Surveillance protocol for Zika and main associated complications" ("Protocolo de vigilancia de enfermedad por virus Zika y sus principales complicaciones"). [https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/3186-protocolo-de-vigilancia-de-enfermedad-por-virus-zika-y-sus-principales-complicaciones/file]. Accessed 05 January 2021.

[2] Ministry of Health (Ministerio de Salud). Undated. "National System on Health Surveillance" ("Sistema Nacional de Vigilancia de la Salud"). [https://docplayer.es/9139868-Sistema-nacional-de-vigilancia-de-la-salud.html] Accessed 05 January 2021.

[3] National Surveillance System "https://www.ministeriodesalud.go.cr/index.php/43-inicio/pagina-inicio-ms/254-inicio-menu-principal-ministerio-virtual-sistema-nacional-vigilancia-ms". Protocol of health surveillance on the field "https://www.binasss.sa.cr/opac-ms//media/digitales/Vigilancia%20de%20la%20salud%20e%20investigación%20epidemiológica%20de%20campo.pdf". Regulations N° 40556-S and N° 37306-S implement the SINAVIS.

2.3.2b

Does the electronic reporting surveillance system collect ongoing or real-time laboratory data?

Yes = 1, No = 0

Current Year Score: 0

There is no evidence showing that Costa Rica's national electronic reporting surveillance system collects ongoing/real time laboratory data. The country does have a surveillance system that provides information on a daily basis on Covid-19, with a lag of no more than 3 days. [1,2] This practice, however, is not possible to expand to other diseases. There is a National System on Health Surveillance (Sistema Nacional de Vigilancia de Salud, SINAVIS), which was created with the purpose of developing standards and guidelines that allow the timely collection, integration and analysis of information on health determinants and trends. Since data collected at the local level is sent in paper form to the Ministry of Health and entered manually into the National System on Health Surveillance (Sistema Nacional de Vigilancia de Salud, SINAVIS), it is not ongoing/real time data collection. Note that SINAVIS is in the process of being reworked for improved data collection and cohesion but there is no information on whether that will result in the availability of ongoing/real time laboratory data or when it will be completed. [3] Access to the system is restricted [4]. The Ministry of Health and the National Bacterial Reference Laboratory has no other relevant information on this [5,6]

[1] Regulations and protocols regarding COVID-19 and the information systems.

https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov. Accessed 05 January 2021.

[2] Real-time report of daily cases of COVID-19. https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1725-situacion-nacional-covid-19. Accessed 05 January 2021.

[3] Ministry of Health (Ministerio de Salud). Undated. "National System on Health Surveillance" ("Sistema Nacional de Vigilancia de la Salud"). [https://docplayer.es/9139868-Sistema-nacional-de-vigilancia-de-la-salud.html] Accessed 05 January 2021.

[4] SINAVIS. https://apps01n.ministeriodesalud.go.cr/SINAVISWEB/index.do]. Accessed 16 February 2021

[5] Ministry of Health (Ministerio de Salud). [https://www.ministeriodesalud.go.cr] Accessed 16 February 2021.

[6] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [https://www.inciensa.sa.cr/inciensa/centros_referencia/] Accessed 16 February

2021. 2021.

2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

2.4.1 Coverage and use of electronic health records

2.4.1a

Are electronic health records commonly in use?

Electronic health records are commonly in use = 2, Electronic health records are not commonly in use, but there is evidence they are used = 1, No evidence electronic health records are in use = 0

Current Year Score: 2

In Costa Rica electronic health records are commonly used. Costa Rica introduced electronic health records (EDUS) in 2011. As of December 2016, 100% of the population was covered by electronic health records in primary care. Implementation of electronic health records was slower in hospitals, with just over 60% of implementation complete by YE2017, with a goal of complete coverage by YE 2018. [1] By August 2019, the EDUS were functional throughout the service network, registering more than 46 million visits. At least 78% of the country's population had been treated once with the electronic medical record. [2] Although there is evidence of the the system webpage, access is restricted to those with nation-recognized ID. There is no further publicly available evidence available from the EHR system's webpage. [3]

[1] WorldConnected. "Electronic Health Record System - An E-Government Service in Costa Rica".

[https://1worldconnected.org/project/lac_egov_health_edusegovcostarica/] Accessed 05 January 2021.

[2] Red Centroamericana de Salud. 16 September 2019. The Unique Digital Health Record: The digital transformation of health services in Costa Rica - RECAINSA (El Expediente Digital Único en Salud: La transformación digital de los servicios de salud en Costa Rica - RECAINSA). [<https://recainsa.org/el-expediente-digital-unico-en-salud-la-transformacion-digital-de-los-servicios-de-salud-en-costa-rica/>] Accessed 16 February 2021.

[3] EDUS. Citas Web. [<https://edus.ccss.sa.cr/educitasweb>] Accessed 05 January 2021.

2.4.1b

Does the national public health system have access to electronic health records of individuals in their country?

Yes = 1, No = 0

Current Year Score: 1

Costa Rica's national public health system has access to the electronic health records (EHR) of individuals in the country. The Costa Rican Social Security System has access to the health records of 100% of the population, who are covered by primary care and "anyone [within the health system] can pull up a patient file anywhere". As of YE2017, just over 60% of EHR was implemented in hospitals and no update could be found on whether full coverage was achieved by YE2018 on the websites of the Ministry of Health or other public sources. [1] By August 2019, the EDUS were functional throughout the service network, registering more than 46 million visits. At least 78% of the country's population had been treated once with the electronic medical record. [2] Although there is evidence of the the system webpage, access is restricted to those with nation-recognized ID. There is no further publicly available evidence available from the EHR system's webpage. [3]

[1] WorldConnected. "Electronic Health Record System - An E-Government Service in Costa Rica".

[https://1worldconnected.org/project/lac_egov_health_edusegovcostarica/] Accessed 05 January 2021.

[2] Red Centroamericana de Salud. 16 September 2019. The Unique Digital Health Record: The digital transformation of

health services in Costa Rica - RECAINSA (El Expediente Digital Único en Salud: La transformación digital de los servicios de salud en Costa Rica - RECAINSA). [<https://recainsa.org/el-expediente-digital-unico-en-salud-la-transformacion-digital-de-los-servicios-de-salud-en-costa-rica/>] Accessed 16 February 2021.

[3] EDUS. Citas Web. [<https://edus.ccss.sa.cr/eduscitasweb>] Accessed 05 January 2021.

2.4.1c

Are there data standards to ensure data is comparable (e.g., ISO standards)?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rica has data standards to ensure data is comparable across the nation's electronic health records. In 2016, the government of Costa Rica issued a regulation on standardizing data in electronic health records, and established a National Commission on Health Data Standardization (Comisión Nacional de Estandarización de Datos de Salud, "Commission"), which is overseen by the Ministry of Health (MOH), to achieve these goals. [1] The regulation does not mention any ISO standards, but it does give responsibility to the Commission to design health data standards that are interoperable and comprehensive. Members of the Commission include representatives from the MOH, Ministry of Science, Technology and Telecommunications, Social Security, public and private hospitals and academia. [1] There is no more recent information from the MOH and the Commission does not have a web presence. [2]

[1] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica). 29 February 2016. "Regulation on the use of standards for patient health data and the creation of the National Commission on Health Data Standardization" ("Reglamento sobre el uso de estándares para datos de la Salud en Atención de Pacientes y creación de la Comisión Nacional de Estandarización de Datos de Salud").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=81652&nValor3=104213&strTipM=TC] Accessed 05 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 05 January 2021.

2.4.2 Data integration between human, animal, and environmental health sectors

2.4.2a

Is there evidence of established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data (e.g., through mosquito surveillance, brucellosis surveillance)?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient publicly available evidence that Costa Rica has established mechanisms at the relevant ministries responsible for animal, human and wildlife surveillance to share data (such as through mosquito surveillance, brucellosis surveillance, etc. Costa Rica's protocol on rabies, which was issued in 2015, specifies the sharing confirmed cases between the Ministry of Health and Ministry of Agriculture. However, there is no mention of a formal mechanism (e.g. a database). [1] Another protocol on brucellosis does not require sharing information among ministries for animal, human and wildlife health. According to the protocol, the Ministry of Agriculture's National Service on Animal Health (Servicio Nacional de Salud Animal, SENASA), conducts surveillance and diagnosis of brucellosis and, once cases are confirmed, simply states that it publishes epidemiological data on its website. [2]] As part of the work for the WHO report "Monitoring Global Progress On Addressing Antimicrobial Resistance (AMR)", Costa Rica confirmed in the WHO Global Database for Antimicrobial Resistance Country

Self-Assessment for 2017 - 2018 that multisector working groups for One Health exist, but are not yet functional. [3,4] There is no additional information from the Ministry of Health, Ministry of Agriculture and Livestock and Ministry of the Environment and Energy. [5,6,7]

[1] Ministry of Health (Ministerio de Salud). January 2015. "Rabies: protocol on surveillance and control in humans" (Rabia: protocolo de vigilancia y control en humanos"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2505-protocolo-de-vigilancia-y-control-de-la-rabia-en-humanos/file>] Accessed 05 January 2021.

[2] National Service on Animal Health (Servicio Nacional de Salud Animal, SENASA). 22 March 2018. "Brucellosis surveillance protocol" ("Protocolo de vigilancia de brucelosis"). [<https://www.senasa.go.cr/informacion/centro-de-informacion/informacion/sgc/pnb/2132-protocolo-de-vigilancia-de-brucelosis/file>] Accessed 05 January 2021.

[3] World Health Organization. 2018. Monitoring Global Progress On Addressing Antimicrobial Resistance (AMR). [<https://www.who.int/antimicrobial-resistance/publications/Analysis-report-of-AMR-country-se/en/>] Accessed 05 January 2021.

[4] World Health Organization. "Global Database for Antimicrobial Resistance Country Self-Assessment." [<https://amrcountryprogress.org/>] Accessed 05 January 2021.

[5] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 05 January 2021.

[6] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed 05 January 2021.

[7] Ministry of the Environment and Energy (Ministerio de Ambiente y Energía). "Inicio". [<https://www.minae.go.cr/>] Accessed 05 January 2021.

2.4.3 Transparency of surveillance data

2.4.3a

Does the country make de-identified health surveillance data on infectious diseases publicly available via reports (or other format) on government websites (such as the Ministry of Health, Ministry of Agriculture, or similar)?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rica makes de-identified health surveillance data on disease outbreaks publicly available. Since 2020 and because of the technical requirements to report about the COVID-19 pandemic, the surveillance system uploads and provides information on a daily basis and with a lag of no more than 3 days. [1] This practice, however, is not expanded to other diseases [1,2]. Epidemiological bulletins are published on Zika, Chikungunya and Dengue 2-3 times a month. [3] The Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA) also releases its own epidemiological reports, by disease and by the responsible National Reference Laboratory. [4]

[1] Regulations and protocols regarding COVID-19 and the information systems. [<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>]. Accessed 05 January 2021.

[2] Real-time report of daily cases of COVID-19. [<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1725-situacion-nacional-covid-19>]. Accessed 05 January 2021.

[3] Ministry of Health (Ministerio de Salud). ""Vector-based Diseases"" (""Enfermedades de Transmisión Vectorial""). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/boletines>] Accessed 06 January 2021.

[4] The Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y

Enseñanza en Nutrición y Salud, INCIENSA). ""Epidemiological reports"" (""Informes epidemiológicos"").
[<http://www.inciensa.sa.cr/actualidad/informes%20de%20vigilancia.aspx>] Accessed 06 January 2021."

2.4.3b

Does the country make de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar)?

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that Costa Rica makes de-identified COVID-19 surveillance data available daily, including percentage of new cases at local and national level, among other measures. This information is widely available through open sources belonging to the Ministry of Health. Information shown includes data on confirmed cases/rate, new cases, recovered cases/rate, death cases/rate, accumulated cases, use of ICUs, and cases by national/foreigner status, age and location [1,2,3]. Similarly, through the INCIESA website it is also possible to get access to relevant COVID-19 information in Costa Rica, and get access to the worldwide COVID-19 real-time database, where it is possible to access information from Costa Rica. [4]

[1] National regulations and protocols against COVID-19: <https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>. Accessed 06 January 2021.

[2] Daily-case registration and aggregated data: <https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1725-situacion-nacional-covid-19>. Accessed 06 January 2021.

[3] Protocols to prevent the spread of COVID-19 with a specific component targeting the indigenous populations: <https://www.ministeriodesalud.go.cr/index.php/centro-de-informacion/material-comunicacion/protocolos-ms>. Accessed 06 January 2021.

[4] Real-time worldwide and Costa Rica COVID-19 information. <https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>. Accessed 06 January 2021.

2.4.4 Ethical considerations during surveillance

2.4.4a

Is there legislation and/or regulations that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities?

Yes = 1 , No = 0

Current Year Score: 1

In Costa Rica regulations safeguard the confidentiality of personal health data. In 2017, the government passed Executive Decree N° 40556 - S, a regulation on health surveillance in Costa Rica. Article 31 of the decree specifically addresses the protection of personal health data. The decree states, "In terms of personal health data and without demerit of the collective interest, the Ministry of Health and information providers will apply strict ethical standards and effective mechanisms to safeguard the privacy and privacy of the people affected by an event, their families and contacts, within the framework of Law No. 8968 of July 7, 2011 "Law on the Protection of the person from the processing of their personal data". [1,2] On an official document of the Ministry of Health (DGA-546-2016) "Advice on the Law of the Protection of the People against the Treatment of their Personal Data" it states that the Ministry - under the umbrella of the Law No. 8968 must reasonably ensure the confidentiality, integrity and availability of the information, which means protecting it against unauthorized use,

disclosure or modification, damage or loss, or other dysfunctional factors occurred during the treatment of personal health data. [3]

[1] Executive Decree. 23 August 2017. "Executive Decree 40556 - S" ("Decreto Ejecutivo 40556 - S").

[https://www.imprentanacional.go.cr/pub/2017/08/23/ALCA206_23_08_2017.pdf] Accessed 06 January 2021.

[2] Government of Costa Rica. "Reglamento de actuación de la Ley de Protección de la Persona Frente al Tratamiento de sus Datos Personales en el Poder Judicial (Ley N° 8968)".

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=78310&nValor3=98645&strTipM=TC] Accessed 06 January 2021.

[3] Ministry of Health (DGA-546-2016) "Advice on the Law of the Protection of the People against the Treatment of their Personal Data". <https://www.ministeriodesalud.go.cr/index.php/informes-auditoria/2016-1/3181-dga-546-2016-asesoria-sobre-la-ley-de-proteccion-de-la-persona-frente-al-tratamiento-de-sus-datos-personales-ley-n-8968/file>. Accessed 06 January 2021.

2.4.4b

Is there legislation and/or regulations safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware)?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rican laws, regulations, or guidelines safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware). In 2017, the government passed Executive Decree N° 40556 - S, a regulation on health surveillance in Costa Rica. Article 31 of the decree specifically addresses the protection of personal health data, but it does not mention cyber attacks, nor any kind of attack through digital or technological tools. The decree states, "In terms of personal health data and without demerit of the collective interest, the Ministry of Health and information providers will apply strict ethical standards and effective mechanisms to safeguard the privacy and privacy of the people affected by an event, their families and contacts, within the framework of Law No. 8968 of July 7, 2011 "Law on the Protection of the person from the processing of their personal data". [1,2] Law 8968 on the protection of personal data does not mention cyber attacks. [2] There is no additional information from the Ministry of Health, Ministry of Economy, Industry and Commerce, and Ministry of Science, Technology and Telecommunications. [3,4,5]. The National Strategy in Cybersecurity developed by the Ministry of ICT in 2017 doesn't mention specific types attacks to the public healthcare facilities or systems, however they identify potential platforms prompt to be targeted, such as the "Digital Health Record" (Expendiente Digital Unico de Salud". [6].

[1] Executive Decree. 23 August 2017. "Executive Decree 40556 - S" ("Decreto Ejecutivo 40556 - S").

[https://www.imprentanacional.go.cr/pub/2017/08/23/ALCA206_23_08_2017.pdf] Accessed 06 January 2021.

[2] Government of Costa Rica. 2014. "Reglamento de actuación de la Ley de Protección de la Persona Frente al Tratamiento de sus Datos Personales en el Poder Judicial (Ley N° 8968)".

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=78310&nValor3=98645&strTipM=TC] Accessed 06 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 06 January 2021.

[4] Ministry of the Economy, Industry and Commerce (Ministerio de Economía, Industria y Comercio). "Inicio".

[<https://www.meic.go.cr/meic/>] Accessed 06 January 2021.

[5] Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnología y Telecomunicaciones).

"Inicio". [<https://www.micit.go.cr/>] Accessed 06 January 2021.

[6] National Strategy in Cybersecurity. <https://www.micit.go.cr/sites/default/files/estrategia-nacional-de-ciberseguridad-costa-rica-19-10-17.pdf>. Accessed 06 January 2021

2.4.5 International data sharing

2.4.5a

Has the government made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region?

Yes, commitments have been made to share data for more than one disease = 2, Yes, commitments have been made to share data only for one disease = 1, No = 0

Current Year Score: 0

There is insufficient publicly available evidence that Costa Rica has made commitments via cooperative agreements to share surveillance data during a public health emergency with other countries in the region for one or more diseases.

On 29 May 2020 the Government of Costa Rica partnered the WHO/PAHO efforts to build a platform for sharing data, knowledge, intellectual property and facilitating equitable access to life-saving health products against COVID-19 [1]. On a similar point, the National University of Costa Rica (UCR) shares scientific and technological contributions for the treatment of patients with COVID-19. All the information needed to obtain serum against the new coronavirus, build ventilators and make swabs for medical tests are included within a platform created by the World Health Organization (WHO) which is called the Covid-19 Rights Repository and which is an initiative proposed by the Government of Costa Rica. [2] Back in March 2020, Minister of Science and Technology Luis Adrián Salazar Solís expressed Costa Rica's support to the creation of a database focused on research and development related to COVID-19 activities, including estimated costs of clinical trials and subsidies provided by governments and charities. This should be a repository of free access that serves to face this emergency [3] However, it is unclear whether disease surveillance data is specifically shared with other countries. [1, 2, 3]

There is no further evidence of Costa Rica sharing disease surveillance data with other countries on the websites of the Ministry of Health and the National Reference Laboratory. [4, 5]

[1] Pan American Health Organization (PAHO). "Repositorio de Derechos COVID-19". [<https://www.paho.org/es/noticias/29-5-2020-oms-costa-rica-lanzan-repositorio-derechos-covid-19>] Accessed 06 January 2021.

[2] The UCR shares with the world scientific and technological contributions for the treatment of patients with COVID-19. "<https://www.ucr.ac.cr/noticias/2020/06/06/la-ucr-comparte-con-el-mundo-aportes-cientificos-y-tecnologicos-para-el-tratamiento-de-pacientes-con-covid-19.html>". Accessed 06 January 2021.

[3] Presidencia. 30 March 2020. "COSTA RICA PARTICIPA EN ENCUENTRO MUNDIAL PARA BUSCAR SOLUCIONES CIENTÍFICAS Y TECNOLÓGICAS A COVID-19". (COSTA RICA PARTICIPA EN ENCUENTRO MUNDIAL PARA BUSCAR SOLUCIONES CIENTÍFICAS Y TECNOLÓGICAS A COVID-19). [<https://www.presidencia.go.cr/comunicados/2020/03/costa-rica-participa-en-encuentro-mundial-para-buscar-soluciones-cientificas-y-tecnologicas-a-covid-19/>]. Accessed 10 January 2021.

[4] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 16 February 2021.

[5] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [https://www.inciensa.sa.cr/inciensa/centros_referencia/] Accessed 16 February 2021.

2.5 CASE-BASED INVESTIGATION

2.5.1 Case investigation and contact tracing

2.5.1a

Is there a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency?

Yes, there is evidence that the national government supports sub-national systems to prepare for future public health emergencies = 2, Yes, there is evidence that the national government supports sub-national systems, but only in response to active public health emergencies = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rica has a national system in place to provide support at the sub-national level to conduct contact tracing in the event of an active or future public health emergency. The May 2020 "National Guidelines for Surveillance of the COVID-19 disease" provides general guidance on contact tracing, such as guidelines for foreigners arriving to country or people in contact with suspected cases. These mention that health services can follow up with people with confirmed cases to identify the need to be treated in the health services if they show signs of alarm or complications of the illness. However, no further information is given on training, financing, or support to carry out contact tracing in the country. [1] Overall, the Ministry of Health has implemented a number of regulations, protocols, and plans to coordinate and support covid-19 response at the cantonal level. However, there is no detailed information regarding conducting contact tracing [2]. There is no evidence of a national system in place to provide support at the sub-national level to conduct contact tracing in the event of a public health emergency on the Ministry of Health and the National Reference Laboratory webpages. [3,4]

[1] COVID-19 National Situation. May 2020. "Lineamientos Nacionales para la Vigilancia de la enfermedad COVID-19". <https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>. Accessed 10 January 2021.

[2] National COVID-19 situation. <https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>. Guide of shared management of COVID-19 crisis. "https://www.cne.go.cr/covid/Modelo_Gestion_Compartida.aspx" Accessed 08 January 2021.

[3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 16 February 2021.

[4] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [https://www.inciensa.sa.cr/inciensa/centros_referencia/] Accessed 16 February 2021. 2021.

2.5.1b

Does the country provide wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention?

Yes, both economic support and medical attention are provided = 2, Yes, but only economic support or medical attention is provided = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention. Costa Rica has issued general guidelines for home isolation for all Costa Ricans, which differentiate urban/rural

citizens from indigenous citizens, as well as, guidelines for differentiated treatments. However, none of these mention wraparound services [1, 2]. In 2020 the Government issued a serie of measures to protect workers and business from the economic effects of the pandemic. This would close the wraparound services provided by the state. There, for example, they detail specific measures to alleviate social contributions, enable home-office, prevent unemployment and give economic stimulus (paychecks) to the people and sectors most affected by the pandemic. However, these services are not specific to people asked to isolate or be quarantined as a result of being suspected or positive cases for an infectious disease. [6] There is no evidence of wraparound services available on the websites of the Ministry of Health and the National Reference Laboratory. [7, 8]

[1] General guidelines for home isolation of Costa Ricans, residents and diplomats entering the country due to the Coronavirus health alert (COVID-19).

https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/ls_vg_005_lineamientos_generales_manejo_domiciliario_casos_investigacion_07082020.pdf. Accessed 08 January 2021.

[2] Technical guidelines for the prevention of COVID-19 in indigenous territories.

https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/ls_pg_015_lineamientos_preencion_territorios_indigenas_07082020.pdf. Accessed 08 January 2021.

[3] Government measures to protect workers and business from the economic effects of the COVID-19.

<https://www.presidencia.go.cr/comunicados/2020/03/gobierno-presenta-medidas-para-protger-trabajadores-y-empresas-ante-los-efectos-economicos-del-covid-19/>. Accessed 08 January 2021.

[4] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 16 February 2021.

[5] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [https://www.inciensa.sa.cr/inciensa/centros_referencia/] Accessed 16 February 2021. 2021.

2.5.1c

Does the country make de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar)?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica makes de-identified data on contact tracing efforts for COVID-19, since there is no in-depth information on contact tracing. The May 2020 "National Guidelines for Surveillance of the COVID-19 disease" provides general guidance on contact tracing, however confusing with guidelines to keep isolation for different cases (foreigners arriving to country or people in contact with suspected cases). There is a small mention that health services can follow up with people with confirmed cases to identify the need to be treated in the health services if they show signs of alarm or complications of the illness. However, no further information is given [1] The Ministry of Health and National Reference Laboratory has no other relevant information on this [2,3]

[1] COVID-19 National Situation. May 2020. "Lineamientos Nacionales para la Vigilancia de la enfermedad COVID-19".

<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>. Accessed 10 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 16 February 2021.

[3] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [https://www.inciensa.sa.cr/inciensa/centros_referencia/] Accessed 16 February

2021. 2021.

2.5.2 Point of entry management

2.5.2a

Is there a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency?

Yes, plan(s)/agreement(s) are in place to prepare for future public health emergencies = 2, Yes, but plan(s)/agreement(s) are in place only in response to active public health emergencies = 1, No = 0

Current Year Score: 0

There is insufficient evidence that there is a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active or future public health emergency. However, the Costa Rican government, in coordination with the Ministry of Health and Ministry of Transport and other related authorities are continuously developing and implementing border measures to identify, register and trace international travelers infected with COVID-19. They also liaise regulations to open/close international land and air borders. [1, 2]. Similarly, through the INCIESA website it is also possible to get access to relevant COVID-19 information in Costa Rica, and get access to the worldwide COVID-19 real-time database, where it is possible to access information from Costa Rica. [4] The country has issued both the general guidelines for home isolation for all Costa Ricans, where they differentiate urban/rural citizens from indigenous citizens, as well as differentiated treatments [3, 4]. The Costa Rican Institute of Research and Teaching in Nutrition and Health and Ministry of Health has no other relevant information on other agreements besides Covid-19 [5, 6]

[1] Measures and regulations across border control stations. <https://covid19.go.cr/medidas-por-categoria/#seguridad-y-control-de-fronteras>

[2] Contingency plan for a public health event at Juan Santamaría International Airport.

https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf. Accessed 08 January 2021.

[3] National Guidelines for Surveillance of Coronavirus Infection (2019-nCoV).

<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>

https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/lineamientos_generales_aislamiento_domiciliar_quienes_ingresen_pais_v2_20032020.pdf. Accessed 08 January 2021.

[4] General guidelines for home isolation of Costa Ricans, residents and diplomats entering the country due to the Coronavirus health alert (COVID-19).

https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/ls_vg_005_lineamientos_generales_manejo_domiciliario_casos_investigacion_07082020.pdf. Accessed 08 January 2021.

[5] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [https://www.inciensa.sa.cr/inciensa/centros_referencia/] Accessed 16 February 2021. 2021.

[6] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 16 February 2021.

2.6 EPIDEMIOLOGY WORKFORCE

2.6.1 Applied epidemiology training program, such as the field epidemiology training program, for public health professionals and veterinarians (e.g., Field Epidemiology Training Program [FETP] and Field Epidemiology Training Program for Veterinarians [FETPV])

2.6.1a

Does the country meet one of the following criteria?

- Applied epidemiology training program (such as FETP) is available in country
- Resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP)

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

Current Year Score: 1

There is evidence that applied epidemiology training program (such as FETP) is available in Costa Rica, but no public evidence that resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs. The Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) database of FETP programs shows that the Costa Rica program was founded in 2000, has been a member since 2005 and has graduated 1600 students. There is no additional information about the program or any government funding. [1] Websites for the Ministry of Health and TEPHINET do not have additional information about government funding for FETP students. [2,3]

[1] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). "Costa Rica Field Epidemiology Training Program". [<https://www.tephinet.org/training-programs/costa-rica-field-epidemiology-training-program>] Accessed 05 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 05 January 2021.

[3] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). [<https://www.tephinet.org/>] Accessed 05 January 2021

2.6.1b

Are the available field epidemiology training programs explicitly inclusive of animal health professionals or is there a specific animal health field epidemiology training program offered (such as FETPV)?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica offers field epidemiology training programs inclusive of animal health, or that FETP-V is available in country. TEPHINET's member programs only mention the availability of FETP programs and the Ministry of Health does not have additional information on the availability of FETP-V programs. [1,2] There is no additional information from the Ministry of Health. [3]

[1] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). "Costa Rica Field Epidemiology Training Program". [<https://www.tephinet.org/training-programs/costa-rica-field-epidemiology-training-program>] Accessed 06 January 2021

[2] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). October 2018. "Member Programs" [<https://www.tephinet.org/sites/tephinet/files/content/attachment/2018-11->

05/TEPHINET%20Member%20Programs%20at%20a%20Glance.pdf] Accessed 06 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Inicio". [https://www.ministeriodesalud.go.cr/] Accessed 06 January 2021.

2.6.2 Epidemiology workforce capacity

2.6.2a

Is there public evidence that the country has at least 1 trained field epidemiologist per 200,000 people?

Yes = 1, No = 0

Current Year Score: 1

2020

Completed JEE assessments; Economist Impact analyst qualitative assessment based on official national sources, which vary by country

Category 3: Rapid response to and mitigation of the spread of an epidemic

3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

3.1.1 National public health emergency preparedness and response plan

3.1.1a

Does the country have an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential?

Evidence that there is a plan in place, and the plan is publicly available = 2, Evidence that the plan is in place, but the plan is not publicly available OR, Disease-specific plans are in place, but there is no evidence of an overarching plan = 1, No evidence that such a plan or plans are in place = 0

Current Year Score: 0

There is insufficient publicly available evidence that Costa Rica has an overarching national public health emergency response plan in place to address planning for multiple communicable diseases with pandemic potential. In 2009, Costa Rica established the National Liaison Center (Centro Nacional de Enlace, CNE), tasked with drafting a National Contingency Plan to address all public health events. There is no public evidence that the CNE has developed a response plan for multiple communicable diseases with pandemic potential. [1] Various contingency plans are available online, but it is unclear how they work together to provide national guidelines and standard operating procedures during a public health emergency. For example, the Ministry of Health (MOH) published a plan in 2014, "Proposal Plan of Contingency for International Sanitary Regulations", that outlines at a high level the responsibilities of stakeholders including the MOH, Ministry of Agriculture and Livestock, and Red Cross, but it does not address multiple diseases with pandemic potential. [2] Other publicly available plans are for the Juan Santamaria International Airport, and a draft version of a local-level health emergency response plan. [3,4] Note that neither local plan references the existence of a national plan. Both of these local plans describe high level planning for emergencies including communicable or vector-based diseases, natural disasters and other risks, but are not specific to communicable diseases [3,4] There is no additional information from the MOH, National Commission for Risk Prevention and

Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [5,6,7,8]

- [1] Ministry of Health (Ministerio de Salud). "National Liaison Center -International Health Regulations - Costa Rica" ("Centro Nacional de Enlace RSI Costa Rica"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 07 January 2021.
- [2] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations" [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.
- [3] Ministry of Health (Ministerio de Salud). January 2020. ""Contingency plan for a public health emergency - Juan Santamaria International Airport"" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria"). [https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 07 January 2021.
- [4] Ministry of Health (Ministerio de Salud). Undated. ""Proposed contingency plan - International Health Regulations, Region of Corredores"" ("Propuesta plan de contingencia reglamento sanitario internacional, Region Corredores"). [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.
- [5] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 07 January 2021.
- [6] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [<https://www.cne.go.cr/>] Accessed 07 January 2021.
- [7] WHO. "Gestión de riesgo - Costa Rica". [https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costa-rica&Itemid=775&lang=es] Accessed 07 January 2021.
- [8] EL SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio". [https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20promoci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo.] Accessed 07 January 2021. "

3.1.1b

If an overarching plan is in place, has it been updated in the last 3 years?

Yes = 1 , No /no plan in place= 0

Current Year Score: 0

There is insufficient publicly available evidence that Costa Rica has an overarching national public health emergency response plan in place to address planning for multiple communicable diseases with pandemic potential and therefore no evidence of an update within the last three years. In 2009 Costa Rica established the National Liaison Center (Centro Nacional de Enlace, CNE), tasked with drafting a National Contingency Plan to address all public health events. There is no public evidence that the CNE has developed a response plan for multiple communicable diseases with pandemic potential. [1] Various contingency plans are available online, but it is unclear how they work together to provide national guidelines and standard operating procedures during a public health emergency. For example, the Ministry of Health (MOH) published a plan in 2014, "Proposal Plan of Contingency for International Sanitary Regulations", that outlines at a high level the responsibilities of stakeholders including the MOH, Ministry of Agriculture and Livestock, and Red Cross, but it does not address multiple diseases with pandemic potential. [2] Other publicly available plans are for the Juan Santamaria International Airport, and a draft version of a local-level health emergency response plan. [3,4] Note that neither local plan references the existence of a

national plan. Both of these local plans describe high level planning for emergencies including communicable or vector-based diseases, natural disasters and other risks, but are not specific to communicable diseases [3,4] There is no additional information from the MOH, National Commission for Risk Prevention and Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [5,6,7,8]

[1] Ministry of Health (Ministerio de Salud). ""National Liaison Center -International Health Regulations - Costa Rica"" ""Centro Nacional de Enlace RSI Costa Rica"". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 07 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations" [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[3] Ministry of Health (Ministerio de Salud). January 2020. ""Contingency plan for a public health emergency - Juan Santamaria International Airport"" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria"). [https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 07 January 2021.

[4] Ministry of Health (Ministerio de Salud). Undated. ""Proposed contingency plan - International Health Regulations, Region of Corredores"" ("Propuesta plan de contingencia reglamento sanitario internacional, Region Corredores"). [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[5] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 07 January 2021.

[6] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [<https://www.cne.go.cr/>] Accessed 07 January 2021.

[7] WHO. "Gestión de riesgo - Costa Rica". [https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costa-rica&Itemid=775&lang=es] Accessed 07 January 2021.

[8] El SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio". [https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20promoci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo.] Accessed 07 January 2021. "

3.1.1c

If an overarching plan is in place, does it include considerations for pediatric and/or other vulnerable populations?

Yes = 1 , No /no plan in place= 0

Current Year Score: 0

There is insufficient publicly available evidence that Costa Rica has an overarching national public health emergency response plan in place to address planning for multiple communicable diseases with pandemic potential and therefore no evidence of considerations for paediatric and other vulnerable populations. In 2009 Costa Rica established the National Liaison Center (Centro Nacional de Enlace, CNE), tasked with drafting a National Contingency Plan to address all public health events. There is no public evidence that the CNE has developed a response plan for multiple communicable diseases with pandemic potential. [1] Various contingency plans are available online, but it is unclear how they work together to provide national guidelines and standard operating procedures during a public health emergency. For example, the Ministry of Health (MOH) published a plan in 2014, "Proposal Plan of Contingency for International Sanitary Regulations", that outlines at a high level

the responsibilities of stakeholders including the MOH, Ministry of Agriculture and Livestock, and Red Cross, but it does not address multiple diseases with pandemic potential. [2] Other publicly available plans are for the Juan Santamaria International Airport, and a draft version of a local-level health emergency response plan. [3,4] Note that neither local plan references the existence of a national plan. Both of these local plans describe high level planning for emergencies including communicable or vector-based diseases, natural disasters and other risks, but are not specific to communicable diseases [3,4] There is no additional information from the MOH, National Commission for Risk Prevention and Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [5,6,7,8]

[1] Ministry of Health (Ministerio de Salud). "National Liaison Center -International Health Regulations - Costa Rica" ("Centro Nacional de Enlace RSI Costa Rica"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 07 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations" [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[3] Ministry of Health (Ministerio de Salud). January 2020. "Contingency plan for a public health emergency - Juan Santamaria International Airport" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria"). [https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 07 January 2021.

[4] Ministry of Health (Ministerio de Salud). Undated. "Proposed contingency plan - International Health Regulations, Region of Corredores" ("Propuesta plan de contingencia reglamento sanitario internacional, Region Corredores"). [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[5] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 07 January 2021.

[6] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [<https://www.cne.go.cr/>] Accessed 07 January 2021.

[7] WHO. "Gestión de riesgo - Costa Rica". [https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costarica&Itemid=775&lang=es] Accessed 07 January 2021.

[8] El SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio". [https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20promoci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo.] Accessed 07 January 2021. "

3.1.1d

Does the country have a publicly available plan in place specifically for pandemic influenza preparedness that has been updated since 2009?

Yes = 1 , No = 0

Current Year Score: 0

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

3.1.2 Private sector involvement in response planning

3.1.2a

Does the country have a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has a specific mechanism for engaging with the private sector to assist with outbreak emergency preparedness and response. The National Liaison Center (Centro Nacional de Enlace), tasked with drafting a National Contingency Plan, does not have information on working with the private sector on its website [1]. Various contingency plans are available online, but they do not address the private sector and it is unclear how they work together to provide national guidelines and standard operating procedures during a public health emergency. For example, the Ministry of Health (MOH) published a plan in 2014, "Proposal Plan of Contingency for International Sanitary Regulations", that outlines at a high level the responsibilities of stakeholders including the MOH, Ministry of Agriculture and Livestock, and Red Cross, but it does not include the private sector. [2] Note that neither local plan references the existence of a national plan. Both of these local plans describe high level planning for emergencies including communicable or vector-based diseases, natural disasters and other risks, but are not specific to communicable diseases. [3,4] There is no additional information from the MOH, National Commission for Risk Prevention and Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [5,6,7,8]

[1] Ministry of Health (Ministerio de Salud). "National Liaison Center -International Health Regulations - Costa Rica" "Centro Nacional de Enlace RSI Costa Rica". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 07 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations" [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[3] Ministry of Health (Ministerio de Salud). January 2020. "Contingency plan for a public health emergency - Juan Santamaria International Airport" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria").

[https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 07 January 2021.

[4] Ministry of Health (Ministerio de Salud). Undated. "Proposed contingency plan - International Health Regulations, Region of Corredores" ("Propuesta plan de contingencia reglamento sanitario internacional, Region Corredores").

[https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[5] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 07 January 2021.

[6] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [<https://www.cne.go.cr/>] Accessed 07 January 2021.

[7] WHO. "Gestión de riesgo - Costa Rica".

[https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costarica&Itemid=775&lang=es] Accessed 07 January 2021.

[8] EL SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio".

[https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20pro]

moci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo.] Accessed 07 January 2021. "

3.1.3 Non-pharmaceutical interventions planning

3.1.3a

Does the country have a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic?

Yes, a policy, plan and/or guidelines are in place for more than one disease = 2, Yes, but the policy, plan and/or guidelines exist only for one disease = 1, No = 0

Current Year Score: 1

There is some evidence of publicly available documentation that the country has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic for one disease. As part of COVID-19 pandemic, the country has developed several plans and protocols, some of which include NPIs [1]. NPIs consist on isolation of confirmed cases, recommendations on general hygiene care, such as frequent hand washing at home and washing and disinfection of utensils [2]. There is also a May 2020 "Technical guidelines for prevention and containment of COVID-19 outbreaks in public and private health establishments" outlining NPIs to prevent outbreaks that consist of general hygiene recommendations, dedicated infrastructure, and indications on treating patients [3]. There is also a 2020 "Contingency Plan for a Public Health Event at the Juan Santamaría International Airport, Alajuela; Costa Rica" that details actions to take to prevent a spread of a possible health event, which also details actions the country took during an Influenza outbreak in 2009, though NPIs are not specified [4].

[1] Ministry of Health. "National situation Covid-19" (Situación Nacional Covid-19)

[<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>] Accessed 05 April 2021

[2] Ministry of Health. 31 March 2021. "National Guidelines for Surveillance for COVID-19 disease" (Lineamientos Nacionales para la Vigilancia de la enfermedad COVID-19). [<https://www.ministeriodesalud.go.cr/index.php/sobre-ministerio/politicas-planes-estrategias>] Accessed 5 April 2021.

[3] Ministry of Health. 22 May 2020 "Technical guidelines for prevention and containment of COVID-19 outbreaks in public and private health establishments" (Lineamientos técnicos para la prevención y contención de brotes de COVID-19 en los establecimientos de salud públicos y privado) [<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>] Accessed 05 April 2021

[4] Ministry of Health. January 2020. "Contingency Plan for a Public Health Event at the Juan Santamaría International Airport, Alajuela; Costa Rica" (Plan De Contingencia Ante Un Evento De Salud Pública En El Aeropuerto Internacional Juan Santamaría, Alajuela; Costa Rica)[https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 05 April 2021.

3.2 EXERCISING RESPONSE PLANS

3.2.1 Activating response plans

3.2.1a

Does the country meet one of the following criteria?

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak

in the past year?

- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

Current Year Score: 1

There is publicly available evidence that the country has activated their national emergency response plan for an infectious disease outbreak and that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year. The National Emergency Center (CNE) is in charge of centralizing response efforts nationwide, as well as alerts, together with the Ministry of Health. In October 2020 they organized the "2nd National Drill" with a special focus on COVID-19. [1]. In February 2020 several emergency and rapid-response teams in the country were trained in the drill against covid-19 in preparation for a possible outbreak [2]. During most of the 2020 Costa Rica has implemented a series of plan, protocols and strategies oriented to address COVID-19 [3]. The country have put in place a special information platform that centralize most of the information about COVID-19 [4]. There is no relevant information on the Ministry of Health or the National Commission for Risk Prevention and Emergency Attention Costa Rica on emergency plans for other diseases [5,6]. There is no further evidence that the country has completed a national-level biological threat-focused exercise with WHO in the past year [7].

[1] Costa Rica National Drill 2020. [<https://simulacro.cr/>] Accessed 10 January 2021.

[2] Emergency and Health Corps participate in coronavirus simulation. [<https://amprensa.com/2020/02/cuerpos-de-emergencia-y-salud-participan-en-simulacro-de-coronavirus/>]. Accessed 10 January 2021.

[3] COVID-19 National Situation. [<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>]. Accessed 10 January 2021.

[4] Country's Official site about COVID-19. [<https://www.ccss.sa.cr/web/coronavirus/>]. Accessed 10 January 2021.

[5] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 16 February 2021.

[6] National Commission for Risk Prevention and Emergency Attention Costa Rica (Comisión Nacional De Prevención De Riesgos y Atención De Emergencias Costa Rica) [<https://www.cne.go.cr/>] Accessed 16 February 2021.

[7] WHO. "Simulation exercise" [<https://extranet.who.int/sph/simulation-exercise?region=All&country=252>] Accessed 16 February 2021

3.2.1b

Is there evidence that the country in the past year has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities?

Yes, the country has developed and published a plan to improve response capacity = 2 , Yes, the country has developed a plan to improve response capacity, but has not published the plan = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has undergone an exercise to identify a list of gaps and best practices through either an after action review or a biological threat-focused IHR exercise with the WHO. There is no exercise planned in the calendar and no evidence that a previous exercise has been conducted in the past. The Ministry of Health and the National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) do not have information on their websites on the subject. [1,2,3,4]

- [1] World Health Organisation. "Strategic Partnership for International Health Regulations (2005) and Health Security (SPH): After Action Review". [<https://extranet.who.int/sph/after-action-review>] Accessed 10 January 2021.
- [2] World Health Organisation. ""Countries - Costa Rica"". [<https://www.who.int/countries/cr/en/>] Accessed 10 January 2021.
- [3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.
- [4] National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) [<https://www.cne.go.cr/>] Accessed 10 January 2021.

3.2.2 Private sector engagement in exercises

3.2.2a

Is there evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives. On the Ministry of Health website there is no evidence about national-level biological threat-focused exercise nor information that provides glances of private sector participation. Such efforts are also not mentioned in the bioterrorism protocol of 2011. [1,2]. There is no evidence about national-level biological threat-focused exercise on the National Emergency Center website, although they do mention the private sector as key actor in the rapid response of an emergency. [3]. In February 2020 several emergency and rapid-response teams in the country were trained in the drill against covid-19 in preparation for a possible outbreak however there is no evidence of private sector involvement [4]. There is no evidence that the country has completed a national-level biological threat-focused exercise with WHO [5]

[1] Ministry of health. Plants, Protocols, Laws. <https://www.ministeriodesalud.go.cr/index.php/sobre-ministerio/politicas-planes-estrategias>. Accessed 10 January 2021.

[2] Bioterrorism Protocol 2011.

https://www.inciensa.sa.cr/vigilancia_epidemiologica/Protocolos_Vigilancia/Protocolo%20Bioterrorismo.pdf. Accessed 10 January 2021.

[3] National Emergency Center. <https://www.cne.go.cr>. Accessed 10 January 2021.

[4] Emergency and Health Corps participate in coronavirus simulation. <https://amprensa.com/2020/02/cuerpos-de-emergencia-y-salud-participan-en-simulacro-de-coronavirus/>. Accessed 10 January 2021.

[5] WHO. "Simulation exercise" [<https://extranet.who.int/sph/simulation-exercise?region=All&country=252>] Accessed 16 February 2021. 2021.

3.3 EMERGENCY RESPONSE OPERATION

3.3.1 Emergency response operation

3.3.1a

Does the country have in place an Emergency Operations Center (EOC)?

Yes = 1 , No = 0

Current Year Score: 1

Costa Rica has in place an Emergency Operations Center specific for health-related emergencies, including pandemics. In line with the International Health Regulations (IHR), in 2009 Costa Rica established its National Liaison Center (Centro Nacional de Enlace), housed within the Ministry of Health's Health Surveillance Unit. Its coordinating body includes permanent members of the Ministry of Health, the Costa Rican Social Security Fund (CCSS), the Costa Rican Institute of Research and Teaching in Nutrition and Health (INCIENSA), the Ministry of Agriculture's National Animal Health Service (SENASA) and State Phytosanitary Service (SFE), and the Costa Rican Institute of Aqueducts and Sewers (ICAA). It also has ad hoc technical advisors specialized in select health events. In addition, the National Liaison Center receives technical support from the Pan American Health Organization and the World Health Organization (PAHO / WHO), the Center for Disease Control (CDC), and the Secretariat of the Council of Ministers of Health of Central America and Dominican Republic (SECOMISCA).

[1] Ministry of Health (Ministerio de Salud). "National Liaison Center -International Health Regulations - Costa Rica") "Centro Nacional de Enlace RSI Costa Rica". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 10 January 2021.

3.3.1b

Is the Emergency Operations Center (EOC) required to conduct a drill for a public health emergency scenario at least once per year or is there evidence that they conduct a drill at least once per year?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica's National Liaison Center is required to conduct a drill once a year or evidence that they conducted a drill at least once per year. There is no information about drills about the subject of a emergency health scenario on the website of the National Liaison Center [1] or further details available about drills related to that on the website of the Ministry of Health. [2] Every year, however, there is a national drill which includes all of the sectors, including the health sector, where they provide guidelines and oversight to the process, but these are not specifically related to a public health emergencies [3]. In February 2020 the Ministry of Health conducted a sectoral drill to simulate response to the international health emergency due to COVID-19, but there is no evidence of these efforts being part of a yearly plan [4].

[1] Ministry of Health (Ministerio de Salud). "National Liaison Center -International Health Regulations - Costa Rica") "Centro Nacional de Enlace RSI Costa Rica". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 10 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

[3] Costa Rica prepares itself for the National Evacuation and Earthquake drill 2021.

<https://www.presidencia.go.cr/comunicados/2020/08/costa-rica-se-prepara-para-el-2do-simulacro-nacional-de-evacuacion-por-sismo/>. Accessed 10 January 2021

[4] Emergency and Health Corps participate in coronavirus simulation. <https://amprensa.com/2020/02/cuerpos-de-emergencia-y-salud-participan-en-simulacro-de-coronavirus/>. Accessed 10 January 2021.

3.3.1c

Is there public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica's National Liaison Center can conduct, or has conducted within the last year, a coordinated emergency response activated within 120 minutes of the identification of the public health emergency/scenario. The website of the National Liaison Center does not have information on either a response or a response exercise, and the Ministry of Health does not have information on the subject either. [1, 2]

[1] Ministry of Health (Ministerio de Salud). "National Liaison Center -International Health Regulations - Costa Rica") "Centro Nacional de Enlace RSI Costa Rica". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 10 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

3.4.1 Public health and security authorities are linked for rapid response during a biological event

3.4.1a

Does the country meet one of the following criteria?

- Is there public evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

- Are there publicly available standard operating procedures, guidelines, memorandums of understanding (MOUs), or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has carried out an exercise to respond to a potential deliberate biological event or that there are publicly available standard operating procedures or agreements between public health and security authorities to respond to a potential deliberate biological event. The websites of the Ministry of Health [1], Ministry of Public Security [2], and the National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) [3] do not have information on exercises or responses to biological events. Note that in 2006 the Ministry of Public Security founded a special counterterrorism unit for biological and chemical threats, but there is no information about the unit's activities on the Ministry of Public Security's website. [4] The Costa Rican protocol of Bioterrorism of 2011 has no information about rapid response measures carries out to respond to a potential deliberate biological event [5]. In 2006 one hospital in Costa Rica - the CIMA Hugo Villegas - carried out an exercise to respond to an Anthrax outbreak. There is no further information on similar practices aftermath, neither that these belong to a specific plan. [6]

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

[2] Ministry of Public Security (Ministerio de Seguridad Publica). [<https://www.seguridadpublica.go.cr/>] Accessed 10 January 2021.

[3] National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) [<https://www.cne.go.cr/>] Accessed 10 January 2021.

[4] El Universo. 13 March 2006. "Costa Rican police prepares special counterterrorism unit" ("Policía de Costa Rica prepara unidad especial antiterrorista")

[<https://www.eluniverso.com/2006/03/13/0001/14/96C122E2FBB64C9B99B8E003C9C1865C.html>] Accessed 10 January 2021.

[5] Bioterrorism Protocol Costa Rica 2011.

https://www.inciensa.sa.cr/vigilancia_epidemiologica/Protocolos_Vigilancia/Protocolo%20Bioterrorismo.pdf. Accessed 10 January 2021.

[6] "CIMA Hugo Villegas" conducted an emergency bioterrorism drill.

http://www.nacion.com/In_ee/2006/septiembre/30/pais843878.html. Accessed 10 January 2021.

3.5 RISK COMMUNICATIONS

3.5.1 Public communication

3.5.1b

Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) outline how messages will reach populations and sectors with different communications needs (eg different languages, location within the country, media reach)?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica's strategy on public health emergencies includes information on how messages will reach populations with different communication needs. Costa Rica has a pandemic influenza response plan (2008) that contains a risk communication section with clear objectives. However, there is no indication on reaching populations with different communication needs [1]. There is no information on the National Liaison Center's website of communications about health emergencies [2]. During the latest health alert in June 2018, on malaria, there was no evidence that the government has a strategy to reach populations and sectors with different communication needs [3]. There is no provision within the contingency plans for health emergencies from the MOH in 2014 ("Proposal Plan of Contingency for International Sanitary Regulations") and the Juan Santamaria International Airport on reaching populations with different communication needs. [4,5] There is no additional information from the MOH, National Commission for Risk Prevention and Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [6,7,8]. Due to COVID-19 the Ministry of Health released several communication measures and protocols in different indigenous languages. These, however, only communicate how to sneeze or wash hands, but there are no information about national plans or strategies to target different populations or on how to address the different communication needs [9].

[1] Ministry of Health. "Plan de Preparación y Respuesta en Situación de Pandemia de Influenza".

[https://www.paho.org/hq/dmdocuments/2010/NIPP_Costa_rica_2008.pdf?ua=1] Accessed 10 January 2021.

[2] Ministry of Health (Ministerio de Salud). "National Liaison Center -International Health Regulations - Costa Rica") "Centro Nacional de Enlace RSI Costa Rica". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/centro-nacional-de-enlace>] Accessed 10 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations"

[https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[4] Ministry of Health (Ministerio de Salud). January 2020. ""Contingency plan for a public health emergency - Juan Santamaria International Airport"" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria").

[https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf]
Accessed 07 January 2021.

[5] Ministry of Health (Ministerio de Salud). Undated. "Proposed contingency plan - International Health Regulations, Region of Corredores" ("Propuesta plan de contingencia reglamento sanitario internacional, Region Corredores").

[https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 07 January 2021.

[6] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [<https://www.cne.go.cr/>] Accessed 10 January 2021.

[7] WHO. "Gestión de riesgo - Costa Rica".

[https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costa-rica&Itemid=775&lang=es] Accessed 10 January 2021.

[8] EL SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio".

[https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20promoci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo.] Accessed 07 January 2021. "

[9] Protocols for Indigenous Population. <https://www.ministeriodesalud.go.cr/index.php/centro-de-informacion/material-comunicacion/protocolos-ms/protocolos-para-poblacion-indigena>. Accessed 10 January 2021.

3.5.1 Risk communication planning

3.5.1a

Does the country have in place, either in the national public health emergency response plan or in other legislation, regulation, or strategy documents, a section detailing a risk communication plan that is specifically intended for use during a public health emergency?

Yes = 1, No = 0

Current Year Score: 1

There is evidence that Costa Rica has a national public health emergency response plan or other legislation, regulation or strategy documents, that details a risk communication plan that is specifically intended for use during a public health emergency. Costa Rica has a pandemic influenza response plan, which is outlined in the Preparation and Response Plan for Pandemic Influenza. The plan dictates guidelines for national and subnational coordination and organization at the inter-institutional level for the development of strategies and actions necessary for the preparation and response in case of Influenza Pandemic. The plan also contains a risk communication section with clear objectives: 1) Inform officials of the health sector and other public and private sectors about the measures that are considered necessary to minimize the consequences of avian influenza and pandemic in different phases. 2) Communicate to civil society about general aspects, the preventive measures and actions to take in case of illness, to prepare different audiences on how to deal with epidemic events and 3) Establish working relationships with the media to organize a response that inform and properly guide the population. It is divided in three phases: 1) Preparation, planning, awareness and orientation of the population before the possible pandemic; 2) Communication response to the pandemic crisis (i.e intensify messages in the mass media, other actions); 3) Post first wave pandemic. Evaluation and redefinition of the communication response (period of decrease in cases). [1] The Ministry of Health publishes additional information about the National Liaison Center within the Ministry of Health, which is responsible for coordinating responses to health emergencies, including public communication. [2] There is no evidence of a risk communication plan on the country's "COVID-19 National Situation" website [3].

[1] Ministry of Health. "Plan de Preparación y Respuesta en Situación de Pandemia de Influenza".

[https://www.paho.org/hq/dmdocuments/2010/NIPP_Costa_rica_2008.pdf?ua=1] Accessed 10 January 2021.

[2] Ministry of Health. "Centro Nacional de Enlace RSI Costa Rica" Accessed 10 January 2021.

[3] COVID-19 National Situation. <https://www.ministeriodosalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov>. Accessed 10 January 2021.

3.5.1c

Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of publicly available communication plan (or other legislation) that designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. Costa Rica has a pandemic influenza response plan (2008) that contains a risk communication section with clear objectives. It also provides a list of designated spokespersons from the government, with specific criteria for the appointment of speakers and competences according to level. It indicates certain characteristics a spokesperson must have and their levels of competence pre-pandemic, during the pandemic and post pandemic. It mentions that spokespersons will be responsible to report on the measures and actions that are applied in their field of competence [1]. Outside the influenza plan, in what concerns to public health issues/topics, the Ministry of Health is the institution in charge as per its strategic framework. There is no information, however, about an appointee or specific unit acting as spokesperson for other cases [2]. On the main website of the National Emergency Center (CNE) it is detailed how all public institutions - the Ministry of Health among of them - interact to take decisions and advance on the alert management system. It is presumable that the CNE would be the main focal point of communication, however there is no clear evidence of whether it is the only source of communication, or the official one besides the Ministry of Health. Similarly, in the "National Plan for Risk Management 2016-2020", the CNE does not state nor specify a clear communication strategy or a communication unit/person [3,4]. As an example, on the Bioterrorism Protocol, there is no mention of a specific unit/person that will liaise and centralize all the communication efforts in such cases. [5].

[1] Ministry of Health. "Plan de Preparación y Respuesta en Situación de Pandemia de Influenza".

[https://www.paho.org/hq/dmdocuments/2010/NIPP_Costa_rica_2008.pdf?ua=1] Accessed 10 January 2021.

[2] Ministry of Health. Marco Estratégico. [<https://www.ministeriodosalud.go.cr/index.php/sobre-ministerio/marco-estrategico>] Accessed 11 January 2021.

[3] National Risk Management System. [<http://www.cne.go.cr>] Accessed 11 January 2021.

[4] National Risk Management Plan 2016-2020. <https://www.bvs.sa.cr/php/situacion/pngr.pdf>. Accessed 11 January 2021.

[5] Bioterrorism Protocol 2011.

https://www.inciensa.sa.cr/vigilancia_epidemiologica/Protocolos_Vigilancia/Protocolo%20Bioterrorismo.pdf. Accessed 11 January 2021.

3.5.2 Public communication

3.5.2a

In the past year, is there evidence that the public health system has actively shared messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation?

Public health system regularly shares information on health concerns = 2, Public health system shares information only during active emergencies, but does not regularly utilize online media platforms = 1, Public health system does not regularly utilize online media platforms, either during emergencies or otherwise = 0

Current Year Score: 2

There is publicly available evidence that Costa Rica has actively shared messages via online media platforms to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation. In August 2019 the country launched the platform "Government Clarifies" (Gobierno Aclara) as a nationwide effort to tackle fake news across different sectors, among them health. For example, in January 2020 the government clarified that there is not a single case of COVID-19 in the country [1]. Through different medial platforms the Costa Rican government has clarified that, for example, it is a felony to disclose fake news about the COVID-19 pandemic, thus spreading misinformation among the public. [2,3]. The government also regularly uses Facebook on public health concerns. While currently most information is regarding Covid-19, there has been information on other concerns, including their success rate against malaria (April 2019) or concerns and precautionary measures to take against the propagation of dengue cases, which in 2020 surpassed cases registered in 2019 (August 2020 and November 2020) [4]

[1] Government Clarifies. <https://aclaraciones.presidencia.go.cr>. Accessed 10 January 2021.

[2] The Public Prosecutor's Office will process complaints of false news about COVID-19.

<https://www.crhoy.com/nacionales/manana-ministerio-publico-tramitara-denuncias-de-noticias-falsas-sobre-covid-19/>. Accessed 10 January 2021.

[3] Disclosing false information about COVID-19 is illegal and has penalties. <https://delfino.cr/2020/02/divulgar-informacion-falsa-sobre-el-covid-19-es-ilegal-y-tiene-sanciones>. Accessed 10 January 2021.

[4] Facebook. Ministerio de Salud. [<https://www.facebook.com/msaludcr/>] Accessed 17 February 2021.

3.5.2b

Is there evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years?

No = 1, Yes = 0

Current Year Score: 1

There is no publicly available evidence that senior leaders have shared misinformation or disinformation on infectious diseases in the past two years. There is no information about personal or professional accounts from Costa Rican leaders (including the president Carlos Alvarado and the Minister of Health Daniel Salas) sharing or creating fake news using social media [1,2,3,4]. Furthermore, in December 2018, the Office of the Presidency informed and released legal actions to fight against fake news. [5] There are no national and international media showing senior leaders sharing misinformation or disinformation on infectious diseases in the past two years.

[1] Facebook. Carlos Alvarado [<https://www.facebook.com/carlosalvaradoquesada>]. Accessed 17 February 2021.

[2] Facebook. Casa Presidencial [<https://www.facebook.com/CasaPresidencial/>]. Accessed 17 February 2021.

[3] Twitter. Casa Presidencial [<https://twitter.com/msaludcr>]. Accessed 17 February 2021.

[4] Twitter. Ministerio de Salud. [<https://twitter.com/presidenciacr?lang=en>]. Accessed 17 February 2021.

[5] Measures against fake news in Costa Rica. <https://www.presidencia.go.cr/comunicados/2018/12/anuncian-acciones-contra-noticias-falsas-en-linea/>. Accessed 11 January 2021.

3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

3.6.1 Internet users

3.6.1a

Percentage of households with Internet

Input number

Current Year Score: 81.2

2019

International Telecommunication Union (ITU)

3.6.2 Mobile subscribers

3.6.2a

Mobile-cellular telephone subscriptions per 100 inhabitants

Input number

Current Year Score: 161.88

2019

International Telecommunication Union (ITU)

3.6.3 Female access to a mobile phone

3.6.3a

Percentage point gap between males and females whose home has access to a mobile phone

Input number

Current Year Score: 0

2019

Gallup; Economist Impact calculation

3.6.4 Female access to the Internet

3.6.4a

Percentage point gap between males and females whose home has access to the Internet

Input number

Current Year Score: 0

2019

Gallup; Economist Impact calculation

3.7 TRADE AND TRAVEL RESTRICTIONS

3.7.1 Trade restrictions

3.7.1a

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak?

Yes = 0, No = 1

Current Year Score: 1

There is no publicly available evidence that Costa Rica has issued a restriction, without international/bilateral support, on the export/import of medical goods due to an infectious disease outbreak. There is no information to suggest such restrictions on the Ministry of Health and Ministry of Agriculture's websites or in media outlets [1,2]. There is no information of disease outbreaks in Costa Rica during the last year on the World Health Organization's Disease Outbreak News website. [3]

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

[2] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). [<http://www.mag.go.cr/>] Accessed 10 January 2021.

[3] World Health Organisation. ""Disease Outbreak News - Costa Rica." [<https://www.who.int/csr/don/archive/country/cr/en/>] Accessed 10 January 2021.

3.7.1b

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak?

Yes = 0, No = 1

Current Year Score: 1

There is no publicly available evidence that Costa Rica has issued a restriction, without international/bilateral support, on the export/import of non-medical goods. There is no information to suggest such restrictions on the Ministry of Health and Ministry of Agriculture's websites or in media outlets [1,2]. There is no evidence of such a restriction on the World Health Organization's Disease Outbreak News website. [3]

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

[2] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganaderia). [<http://www.mag.go.cr/>] Accessed 10 January 2021.

[3] World Health Organisation. ""Disease Outbreak News - Costa Rica." [<https://www.who.int/csr/don/archive/country/cr/en/>] Accessed 10 January 2021. "

3.7.2 Travel restrictions

3.7.2a

In the past year, has the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak?

Yes = 0, No = 1

Current Year Score: 0

There is evidence that Costa Rica implemented a ban without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. On the website of the National Migrations Authority there is information about the closure of air and road borders due to COVID-19. These decisions correspond to a worldwide healthcare alarm due to the pandemic. [1,2]. The main international airport in Costa Rica has released the updates of the restrictions in place for international travelers wanting to visit Costa Rica. [3] Costa Rica also closed terrestrial frontiers until 1st of February 2021 to all foreigners without residency in Costa Rica due to Covid-19 [3]

[1] Migrations Authority. Press releases. <https://www.migracion.go.cr/Paginas/Cierre-de-Fronteras.aspx>. Accessed 11 January 2021.

[2] Migrations Authority. Communication AJ-1861-10-2020-ABM. <https://www.migracion.go.cr/Documentos%20compartidos/Circulares%20y%20Directrices/2020/COVID-19/Circular%20AJ-1861-10-2020-ABM.%20Medidas%20Migratorias%20%281%29.pdf>. Accessed 11 January 2021.

[3] Santa Maria - San Jose International Airport. Press Release. <https://sjoairport.com/covid19/preguntas-y-respuestas/>. Accessed 11 January 2021.

[4] Deutsche Welle. 5 January 2021. "Costa Rica mantiene el cierre de fronteras terrestres para extranjeros". [<https://www.dw.com/es/costa-rica-mantiene-el-cierre-de-fronteras-terrestres-para-extranjeros/a-56129171>] Accessed 17 February 2021.

Category 4: Sufficient and robust health sector to treat the sick and protect health workers

4.1 HEALTH CAPACITY IN CLINICS, HOSPITALS, AND COMMUNITY CARE CENTERS

4.1.1 Available human resources for the broader healthcare system

4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 289.39

2018

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 341.44

2018

WHO; national sources

4.1.1c

Does the country have a health workforce strategy in place (which has been updated in the past five years) to identify fields where there is an insufficient workforce and strategies to address these shortcomings?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has a public workforce strategy in place, updated in the last five years, to identify fields with insufficient workforce or strategies to address these shortcomings. The Ministry of Health's human resources site, although specifying its principal role as identifying gaps in the workforce, does not have any information on relevant strategies or studies in place; it only posts salary information on various positions. [1]. One of the key objectives (objective # 4) in Costa Rica's country cooperation strategy with the Pan American Health Organisation (PAHO) is "the design and implementation of a national mechanism for human resources planning, based on an integrated information system that identifies gaps in human resources affecting the performance of the health system." According to this objective, Costa Rica's Ministry of Health is tasked with "advancing a national information system, which integrates the institutional databases of the country's different health sectors, including personnel, professional records and certifications, as well as the establishment of a national planning mechanism on supply and demand in the health labour force." [2] There is no mention of shortages of health workforce in the National Health Plan 2016-2020 [3]. There is no additional information from the Ministry of Health, Ministry of Public Education and Ministry of Labour and Social Security. [4,5,6]

[1] Ministry of Health (Ministerio de Salud). "Human Resources" ("Recursos Humanos").

[<https://www.ministeriodesalud.go.cr/index.php/recursos-humanos>] Accessed 13 January 2021.

[2] Pan American Health Organisation (PAHO). July 2016. "Cooperation Strategy with Costa Rica 2016-2019" ("Estrategia de Cooperacion con Costa Rica 2016-2019"). [http://apps.who.int/iris/bitstream/handle/10665/255014/ccs_cri_2016-2019_es.pdf;jsessionid=E8E193866C8F1D9C72A74FD0C5CC5B60?sequence=1] Accessed 13 January 2021.

[3] Gobierno de la Republica. December 2016. National Health Plan 2016-2020 (Plan Nacional de Salud 2016-2020).

[<https://www.ministeriodesalud.go.cr/index.php/biblioteca-de-archivos/sobre-el-ministerio/politcas-y-planes-en-salud/planes-en-salud/964-plan-nacional-de-salud-2016-2020/file>]. Accessed 10 January 2021.

[4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 10 January 2021.

[5] Ministry of Public Education (Ministerio de Educacion Publica). "Inicio". [<https://www.mep.go.cr/>] Accessed 10 January 2021

[6] Ministry of Labour and Social Security (Ministerio de Trabajo y Seguridad Social). "Inicio". [<http://www.mtss.go.cr/>] Accessed 10 January 2021

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 110.0

2019

WHO/World Bank; national sources

4.1.2b

Does the country have the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit located within the country?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rica has the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation facility located within the country. According to the 2015 Ebola protocol document, Costa Rica's San Rafael de Alajuela hospital is the designated hospital in the country that has the isolation capacity to handle patients with Ebola. However, there is no additional information about how the isolation unit works. [1] The Ministry of Health (MOH) has shared a document from the Pan-American Health Organization on precautions for isolating patients, which mentions PPE and separated rooms for patients, but makes no indication about the country's capacity to isolate patients with highly communicable diseases. [2] As consequence of COVID-19, the country issued a guideline to locate people confirmed with COVID-19 in authorized accommodations. The guidelines, which provide steps for adequate care and contention, are not however pertaining to hospitals, but general accommodation. [3] Websites for the MOH and Hospital Metropolitano and Hospital San Rafael de Alajuela, two of the largest hospitals in Costa Rica, do not have information about this. [4,5,6]

[1] Ministry of Health (Ministerio de Salud). 12 April 2015. "Ebola virus: Protocol on the surveillance and clinical management of Ebola" ("Virus Ebola: Protocolo de vigilancia y manejo clinico"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 13 January 2021.

[2] Ministry of Health (Ministerio de Salud). Undated. "Afiches Aislamiento". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/prevencion-y-control-de-infecciones>] Accessed 13 January 2021.

[3] Ministry of Health. 1 July 2020. "LS-CS-013. General guidelines for the isolation of confirmed cases of COVID-19 disease in authorized lodgings".LS-CS-013. Lineamientos generales para el aislamiento de casos confirmados por la enfermedad COVID-19 en hospedajes autorizados [https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/ls_cs_013_hospedaje_autorizado_01072020.pdf]. Accessed 13 January 2021.

[4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 13 January 2021.

[5] Hospital Metropolitano. "Inicio". [<http://www.metropolitanocr.com/>] Accessed 13 January 2021.

[6] Hospital San Rafael de Alajuela. "Inicio". [<https://www.ccss.sa.cr/hospitales?v=26>] Accessed 13 January 2021.

4.1.2c

Does the country meet one of the following criteria?

- Is there evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years?

- Is there evidence that the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence to confirm that Costa Rica has demonstrated capacity to expand isolation capacity, or evidence that the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years, since there is insufficient evidence of the Costa Rica's capacity to isolate patients. According to the 2015 Ebola protocol document, Costa Rica's San Rafael de Alajuela hospital is the designated hospital in the country that has the isolation capacity to handle patients with Ebola. However, there is no additional information about how the isolation unit works or if it has been expanded. [1] The Ministry of Health has shared a document from the Pan-American Health Organization on precautions for isolating patients, which mentions PPE and separated rooms for patients, but makes no indication about the country's capacity to isolate patients with highly communicable diseases. [2] In response to covid-19, the country issued a guideline to locate people confirmed with COVID-19 in authorized accommodations. The guidelines, which provide steps for adequate care and contention, are not however pertaining to hospitals, but general accommodation. [3] Websites for the Ministry of Health and Hospital Metropolitano and Hospital San Rafael de Alajuela, two of the largest hospitals in Costa Rica, do not have information about this. [4,5,6]

[1] Ministry of Health (Ministerio de Salud). 12 April 2015. "Ebola virus: Protocol on the surveillance and clinical management of Ebola" ("Virus Ebola: Protocolo de vigilancia y manejo clinico"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 13 January 2021.

[2] Ministry of Health (Ministerio de Salud). 03 October 2017. "Afiches Aislamiento". [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/prevencion-y-control-de-infecciones>] Accessed 19 March 2019.

[3] Ministry of Health. 1 July 2020. "LS-CS-013. General guidelines for the isolation of confirmed cases of COVID-19 disease in authorized lodgings".LS-CS-013. Lineamientos generales para el aislamiento de casos confirmados por la enfermedad COVID-19 en hospedajes autorizados

[https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/ls_cs_013_hospedaje_autorizado_01072020.pdf]

[4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 18 March 2019.

[5] Hospital Metropolitano. "Inicio". [<http://www.metropolitanocr.com/>] Accessed 19 March 2019.

[6] Hospital San Rafael de Alajuela. "Inicio". [<https://www.ccss.sa.cr/hospitales?v=26>] Accessed 19 March 2019.

4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

4.2.1 Routine health care and laboratory system supply

4.2.1a

Is there a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs?

Yes for both laboratory and medical supply needs = 2, Yes, but only for one = 1, No = 0

Current Year Score: 1

Costa Rica has a national procurement protocol in place used by the Ministries of Health and Agriculture for the acquisition of medical and laboratory supplies.

According to the Ministry of Health website for purchases and contracts, all contracting of a good or service that is processed in the Ministry of Health adheres to what is established by the Administrative Contracting Law and its Regulations. Purchases are made via the Integrated System for Public Purchases (Sistema Integrado de Compras Públicas, SICOP) and each Ministry's purchases are publicly available, including annual procurement plans. SICOP is a virtual procurement model, which seeks to make purchasing and contracting processes of public institutions more efficient. In this section one can find the files with the details of the purchasing and contracting processes for goods and services, as well as the institution's purchasing plan per year. There is evidence that in December 2020, a request for the purchase of gloves, respirators and other medical supplies was made. [1]

[1] Ministry of Health (Ministerio de Salud). "Information about purchases and contracts" ("Información sobre compras y contrataciones"). [<https://www.ministeriodesalud.go.cr/index.php/legislacion-sanitaria-transparencia/725-sobre-el-ministerio/red-de-transparencia/1151-compras-y-contrataciones>] Accessed 13 January 2021.

4.2.2 Stockpiling for emergencies

4.2.2a

Does the country have a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency?

Yes = 2, No = 0, but there is limited evidence about what the stockpile contains = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica maintains a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency. There is no information about reserves in Costa Rica's individual disease plans (e.g.: on influenza) or on the Ministry of Health's or Social Security System's website, or on the Ministry of Public Security or the National Commission on Risk Prevention and Emergency Response, or in publicly available research studies on the subject. [1,2,3,4]. There is evidence in media reporting that the country is buying several types of medical equipment, having currently more buyers than sellers as Costa Rica has had problems with the logistics of supplying strategic items to combat covid-19 [5]. Given the current situation with COVID-19, as of April 2020, Costa Rica was looking to develop its own COVID-19 detection tests, and is competing to acquire reagents and laboratory kits to diagnose the virus that causes the COVID-19 disease. However, there are no news that the detection tests were actually developed [6]. A 2016 press release announced that Costa Rica's Ministry of Health purchased 1 million influenza vaccines to hold on reserve for vulnerable populations and for health workers for that year. The press release also states that in 2015 730,000 doses were purchased. [7] There is also evidence that the government reserved nearly USD 84 million to buy vaccines during the covid-19 pandemic in 2020 [8]. But there is no evidence of whether a stockpile of either vaccines or MCMs was maintained. [7, 8]

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 13 January 2021.

[2] Costa Rican Social Security (Caja Costarricense de Seguro Social). [<https://www.ccss.sa.cr/>] Accessed 13 January 2021.

[3] Ministry of Public Security (Ministerio de Seguridad Pública). [<https://www.seguridadpublica.go.cr/>] Accessed 13 January 2021.

[4] National Commission on Risk Prevention and Emergency Response (Comisión Nacional de Prevención de Riesgos y Atención de Emergencias) [<https://www.cne.go.cr/>] Accessed 13 January 2021.

[5] BBC. 11 April 2020. A "Coronavirus: cómo afecta a América Latina la pugna entre países por conseguir respiradores,

ventiladores y mascarillas" (Coronavirus: cómo afecta a América Latina la pugna entre países por conseguir respiradores, ventiladores y mascarillas). [https://www.bbc.com/mundo/noticias-america-latina-52233577]. Accessed 13 January 2021.

[6] Ministry of Health. 23 April 2020. "Costa Rica will develop its own COVID-19 detection tests" (Costa Rica desarrollará sus propias pruebas para detección de COVID-19). [https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1627-costa-rica-desarrollara-sus-propias-pruebas-para-deteccion-de-covid-19] Accessed 13 January 2021.

[7] Ministry of Health (Ministerio de Salud). "Health authorities will buy one million doses of the flu vaccine in 2016" ("Autoridades de Salud comprarán un millón de dosis de vacunas contra influenza en el 2016") [https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/727-noticias-2016/832-autoridades-de-salud-compraran-un-millon-de-dosis-de-vacunas-contra-influenza-en-el-2016] Accessed 13 January 2021.

[8] La Nacion. 5 January 2020. "How much did each vaccine cost? Pfizer's confidentiality clause prevents knowing, for now" (¿Cuánto costó cada vacuna? Cláusula de confidencialidad de Pfizer impide conocerlo, por ahora). https://www.nacion.com/ciencia/salud/que-contiene-la-clausula-de-confidencialidad-que/CMMBABWHCVGB7MAPROU3ZGEPBA/story/] Accessed 13 January 2021.

4.2.2b

Does the country have a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica maintains stockpiles of laboratory supplies for use during a public health emergency. There is no information about reserves in Costa Rica's individual disease plans (e.g.: on influenza) or on the Ministry of Health's or Social Security System's website, or on the Ministry of Public Security or the National Commission on Risk Prevention and Emergency Response, or in publicly available research studies on the subject. [1,2,3,4].

[1] Ministry of Health (Ministerio de Salud). [https://www.ministeriodesalud.go.cr/] Accessed 13 January 2021.

[2] Costa Rican Social Security (Caja Costarricense de Seguro Social). [https://www.ccss.sa.cr/] Accessed 13 January 2021.

[3] Ministry of Public Security (Ministerio de Seguridad Pública). [https://www.seguridadpublica.go.cr/] Accessed 13 January 2021.

[4] National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) [https://www.cne.go.cr/] Accessed 13 January 2021.

4.2.2c

Is there evidence that the country conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency?

Yes = 1, No = 0

Current Year Score: 0

There is no evidence to conclude that Costa Rica conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. There is no information about stockpiles in Costa Rica's individual disease plans (e.g.: on influenza) or on the Ministry of Health's or Social Security System's website, or on the Ministry of Public Security or the National Commission on Risk Prevention and Emergency Response, or in publicly available research studies on the subject. [1, 2, 3, 4].

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 13 January 2021.

[2] Costa Rican Social Security (Caja Costarricense de Seguro Social). [<https://www.ccss.sa.cr/>] Accessed 13 January 2021.

[3] Ministry of Public Security (Ministerio de Seguridad Publica). [<https://www.seguridadpublica.go.cr/>] Accessed 13 January 2021.

[4] National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) [<https://www.cne.go.cr/>] Accessed 13 January 2021.

4.2.3 Manufacturing and procurement for emergencies

4.2.3a

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is no evidence to conclude that Costa Rica has a plan or agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE), or to procure them for national use. Because of the current situation with Covid-19, there are reports that the country is having problems with the logistics of supplying strategic items to combat Covid-19. According to the president of Social Security Fund (CCSS), the country arranged have agreements with local manufacturers for producing PPE, respirators and diagnostic kits [1]. In order to support the CCSS, private organizations managed to coordinate actions to generate EPP production capacity, through the EPP Local Supply Initiative (ALEPP), a conglomerate of several business, industry and academic institutions. One achievement in this inter-institutional cooperation was the mass production of a mask approved by the CCSS. [2] While there is evidence of the agreement having taken place, there is no evidence of the actual agreement or plan. The government also released a statement mentioning that they signed a contract with Pfizer and BioNTech to manufacture and supply the vaccine against COVID-19, but it does not specify where does the manufacturing takes place [3]. There is no relevant information in the Ministry of Health's or Social Security System's website, or on the Ministry of Public Security or the National Commission on Risk Prevention and Emergency Response, or in publicly available research studies on the subject. [4, 5, 6, 7].

[1] BBC. 11 April 2020. A "Coronavirus: cómo afecta a América Latina la pugna entre países por conseguir respiradores, ventiladores y mascarillas" (Coronavirus: cómo afecta a América Latina la pugna entre países por conseguir respiradores, ventiladores y mascarillas). [<https://www.bbc.com/mundo/noticias-america-latina-52233577>]. Accessed 13 January 2021.

[2] Periodico Mensaje. 14 May 2020. "Costa Rica develops the capacity to produce high quality personal protective equipment (PPE)" (Costa Rica desarrolla la capacidad de producir equipos de protección personal (EPP) de alta calidad) [<https://www.periodicomensaje.com/salud/4982-costa-rica-desarrolla-la-capacidad-de-producir-equipos-de-proteccion-personal-epp-de-alta-calidad>] Accessed 13 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Costa Rica signs an agreement with Pfizer and BioNTech for the supply of a candidate vaccine against SARS-CoV-2" (Costa Rica firma acuerdo con Pfizer y BioNTech para suministro de vacuna candidata contra el SARS-CoV-2) [<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1907-costa-rica-firma-acuerdo-con-pfizer-y-biontech-para-suministro-de-vacuna-candidata-contra-el-sars-cov-2>] Accessed 13 January 2021.

[4] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr/>] Accessed 13 January 2021.

[5] Costa Rican Social Security (Caja Costarricense de Seguro Social). [<https://www.ccss.sa.cr/>] Accessed 13 January 2021.

[6] Ministry of Public Security (Ministerio de Seguridad Publica). [<https://www.seguridadpublica.go.cr/>] Accessed 13 January 2021.

[7] National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) [<https://www.cne.go.cr/>] Accessed 13 January 2021.

4.2.3b

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica plans to leverage domestic manufacturing capacity to produce laboratory supplies for use during a public health emergency or that there is a mechanism to procure laboratory supplies for national use during a public health emergency. There is no relevant information for either case in the Ministry of Health, the National Commission for Risk Prevention and Emergency Attention Costa Rica and the Ministry of Public Security [1,2,3]

[1] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr/>] Accessed 17 February 2021.

[2] National Commission for Risk Prevention and Emergency Attention Costa Rica (Comisión Nacional De Prevención De Riesgos y Atención De Emergencias Costa Rica) [<https://www.cne.go.cr/>] Accessed 17 February 2021. 2021.

[3] Ministry of Public Security (Ministerio de Seguridad Publica). [<https://www.seguridadpublica.go.cr/>] Accessed 17 February 2021.

4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

4.3.1 System for dispensing medical countermeasures (MCM) during a public health emergency

4.3.1a

Does the country have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics)?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has a plan, program, and guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency, but only regarding distribution. Due to the COVID-19 pandemic, the Costa Rican government has liaised the acquisition of vaccines from Pfizer to begin the immunization of both medical bodies (as well as frontliners) and the people. The Costa Rican Social Security Fund (CCSS) has implemented a plan that currently reaches out 47 healthcare facilities nationwide to supply medicines to patients with chronic illnesses. [1,2]. Hospitals in Costa Rica are developing, together with the Ministry of Health, a plan to supply with antiretrovirals on time to patients with HIV/AIDS during the pandemic. [3] There is no relevant information for either case in the Ministry of Health, the National Commission for Risk Prevention and Emergency Attention Costa Rica and the Ministry of

Public Security [4,5,6]

- [1] Presidencia. 23 December 2020. "First convoy of covid-19 vaccines arrive in Costa Rica". <https://www.presidencia.go.cr/comunicados/2020/12/llego-al-pais-primer-lote-de-vacunas-contra-covid-19/>. Accessed 12 January 2021.
- [2] Presidencia. 24 March 2020. "Costa Rican Post Office and Budget Car Rental join forces to deliver mediciones to homes". <https://www.presidencia.go.cr/comunicados/2020/03/ccss-correos-de-costa-rica-y-budget-car-rental-se-unen-para-entregar-medicamentos-a-domicilio/>. Accessed 12 January 2021.
- [3] RUCR. 22 September 2020. "HIV/AIDS medicine and COVID-19 plan in Costa Rica". <https://radios.ucr.ac.cr/2020/09/interferencia/vivir-con-vih-en-tiempos-de-covid-19-cuando-los-antirretrovirales-urgentes-llegan-tarde/>. Accessed 12 January 2021.
- [4] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 17 February 2021.
- [5] National Commission for Risk Prevention and Emergency Attention Costa Rica (Comisión Nacional De Prevención De Riesgos y Atención De Emergencias Costa Rica) [<https://www.cne.go.cr/>] Accessed 17 February 2021. 2021.
- [6] Ministry of Public Security (Ministerio de Seguridad Publica). [<https://www.seguridadpublica.go.cr/>] Accessed 17 February 2021.

4.3.2 System for receiving foreign health personnel during a public health emergency

4.3.2a

Is there a public plan in place to receive health personnel from other countries to respond to a public health emergency?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Costa Rica has a public plan in place to receive health personnel from other countries to respond to a public health emergency. Various public health contingency plans are available online, but it is unclear how they work together to provide national guidelines and standard operating procedures during a public health emergency. For example, the Ministry of Health (MOH) published a plan in 2014, "Proposal Plan of Contingency for International Sanitary Regulations", that outlines at a high level the responsibilities of stakeholders including the MOH, Ministry of Agriculture and Livestock, and Red Cross, but it does not address receiving international personnel. [1] Other publicly available plans are for the Juan Santamaria International Airport, and a draft version of a local-level health emergency response plan. Neither plan addresses international emergency personnel. [2,3] There is no additional information from the MOH, National Commission for Risk Prevention and Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [4,5,6,7].

- [1] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations" [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 12 January 2021.
- [2] Ministry of Health (Ministerio de Salud). January 2020. ""Contingency plan for a public health emergency - Juan Santamaria International Airport"" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria"). [https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 12 January 2021.
- [3] Ministry of Health (Ministerio de Salud). Undated. ""Proposed contingency plan - International Health Regulations, Region

of Corredores"" ("Propuesta plan de contingencia reglamento sanitario internacional, Region Corredores").

[https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 12 January 2021.

[4] Ministry of Health (Ministerio de Salud). "Inicio". [https://www.ministeriodesalud.go.cr/] Accessed 12 January 2021.

[5] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [https://www.cne.go.cr/] Accessed 12 January 2021.

[6] WHO. "Gestión de riesgo - Costa Rica".

[https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costa-rica&Itemid=775&lang=es] Accessed 12 January 2021.

[8] EL SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio".

[https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20promoci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo.] Accessed 12 January 2021.

4.4 HEALTHCARE ACCESS

4.4.1 Access to healthcare

4.4.1a

Does the constitution explicitly guarantee citizens' right to medical care?

Guaranteed free = 4, Guaranteed right = 3, Aspirational or subject to progressive realization = 2, Guaranteed for some groups, not universally = 1, No specific provision = 0

Current Year Score: 0

2020

World Policy Analysis Center

4.4.1b

Access to skilled birth attendants (% of population)

Input number

Current Year Score: 90

2015

WHO/World Bank/United Nations Children's Fund (UNICEF)

4.4.1c

Out-of-pocket health expenditures per capita, purchasing power parity (PPP; current international \$)

Input number

Current Year Score: 268.28

2017

WHO Global Health Expenditure database

4.4.2 Paid medical leave

4.4.2a

Are workers guaranteed paid sick leave?

Paid sick leave = 2, Unpaid sick leave = 1, No sick leave = 0

Current Year Score: 2

2020

World Policy Analysis Center

4.4.3 Healthcare worker access to healthcare

4.4.3a

Has the government issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency?

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Costa Rica has a plan and public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency, but only guarantees to be provided with care or prioritization regarding the vaccines. The Ministry of Health has committed to provide immunization to all frontline health personnel whether they were previously infected or not with COVID-19. Out of the 2,455 people immunized in the first round, 60% were health personnel [1]. The CCSS has prepared a plan to adequate its supply chain, as well as key infrastructure to support healthcare facilities nationwide in preparation to the vaccine process. Health personnel is to be prioritized when immunization begins [2]. There is no public information however on healthcare workers being prioritized in case they become ill. No information can be found on the Ministry of Health, or on the National Guidelines for Surveillance of Coronavirus Infection (2019-nCoV) [3,4]

[1] Ministry of Health (Ministerio de Salud). "2,455 people started the new year with the first dose of covid-19 vaccine". <https://www.ministeriodosalud.go.cr/index.php/centro-de-prensa/noticias/746-noticias-2021/2024-2-455-personas-iniciaron-nuevo-ano-con-la-primera-dosis-de-la-vacuna-contra-covid-19>. Accessed 12 January 2021.

[2] El Pais. 29 December 2020. "CCSS prepared for constant supply as Covid-19 vaccine enters Costa Rica". <https://www.elpais.cr/2020/12/29/ccss-preparada-para-suministro-constante-conforme-ingrese-la-vacuna-contra-covid-19-a-costa-rica/>. Accessed 12 January 2021.

[3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodosalud.go.cr>] Accessed 17 February 2021.

[4] Ministry of Health (Ministerio de Salud). "National Guidelines for Surveillance of Coronavirus Infection (2019-nCoV)" (Lineamientos Nacionales para la Vigilancia de la infección por Coronavirus (2019-nCoV)). <https://www.ministeriodosalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov> Accessed 17 February 2021.

4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

4.5.1 Communication with healthcare workers

4.5.1a

Is there a system in place for public health officials and healthcare workers to communicate during a public health emergency?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient public evidence that Costa Rica has a system in place for public health officials and healthcare workers to communicate during a public health emergency. Various public health contingency plans are available online, and some outline how public health officials and healthcare workers communicate. The 2017 Multi-threat Response Plan for Emergencies and Disasters in the Health Sector of Honduras 2018 - 2022 has a section on coordination and communication among stakeholders, but it does not describe how healthcare workers can communicate with the government. [1] The 2014 "Proposal Plan of Contingency for International Sanitary Regulations" does not specifically describe this. [2] The contingency plan for a public health emergency at the Juan Santamaria International Airport specifies that healthcare workers must communicate with regional directorate office of the Ministry of Health (Direction Regional de Rectoria de la Salud Central Norte), which, in turn, communicates with the National Liaison Center (within the Ministry of Health's Health Surveillance unit) and directly with the Minister of Health, as well as with the Costa Rican Social Security System. However, there is no specific description for how to do this. [3] Costa Rica's surveillance and clinical management protocol on Ebola describes the use of an institutional MOH website that is accessible to healthcare providers and government so that stakeholders can communicate. However it is not clear if this functions for emergencies. [4] There is no additional information from the MOH, National Commission for Risk Prevention and Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [5,6,7]

[1] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations" [https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 12 January 2021.

[2] Ministry of Health (Ministerio de Salud). January 2020. ""Contingency plan for a public health emergency - Juan Santamaria International Airport"" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria"). [https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 12 January 2021.

[3] Ministry of Health (Ministerio de Salud). 12 April 2015. "Ebola virus: Protocol on the surveillance and clinical management of Ebola" ("Virus Ebola: Protocolo de vigilancia y manejo clinico"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 12 January 2021.

[4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 12 January 2021.

[5] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [<https://www.cne.go.cr/>] Accessed 12 January 2021.

[6] WHO. "Gestión de riesgo - Costa Rica".

[https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costa-rica&Itemid=775&lang=es] Accessed 12 January 2021.

[8] El SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio".

[https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20promoci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo] Accessed 12 January 2021. "

4.5.1b

Does the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient public evidence that Costa Rica has a system in place for public health officials and healthcare workers to communicate during a public health emergency in both the public and private sector. Various public health contingency plans are available online, and some outline how public health officials and healthcare workers communicate though there is no evidence of two-way communication. The 2017 Multi-threat Response Plan for Emergencies and Disasters in the Health Sector of Honduras 2018 - 2022 has a section on coordination and communication among stakeholders, but it does not describe how healthcare workers can communicate with the government. [1] The 2014 "Proposal Plan of Contingency for International Sanitary Regulations" does not specifically describe this. [2] The contingency plan for a public health emergency at the Juan Santamaria International Airport specifies that healthcare workers must communicate with regional directorate office of the Ministry of Health (Direction Regional de Rectoria de la Salud Central Norte), which, in turn, communicates with the National Liaison Center (within the Ministry of Health's Health Surveillance unit) and directly with the Minister of Health, as well as with the Costa Rican Social Security System. However, there is no specific description for how to do this. [3] Costa Rica's surveillance and clinical management protocol on Ebola describes the use of an institutional MOH website that is accessible to healthcare providers and government so that stakeholders can communicate. However it is not clear if this functions for emergencies. [4] There is no additional information from the MOH, National Commission for Risk Prevention and Attention to Emergencies, the local WHO office, or the National System of National Risk Management, a multisectoral system that is responsible for managing disaster risk in Costa Rica. [5, 6, 7]

[1] Ministry of Health (Ministerio de Salud). "Proposal Plan of Contingency for International Sanitary Regulations"

[https://www.ministeriodesalud.go.cr/misalud_2017/index.php/quiosco-de-informacion/centro-de-documentacion/material-educativo/enfermedades/ebola/2528-plan-de-contingencia-local-y-de-frontera-paso-canoas-para-atender-eventos-de-salud-publica-2014/file] Accessed 12 January 2021.

[2] Ministry of Health (Ministerio de Salud). January 2020. ""Contingency plan for a public health emergency - Juan Santamaria International Airport"" ("Plan de contingencia ante un evento de salud publica - Aeropuerto Internacional Juan Santamaria").

[https://www.ministeriodesalud.go.cr/sobre_ministerio/prensa/docs/plan_contingencia_eventos_salud_publica_AIJS.pdf] Accessed 12 January 2021.

[3] Ministry of Health (Ministerio de Salud). 12 April 2015. "Ebola virus: Protocol on the surveillance and clinical management of Ebola" ("Virus Ebola: Protocolo de vigilancia y manejo clinico"). [<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/zoonosis/2882-enfermedad-virus-ebola-protocolo-de-vigilancia-y-manejo-clinico/file>] Accessed 12 January 2021.

[4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 12 January 2021.

[5] National Commission for Risk Prevention and Attention to Emergencies (Comision Nacional de Prevention de Riesgos y Atencion de Emergencias). "Inicio". [<https://www.cne.go.cr/>] Accessed 12 January 2021.

[6] WHO. "Gestión de riesgo - Costa Rica".

[https://www.paho.org/disasters/index.php?option=com_content&view=article&id=565:gestion-de-riesgo-costa-rica&Itemid=775&lang=es] Accessed 12 January 2021.

[8] El SISTEMA NACIONAL DE GESTIÓN DEL RIESGO. "Inicio".

[https://www.cne.go.cr/rectoria/sistema_nacional_gestion_riesgo.aspx#:~:text=Su%20prop%C3%B3sito%20es%20la%20promoci%C3%B3n,de%20las%20pr%C3%A1cticas%20del%20desarrollo] Accessed 12 January 2021. "

4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

4.6.1 Healthcare associated infection (HCAI) prevention and control programs

4.6.1a

Is there evidence that the national public health system is monitoring for and tracking the number of healthcare associated infections (HCAI) that take place in healthcare facilities?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that Costa Rica's national public health system monitors for and tracks the number of health care associated infections (HCAI) that take place in healthcare facilities. Press releases about three years' worth of annual reports released by the Evaluation of Health Services unit (Evaluacion de Servicios de Salud) are available on the website of the Costa Rican Social Security system [1]. The annual report or the data itself could not be located either on the website of the Ministry of Health or the Social Security System. [1,2] According to the press report, surveillance is based on data collected from 22 general hospitals and 5 specialty hospitals managed by the Social Security system across the country. The Social Security system has a central epidemiological surveillance commission in place, as well as epidemiological commissions supported by interdisciplinary teams within each hospital, to monitor on HCAs. Costa Rica's plan on antimicrobial resistance does not specify the work of the Evaluation of Health Services unit either nor does it make reference to the report. [3]. Due to COVID-19 health personnel is being monitored and taken care of in public health facilities to assure its tracking. [4]

[1] Costa Rican Social Security (Caja Costarricense de Seguro Social). 17 April 2018. "Incidents of health care associated infections are low in Costa Rica" ("Incidencia de infecciones asociadas a la atención en salud es baja en Costa Rica"). [<https://www.ccss.sa.cr/noticia?incidencia-de-infecciones-asociadas-a-la-atencion-en-salud-es-baja-en-costa-rica>] Accessed 12 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 12 January 2021.

[3] Ministry of Health (Ministerio de Salud). Undated. "National Action Plan for Combating AMR 2018-2025" (Plan de Accion Nacional de Lucha Contra La Resistencia a los Antimicrobianos 2018-2025").

[<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/resistencia-microbiana/3811-plan-de-accion-nacional-de-lucha-contra-la-resistencia-a-los-antimicrobianos-costa-rica-2018-2025/file>] Accessed 12 January 2021.

[4] 20% of those infected by COVID-19 in Costa Rica are health personnel. <https://semanariouniversidad.com/ultima-hora/el-20-de-los-contagiados-por-covid-19-en-costa-rica-es-personal-de-salud/>. Accessed 12 January 2021.

4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

4.7.1a

Is there a national requirement for ethical review (e.g., from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial?

Yes = 1, No = 0

Current Year Score: 1

Costa Rica requires ethical review from an ethics committee before beginning a clinical trial. The Ministry of Health's National Health Research Council (Consejo Nacional de Investigación en Salud, CONIS), created in 2014, approves clinical trials, which must be approved by an ethics committee before commencing a trial. Phase I clinical trials at the national level must be approved by the ethics committee of the Ministry of Health. However, any public or private entity in whose facilities biomedical research is carried out may constitute an ethics committee for later phases, but they must be accredited by CONIS. [1] The obligations of the CECs are established in the Biomedical Research Regulatory Law, Law N ° 9234 and regulation N ° 39061-S. [2]

[1] Ministry of Health (Ministerio de Salud). "National Health Research Council" ("Consejo Nacional de Investigación en Salud, CONIS"). [<https://www.ministeriodesalud.go.cr/index.php/consejos/conis>] Accessed 12 January 2021.

[2] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica). 8 May 2015. "Regulation on the law regulating biomedical research" ("Reglamento a la Ley Reguladora de Investigación Biomédica - N° 39061-S").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=79779&nValor3=101025&strTipM=TC] Accessed 12 January 2021.

4.7.1b

Is there an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics?

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available information that an expedited process exists for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics. Costa Rica's 2014 law and accompanying regulations on biomedical research, which govern clinical trials in the country, do not mention an expedited process for priority health research. Research deemed "priority health research" and/or "research that is in the public interest" is simply exempt from the relevant registration fees for clinical trials, but it does not include an expedited process for clinical trial approval. [1,2] There is no additional information from the Ministry of Health and the Ministry of Science, Technology and Telecommunications. [3,4]. There is no public evidence that among the authorization procedures for the immunization process of COVID-19, an expedited process was issued to allow clinical trials before its application. [5,6]

[1] Costa Rican System on Legal Information (Sistema Costarricense de Información Jurídica). 22 April 2014 "Law regulating biomedical research" "Ley reguladora de investigación biomédica N° 9234").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=79779&nValor3=101025&strTipM=TC]

2=77070&nValor3=96424&strTipM=TC] Accessed 12 January 2021.

[2] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 8 May 2015. "Regulation on the law regulating biomedical research" ("Reglamento a la Ley Reguladora de Investigación Biomédica - Nº 39061-S").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=79779&nValor3=101025&strTipM=TC] Accessed 12 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 12 January 2021.

[4] Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnología y Telecomunicaciones). "Inicio". [<https://www.micit.go.cr/>] Accessed 12 January 2021.

[5] Ministry of Health authorized the use of Pfizer-BioNTech's COVID-19 vaccine.

<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/2011-salud-autorizo-el-uso-de-la-vacuna-contra-covid-19-de-pfizer-biontech>. Accessed 12 January 2021.

[6] Ministry of Health (Ministerio de Salud). Registro de productos de interes sanitario.

[<https://www.ministeriodesalud.go.cr/index.php/tramites-ms/registro-de-productos-de-interes-sanitario-ms?id=637>]. Accessed 12 January 2021.

4.7.2 Regulatory process for approving medical countermeasures

4.7.2a

Is there a government agency responsible for approving new medical countermeasures (MCM) for humans?

Yes = 1 , No = 0

Current Year Score: 1

There is public evidence of a government agency in Costa Rica that is responsible for approving new medical countermeasures for humans. The Ministry of Health's National Health Research Council (Consejo Nacional de Investigación en Salud, CONIS), created in 2014, approves new medical countermeasures for humans. [1,2] The Regulation on the law regulating biomedical research ("Reglamento a la Ley Reguladora de Investigación Biomédica - Nº 39061-S") gives CONIS the responsibility to approve vaccines, medicines and other medical interventions that can include devices, diagnostics or therapeutics. [2]. The Ministry of Health together with the Directorate for the Regulation of Products of Health Interest (DRPIS) was in charge of approving the COVID-19 vaccine. [4,5]

[1] Ministry of Health (Ministerio de Salud). "National Health Research Council" ("Consejo Nacional de Investigación en Salud, CONIS"). [<https://www.ministeriodesalud.go.cr/index.php/consejos/conis>] Accessed 12 January 2021.

[2] Costa Rican System on Legal Information (Sistema Costarricense de Informacion Jurídica). 8 May 2015. "Regulation on the law regulating biomedical research" ("Reglamento a la Ley Reguladora de Investigación Biomédica - Nº 39061-S").

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=79779&nValor3=101025&strTipM=TC] Accessed 12 January 2021.

[3] Ministry of Health authorized the use of Pfizer-BioNTech's COVID-19 vaccine.

<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/2011-salud-autorizo-el-uso-de-la-vacuna-contra-covid-19-de-pfizer-biontech>. Accessed 12 January 2021.

[4] <https://www.ministeriodesalud.go.cr/index.php/tramites-ms/registro-de-productos-de-interes-sanitario-ms?id=637>.

<https://www.ministeriodesalud.go.cr/index.php/tramites-ms/registro-de-productos-de-interes-sanitario-ms?id=637>.

Accessed 12 January 2021.

4.7.2b

Is there an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that there is an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies, although there is evidence of cases where MCM have been approved in a short period. The Ministry of Health together with the Directorate for the Regulation of Products of Health Interest (DRPIS) was in charge of approving the application of COVID-19 vaccine. On the 15.09.2020 the Ministry of Health authorized COVID-19 vaccine "This authorization is given thanks to the work of the Directorate of Regulation of Products of Health Interest (DRPIS), of the Ministry of Health, which received on December 13, at the end of the day, the application for the authorization of emergency use of the Pfizer-BioNTech vaccine along with the necessary requirements such as the certified letter of the Emergency Use Authorization issued by FDA, sworn statement confirming that the product offered corresponds in all respects to the product approved by FDA, pharmacological and labeling information, as well as certificate of good manufacturing practices. This, however, was not backed up by a national plan authorizing expediting process for MCM during health emergencies. [1,2] There is no evidence of such a process in the Ministry of Health or the Costa Rican Institute of Research and Teaching in Nutrition and Health. [3,4]

[1] Ministry of Health authorized the use of Pfizer-BioNTech's COVID-19 vaccine.

<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/2011-salud-autorizo-el-uso-de-la-vacuna-contra-covid-19-de-pfizer-biontech>. Accessed 12 January 2021.

[2] <https://www.ministeriodesalud.go.cr/index.php/tramites-ms/registro-de-productos-de-interes-sanitario-ms?id=637>.

<https://www.ministeriodesalud.go.cr/index.php/tramites-ms/registro-de-productos-de-interes-sanitario-ms?id=637>.

Accessed 12 January 2021.

[3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 17 February 2021.

[4] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). [www.inciensa.sa.cr] Accessed 17 February 2021.

Category 5: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

5.1 INTERNATIONAL HEALTH REGULATIONS (IHR) REPORTING COMPLIANCE AND DISASTER RISK REDUCTION

5.1.1 Official IHR reporting

5.1.1a

Has the country submitted IHR reports to the WHO for the previous calendar year?

Yes = 1 , No = 0

Current Year Score: 1

2020

World Health Organization

5.1.2 Integration of health into disaster risk reduction

5.1.2a

Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that in Costa Rica epidemics is considered in a standalone national risk reduction strategy. There is only a 2008 "Preparedness and Response Plan in a Situation of an Influenza Pandemic" that dictates guidelines for national and subnational coordination and organization at the inter-institutional level for the development of strategies and actions necessary for the preparation and response in case of Influenza Pandemic. While it does defines preparedness and response strategies that could be applied at the national level, it is not an overarching disaster risk reduction strategy [1]. Costa Rica has a national risk management and reduction strategy, however, it does not explicitly include pandemics, though the strategy encompasses all risks "of natural, technological or man-made causes"... and "result in loss of lives and health of the population..." among others. [2] The risks that are specified include natural and meteorological disasters and infrastructure risk in urban areas, but there is no mention of public health emergencies. There is no publicly available evidence that a separate standalone plan exists on disaster risk reduction for pandemics, either on the websites of the Ministry of Health and its National Liaison Center, or the National Commission on Risk Prevention and Emergency Response [2,3]. Pandemics are also not explicitly mentioned in the Commission's governing documents, including the law on emergencies and risk reduction that created the Commission. [4]

[1]. Pan-American Health Organization. April, 2008. "Preparedness and Response Plan in a Situation of an Influenza Pandemic" (Plan de Preparación y Respuesta en Situación de Pandemia de Influenza).

[https://www.paho.org/hq/dmdocuments/2010/NIPP_Costa_rica_2008.pdf?ua=1] Accessed 18 February 2021.

[2] National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias). 2015. "National policy on risk management 2016-2030" ("Politica nacional de gestion del riesgo 2016-2030").

[2] [<https://drive.google.com/file/d/0ByA2trMWnTn4dS1GOGNIQTFHMu0/view>] Accessed 18 February 2021.

[3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 20 January 2019. 3. National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias) [<https://www.cne.go.cr/>] Accessed 18 February 2021.

[4] National Commission on Risk Prevention and Emergency Response (Comision Nacional de Prevencion de Riesgos y Atencion de Emergencias). 22 November 2005. "Law on emergencies and risk prevention - Decree 8488" ("Ley de emergencia y prevención de riesgos - Decreto 8488")

[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?nValor1=1&nValor2=56178]. Accessed 18 February 2021.

5.2 CROSS-BORDER AGREEMENTS ON PUBLIC HEALTH AND ANIMAL HEALTH EMERGENCY RESPONSE

5.2.1 Cross-border agreements

5.2.1a

Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

Current Year Score: 2

There is evidence that Costa Rica has cross-border agreements, protocols or MOUs with neighbouring countries, or as part of a regional group, with regards to public health emergencies. Costa Rica participates in the Technical Commission for Risk Management in Health (CTEGERS), which is part of the System of Central American Integration (SICA). SICA members include Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and Dominican Republic. CTEGERS exists to coordinate efforts among Central American public health authorities to strengthen their response to both disaster and public health emergencies. It is supported by the regional health agenda put forth by the Council of Health Ministers of Central America. [1] Costa Rica also participates in the SICA-organised Regional Mechanism for Mutual Assistance during Disasters (MecReg). SICA member countries are also members of MecReg. MecReg's goal is to "coordinate international humanitarian help and assistance within the framework of the System of Central American Integration". MecReg promotes the creation of fast response health teams that participating countries can deploy to assist other countries, the creation of a regional list of medical supplies required based on the type of emergency or disaster and the operation of specialised groups to evaluate health problems and needs in emergencies. [2] Additionally, since July 2017, MecReg member countries adopted expedited procedures to ship humanitarian aid across their borders. [3] There is evidence that MecReg has recently (March 2020) responded to the Covid-19 outbreak, launching the Regional Contingency Plan against Coronavirus for more than US \$ 1,900 million for Fiscal Emergency Funds, Support to Central Banks and Liquidity Program for Commercial Banks of SICA member countries.[4] There is no evidence of gaps in implementation with Costa Rica's cross-border agreements.

[1] COMISCA Executive Secretariat (Secretaría Ejecutiva COMISCA). 2018. "Technical Commission for Risk Management in Health" ("Comisión Técnica para la Gestión del Riesgo en Salud (CTEGERS)").

[<https://www.sica.int/consulta/documentos.aspx?ident=1488&IdCat=&IdMod=3&IdEntStyle=143>]. Accessed 10 January 2021

[2] System of Central American Integration (Sistema de la Integración Centroamericana). 2012. "Manual for the Coordination of International Help and Assistance for the System of Central American Integration, SICA" ("MANUAL PARA LA COORDINACIÓN DE LA AYUDA Y ASISTENCIA HUMANITARIA INTERNACIONAL DEL SISTEMA DE LA INTEGRACIÓN CENTROAMERICANA, SICA"). [<https://www.ifrc.org/docs/IDRL/Mec%20Reg%20SICA%202012.pdf>]. Accessed 10 January 2021

[3] ReliefWeb. 2017. "Central America Adopts New Procedure for the Transit of Humanitarian Relief Items".

[<https://reliefweb.int/report/nicaragua/central-america-adopts-new-procedure-transit-humanitarian-relief-items>]. Accessed 10 January 2021.

[4] System of Central American Integration (Sistema de la Integración Centroamericana). 26 March, 2020. "SICA launches the Regional Contingency Plan against Coronavirus for more than US \$ 1,900 million (SICA pone en marcha el Plan de Contingencia Regional frente al Coronavirus por más de US\$1,900 millones)". [https://www.sica.int/noticias/sica-pone-en-marcha-el-plan-de-contingencia-regional-frente-al-coronavirus-por-mas-de-us-1-900-millones_1_121514.html]. Accessed 10 January 2021.

5.2.1b

Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

Current Year Score: 0

There is insufficient publicly available evidence that Costa Rica has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal public health emergencies.

Costa Rica is a member of the International Regional Organization for Plant and Animal Health (Organismo Internacional Regional de Sanidad Agropecuaria, OIRSA). [1] OIRSA provides technical support to the Ministries or Secretariats of Agriculture and Livestock on agricultural production and food safety issues. [2] In Costa Rica, OIRSA has helped the country with emergency preparedness and surveillance on foot and mouth disease, by hosting a simulation with the Ministry of Agriculture's National Animal Health Service [3]. More recently, OIRSA has helped in October 2020 with the accreditation of two techniques used for the diagnosis of different species of bacteria of the genus *Brucella* to the bacteriology area of the National Veterinary Services Laboratory (LANASEVE), of the National Animal Health Service (SENASA) of Costa Rica [4]. During the Covid-19 pandemic, OIRSA helped co-host the 1st Phytosanitary Conference in April 2020, offering guidance and recommendations to technical personnel, producers and personnel working in the agricultural sector for phytosanitary management, and to face risks of this pandemic in their work activity [5]. However, there is no evidence that the OIRSA includes agreements, protocols, or MOUs that explicitly addresses response to animal health emergencies.

[1] International Regional Organization for Plant and Animal Health OIRSA. 2018. "Representaciones".

[<https://www.oirsa.org/informacion.aspx?id=16>]. Accessed 10 January 2021

[2] International Regional Organization for Plant and Animal Health OIRSA. "Search - emergency" (Busqueda - emergencia".

[<https://www.oirsa.org/busqueda.aspx?q=emergencia>] Accessed 10 January 2021.

[3] International Regional Organization for Plant and Animal Health OIRSA. "Costa Rica and OIRSA" ("Costa Rica y el OIRSA")

[<https://www.oirsa.org/informacion.aspx?id=53>] Accessed 10 January 2021.

[4].OIRSA. 14 October 2020. "Costa Rica: brucellosis detection tests accredited after OIRSA, MAG and OIE project" (Costa Rica: acreditan pruebas de detección de brucelosis tras proyecto de OIRSA, MAG y OIE). [<https://www.oirsa.org/noticia-detalle.aspx?id=7997>]. Accessed 10 January 2021.

[5].FAO. 17 April 2020. " Phytosanitary day for the protection of workers and agricultural production during COVID-19" (Realizan jornada fitosanitaria para la protección de las personas trabajadoras y la producción agropecuaria durante la COVID-19. [<http://www.fao.org/costarica/noticias/detail-events/es/c/1271634/>]. Accessed 10 January 2021.

5.3 INTERNATIONAL COMMITMENTS

5.3.1 Participation in international agreements

5.3.1a

Does the county have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?

Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

Current Year Score: 2

2021

Biological Weapons Convention

5.3.1b

Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?

Yes = 1 , No = 0

Current Year Score: 0

2021

Biological Weapons Convention

5.3.1c

Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?

Yes = 1 , No = 0

Current Year Score: 1

2021

Biological Weapons Convention

5.3.1d

Extent of United Nations Security Council Resolution (UNSCR) 1540 implementation related to legal frameworks and enforcement for countering biological weapons:

Very good (60+ points) = 4, Good (45–59 points) = 3, Moderate (30–44 points) = 2, Weak (15–29 points) = 1, Very weak (0–14 points) or no matrix exists/country is not party to the BWC = 0

Current Year Score: 2

2021

Biological Weapons Convention

5.3.2 Voluntary memberships

5.3.2a

Does the country meet at least 2 of the following criteria?

- Membership in Global Health Security Agenda (GHSA)
- Membership in the Alliance for Country Assessments for Global Health Security and IHR Implementation (JEE Alliance)
- Membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP)
- Membership in the Australia Group (AG)
- Membership in the Proliferation Security Initiative (PSI)

Needs to meet at least two of the criteria to be scored a 1 on this measure. , Yes for five = 1 , Yes for four = 1 , Yes for three = 1 , Yes for two = 1 , Yes for one = 0 , No for all = 0

Current Year Score: 0

2021

Global Health Security Agenda; JE Alliance; Global Partnership; Australia Group; PSI

5.4 JOINT EXTERNAL EVALUATION (JEE) AND PERFORMANCE OF VETERINARY SERVICES PATHWAY (PVS)

5.4.1 Completion and publication of a Joint External Evaluation (JEE) assessment and gap analysis

5.4.1a

Has the country completed a Joint External Evaluation (JEE) or precursor external evaluation (e.g., GHSA pilot external assessment) and published a full public report in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

5.4.1b

Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?

Yes = 1, No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

5.4.2a

Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

5.4.2b

Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

5.5 FINANCING

5.5.1 National financing for epidemic preparedness

5.5.1a

Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years. The 2008 "Preparedness and Response Plan in a Situation of an Influenza Pandemic" talks about funds specific for emergencies, but no clear budget is given in this plan [1]. There is no indication of national funds for pandemics (excepto for COVID-19) on the Ministry of Health or Ministry of Agriculture websites [2,3]. Costa Rica has released a fund for alleviating the economy among the COVID-19 pandemic, but the fund is a response to the recent situation [4].

[1] Pan-American Health Organization. April, 2008. "Preparedness and Response Plan in a Situation of an Influenza Pandemic" (Plan de Preparación y Respuesta en Situación de Pandemia de Influenza).

[https://www.paho.org/hq/dmdocuments/2010/NIPP_Costa_rica_2008.pdf?ua=1] Accessed 10 January 2021.

[2] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

[3] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). [<http://www.mag.go.cr/>] Accessed 10 January 2021.

[4] CEPAL. 25 September 2020. "Costa Rica presents a proposal for a Fund to Alleviate the COVID-19 Economy" (Costa Rica presenta propuesta de Fondo para Aliviar la Economía COVID-19). [<https://www.cepal.org/es/comunicados/costa-rica-presenta-propuesta-fondo-aliviar-la-economia-covid-19>] Accessed 10 January 2021.

5.5.2 Financing under Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS) reports and gap analyses

5.5.2a

Does the Joint External Evaluation (JEE) report, National Action Plan for Health Security (NAPHS), and/or national GHSA roadmap allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1, No/country has not conducted a JEE = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

5.5.2b

Does the Performance of Veterinary Services (PVS) gap analysis and/or PVS assessment allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a PVS = 0

Current Year Score: 0

2021

OIE PVS assessments

5.5.3 Financing for emergency response

5.5.3a

Is there a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency (such as through a dedicated national reserve fund, an established agreement with the World Bank pandemic financing facility/other multilateral emergency funding mechanism, or other pathway identified through a public health or state of emergency act)?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of a special emergency public financing mechanism and funds which Costa Rica can access in the face of a public health emergency. As a member state of the Pan-American Health Organization, the country has access to the PAHO Epidemic Emergency Fund. The Epidemic Emergency Fund is used as a revolving fund to advance monies to affected countries in the event of an epidemic outbreak or public health emergency [1]. Costa Rica also appears on the list of countries that have signed agreements with PAHO to use the mechanism of the Strategic Fund. The Strategic Fund is a mechanism created in the year 2000 by PAHO to facilitate the acquisition of strategic public health supplies in the different Member States. The Fund promotes the availability of quality strategic supplies at low cost and helps to build capacity in drug supply management and procurement programming and planning at the national level. The Strategic Fund also assists Member States in the acquisition of public health supplies in emergency cases. There is however no evidence that Costa Rica has used the fund [2]. Internally, in 2018, the Ministry of Health and the Costa Rican Social Security Fund (CCSS) activated a public health emergency in response to a strike of public health workers. The CCSS was able to access to an emergency fund that allowed the agency to hire temporary workers. [3] However, it is not clear if this is a dedicated fund that the country can use in future public health emergencies. There is no additional information about this fund from the Ministry of Health or the CCSS. [4,5] Costa Rica is not eligible for World Bank pandemic financing. [6,7]

[1] Pan-American Health Organization. 31 December 2017. "PAHO Financial Report of the Director and Report of the External Auditor". [<http://iris.paho.org/xmlui/bitstream/handle/123456789/49722/CD56-OD356-e.pdf?sequence=1&isAllowed=y>]. Accessed 10 January 2021.

- [2] Pan-American Health Organization. "PAHO Strategic Fund: Frequently Asked Questions". [https://www.paho.org/hq/index.php?option=com_content&view=article&id=12167:faqs-strategic-fund&Itemid=1694&lang=fr#8]. Accessed 10 January 2021.
- [3] Ministry of Health (Ministerio de Salud). "Ministerio de Salud y CCSS analizaron situación de sector salud". [<https://www.ministeriodesalud.go.cr/index.php/noticias/noticias-2018/1333-ministerio-de-salud-y-ccss-analizaron>] Accessed 10 January 2021.
- [4] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr/>] Accessed 10 January 2021.
- [5] Costa Rican Social Security (Caja Costarricense de Seguro Social). "Inicio". [<https://www.ccss.sa.cr/>] Accessed 10 January 2021.
- [6] World Bank Group. "International Development Association - Borrowing countries". [<http://ida.worldbank.org/about/borrowing-countries>] Accessed 10 January 2021.
- [7] World Bank Group. "Pandemic Financing Facility". [<http://pubdocs.worldbank.org/en/119961516647620597/PEF-Operational-Brief-Dec-2017.pdf>] Accessed 10 January 2021.

5.5.4 Accountability for commitments made at the international stage for addressing epidemic threats

5.5.4a

Is there evidence that senior leaders (president or ministers), in the past three years, have made a public commitment either to:

- Support other countries to improve capacity to address epidemic threats by providing financing or support?
- Improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is insufficient evidence that senior leaders (president or ministers) have made a public commitment either to support other countries to improve capacity to address epidemic threats or improve its own domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity in the past three years. There are only public commitments in regard to Covid-19, but there is no evidence of investments to expand capacity against future threats other than Covid. In September 2020, Costa Rica's president Carlos Alvarado Quesada, presented to the 75th General Assembly of the United Nations, the proposal to create the "Fund to Alleviate COVID-19 Economics - FACE", as an instance of international solidarity in the face of the economic recession caused by the pandemic and an instrument to promote a sustainable recovery. FACE seeks to provide developing countries with the necessary funds to face the socioeconomic impacts of the pandemic on the economy and people. The president explained that it is "an extraordinary support fund of half a trillion dollars, financed with 0.7% of the Gross Domestic Product (GDP) of the largest and strongest economies in the world, as a viable option to address the social and economic impacts that the crisis of the COVID-19 causes in developing countries" [1]. Back in March, Minister of Science and Technology Luis Adrián Salazar Solís participated in a virtual ministerial dialogue together with 79 ministers and 200 representatives of international organizations, where he stressed the need to contribute to global actions as a whole to combat this pandemic, and expressed Costa Rica's commitment to work together and finding innovative solutions. The creation of a database focused on research and development related to COVID-19 activities, including estimated costs of clinical trials and subsidies provided by governments and charities, was also suggested. [2]. There is no mention of commitments to support other countries or improve domestic capacity to address epidemic threats in the Ministry of Health or the Ministry of Foreign Affairs and Worship [3,4]

[1] CEPAL. 25 September 2020. "Costa Rica presents a proposal for a Fund to Alleviate the COVID-19 Economy" (Costa Rica presenta propuesta de Fondo para Aliviar la Economía COVID-19). [<https://www.cepal.org/es/comunicados/costa-rica-presenta-propuesta-fondo-aliviar-la-economia-covid-19>]. Accessed 10 January 2021.

[2] Presidencia. 30 March 2020. "COSTA RICA PARTICIPA EN ENCUENTRO MUNDIAL PARA BUSCAR SOLUCIONES CIENTÍFICAS Y TECNOLÓGICAS A COVID-19". (COSTA RICA PARTICIPA EN ENCUENTRO MUNDIAL PARA BUSCAR SOLUCIONES CIENTÍFICAS Y TECNOLÓGICAS A COVID-19). [<https://www.presidencia.go.cr/comunicados/2020/03/costa-rica-participa-en-encuentro-mundial-para-buscar-soluciones-cientificas-y-tecnologicas-a-covid-19/>]. Accessed 10 January 2021.

[3] Ministry of Health (Ministerio de Salud). [<https://www.ministeriodesalud.go.cr>] Accessed 18 February 2021.

[4] Ministry of Foreign Affairs and Worship (Ministerio de Relaciones Exteriores y Culto). [<https://www.rree.go.cr/>] Accessed 18 February 2021.

5.5.4b

Is there evidence that the country has, in the past three years, either:

- Provided other countries with financing or technical support to improve capacity to address epidemic threats?

- Requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 1

There is evidence that Costa Rica has invested finances to improve its own domestic capacity in the past three years, but there is insufficient evidence that it has provided technical or financial support other countries to improve capacity to address epidemic threats during that same time period. The IMF Executive Board approved in April 2020 USD504 million of emergency assistance in favor of Costa Rica to help address the COVID-19 pandemic, after a request by the government was made earlier that year, in order to alleviate the most affected and vulnerable sectors as a result of the pandemic [1]. In September 2020, Costa Rica's president Carlos Alvarado Quesada, presented to the 75th General Assembly of the United Nations, the proposal to create the "Fund to Alleviate COVID-19 Economics - FACE", as an instance of international solidarity in the face of the economic recession caused by the pandemic and an instrument to promote a sustainable recovery. FACE seeks to provide developing countries with the necessary funds to face the socioeconomic impacts of the pandemic on the economy and people. The president explained that it is "an extraordinary support fund of half a trillion dollars, financed with 0.7% of the Gross Domestic Product (GDP) of the largest and strongest economies in the world, as a viable option to address the social and economic impacts that the crisis of the COVID-19 causes in developing countries [2]. The Global Health Security Funding Tracker shows that between 2014 and 2018, Costa Rica received US\$291M of disbursed funds between 2018 and 2020 for healthcare. [3] While most funding from donors was focused on topics such as universal health coverage, non-communicable diseases and sexual reproductive health, there is evidence of some funding by the World Health Organisation to support projects including the "control strategies, plans and capacities developed for diseases such as cholera, viral haemorrhagic fever, meningitis and influenza and those due to vector-borne, emerging and re-emerging pathogens" (2019) [4] There is no evidence of Costa Rica providing assistance to other countries to address epidemic threats on the GHS tracker. [5]

[1] IMF. 29 April 2020. "IMF Executive Board approves USD504 million of emergency assistance in favor of Costa Rica to help address the COVID-19 pandemic" (El Directorio Ejecutivo del FMI aprueba USD504 millones de asistencia de emergencia a favor de Costa Rica para ayudar a abordar la pandemia de la COVID-19). [<https://www.imf.org/es/News/Articles/2020/04/29/pr20194-costa-rica-imf-executive-board-approves-us-emergency-assistance-address-covid-19-pandemic>]. Accessed 10 January 2021.

[2] CEPAL. 25 September 2020. "Costa Rica presents a proposal for a Fund to Alleviate the COVID-19 Economy" (Costa Rica presenta propuesta de Fondo para Aliviar la Economía COVID-19). [<https://www.cepal.org/es/comunicados/costa-rica-presenta-propuesta-fondo-aliviar-la-economia-covid-19>]. Accessed 10 January 2021.

presenta-propuesta-fondo-aliviar-la-economia-covid-19]. Accessed 10 January 2021.

[3] GHS Tracking Dashboard. "Recipient profile: Costa Rica". [<https://tracking.ghscosting.org/details/918/recipient>] Accessed 20 May 2021.

[4] World Health Organization. "Costa Rica. WHO Health Emergency Programme > Infectious Hazard Management" [<http://open.who.int/2018-19/country-programme/CRI/12.001>] Accessed 18 February 2021.

[5] GHS Tracking Dashboard. "Funder profile: Costa Rica". [<https://tracking.ghscosting.org/details/918/funder>] Accessed 20 May 2021.

5.5.4c

Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?

Yes = 1 , No = 0

Current Year Score: 0

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

5.6.1a

Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that Costa Rica has currently a plan or policy for sharing genetic or epidemiological data, clinical specimens or other biological materials with international organizations or other countries. However, there is evidence of the country's commitment to share data. In April 2020, the National Reference Center for Microbiological Food Safety (CNRIMA) managed to sequence the first genomes of the virus causing the COVID-19 disease and the results were submitted to the Global Initiative on Sharing All Influenza Data (GISAD) platform, which is used globally to share this type of information, thereby making the data from Costa Rica available to the world scientific community [1]. While there is evidence that Costa Rica shares a range of epidemiological surveillance data with the Pan American Health Organization, no official sources, including public statements, agreements or policy documents are publicly available on the Ministry of Health's website or the Ministry of Agriculture. [2,3] There is no mention of such plans on the Pan American Health Organization's website or in the Costa Rica Country Cooperation Strategy, a publication of the Pan American Health Organisation (PAHO) and the World Health Organisation (WHO) Regional Office for the Americas. [4] In addition, while the National Reference Laboratory specifies data sharing with regional laboratory networks on pneumonia and bacterial meningitis (SIREVA II), antimicrobial resistance (ReLAVRA), arbovirus (RELDA) and tuberculosis, the cooperation agreements are not publicly available on its website. [5] The Ministry of Science, Technology and Telecommunications does not have information about this. [6] There is

no evidence of such a plan in media, academic studies, or other external documentation.

[1] Ministry of Health. 30 April 2020. "Inciensa succeeds in sequencing the complete genome of the new coronavirus SARS-CoV-2 (COVID-19)" (Inciensa logra secuenciar el genoma completo del nuevo coronavirus SARS-CoV-2 (COVID-19))

[<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1642-inciensa-logra-secuenciar-el-genoma-completo-del-nuevo-coronavirus-sars-cov-2-covid-19>]. Accessed 10 January 2021.

[2] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

[3] Ministry of Agriculture and Livestock (Ministerio de Agricultura y Ganadería). "Inicio". [<http://www.mag.go.cr/>] Accessed 10 January 2021.

[4] Pan American Health Organization. February 2017. "Country cooperation strategy Costa Rica 2016-2019" ("Estrategia de cooperación de país: Costa Rica. 2016-2019").

[https://www.paho.org/hq/index.php?option=com_docman&view=download&category_slug=country-cooperation-strategy-1764&alias=44808-costa-rica-country-cooperation-strategy-2016-2019-spanish-808&Itemid=270&lang=en] Accessed 18 February 2021.

[5] Costa Rican Institute of Research and Teaching in Nutrition and Health (Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, INCIENSA). "National Bacterial Reference Laboratory" ("Centro Nacional de Referencia de Bacteriología, CNRB"). [http://www.inciensa.sa.cr/inciensa/centros_referencia/bacteriologia.aspx] Accessed 18 February 2021.

[6] Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnología y Telecomunicaciones). "Inicio". [<https://www.micit.go.cr/>] Accessed 18 February 2021.

5.6.1b

Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?

Yes = 0, No = 1

Current Year Score: 1

There is no evidence that Costa Rica has declined to share samples in accordance with the PIP framework in the past two years. The World Health Organisation has not reported any non-compliance in the past two years by Costa Rica, and there is no evidence of non-compliance via media reports. [1] The PAHO FluNet database shows data for Costa Rica through the present. [2] There is no reference to sharing influenza data on the Ministry of Health's website. [3]

[1] World Health Organization (WHO). Pandemic Influenza Preparedness (PIP) Framework.

[<https://www.who.int/influenza/pip/en/>] Accessed 10 January 2021.

[2] PAHO. "FluNet Homepage". [http://ais.paho.org/hip/viz/ed_flu.asp] Accessed 10 January 2021.

[3] Ministry of Health (Ministerio de Salud). "Inicio". [<https://www.ministeriodesalud.go.cr>] Accessed 10 January 2021.

5.6.1c

Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?

Yes = 0, No = 1

Current Year Score: 1

There is no evidence that Costa Rica has declined to share pandemic pathogen samples during an outbreak in the past two years. There is no evidence at the World Health Organisation. [1] There are no reports of Costa Rica's failure to share

pathogen samples during an outbreak in international or local media. In April 2020, the National Reference Center for Microbiological Food Safety (CNRIMA) managed to sequence the first genomes of the virus causing the COVID-19 disease and the results were submitted to the Global Initiative on Sharing All Influenza Data (GISAD) platform, which is used globally to share this type of information, thereby making the data from Costa Rica available to the world scientific community [4].

[1] World Health Organization (WHO). Pandemic Influenza Preparedness (PIP) Framework.

[<https://www.who.int/influenza/pip/en/>]. Accessed 10 January 2021.

[2] Ministry of Health. 30 April 2020. "Inciensa succeeds in sequencing the complete genome of the new coronavirus SARS-CoV-2 (COVID-19)" (Inciensa logra secuenciar el genoma completo del nuevo coronavirus SARS-CoV-2 (COVID-19))

[<https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1642-inciensa-logra-secuenciar-el-genoma-completo-del-nuevo-coronavirus-sars-cov-2-covid-19>]. Accessed 10 January 2021.

Category 6: Overall risk environment and vulnerability to biological threats

6.1 POLITICAL AND SECURITY RISK

6.1.1 Government effectiveness

6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

6.1.1d

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

6.1.1e

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 57

2020

Transparency International

6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

2020

Economist Intelligence

6.1.1g

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

6.1.2 Orderly transfers of power

6.1.2a

How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?

Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

Current Year Score: 4

2021

Economist Intelligence

6.1.3 Risk of social unrest

6.1.3a

What is the risk of disruptive social unrest?

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

Current Year Score: 2

2021

Economist Intelligence

6.1.4 Illicit activities by non-state actors

6.1.4a

How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 4

2021

Economist Intelligence

6.1.4b

What is the level of illicit arms flows within the country?

4 = Very high, 3 = High, 2 = Moderate, 1 = Low, 0 = Very low

Current Year Score: 0

2020

UN Office of Drugs and Crime (UNODC)

6.1.4c

How high is the risk of organized criminal activity to the government or businesses in the country?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 2

2021

Economist Intelligence

6.1.5 Armed conflict

6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 4

2021

Economist Intelligence

6.1.6 Government territorial control

6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

6.1.7 International tensions

6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 2

2021

Economist Intelligence

6.2 SOCIO-ECONOMIC RESILIENCE

6.2.1 Literacy

6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

Current Year Score: 97.86

2018

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);
The Economist Intelligence Unit

6.2.2 Gender equality

6.2.2a

United Nations Development Programme (UNDP) Gender Inequality Index score

Input number

Current Year Score: 0.72

2018

United Nations Development Programme (UNDP); The Economist Intelligence Unit

6.2.3 Social inclusion

6.2.3a

Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

Input number

Current Year Score: 0.6

2018

World Bank; Economist Impact

6.2.3b

Share of employment in the informal sector

Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0

Current Year Score: 1

According to the Continuous Employment Survey corresponding to the first quarter of 2020, the percentage of the employed population with informal employment was 47.1%, without significant changes compared to the same period for the previous year [1]

[1] El Mundo. 8 May 2020. "Continuous Employment Survey: One million people are employed in the informal sector" (Encuesta Continua de Empleo: Un millón de personas tienen empleo en el sector informal). [[https://www.elmundo.cr/costa-rica/encuesta-continua-de-empleo-un-millon-de-personas-tienen-empleo-en-el-sector-informal/#:~:text=San%20Jos%C3%A9%2C%208%20may%20\(elmundo,mismo%20per%C3%ADodo%20del%20a%C3%B1o%20anterior.](https://www.elmundo.cr/costa-rica/encuesta-continua-de-empleo-un-millon-de-personas-tienen-empleo-en-el-sector-informal/#:~:text=San%20Jos%C3%A9%2C%208%20may%20(elmundo,mismo%20per%C3%ADodo%20del%20a%C3%B1o%20anterior.))] Accessed 10 January 2021

6.2.3c

Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

Current Year Score: 1

2016, or latest available

World Bank; Economist Impact calculations

6.2.4 Public confidence in government

6.2.4a

Level of confidence in public institutions

Input number

Current Year Score: 1

2021

Economist Intelligence Democracy Index

6.2.5 Local media and reporting

6.2.5a

Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

Input number

Current Year Score: 2

2021

Economist Intelligence Democracy Index

6.2.6 Inequality

6.2.6a

Gini coefficient

Scored 0-1, where 0=best

Current Year Score: 0.48

Latest available.

World Bank; Economist Impact calculations

6.3 INFRASTRUCTURE ADEQUACY

6.3.1 Adequacy of road network

6.3.1a

What is the risk that the road network will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 1

2021

Economist Intelligence

6.3.2 Adequacy of airports

6.3.2a

What is the risk that air transport will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

6.3.3 Adequacy of power network

6.3.3a

What is the risk that power shortages could be disruptive?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 2

2021

Economist Intelligence

6.4 ENVIRONMENTAL RISKS

6.4.1 Urbanization

6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 80.08

2019

World Bank

6.4.2 Land use

6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: 2.62

2008-2018

World Bank; Economist Impact

6.4.3 Natural disaster risk

6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 4

2021

Economist Intelligence

6.5 PUBLIC HEALTH VULNERABILITIES

6.5.1 Access to quality healthcare

6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 80.09

2018

United Nations; World Bank, UNICEF; Institute for Health Metrics and Evaluation (IHME); Central Intelligence Agency (CIA)
World Factbook

6.5.1b

Age-standardized NCD mortality rate (per 100 000 population)

Input number

Current Year Score: 309.2

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 9.88

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 9.8

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 25.7

2016

WHO

6.5.2 Access to potable water and sanitation

6.5.2a

Percentage of homes with access to at least basic water infrastructure

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 97.82

2017

UNICEF; Economist Impact

6.5.3 Public healthcare spending levels per capita

6.5.3a

Domestic general government health expenditure per capita, PPP (current international \$)

Input number

Current Year Score: 967.57

2018

WHO Global Health Expenditure database

6.5.4 Trust in medical and health advice

6.5.4a

Trust medical and health advice from the government

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 1

2018

Wellcome Trust Global Monitor 2018

6.5.4b

Trust medical and health advice from medical workers

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 2

2018

Wellcome Trust Global Monitor 2018