

Antigua & Barbuda

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

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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: 0

There is no publicly available evidence of a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens for Antigua and Barbuda. There is no national action plan available through the World Health Organization library of National Action Plans or on the websites of the country's Ministry of Health or the Ministry of Agriculture. [1, 2, 3] The 2018-2019 Antimicrobial Resistance Country Self Assessment for Antigua and Barbuda indicates that there is a national AMR action plan under development, though the self-assessment does not indicate when the action plan is due to be complete. [4] The self assessment also indicates that there is no national plan for a system of monitoring AMR. [4] An article in a April 2017 newsletter from the Ministry of Health reports that a Medical Officer from the Ministry of Health stated that a three-year NAP on AMR will be ready by the end of May 2017. [5] There is no more recent update of such a plan available on the websites of the Ministry for Health and Ministry of Agriculture. [2, 3] In December 2014, the Caribbean Public Health Agency (CARPHA)—of which Antigua and Barbuda is a member state—jointly hosted, with Public Health England, a workshop on Combatting Antimicrobial Resistance in the Caribbean. [6]

[1] World Health Organization. "Antimicrobial resistance - Library of national action plans".

[<http://www.who.int/antimicrobial-resistance/national-action-plans/library/en>]. Accessed 22 July 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 22 July 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 22 July 2020.

[4] World Health Organization. "Global Database for Antimicrobial Resistance Country Self Assessment 2018-2019 - Antigua and Barbuda". [<http://amrcountryprogress.org/>]. Accessed 22 July 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. "Newsletter - April 2017".

[<http://www.healthwatchantiguaandbarbuda.com/Newsletter/April%202017%20Newsletter.pdf>]. Accessed 22 July 2020.

[6] Caribbean Public Health Agency (CARPHA). "CARPHA and Public Health England Tackle the Threat of Antimicrobial Drug Resistance in the Region". [<https://carpha.org/More/Media/Articles/ArticleID/86/CARPHA-and-Public-Health-England-Tackle-the-Threat-of-Antimicrobial-Drug-Resistance-in-the-Region>]. Accessed 22 July 2020.

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: 0

There is no evidence of a national laboratory/laboratory system which tests for priority AMR pathogens. However, Antigua and Barbuda can test for some AMR pathogens through the Caribbean Public Health Agency (CARPHA). The CARPHA Laboratory User Manual includes testing capabilities for the following five pathogens in its list of testing services: E. coli; S. pneumoniae; Salmonellosis; Shigellosis; Tuberculosis. [1] The testing services list specifically indicates testing capabilities for drug-resistant forms of one of the priority pathogens, Tuberculosis (drug sensitivity testing (PCR)). [1] CARPHA member states, including Antigua and Barbuda, can submit specimens to the CARPHA laboratory by way of the national public health laboratories. [1] There is no evidence of laboratory sites within Antigua and Barbuda that test for priority AMR pathogens through the Ministry of Health or Ministry of Agriculture, and there is no indication of a national laboratory/laboratory system through the country's Health Service Listings. [2, 3, 4] An article in a April 2017 newsletter from the Ministry of Health states that "plans are in the works to develop a public health laboratory which will allow the country to better monitor and reduce the threat of AMRs". [5] There is no national action plan (NAP) available through the World Health Organization library of National Action Plans, however, the April 2017 newsletter article reports a Medical Officer from the Ministry of Health saying that at three-year NAP on AMR will be ready by the end of May 2017. [6, 5]

[1] Caribbean Public Health Agency (CARPHA). January 2020. "Laboratory Procedure Manual". [https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual[1452].pdf?ver=2020-04-16-180718-920]. Accessed 22 July 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 22 July 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [http://agriculture.gov.ag/]. Accessed 22 July 2020.

[4] Antigua and Barbuda Health Service Listings. [http://medicalspecialists.health.gov.ag/]. Accessed 22 July 2020.

[5] Ministry of Health and the Environment of Antigua and Barbuda. April 2017. "Newsletter - April 2017, Vol. 17". [http://www.healthwatchantiguaandbarbuda.com/Newsletter/April%202017%20Newsletter.pdf]. Accessed 22 July 2020.

[6] World Health Organization. "Antimicrobial resistance - Library of national action plans". [http://www.who.int/antimicrobial-resistance/national-action-plans/library/en]. Accessed 22 July 2020.

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 the government of Antigua and Barbuda conducts detection or surveillance activities for antimicrobial residues or AMR organisms. In the 2018-2019 Antimicrobial Resistance Country Self Assessment, regarding a national surveillance for AMR in food (animal and plant origin), Antigua and Barbuda indicates that "no national plan for a system of surveillance of AMR". [1] There is no national action plan available through the World Health Organization library of National Action Plans, and there is no evidence of AMR detection or surveillance activities through the Ministry of Health, Ministry of Agriculture, or Department of the Environment. [2, 3, 4, 5]

[1] World Health Organization. "Global Database for Antimicrobial Resistance Country Self Assessment 2018-2019 - Antigua and Barbuda". [http://amrcountryprogress.org/]. Accessed 22 July 2020.

[2] World Health Organization. "Antimicrobial resistance - Library of national action plans". [http://www.who.int/antimicrobial-resistance/national-action-plans/library/en]. Accessed 22 July 2020.

[3] Ministry of Health Health, Wellness & The Environment of Antigua and Barbuda.

[https://ab.gov.ag/detail_page.php?page=29]. Accessed 22 July 2020.

[4] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>].

Accessed 22 July 2020.

[5] Department of the Environment of Antigua and Barbuda. [<https://www.environment.gov.ag/en/>]. Accessed 22 July 2020.

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: 2

Antigua and Barbuda has national legislation in place requiring prescriptions for antibiotic use for humans. The Antibiotics and Therapeutic Substances Act of 1951 states that antibiotics may only be dispensed by a registered medical practitioner, dentist, or veterinary surgeon or with the prescription of any such practitioner. [1] The Act also covers licensing requirements for the manufacturing, sale, supply, and import of antibiotics and therapeutic substances, and it states penalties for offences under the Act. [1] USAID's 2012 report on Antigua and Barbuda Health Systems and Private Sector Assessment states that the Act is enacted and enforced by the Pharmacy Council. [2] The country's 1995 Pharmacy Act established the Pharmacy Council to "regulate the practice of pharmacy and the sale of drugs" and, as an extension of the council, a board of inspectorates who submit reports of completed inspections to the Ministry of Health and Medical Benefits Scheme. [2]

[1] Laws of Antigua and Barbuda. Chapter 17: 1 June 1951 "Antibiotics and Therapeutic Substances Act".

[<http://laws.gov.ag/wp-content/uploads/2018/08/cap-17.pdf>]. Accessed 23 July 2020.

[2] USAID. 2012. "Antigua and Barbuda Health Systems and Private Sector Assessment 2011".

[<https://www.hfgproject.org/wp-content/uploads/2015/02/Antigua-and-Barbuda-Health-Systems-and-Private-Sector-Assessment-2011.pdf>]. Accessed 23 July 2020.

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: 2

Antigua and Barbuda has national legislation in place requiring prescriptions for antibiotic use for animals. The Antibiotics and Therapeutic Substances Act of 1951 states that antibiotics may only be dispensed by a registered medical practitioner, dentist, or veterinary surgeon or with the prescription of any such practitioner. [1] The Act also covers licensing requirements for the manufacturing, sale, supply, and import of antibiotics and therapeutic substances, and it states penalties for offences under the Act. [1] USAID's 2012 report on Antigua and Barbuda Health Systems and Private Sector Assessment states that the Act is enacted and enforced by the Pharmacy Council. [2] The country's 1995 Pharmacy Act established the Pharmacy Council to "regulate the practice of pharmacy and the sale of drugs" and, as an extension of the council, a board of inspectorates who submit reports of completed inspections to the Ministry of Health and Medical Benefits Scheme. [2]

[1] Laws of Antigua and Barbuda. Chapter 17: 1 June 1951 "Antibiotics and Therapeutic Substances Act".

[<http://laws.gov.ag/wp-content/uploads/2018/08/cap-17.pdf>]. Accessed 23 July 2020.

[2] USAID. 2012. "Antigua and Barbuda Health Systems and Private Sector Assessment 2011".

[<https://www.hfgproject.org/wp-content/uploads/2015/02/Antigua-and-Barbuda-Health-Systems-and-Private-Sector-Assessment-2011.pdf>]. Accessed 23 July 2020.

1.2 ZOOBOTIC 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: 0

There is no publicly available evidence that Antigua and Barbuda has a national law, plan, or equivalent strategy document, on zoonotic disease. There is no indication of such a plan through the Ministry of Health or Ministry of Agriculture. [1, 2] The Animal Health Act of 2017 mentions zoonotic disease, including that the Ministry of Health shall be notified immediately in the event of an outbreak of a suspected zoonotic disease. [3] However, there is evidence that the country is party to planning and strategy regarding zoonotic disease. In 2012, the Caribbean Community (CARICOM), of which Antigua and Barbuda is a Member State, signed an agreement with the World Organisation for Animal Health (OIE) "to prevent the spread of animal diseases, to improve the animal health", and to "harmonize legislation and regulations on animal diseases and zoonoses". [4] Antigua and Barbuda participates in the Caribbean Animal Health Network (CaribVET), which aims to improve animal and veterinary public health in all the countries and/or the territories of the Caribbean, including strengthening national capacities related to preparedness, surveillance, monitoring and management of animal and zoonotic disease. [5] In addition, the "neglected, tropical and zoonotic disease" is among the programme areas of the Pan American Health Organization division of the World Health Organization Subregional Cooperation Strategy for 2016-2019. [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 23 July 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 23 July 2020.

[3] Antigua and Barbuda. No. 12 of 2017. "Animal Health Act, 2017". [http://legalaffairs.gov.ag/pdf/bills/ANIMAL_HEALTH_BILL_2017.pdf]. Accessed 23 July 2020.

[4] The World Organisation for Animal Health (OIE). 2012. "Agreement Between the Caribbean Community (CARICOM) and the World Organisation for Animal Health (OIE)". [http://www.oie.int/fileadmin/Home/eng/About_us/docs/pdf/accords/CARICOM_ANG.pdf]. Accessed 23 July 2020.

[5] Caribbean Animal Health Network (CaribVET). "Network Objectives". [<https://www.caribvet.net/about-the-network/objectives>]. Accessed 23 July 2020.

[6] Pan American Health Organization/World Health Organization (PAHO/WHO). "Working for Health in the Caribbean: PAHO/WHO Subregional Cooperation Strategy, 2016-2019". [<https://www.paho.org/en/file/64750/download?token=BUStU0gL>]. Accessed 23 July 2020.

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 no publicly available evidence that Antigua and Barbuda has a national law, plan, or equivalent strategy document which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. There is no indication of such a plan through the Ministry of Health or Ministry of Agriculture. [1, 2] The Animal Health Act of 2017 mentions zoonotic disease, including that the Ministry of Health shall be notified immediately in the event of an outbreak of a suspected zoonotic disease. [3] However, there is no specific strategy that includes measures for risk identification and reduction. In 2012, the Caribbean Community (CARICOM), of which Antigua and Barbuda is a Member State, signed an agreement with the World Organisation for Animal Health (OIE) "to prevent the spread of animal diseases, to improve the animal health", and to "harmonize legislation and regulations on animal diseases and zoonoses". [4] Antigua and Barbuda participates in the Caribbean Animal Health Network (CaribVET), which aims to improve animal and veterinary public health in all the countries and/or the territories of the Caribbean, including strengthening national capacities related to preparedness, surveillance, monitoring and management of animal and zoonotic disease. [5] In addition, the "neglected, tropical and zoonotic disease" is among the programme areas of the Pan American Health Organization division of the World Health Organization Subregional Cooperation Strategy for 2016-2019. [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 5 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 5 August 2020.

[3] Antigua and Barbuda Laws. [<http://laws.gov.ag/new/index.php>]. Accessed 5 August 2020.

[4] The World Organisation for Animal Health (OIE). 2012. "Agreement Between the Caribbean Community (CARICOM) and the World Organisation for Animal Health (OIE)". [http://www.oie.int/fileadmin/Home/eng/About_us/docs/pdf/accords/CARICOM_ANG.pdf]. Accessed 5 August 2020.

[5] Caribbean Animal Health Network (CaribVET). "Network Objectives". [<https://www.caribvet.net/about-the-network/objectives>]. Accessed 5 August 2020.

[6] Pan American Health Organization/World Health Organization (PAHO/WHO). "Working for Health in the Caribbean: PAHO/WHO Subregional Cooperation Strategy, 2016-2019". [<https://www.paho.org/en/file/64750/download?token=BUStU0gL>]. Accessed 5 August 2020.

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: 0

There is no publicly available evidence of a national plan, guidelines, or law that accounts for the surveillance and control of multiple zoonotic pathogens of public health concern in Antigua and Barbuda. There is no evidence of such a document provided by the Ministry of Health, Ministry of Agriculture, or through the country's Legislative Library. [1, 2, 3] However, the Caribbean Community (CARICOM) One Health policy urges collaboration between the public health, agriculture and wildlife/environment sectors, including for joint surveillance and information sharing, joint outbreak investigation, and joint emergency planning and response to emerging issues such as outbreaks of zoonotic or food borne diseases. [5] The CARICOM One Health policy was ratified by the Ministers of Agriculture at the Council for Trade and Economic Development in 2013 and CARICOM One Health has a six-year strategic framework (2017-2022) in place. [5] One of the coordinated actions of the Caribbean Animal Health Network (CaribVET) is epidemiological surveillance, but CaribVET does not have publicly

available plans or guidelines on surveillance and control of zoonotic pathogens. [6, 7]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 24 July 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 24 July 2020.

[3] Antigua and Barbuda Laws. [<http://laws.gov.ag/new/index.php>]. Accessed 24 July 2020.

[4] Oura, C., Mahase-Gibson, A., & Stephen, C. (Eds.). 2017. "Caribbean Resilience and Prosperity Through One Health." [http://www.cwhc-rcof.ca/docs/technical_reports/Caribbean_Resilience.pdf]. Accessed 24 July 2020.

[5] Pan American Health Organization. 2013. "One Health: From Ideas to Action". [https://www.paho.org/trt/images/stories/PWR_TRT/one%20health%20workshop%20report.pdf?ua=1&ua=1]. Accessed 24 July 2020.

[6] Caribbean Animal Health Network (CaribVET). "About the Network". [<https://www.caribvet.net/about-the-network>]. Accessed 24 July 2020.

[7] Lefrancois, T., Petit-Sinturel, M., Kalloo, M., Shaw, J., Herbert-Hackshaw, K., Trotman, M., & Gongora, V. 2010. "CaribVET: a model for surveillance of zoonotic diseases." *Int. J. Inf. Dis.* 14, e185-e185. [http://www-old.caribvet.net/en/system/files/ucid2010_caribvet_model_zoonotic_diseases__lefrancois.pdf]

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 no publicly available evidence of a department, agency or similar unit dedicated to zoonotic disease that functions across ministries in Antigua and Barbuda. The 2018-19 Antimicrobial Resistance Country Self Assessment for Antigua and Barbuda indicates that the country has a multi-sectoral and One Health working group or coordination committee on AMR established with Government leadership, but no additional information is available regarding this coordination. [1] There is no evidence of a cross-ministry group through the Ministry of Health or Ministry of Agriculture. [2, 3]

[1] World Health Organization. "Global Database for Antimicrobial Resistance Country Self Assessment 2017-2018 - Antigua and Barbuda". [<http://amrcountryprogress.org/>]. Accessed 31 July 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 31 July 2020.

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: 0

There is no publicly available evidence that Antigua and Barbuda has a national mechanism for owners of livestock to conduct and report on disease surveillance to a central government agency. The Analytical Services Division of the Ministry of Agriculture conducts surveillance and monitoring of water quality, food safety, soil fertility, and plant pathogen screening, but there is no evidence of disease reporting from livestock owners. [1] The 2010 charter for Caribbean Animal Health Network (CaribVET), of which Antigua and Barbuda is a member, states that one of the roles of the Veterinary epidemiologist / para-epidemiologist (VEP) project is to establish an early detection and rapid response system in the Caribbean region, including surveillance systems for priority / emerging diseases, and to develop and reinforce national surveillance systems. [2] There is no further information by CaribVET specific to Antigua and Barbuda, and there is no evidence of a such a mechanism provided by the Ministry of Health. [3, 4]

[1] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. "Analytical Service." [http://agriculture.gov.ag/index.php/analytical-service/]. Accessed 31 July 2020.

[2] Caribbean Animal Health Network (CaribVET). "Caribbean Animal Health Network Charter". [https://www.caribvet.net/content/download/4499/33474/version/1/file/CaribVET_CHARTER_FINAL_EN2011%28detailed%29.pdf]. Accessed 31 July 2020.

[3] Caribbean Animal Health Network (CaribVET). [https://www.caribvet.net/]. Accessed 31 July 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

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 evidence that there are laws or guidelines that safeguard the confidentiality of information generated through surveillance activities for animals (for owners). The Ministry of Health and Ministry of Agriculture make no mention of such laws or guidelines. [1, 2] The Data Protection Act of 2013, is intended to promote protection of "personal data processed by public and private bodies", however, there is no mention of these protections pertaining to animals as property of owners. [3]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [http://agriculture.gov.ag/]. Accessed 31 July 2020.

[3] Laws of Antigua and Barbuda. Act No. 10 of 2013. "Data Protection Act, 2013". [http://laws.gov.ag/wp-content/uploads/2019/02/a2013-10.pdf]. Accessed 31 July 2020.

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: 0

There is insufficient evidence that Antigua and Barbuda conducts surveillance of zoonotic disease in wildlife. However, Antigua and Barbuda is part of the Caribbean Public Health Agency (CARPHA), which conducts surveillance on vector-borne

diseases. [1, 2] In 2017, CARPHA launched the regional Caribbean Vector-Borne Diseases Network (CariVecNet), which acts as an exchange center for surveillance information on vector-borne diseases. [3, 4] A representative from Antigua and Barbuda serves on the CariVectNet Surveillance/Epidemiology Working Group. [5] Beyond participation in the regional surveillance, there is no evidence of Antigua and Barbuda conducting surveillance of zoonotic disease in wildlife available through the Ministry of Health, Ministry of Agriculture, or the the country's Government Information and Services. [6, 7, 8]

[1] Caribbean Public Health Agency (CARPHA). "Services and Resources". [<https://carpha.org/Orientation-Home/Service-Resources>]. Accessed 31 July 2020.

[2] Caribbean Public Health Agency (CARPHA). "Departments in CARPHA". [<https://carpha.org/Orientation-Home/Departments>]. Accessed 31 July 2020.

[3] Caribbean Public Health Agency (CARPHA). 22 August 2017. "Regional Network Launched to Collaborate on Zika and Other Vector-Borne Diseases". [<https://carpha.org/More/Media/Articles/ArticleID/194/Regional-Network-Launched-to-Collaborate-on-Zika-and-Other-Vector-Borne-Diseases>]. Accessed 31 July 2020.

[4] Caribbean Vector-Borne Diseases Network (CariVecNet). [<http://carivecnet.carpha.org/>]. Accessed 31 July 2020.

[5] Caribbean Vector-Borne Diseases Network (CariVecNet). "CariVectNet Surveillance/Epidemiology Working Group Members". [<http://carivecnet.carpha.org/Surveillance-Epidemiology>]. Accessed 31 July 2020.

[6] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

[7] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 31 July 2020.

[8] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 31 July 2020.

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: -

No data available

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: -

No data available

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 evidence of a national plan, guidelines, or law that accounts for the surveillance and control of multiple zoonotic pathogens of public health concern in Antigua and Barbuda. There is no evidence of such a document provided by the Ministry of Health, Ministry of Agriculture, or through the country's Legislative Library. [1, 2, 3] Regional private sector groups are members of the Caribbean Animal Health Network (CaribVET), the animal health network for the Caribbean region, which includes Antigua and Barbuda. [4]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 31 July 2020.

[3] Laws of Antigua and Barbuda. [<http://laws.gov.ag/laws/alphabetical/>]. Accessed 31 July 2020.

[4] CaribVET - Caribbean Animal Health Network. [<https://www.caribvet.net/>]. Accessed 31 July 2020.

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 evidence that Antigua and Barbuda 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, including details on inventories and inventory management systems. The Ministry of Health, Ministry of Agriculture, Defence Force, and the Government Information and Services offer no such evidence. [1, 2, 3, 4] Although Antigua and Barbuda is party to the BWC, there is no public evidence

that is has submitted Confidence-Building Measures reports. [5] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 31 July 2020.

[3] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 31 July 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 31 July 2020.

[5] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 31 July 2020.

[6] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 evidence that Antigua and Barbuda has in place legislation related to biosecurity which address requirements such as physical containment, operation practices, and cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed. The Biological Weapons Act of 1975, Public Health Act of 1957, and Prevention of Terrorism Act of 2005 are the potentially relevant legislation listed for Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [1] Antigua and Barbuda's Biological Weapons Act of 1975 states offences for unlawful use or handling of biological agent or toxins, but does not address preventive measures such as physical containment and operation practices. [2] Antigua and Barbuda's Public Health Act of 1957, which covers food and drug safety and infectious diseases and the 2005 Prevention of Terrorism Act describing counter terrorism measures, including threats from biological agents do not cover biosecurity measures regarding facilities in which especially dangerous pathogens and toxins are stored or processed. [3, 4] No evidence of such legislation or regulations is available from the Ministry of Health, Ministry of Agriculture, Defence Force, or the Government Information and Services. [5, 6, 7, 8] Although Antigua and Barbuda is party to the Biological Weapons Convention (BWC), there is no public evidence that is has submitted Confidence-Building Measures reports. [9]

[1] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/>]. Accessed 31 July 2020.

[2] Laws of Antigua and Barbuda. Chapter 52, 1975. "Biological Weapons Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-52.pdf>]. Accessed 31 July 2020.

[3] Laws of Antigua and Barbuda. Chapter 353, 1957. "The Public Health Act". [<http://extwprlegs1.fao.org/docs/pdf/ant45460.pdf>]. Accessed 31 July 2020.

[4] Laws of Antigua and Barbuda. No. 12 of 2005. "The Prevention of Terrorism Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/a2005-12.pdf>]. Accessed 31 July 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29].

Accessed 31 July 2020.

[6] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>].

Accessed 31 July 2020.

[7] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 31 July 2020.

[8] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 31 July 2020.

[9] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 31 July 2020.

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 evidence that there is an established agency responsible for the enforcement of biosecurity legislation and regulations, as there is no evidence that such legislation or regulations exist. Antigua and Barbuda's Biological Weapons Act of 1975 states offences for unlawful use or handling of biological agent or toxins, but does not address preventive measures such as physical containment and operation practices. [1] No evidence of such legislation or regulations is available from the Ministry of Health, Ministry of Agriculture, Defence Force, or the Government Information and Services. [2, 3, 4, 5] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [6] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [7]

[1] Laws of Antigua and Barbuda. Chapter 52, 1975. "Biological Weapons Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-52.pdf>]. Accessed 31 July 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 31 July 2020.

[4] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 31 July 2020.

[5] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 31 July 2020.

[6] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 31 July 2020.

[7] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 public evidence that shows that Antigua and Barbuda has taken action to consolidate its inventories of dangerous pathogens and toxins into a minimum number of facilities. The Ministry of Health, Ministry of Agriculture, Defence Force and Government Information and Services offer no evidence of consolidation of pathogen and toxin inventories. [1, 2, 3, 4] There

is also no indication of such a consolidation by the Caribbean Public Health Agency (CARPHA) Laboratory. [5] Antigua and Barbuda's Biological Weapons Act of 1975 does not address consolidation of inventories. [6] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [7] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [8]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 31 July 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 31 July 2020.

[3] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 31 July 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 31 July 2020.

[5] Caribbean Public Health Agency (CARPHA). "Laboratory Services". [<https://www.carpha.org/What-We-Do/LABS/Overview>]. Accessed 31 July 2020.

[6] Laws of Antigua and Barbuda. Chapter 52, 1975. "Biological Weapons Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-52.pdf>]. Accessed 31 July 2020.

[7] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 31 July 2020.

[8] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 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, in Antigua and Barbuda. The Caribbean Public Health Agency (CARPHA), in conjunction with the Pan American Health Organization of the World Health Organization (PAHO/WHO), has facilitated access to laboratory facilities at the WHO-Collaborating Centres at the United States Centers for Disease Control and Prevention and Public Health Agency Canada for diagnosis of Ebola cases. [1] As of 2014, the CARPHA Biosafety Level 3 (BSL3) laboratory, based in Antigua and Barbuda, was being prepared to receive and test clinical samples from suspected Ebola patients using molecular diagnostic methods; however Ebola viral culture will not be conducted at this laboratory, since this can only be done safely in a BSL4 laboratory facility. [1] There is no information about diagnostic testing for anthrax and/or Ebola provided by the Ministry of Health, Ministry of Agriculture, and Government and Information Services. [2, 3, 4] Anthrax is not listed among the CARPHA laboratory testing services, however, CARPHA directs that in suspected cases of cutaneous anthrax, specimens may be taken from the skin lesions and blood cultures. [5]

[1] Caribbean Public Health Agency (CARPHA). 15 December 2014. "CARPHA Response to the Ebola Epidemic in West Africa". [https://www.carpha.org/Portals/0/Documents/Ebola-What_is_CARPHA_Doing_FINAL_15122014.pdf]. Accessed 1 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>].

Accessed 1 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[5] Caribbean Public Health Agency (CARPHA). January 2020. "Laboratory Procedure Manual".

[[https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual\[1452\].pdf?ver=2020-04-16-180718-920](https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual[1452].pdf?ver=2020-04-16-180718-920)]. Accessed 1 August 2020.

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 evidence that Antigua and Barbuda 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. In 2014, the Caribbean Public Health Agency (CARPHA) hosted two workshops, on shipping of infectious substances and biosafety practices in a clinical laboratory. [1] In 2016, the Caribbean Animal Health Network (CaribVET) hosted three workshops on poultry biosecurity. [2] These one-off workshops were held in Antigua and Barbuda, and there is no evidence that representatives from Antigua and Barbuda were present. [1, 2] The Ministry of Health, Ministry of Agriculture, Defence Force, and Government and Information Services make no mention of standardized biosecurity training. [3, 4, 5, 6] Antigua and Barbuda's Biological Weapons Act of 1975 and the 2005 Prevention of Terrorism Act, which includes threats from biological agents, does not mention biosecurity training. [7, 8] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [9] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [10]

[1] Caribbean Public Health Agency (CARPHA). "CARPHA Trains Laboratory Personnel to Better Manage Outbreak Situations in the Region". [<https://carpha.org/More/Media/Articles/ArticleID/85/CARPHA-Trains-Laboratory-Personnel-to-Better-Manage-Outbreak-Situations-in-the-Region>]. Accessed 1 August 2020.

[2] Caribbean Animal Health Network (CaribVET). "April: the month of Biosecurity, April 2016, Guyana, Trinidad, Tobago". [<https://www.caribvet.net/training/training-workshops/april-the-month-of-biosecurity>]. Accessed 1 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[4] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[5] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 1 August 2020.

[6] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[7] Laws of Antigua and Barbuda. Chapter 52, 1975. "Biological Weapons Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-52.pdf>]. Accessed 1 August 2020.

[8] Laws of Antigua and Barbuda. No. 12 of 2005. "The Prevention of Terrorism Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/a2005-12.pdf>]. Accessed 1 August 2020.

[9] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[10] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation

Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 evidence that Antigua and Barbuda 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 drug testing, background checks, and psychological or mental fitness checks. The Ministry of Health, Ministry of Agriculture, Defence Force, and Government and Information Services—which includes the Ministry of Legal Affairs, Public Safety, and Labour—make no mention of such requirements. [1, 2, 3, 4] There is also no mention of personnel checks through the Caribbean Public Health Agency (CARPHA) laboratory. [5] Antigua and Barbuda's Biological Weapons Act of 1975 and the 2005 Prevention of Terrorism Act, which includes threats from biological agents, does not cover personnel checks for those with access to especially dangerous pathogens. [6] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [7] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [8]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[3] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 1 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[5] Caribbean Public Health Agency (CARPHA). "Laboratory Services". [<https://www.carpha.org/What-We-Do/LABS/Overview>]. Accessed 1 August 2020.

[6] Laws of Antigua and Barbuda. Chapter 52, 1975. "Biological Weapons Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-52.pdf>]. Accessed 1 August 2020.

[7] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[8] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 evidence to demonstrate that Antigua and Barbuda has regulations on the safe and secure transport of infectious substances (Categories A and B). Although the Caribbean Public Health Agency (CARPHA) issues guidance on the transport of infectious substances, it is unclear if this is a recommendation or a requirement. The CARPHA Laboratory User Manual provides guidelines and requirements for the preparation, packaging, and shipping of specimens, including Category A and B infectious substances. [1] The guidelines define Category A and B infectious substances and include them under one of four classes of dangerous goods, Toxic and Infectious Substances. [1] The guidelines are according to Annex 2 of the World Health Organization (WHO) Guidance on regulations for the Transport of Infectious Substances 2011-2012. [1] Additionally, the Antigua and Barbuda's Biological Weapons Act of 1975 does not address transport of infectious substances, and no other legislation captures this topic. [2, 3] There is no evidence of regulations on the safe and secure transport of infectious substances through the Government and Information Services—which includes the Antigua and Barbuda Transport Board—the Ministry of Health, Defence Force, or the Ministry of Agriculture. [4, 5, 6, 7] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [8] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [9]

[1] Caribbean Public Health Agency (CARPHA). January 2020. "Laboratory Procedure Manual".

[[https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual\[1452\].pdf?ver=2020-04-16-180718-920](https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual[1452].pdf?ver=2020-04-16-180718-920)]. Accessed 1 August 2020.

[2] Laws of Antigua and Barbuda. Chapter 52, 1975. "Biological Weapons Act". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-52.pdf>]. Accessed 1 August 2020.

[3] Antigua and Barbuda Laws. [<http://laws.gov.ag/>]. Accessed 1 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[6] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 1 August 2020.

[7] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[8] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[9] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 evidence that Antigua and Barbuda has national legislation, regulation, or other guidance in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins and pathogens with pandemic potential. Antigua and Barbuda has ratified the Biological Weapons Convention, and has enacted national legislation relevant

to the convention, the Biological Weapons Act of 1975. [1] The Importation Prohibition (Epidemic Disease) Act of 1888 allows the Cabinet to prohibit importation of goods and animals from places "where epidemic disease of a contagious or infectious character prevails ", but the act does not specifically address cross-border transfer and end-user screening processes. [2] A working paper titled, International Activities of the Government of Canada related to Article X of the Biological and Toxin Weapons Convention: Update 2015, out of the United Nations Office at Geneva indicates that, beginning in 2015, Canada has been supporting the enhancement of export controls and border security measures to prevent the proliferation and trafficking of weapons of mass destruction (WMDs), including biological materials, in the Caribbean. [3] There is no evidence of such legislation, regulation, or guidance specific to cross-border transfer available through the Ministry of Agriculture, Defence Force, Ministry of Foreign Affairs, Government Information and Services, or the Caribbean Agricultural Research and Development Institute. [4, 5, 6, 7, 8] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [9] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [10]

[1] Nuclear Threat Initiative. "Annex to the note verbale dated 6 November 2006 from the Permanent Mission of Antigua and Barbuda to the United Nations addressed to the Chairman of the Committee - Report of the Government of Antigua and Barbuda pursuant to Security Council resolution 1540 (2004)".

[https://www.nti.org/media/pdfs/Antigua_and_Barbuda_1540_Initial_Report_1.pdf?_=1316618676?_=1316618676]. Accessed 1 August 2020.

[2] Laws of Antigua and Barbuda. Chapter 210, 1888. "Importation Prohibition (Epidemic Diseases) Act".

[<http://laws.gov.ag/wp-content/uploads/2018/08/cap-210.pdf>]. Accessed 1 August 2020.

[3] The United Nations Office at Geneva. "Working Paper 3: International Activities of the Government of Canada related to Article X of the Biological and Toxin Weapons Convention: Update 2015".

[[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/3BAB21866EC7F6B1C1257F17002CF205/\\$file/2015+MSP+WP+3+CANADA+Adv_Ver.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/3BAB21866EC7F6B1C1257F17002CF205/$file/2015+MSP+WP+3+CANADA+Adv_Ver.pdf)]. Accessed 1 August 2020.

[4] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[5] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 1 August 2020.

[6] Ministry of Foreign Affairs, International Trade and Immigration. [<http://www.immigration.gov.ag/>]. Accessed 1 August 2020.

[7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[8] Caribbean Agricultural Research and Development Institute (CARDI). [<http://www.cardi.org/>]. Accessed 1 August 2020.

[9] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[10] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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: 0

There is no evidence that Antigua and Barbuda has in place national biosafety legislation and/or regulations. A Caribbean regional forum in 2017 included mention of the Caribbean Public Health Agency (CARPHA)'s role in assisting Member States in areas of biosafety and biosecurity. [1] In 2014, CARPHA received a Biosafety Level 3 (BSL-3) laboratory, and there is evidence that CARPHA has conducted biosafety trainings. [2, 3] Antigua and Barbuda is party to the Cartagena Protocol, which aims to ensure the safe handling, transport and use of living modified organisms. [4] According to a 2017 news story by the United Nations (UN) Environment Programme, Antigua and Barbuda is among the Caribbean countries participating in a project towards ensuring compliance with the protocol. [5] In the Caribbean, related to agricultural biosafety and biotechnology, there is the Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region. [6] According to the International Labour Organization, the country has a draft Occupational Health and Safety Act from 2013, though this act is not available through Antigua and Barbuda's online library of laws, and there is no evidence that the Act has been enacted. [7, 8] The draft Act states that laboratory workers are among those who do not have the right to refuse work where safety and health are in danger. [7] Antigua and Barbuda's Labour Code of 1975 states that "where a work process involves a reasonable possibility of injury to other parts of an employee's body, suitable protective equipment shall be furnished", but it does not specifically address biosafety measures. [8] There is no indication of biosafety legislation or regulations through the Ministry of Health or the Ministry of Agriculture. [9, 10] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [11] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [12]

[1] Caribbean Public Health Agency (CARPHA). "Regional Laboratories Prepare to Detect and Respond to New and Emerging Diseases". [<https://carpha.org/More/Media/Articles/ArticleID/192/Regional-Laboratories-Prepare-to-Detect-and-Respond-to-New-and-Emerging-Diseases>]. Accessed 1 August 2020.

[2] Ministry of Health of Trinidad and Tobago. "CARPHA's New Laboratory Promises Faster Detection and Response to Control Disease Outbreaks in the Caribbean". [<http://health.gov.tt/news/newsitem.aspx?id=475>]. Accessed 1 August 2020.

[3] Caribbean Public Health Agency (CARPHA). "CARPHA Trains Laboratory Personnel to Better Manage Outbreak Situations in the Region". [<https://carpha.org/More/Media/Articles/ArticleID/85/CARPHA-Trains-Laboratory-Personnel-to-Better-Manage-Outbreak-Situations-in-the-Region>]. Accessed 1 August 2020.

[4] Observatory on Principle 10 in Latin America and the Caribbean. "The Cartagena Protocol on Biosafety to the Convention on Biological Diversity". [<https://observatoriop10.cepal.org/en/treaties/cartagena-protocol-biosafety-convention-biological-diversity>] Accessed 1 August 2020.

[5] United Nations Environment Programme. 7 June 2017. "Strengthening Biosafety in the Caribbean". [<https://www.unenvironment.org/news-and-stories/story/strengthening-biosafety-caribbean>]. Accessed 1 August 2020.

[6] Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region. [<https://caribbeanbiosafety.org/>]. Accessed 1 August 2020.

[7] International Labour Organization. "Antigua and Barbuda - 2015." [https://www.ilo.org/dyn/legosh/en/f?p=14100:1100:0::NO:1100:P1100_ISO_CODE3,P1100_SUBCODE_CODE,P1100_YEAR:ATG,,2015:NO]. Accessed 1 August 2020.

[8] Laws of Antigua and Barbuda. [<http://laws.gov.ag/laws/alphabetical/>]. Accessed 31 July 2020.

[9] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[10] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[11] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[12] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 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: 0

There is no evidence of an established agency responsible for the enforcement of biosafety legislation and regulations, as Antigua and Barbuda does not have in place national biosafety legislation and/or regulations. The Ministry of Health and Ministry of Agriculture make no mention of responsibility for enforcement of biosafety legislation. [1, 2] A Caribbean regional forum in 2017 included mention of the Caribbean Public Health Agency (CARPHA)'s role in assisting Member States in areas of biosafety and biosecurity. [3] According to the International Labour Organization, the country has a draft Occupational Health and Safety Act from 2013, though this act is not available through Antigua and Barbuda's online library of laws, and there is no evidence that the Act has been enacted. [4, 5] The draft Act states that laboratory workers are among those who do not have the right to refuse work where safety and health are in danger. [6] Antigua and Barbuda's Labour Code of 1975 states that "where a work process involves a reasonable possibility of injury to other parts of an employee's body, suitable protective equipment shall be furnished", but it does not specifically address biosafety measures. [7] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [8] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [9]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[3] Caribbean Public Health Agency (CARPHA). "Regional Laboratories Prepare to Detect and Respond to New and Emerging Diseases". [<https://carpha.org/More/Media/Articles/ArticleID/192/Regional-Laboratories-Prepare-to-Detect-and-Respond-to-New-and-Emerging-Diseases>]. Accessed 1 August 2020.

[4] International Labour Organization. "Antigua and Barbuda - 2015." [https://www.ilo.org/dyn/legosh/en/f?p=14100:1100:0::NO:1100:P1100_ISO_CODE3,P1100_SUBCODE_CODE,P1100_YEAR:ATG,,2015:NO]. Accessed 1 August 2020.

[5] Laws of Antigua and Barbuda. [<http://laws.gov.ag/laws/alphabetical/>]. Accessed 31 July 2020.

[6] Antigua and Barbuda. "The Occupational Safety And Health Act, 2013". [https://issuu.com/antiguabarbuda0/docs/nlb_osh_full_draft_final]. Accessed 1 August 2020.

[7] Laws of Antigua and Barbuda. Chapter 27, 1975. "The Antigua and Barbuda Labour Code". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-27.pdf>]. Accessed 1 August 2020.

[8] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[9] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 no evidence that Antigua and Barbuda 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 Caribbean Public Health Agency (CARPHA) has biosafety and biosecurity training materials available for Belize, Jamaica, and Guyana, but no such materials are available from Antigua and Barbuda. [1] The curriculum for CARPHA's Field Epidemiology and Laboratory Training Programme (FELTP) includes laboratory and biosafety training as a core domain, but there is no information available on Antigua and Barbuda's involvement in FELTP. [2] A 2014 news post by the CARPHA mentions training workshops for participants from 12 Caribbean countries on the shipping of infectious substances and biosafety practices in clinical laboratory. [3] The responsibilities of the Basic Employment Division delineated in Antigua and Barbuda's Labour Code of 1975 include requiring employers to provide "reasonable training" during probationary periods, but there is nothing specific to training practices for biosafety. [4] The Ministry of Health, Ministry of Agriculture, and Government Information and Services make no mention of standardized biosafety trainings. [5, 6, 7] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [7, 8] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [9]

[1] Caribbean Public Health Agency (CARPHA). "Biosafety and Biosecurity Training Materials".

[<https://www.carpha.org/What-We-Do/-Laboratory-Biosafety-and-Biosecurity-Training-Materials>]. Accessed 1 August 2020.

[2] Caribbean Public Health Agency (CARPHA). "FELTP - Structure". [<https://carpha.org/What-We-Do/FELTP/Structure>].

Accessed 1 August 2020.

[3] Caribbean Public Health Agency (CARPHA). "CARPHA Trains Laboratory Personnel to Better Manage Outbreak Situations in the Region". [<https://carpha.org/More/Media/Articles/ArticleID/85/CARPHA-Trains-Laboratory-Personnel-to-Better-Manage-Outbreak-Situations-in-the-Region>]. Accessed 1 August 2020.

[4] Laws of Antigua and Barbuda. Chapter 27, 1975. "The Antigua and Barbuda Labour Code". [<http://laws.gov.ag/wp-content/uploads/2018/08/cap-27.pdf>]. Accessed 1 August 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[6] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[8] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[9] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 Antigua and Barbuda 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. The Caribbean Public Health Agency (CARPHA) 2013 Corporate Inaugural Report indicates that final activities of the "Strengthening Laboratory Capacity and Biorisk Management in [Caribbean Epidemiology Centre] CAREC and CAREC Member Countries (IGA0031-2012 (4015-11 PAHO) were concluded", but Antigua and Barbuda were not among the five member states that had needs assessments conducted in 2013. [1] The Ministry of Health, Ministry of Agriculture, and Government Information and Services provide no information on dual use research or an assessment to determine whether ongoing research is occurring. [2, 3, 4] A presentation in April 2018 from a regional workshop on developments relevant to the Biological Weapons Convention (BWC) for Latin America and the Caribbean indicates that CARICOM Member States have not prioritized the development of regulatory frameworks to prevent the misuse of science and technology. [5] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [6] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [7]

[1] Caribbean Public Health Agency (CARPHA). "Corporate Inaugural Report - 2013".

[https://www.carpha.org/Portals/0/Documents/CARPHA_ANNUAL_REPORT_2013_EVERSION.pdf]. Accessed 1 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[5] The United Nations Office at Geneva. "Regulatory Frameworks to Prevent the Misuse of Science and Technology - Regional Workshop on Science and Technology: Developments Relevant to the Biological Weapons Convention (BWC) for Latin America and the Caribbean".

[[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/8D3E81383571A952C125827C00441E47/\\$file/CARICOM_SnT+Worshop+LAC.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/8D3E81383571A952C125827C00441E47/$file/CARICOM_SnT+Worshop+LAC.pdf)]. Accessed 1 August 2020.

[6] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[7] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 evidence of legislation and/or regulation requiring oversight of dual use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential in Antigua and Barbuda. The Ministry of Health, Ministry of Agriculture, and Government Information and Services provide no information on dual-use research or a national policy requiring oversight of dual use research. [1, 2, 3] A presentation in April 2018 from a regional workshop on developments relevant to the Biological Weapons Convention (BWC) for Latin America and the Caribbean indicates that

CARICOM Member States have not prioritized the development of regulatory frameworks to prevent the misuse of science and technology. [4] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [5] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[4] The United Nations Office at Geneva. "Regulatory Frameworks to Prevent the Misuse of Science and Technology - Regional Workshop on Science and Technology: Developments Relevant to the Biological Weapons Convention (BWC) for Latin America and the Caribbean".

[[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/8D3E81383571A952C125827C00441E47/\\$file/CARICOM_SnT+Worshop+LAC.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/8D3E81383571A952C125827C00441E47/$file/CARICOM_SnT+Worshop+LAC.pdf)]. Accessed 1 August 2020.

[5] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[6] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 no evidence of an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual use research in Antigua and Barbuda. The Ministry of Health, Ministry of Agriculture, and Government Information and Services—which includes the Ministry of Legal Affairs, Public Safety, and Labour—provide no indication of an agency responsible for oversight of research with especially dangerous pathogens. [1, 2, 3] The Agreement Establishing the Caribbean Public Health Agency (CARPHA) states that CARPHA is responsible for "conduct of relevant research on public-health priorities in the Caribbean". [4] There is no evidence that CARPHA is responsible for oversight of research with especially dangerous pathogens, though CARPHA is equipped to investigate communicable diseases through security laboratories, as well as specialized units, such as an experimental mosquito colony. [5] A presentation in April 2018 from a regional workshop on developments relevant to the Biological Weapons Convention (BWC) for Latin America and the Caribbean indicates that CARICOM Member States have not prioritized the development of regulatory frameworks to prevent the misuse of science and technology. [6] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [7] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [8]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[4] Caribbean Public Health Agency (CARPHA). 2011. "Agreement Establishing the Caribbean Public Health Agency (CARPHA)". [<https://caricom.org/documents/legaldocuments/10375-carpha-iga.pdf>]. Accessed 1 August 2020.

[5] Caribbean Public Health Agency (CARPHA). "Communicable Diseases". [<https://www.carpha.org/What-We-Do/Communicable-Diseases>]. Accessed 1 August 2020.

[6] The United Nations Office at Geneva. "Regulatory Frameworks to Prevent the Misuse of Science and Technology - Regional Workshop on Science and Technology: Developments Relevant to the Biological Weapons Convention (BWC) for Latin America and the Caribbean". [[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/8D3E81383571A952C125827C00441E47/\\$file/CARICOM_SnT+Worshop+LAC.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/8D3E81383571A952C125827C00441E47/$file/CARICOM_SnT+Worshop+LAC.pdf)]. Accessed 1 August 2020.

[7] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[8] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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 evidence of national legislation, regulation, policy, or other guidance, requiring the screening of synthesized DNA before it is sold in Antigua and Barbuda. There is no evidence of such provided on the websites of the Government Information and Services—which includes the Antigua and Barbuda Transport Board and Ministry of Legal Affairs, Public Safety, and Labour—Ministry of Health, Ministry of Agriculture, or Defence Force. [1, 2, 3, 4] There is no evidence that the Caribbean Community (CARICOM) and Caribbean Public Health Agency (CARPHA) has relevant legislation, regulation, policy or other guidance. [5, 6] Although Antigua and Barbuda is party to the BWC, there is no public evidence that it has submitted Confidence-Building Measures reports. [7] There is no relevant legislation listed for the Antigua and Barbuda in the VERTIC Biological Weapons Convention (BWC) Legislation Database. [8]

[1] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 1 August 2020.

[4] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 1 August 2020.

[5] Caribbean Community (CARICOM). [<https://www.caricom.org/>]. Accessed 1 August 2020.

[6] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 1 August 2020.

[7] United Nations Office at Geneva (UNOG) - Biological Weapons Convention (BWC) Electronic Confidence Building Measures Portal. "Antigua and Barbuda". [<https://bwc-ecbm.unog.ch/state/antigua-and-barbuda>]. Accessed 1 August 2020.

[8] Verification Research, Training and Information Centre (VERTIC). "Biological Weapons Convention (BWC) Legislation Database". [<http://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/a/>]. Accessed 19 August 2020.

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: 2

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: 0

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: 0

There is insufficient evidence that the national laboratory system of Antigua and Barbuda has the capacity to conduct diagnostic tests for at least 5 of the 10 World Health Organization (WHO)-defined core tests. There is no evidence that Antigua and Barbuda has publicly defined the four country-specific tests, but the CARPHA Laboratory—which serves as the regional reference laboratory and is located in Trinidad—can perform 5 of the 6 commonly defined core tests. According to

CARPHA's list of laboratory tests and Laboratory Procedure Manual, last updated in 2020, the CARPHA Laboratory can perform PCR for influenza; PCR and virus isolation for polio; identification (PCR) and drug sensitivity (PCR) for tuberculosis; PCR for malaria; and identification and serotyping (isolate in maintenance media) for typhoid. [1, 2] CARPHA performs a PCR assay using the Xpert MTB/RIF test for Mycobacterium tuberculosis, which is recommended by the WHO over conventional microscopy to diagnose pulmonary TB. [2, 3] The Testing for HIV is not listed as part of CARPHA's Testing Services, however, CARPHA indicates that HIV/AIDS and sexually transmitted disease are among the diseases routinely investigated. [4] The four laboratories listed on Antigua and Barbuda Health Service Listings "Bel Lab Services, Biohealth Medical Laboratory, Medical Laboratory Services, and Medpath Clinical Lab" indicate they conduct blood draw for HIV but does not specify serological testing. [5] No evidence on testing is available through the Ministry of Health, including any indication that Antigua and Barbuda has publicly defined the four country-specific tests. [6]

[1] Caribbean Public Health Agency (CARPHA). "Laboratory Testing Services". [<https://www.carpha.org/What-We-Do/Laboratory/Laboratory-Testing-Services>]. Accessed 1 August 2020.

[2] Caribbean Public Health Agency (CARPHA). January 2020. "Laboratory Procedure Manual". [[https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual\[1452\].pdf?ver=2020-04-16-180718-920](https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual[1452].pdf?ver=2020-04-16-180718-920)]. Accessed 1 August 2020.

[3] World Health Organization (WHO). 2014. "Xpert MTB/RIF implementation manual." [https://apps.who.int/iris/bitstream/handle/10665/112469/9789241506700_eng.pdf?sequence=1]. Accessed 27 February 2021.

[4] Caribbean Public Health Agency (CARPHA). "Communicable Diseases". [<https://carpha.org/What-We-Do/Communicable-Diseases>]. Accessed 1 August 2020.

[6] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[5] Antigua and Barbuda Health Service Listings. "HIV / AIDS HCT Profiles: HIV Testing Services". [<http://medicalspecialists.health.gov.ag/reports/hivprofilestest>]. Accessed 1 August 2020.

[6] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

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 insufficient evidence that there is 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. In April 2020 an article from the Caribbean Community (CARICOM), and a press release from the Caribbean Public Health Agency (CARPHA) stated that the regional reference laboratory, CARPHA's Medical Microbiology Laboratory (CMMML) conducts COVID-19 testing for Member States. [1, 2] CARPHA has publicly available "CARPHA Interim Guidance for the Evaluation and Selection of Diagnostic Tests for the COVID-19 Response" as of June 2020. [3] However, there is no evidence of a CARPHA plan or similar strategy document for conducting testing during a public health emergency, including for COVID-19. [4] There is no evidence of a national plan through the country's Ministry of Health, Ministry of Agriculture, or Government Information and Services, including the page dedicated to Novel Coronavirus Information. [5, 6, 7, 8]

- [1] Caribbean Community (CARICOM). 22 April 2020. "CARPHA's COVID-19 Testing Process and Adherence to Quality Standards." [<https://caricom.org/carphas-covid-19-testing-process-and-adherence-toquality-standards/>]. Accessed 21 August 2020.
- [2] Caribbean Public Health Agency (CARPHA). 15 April 2020. "CARPHA's Role in COVID-19 Testing." [<https://www.carpha.org/Portals/0/Documents/Media%20Releases/CARPHA%E2%80%99s%20Role%20in%20COVID-19%20Testing.pdf>]. Accessed 21 August 2020.
- [3] Caribbean Public Health Agency (CARPHA). 2 June 2020. "CARPHA Interim Guidance for the Evaluation and Selection of Diagnostic Tests for the COVID-19 Response. Revised Version." [<https://carpha.org/Portals/0/Documents/Technical%20Guidance/CARPHA%20Interim%20Guidance%20for%20the%20Evaluation%20and%20Selection%20ofDiagnostic%20Tests%20for%20the%20COVID-19%20Response.pdf>]. Accessed 21 August 2020.
- [4] Caribbean Public Health Agency (CARPHA). [<https://www.carpha.org/>]. Accessed 21 August 2020.
- [5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 21 August 2020.
- [6] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 21 August 2020.
- [7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 21 August 2020.
- [8] Antigua and Barbuda's Government Information and Services. "Novel Coronavirus Information." [https://ab.gov.ag/detail_page.php?page=42]. Accessed 21 August 2020.

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: 0

There is insufficient evidence that there is a national laboratory that serves as a reference facility that is accredited. The Caribbean Public Health (CARPHA) laboratory, a regional laboratory that is located in Trinidad, was awarded accreditation through the Jamaica National Agency for Accreditation (JANAAC) to ISO 15189 in 2018. [1] ISO 15189 is a standard of the International Organization for Standardization (ISO) that recognizes quality and competence in medical laboratories. [2] According to a 2017 peer-reviewed publication in the African Journal of Laboratory Medicine, it has been a challenge to implement quality management systems and accredit laboratories in the Caribbean. [3] There is no evidence through the Ministry of Health—including the 2016-2020 National Strategic Plan for Health—or Government Information and Services that there is a national reference laboratory. [4, 5, 6]

- [1] Caribbean Public Health Agency (CARPHA). 11 December 2018. "CARPHA Laboratory Achieves Accreditation for Quality and Competence". [<https://carpha.org/More/Media/Articles/ArticleID/236/CARPHA-Laboratory-Achieves-Accreditation-for-Quality-and-Competence>]. Accessed 1 August 2020.
- [2] International Organization for Standardization (ISO). "SO 15189:2012 Medical laboratories -- Requirements for quality and competence". [<https://www.iso.org/standard/56115.html>]. Accessed 1 August 2020.
- [3] Alemnji G, Edghill L, Guevara G, et al. 2017. "Development and implementation of the Caribbean Laboratory Quality Management Systems Stepwise Improvement Process (LQMS-SIP) Towards Accreditation". African Journal of Laboratory Medicine. 6[1], a496. [<https://doi.org/10.4102/ajlm.v6i1.496>]. Accessed 1 August 2020.
- [4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29].

Accessed 1 August 2020.

[5] Health Watch Antigua and Barbuda. ND. "National Strategic Plan for Health, 2016-2020".

[http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 1 August 2020.

[6] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

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: 0

There is no evidence that there is a national laboratory in Antigua and Barbuda that serves as a reference facility that is subject to external quality assurance review. There is no evidence through the Ministry of Health including the 2016-2020 National Strategic Plan for Health, Ministry of Agriculture, or Government Information and Services that there is a national reference laboratory. [1, 2, 3, 4] A 2017 peer-reviewed publication in the African Journal of Laboratory Medicine states that implementing quality management systems in the Caribbean laboratory has been a challenge. [5]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 1 August 2020.

[2] Health Watch Antigua and Barbuda. ND. "National Strategic Plan for Health, 2016-2020".

[http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 1 August 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>].

Accessed 1 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 1 August 2020.

[5] Alemnji G, Edghill L, Guevara G, et al. 2017. "Development and implementation of the Caribbean Laboratory Quality Management Systems Stepwise Improvement Process (LQMS-SIP) Towards Accreditation". African Journal of Laboratory Medicine. 6[1] , a496. [<https://doi.org/10.4102/ajlm.v6i1.496>]. Accessed 1 August 2020.

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 evidence of a nationwide specimen transport system in Antigua and Barbuda. There are private courier systems, such as DHL, that operate in Antigua and Barbuda, but there is no indication that this includes specimen transport. [1] The Caribbean Public Health Agency (CARPHA) laboratory provides detailed instructions on preparation, packaging and shipping, and indicates that all specimens must be routed through the relevant National Reference/Public Health Laboratory or the Ministry of Health. [2, 3] There is no information on a nationwide specimen transport system provided by the Ministry of Health or Ministry of Agriculture. [4, 5]

[1] DHL. "Carribean [sic] Cluster - Country Profile". [https://www.dhl.com/vc/en/country_profile.html]. Accessed 2 August 2020.

[2] Caribbean Public Health Agency (CARPHA). "Laboratory - Annex 2: Guidelines for Preparation, Packing and Shipping Specimens". [<https://carpha.org/What-We-Do/Laboratory/Annex-2-GUIDELINES-FOR-PREPARATION-PACKING-AND-SHIPPING-SPECIMENS>]. Accessed 2 August 2020.

[3] Caribbean Public Health Agency (CARPHA). January 2020. "Laboratory Procedure Manual". [[https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual\[1452\].pdf?ver=2020-04-16-180718-920](https://carpha.org/Portals/0/GUL-Q05-001-05_User%20Manual[1452].pdf?ver=2020-04-16-180718-920)]. Accessed 2 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[5] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 2 August 2020.

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 evidence that Antigua and Barbuda has 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. There is no such evidence available through the Ministry of Health, Ministry of Agriculture, Government Information and Services, or Health Watch Antigua and Barbuda. [1, 2, 3, 4] A COVID-19 brief from the Caribbean Med Labs Foundation (CMLF), a non-governmental organisation dedicated to assisting governments around best practice in medical laboratory services in the Caribbean region, calls for scaling up laboratory services in the region. [5] The Caribbean Public Health Agency (CARPHA) reported that its Medical Microbiology Laboratory (CMML)'s COVID-19 testing met 100% compliance of turnaround time for all Member States in May and June 2020. [6] However, there is no evidence of CARPHA having a plan in place to scale-up testing during an outbreak. [7]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 2 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[4] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 2 August 2020.

[5] Caribbean Med Labs Foundation. "COVID-19: An opportunity for strengthening laboratories and health systems in the region". [<http://cmedlabsfoundation.net/documents/COVID-19.pdf>]. Accessed 2 August 2020.

[6] Caribbean Public Health Agency (CARPHA). 14 July 2020. "CARPHA Laboratory Achieves 100% Turnaround Time for All Diagnostic Tests." [<https://carpha.org/More/Media/Articles/ArticleID/341>]. Accessed 2 August 2020.

[7] Caribbean Public Health Agency (CARPHA). [<http://carpha.org>]. Accessed 2 August 2020.

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 insufficient evidence that Antigua and Barbuda conducts ongoing event-based surveillance. Although the Caribbean Public Health Agency (CARPHA) operates two programs for regional surveillance, there is insufficient evidence that this constitutes event-based surveillance for Antigua & Barbuda. The Tourism and Health Information System (THIS) is a real-time system for hotel management and public health officials to identify events such as outbreaks early. [1, 2] However, Antigua and Barbuda is not among the eight countries listed as currently implementing THIS. [2] Under the Regional Tourism and Health/Travelers Health Program (THP) CARPHA has developed two sets of regional surveillance guidelines "the Caribbean Vessel Surveillance System (CVSS) and Tourist Accommodation-Based Surveillance" to "establish baselines for outbreak detection and strengthen national surveillance". [3] However, there is no evidence that CVSS is an event-based surveillance system. The Ministry of Health and Ministry of Agriculture make no mention of event-based surveillance. [4, 5]

[1] Caribbean Public Health Agency (CARPHA). "Tourism and Health/Travelers Health Program (THP) - Background". [https://carpha.org/THP/Background]. Accessed 2 August 2020.

[2] Caribbean Public Health Agency (CARPHA). "THP: THIS Hotel Based Surveillance". [https://carpha.org/THP/THIS-Hotel-Based-Surveillance]. Accessed 2 August 2020.

[3] Caribbean Public Health Agency (CARPHA). "THP: Regional Guidelines". [https://carpha.org/THP/Regional-Guidelines-for-Response]. Accessed 2 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[5] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [http://agriculture.gov.ag/]. Accessed 2 August 2020.

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 evidence that Antigua and Barbuda has reported a potential public health emergency of international concern (PHEIC) to the World Health Organization (WHO) within the last two years. [1, 2] A 2017 PAHO/WHO epidemiological report indicates there were three suspected, but no confirmed, cases of zika in Antigua and Barbuda as recent as 2017. [3] The Ministry of Health and the Caribbean Public Health Agency (CARPHA) does not have any report of a potential PHEIC within the last two years. [4, 5]

- [1] World Health Organization (WHO). "Emergencies preparedness, response - Disease Outbreak News (DONs)". [<http://www.who.int/csr/don/en/>]. Accessed 2 August 2020.
- [2] World Health Organization (WHO). "Emergency Preparedness, Response - Antigua and Barbuda". [<https://www.who.int/csr/don/archive/country/atg/en/>]. Accessed 2 August 2020.
- [3] Pan American Health Organization - World Health Organization (PAHO/WHO). 2017. "Zika-Epidemiological Report, Antigua and Barbuda". [<https://www.paho.org/hq/dmdocuments/2017/2017-phe-zika-situation-report-atg.pdf>]. Accessed 2 August 2020.
- [4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.
- [5] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 2 August 2020.

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: 0

There is no evidence that Antigua and Barbuda operates an electronic reporting surveillance system at both the national and sub-national level. The Ministry of Health and Government Information and Services website make no mention of electronic reporting [1, 2]. Health Watch Antigua & Barbuda "a government website that communicates health information to the public" describes a workshop held at the Ministry of Health's headquarters for laboratory and health professionals on the use of WHONET software, to streamline epidemiological data for the monitoring of Antimicrobial resistance (AMR). [3] WHONET is an information system that was developed to support the World Health Organization's (WHO) goal of global AMR surveillance. [3] However, this article is not dated, and there is no other indication that WHONET has been systematically integrated in Antigua and Barbuda. [3] The Caribbean Public Health Agency (CARPHA)'s role in the Caribbean region includes surveillance of communicable diseases, however details on CARPHA's surveillance system are not publicly available. [4] CARPHA hosts a Tourism and Health Information System (THIS), a real-time system for hotel management and public health officials to identify events such as outbreaks early. However, Antigua and Barbuda is not among the eight countries listed as currently implementing THIS. [5] CARPHA also has the Caribbean Vessel Surveillance System (CVSS) for rapid information flow and coordinated multisectoral response for public health events occurring among visitors from passenger ships. [6] However, there is no other indication of an electronic reporting surveillance system through CARPHA. [7]

- [1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.
- [2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.
- [3] Health Watch Antigua and Barbuda. ND. "Antigua Steps up Fight against Superbugs". [http://www.healthwatchantiguaandbarbuda.com/fight_against_superbugs]. Accessed 2 August 2020.
- [4] Caribbean Public Health Agency (CARPHA). "What we do - Communicable Diseases". [<https://carpha.org/What-We-Do/Communicable-Diseases>]. Accessed 2 August 2020.
- [5] Caribbean Public Health Agency (CARPHA). "THP: THIS Hotel Based Surveillance". [<https://carpha.org/THP/THIS-Hotel-Based-Surveillance>]. Accessed 2 August 2020.
- [6] Caribbean Public Health Agency (CARPHA). "THP: Regional Guidelines". [<https://carpha.org/THP/Regional-Guidelines-for-Response>]. Accessed 2 August 2020.
- [7] Caribbean Public Health Agency (CARPHA). [<https://carpha.org/>]. Accessed 2 August 2020.

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 that Antigua and Barbuda's surveillance system collects ongoing/real time laboratory data, as there is no evidence that Antigua and Barbuda operates an electronic reporting surveillance system. The Ministry of Health and the Government Information and Services make no mention of electronic reporting [1, 2]. Health Watch Antigua and Barbuda, a government website that communicates health information to the public, describes a workshop held at the Ministry of Health's headquarters for laboratory and health professionals on the use of WHONET software, to streamline epidemiological data for the monitoring of Antimicrobial resistance (AMR). [3] WHONET is an information system that was developed to support the World Health Organization's (WHO) goal of global AMR surveillance. [3] However, this article is not dated, and there is no other indication that WHONET has been systematically integrated in Antigua and Barbuda. [3] The Caribbean Public Health Agency (CARPHA)'s role in the Caribbean region includes surveillance of communicable diseases, however details on CARPHA's surveillance system are not publicly available. [4] CARPHA hosts a Tourism and Health Information System (THIS), a real-time system for hotel management and public health officials to identify events such as outbreaks early. However, Antigua and Barbuda is not among the eight countries listed as currently implementing THIS. [5] CARPHA also has the Caribbean Vessel Surveillance System (CVSS) for rapid information flow and coordinated multisectoral response for public health events occurring among visitors from passenger ships. [6] However, there is no other indication of ongoing/real time laboratory through CARPHA. [7]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[3] Health Watch Antigua and Barbuda. ND. "Antigua Steps up Fight against Superbugs".

[http://www.healthwatchantiguaandbarbuda.com/fight_against_superbugs]. Accessed 2 August 2020.

[4] Caribbean Public Health Agency (CARPHA). "What we do - Communicable Diseases". [<https://carpha.org/What-We-Do/Communicable-Diseases>]. Accessed 2 August 2020.

[5] Caribbean Public Health Agency (CARPHA). "THP: THiS Hotel Based Surveillance". [<https://carpha.org/THP/THiS-Hotel-Based-Surveillance>]. Accessed 2 August 2020.

[6] Caribbean Public Health Agency (CARPHA). "THP: Regional Guidelines". [<https://carpha.org/THP/Regional-Guidelines-for-Response>]. Accessed 2 August 2020.

[7] Caribbean Public Health Agency (CARPHA). [<https://carpha.org>]. Accessed 2 August 2020.

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: 0

There is no evidence that electronic health records (EHR) are commonly in use in Antigua and Barbuda. The Ministry of Health and Government Information and Services website make no mention of electronic health records. [1, 2] The 2016-

2020 National Strategic Plan for Health states that introducing "an electronic health information system" is a strategic action goal, but there is no evidence that this has been implemented. [3] The Medical Benefits Scheme, which provides financial assistance "including for laboratory tests and pharmaceuticals" to qualified residents of Antigua and Barbuda, does not mention electronic health records. [4] There is no indication that the Caribbean Public Health Agency (CARPHA) has EHR commonly in use. [5] However, EHR has been a topic of interest for CARPHA as recently as June 2018, when a representative from the Pan American Health Organisation (PAHO) presented on effective implementation and the steady growth of electronic medical records over the past 15 years. [6] An undated online article from PAHO indicates that countries in the Caribbean are looking to build EHR capacity and that several countries have adopted OpenEHR, towards standardizing EHR, but Antigua and Barbuda is not mentioned. [7]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[3] Health Watch Antigua and Barbuda. ND. "National Strategic Plan for Health, 2016-2020". [http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 2 August 2020.

[4] Medical Benefits Scheme of Antigua and Barbuda. [<http://www.mbs.gov.ag/v2/>]. Accessed 2 August 2020.

[5] Caribbean Public Health Agency (CARPHA). [<https://carpha.org/>]. Accessed 2 August 2020.

[6] Caribbean Public Health Agency (CARPHA). "63rd Annual CARPHA Health Research Conference: June 14-16, 2018". [<http://conference.carpha.org/Portals/0/Documents/CARPHA%202018%20WIMJ%20Supplement.pdf>]. Accessed 2 August 2020.

[7] Pan American Health Organisation (PAHO). ND. "The Caribbean Looks to Build Capacity on the OpenEHR Reference Model and Develop Specific Core Archetypes." [<https://www.paho.org/ish/index.php/en/all-stories?id=118>] Accessed 2 August 2020.

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: 0

There is no evidence that Antigua and Barbuda's national public health system has access to electronic health records (EHR) of individuals in their country. The Ministry of Health and the Government Information and Services make no mention of electronic health records. [1, 2] The 2016-2020 National Strategic Plan for Health states that introducing "an electronic health information system" is a strategic action goal, but there is no evidence that this has been implemented. [3] The Medical Benefits Scheme, which provides financial assistance "including for laboratory tests and pharmaceuticals" to qualified residents of Antigua and Barbuda, does not mention electronic health records. [4] There is no indication that the Caribbean Public Health Agency (CARPHA) has EHR commonly in use. [5] However, EHR has been a topic of interest for CARPHA as recently as June 2018, when a representative from the Pan American Health Organisation (PAHO) presented on effective implementation and the steady growth of electronic medical records over the past 15 years. [6] An undated online article from PAHO indicates that countries in the Caribbean are looking to build EHR capacity and that several countries have adopted OpenEHR, towards standardizing EHR, but Antigua and Barbuda is not mentioned. [7]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[3] Health Watch Antigua and Barbuda. ND. "National Strategic Plan for Health, 2016-2020".

[http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 2 August 2020.

- [4] Medical Benefits Scheme of Antigua and Barbuda. [<http://www.mbs.gov.ag/v2/>]. Accessed 2 August 2020.
- [5] Caribbean Public Health Agency (CARPHA). [<http://carpha.org>]. Accessed 2 August 2020.
- [6] Caribbean Public Health Agency (CARPHA). "63rd Annual CARPHA Health Research Conference: June 14-16, 2018". [<http://conference.carpha.org/Portals/0/Documents/CARPHA%202018%20WIMJ%20Supplement.pdf>]. Accessed 2 August 2020.
- [7] Pan American Health Organisation (PAHO). ND. "The Caribbean Looks to Build Capacity on the OpenEHR Reference Model and Develop Specific Core Archetypes." [<https://www.paho.org/ish/index.php/en/all-stories?id=118>] Accessed 2 August 2020.

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 no evidence of data standards to ensure data is comparable in Antigua and Barbuda. The Ministry of Health and the Government Information and Services make no mention of electronic health records (EHR). [1, 2] The 2016-2020 National Strategic Plan for Health states that introducing "an electronic health information system" is a strategic action goal, but there is no evidence that this has been implemented. [3] The Medical Benefits Scheme, which provides financial assistance "including for laboratory tests and pharmaceuticals" to qualified residents of Antigua and Barbuda, does not mention electronic health records. [4] There is no indication that the Caribbean Public Health Agency (CARPHA) has EHR commonly in use. [5] However, EHR has been a topic of interest for CARPHA as recently as June 2018, when a representative from the Pan American Health Organisation (PAHO) presented on effective implementation and the steady growth of electronic medical records over the past 15 years. [6] An undated online article from PAHO indicates that countries in the Caribbean are looking to build EHR capacity and that several countries have adopted OpenEHR, towards standardizing EHR, but Antigua and Barbuda is not mentioned. [7]

- [1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.
- [2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.
- [3] Health Watch Antigua and Barbuda. ND. "National Strategic Plan for Health, 2016-2020". [http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 2 August 2020.
- [4] Medical Benefits Scheme of Antigua and Barbuda. [<http://www.mbs.gov.ag/v2/>]. Accessed 2 August 2020.
- [5] Caribbean Public Health Agency (CARPHA). [<http://carpha.org>]. Accessed 2 August 2020.
- [6] Caribbean Public Health Agency (CARPHA). "63rd Annual CARPHA Health Research Conference: June 14-16, 2018". [<http://conference.carpha.org/Portals/0/Documents/CARPHA%202018%20WIMJ%20Supplement.pdf>]. Accessed 2 August 2020.
- [7] Pan American Health Organisation (PAHO). ND. "The Caribbean Looks to Build Capacity on the OpenEHR Reference Model and Develop Specific Core Archetypes." [<https://www.paho.org/ish/index.php/en/all-stories?id=118>]. Accessed 2 August 2020.

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 some evidence of established mechanisms to share arbovirus surveillance but it is through the regional Caribbean Public Health Agency (CARPHA). In a 2013 workshop report from the Pan American Health Organisation of the Caribbean One Health, one project proposed for future development was the One Health approach to vector borne diseases, including strengthening surveillance and diagnostic capacity. [1] CARPHA has an established strategic approach to the prevention and control of vector borne diseases (VBDs), including surveillance. [2] Between 2019 and 2023, the European Union (EU) is funding a project to support the prevention and control of arboviruses among CARPHA member states, including "Increased capacity for detection, monitoring and surveillance of Zika, and other mosquito-borne diseases, and sequelae in the Caribbean" and strengthened regional coordination. [3] In 2017, the first Surveillance and Vector Control Working Group was convened by the Caribbean Vector-Borne Diseases Network (CariVecNet), which includes Antigua and Barbuda and will act as an avenue for exchange of surveillance information on vector borne diseases. [4, 5, 6] CariVecNet will be operationalized and expanded under the EU-funded programme. [3]

[1] Pan American Health Organization. 2013. "One Health: From Ideas to Action".

[https://www.paho.org/trt/images/stories/PWR_TRT/one%20health%20workshop%20report.pdf?ua=1&ua=1]. Accessed 2 August 2020.

[2] Caribbean Public Health Agency (CARPHA). N.d. "Vector Borne Disease Strategy." [<https://carpha.org/What-We-Do/VBD/Overview>]. Accessed 27 February 2021.

[3] Caribbean Public Health Agency (CARPHA). N.d. "11th European Development Fund (EDF): Programme of Support for Health System Strengthening for Prevention and Control of Outbreaks of Zika and other Mosquito-borne Diseases in the Caribbean." [<https://www.carpha.org/Projects/Ongoing-Projects/11th-EDF-Zika>]. Accessed 27 February 2021.

[4] Caribbean Public Health Agency (CARPHA). 2017. "Regional Experts Lay Groundwork for Unified Response to Vector-Borne Diseases". [<https://carpha.org/More/Media/Articles/ArticleID/179/Regional-Experts-Lay-Groundwork-for-Unified-Response-to-Vector-Borne-Diseases>]. Accessed 2 August 2020.

[5] Caribbean Vector Borne Disease Network (CariVectNet). "Working Groups". [<http://carivecnet.carpha.org/workinggroups>]. Accessed 2 August 2020.

[6] Caribbean Vector Borne Disease Network. (CariVectNet). [<http://carivecnet.carpha.org/>]. Accessed 2 August 2020.

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 no evidence that Antigua and Barbuda makes de-identified health surveillance data on disease outbreaks publicly available via reports (or other format) on government websites. The websites for the Ministry of Health, Ministry of

Agriculture, Health Watch Antigua and Barbuda—a government website that communicates health information to the public—and Government Information and Services offer no such information. [1, 2, 3, 4] Antigua and Barbuda has published health surveillance data on disease outbreaks through the Pan American Health Organization/World Health Organization (PAHO/WHO), such as an epidemiological report of zika cases in the country. [5] Data on COVID-19 cases from Antigua and Barbuda have been included in the regional Caribbean Public Health Agency (CARPHA) situation reports. [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 4 August 2020.

[3] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 4 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 4 August 2020.

[5] Pan American Health Organization - World Health Organization (PAHO/WHO). "Zika-Epidemiological Report, Antigua and Barbuda". [<https://www.paho.org/hq/dmdocuments/2017/2017-phe-zika-situation-report-atg.pdf>]. Accessed 5 January 2019.

[6] Caribbean Public Health Agency (CARPHA). 31 July 2020. "CARPHA Situation Report No. 77 - Coronavirus Disease (COVID-19) Pandemic". [<https://carpha.org/Portals/0/Documents/COVID%20Situation%20Reports/Situation%20Report%2077%20-%20July%2031,%202020.pdf>]. Accessed 4 August 2020.

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: 0

There is no evidence that Antigua and Barbuda makes de-identified COVID-19 surveillance data available via daily reports on government websites. The websites for the Ministry of Health, Ministry of Agriculture, Health Watch Antigua and Barbuda "a government website that communicates health information to the public" and Government Information and Services offer no such information. [1, 2, 3, 4] COVID-19 surveillance data has been included in periodic updates from the government, such as a June 24, 2020 press release from the Prime Minister. [5, 6] Data on COVID-19 cases from Antigua and Barbuda have been included in the weekly regional Caribbean Public Health Agency (CARPHA) situation reports. [7]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 4 August 2020.

[3] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 4 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 4 August 2020.

[5] Antigua and Barbuda's Government Information and Services. "Novel Coronavirus Information." [https://ab.gov.ag/detail_page.php?page=42]. Accessed 4 August 2020.

[6] Antigua and Barbuda's Government Information and Services. 24 June 2020. "The Honorable Gaston A. Browne Prime Minister of Antigua and Barbuda Statement: Update on COVID-19 Cases." [https://ab.gov.ag/pdf/covid_news/2020_06_25_COVID-19_Update.pdf]. Accessed 4 August 2020.

[7] Caribbean Public Health Agency (CARPHA). 31 July 2020. "CARPHA Situation Report No. 77 - Coronavirus Disease (COVID-19) Pandemic". [<https://carpha.org/Portals/0/Documents/COVID%20Situation%20Reports/Situation%20Report%2077%20-%20July%2031,%202020.pdf>]. Accessed 4 August 2020.

%20July%2031,%202020.pdf]. Accessed 4 August 2020.

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

There is a law in Antigua and Barbuda that safeguards the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. Antigua and Barbuda's Data Protection Act of 2013 is intended to "promote the protection of personal data processed by public and private bodies". [1] "Sensitive personal data" is defined in the Act to include information on a person's physical or mental health or condition. [1] According to the Act, data users must protect personal data, and sensitive personal data may not be processed by a data user except in certain circumstances, such as explicit consent or for medical purposes by a healthcare professional or other authorized person. [1] There is no evidence provided by the Ministry of Health or regarding confidentiality specific to health surveillance activities. [2, 3]

[1] Laws of Antigua and Barbuda. Act No. 10 of 2013. "Data Protection Act, 2013". [<http://laws.gov.ag/wp-content/uploads/2019/02/a2013-10.pdf>]. Accessed 2 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

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 no evidence that the law in Antigua and Barbuda that safeguards the confidentiality of identifiable health information includes mention of protections from cyber attacks. Antigua and Barbuda's Data Protection Act of 2013 is intended to ensure protection of an individual's right to privacy and the right to maintain sensitive personal information as private and personal. [1] "Sensitive personal information" is defined in the Act to include information on a person's physical or mental health or condition. [1] According to the Act, a public body may only disclose personal information if "the head of the public body concerned has approved conditions relating to security and confidentiality", and the Information Commissioner may publish guidelines regarding compliance with the Act, including guidelines dealing with security of information and information systems. [1] Antigua and Barbuda participates in STOP. THINK. CONNECT, a global cybersecurity awareness campaign for citizens' safety and security, but there is no mention of health information. [2] There is no mention of protections from cyber attacks around surveillance activities mentioned by the Ministry of Health or the Government Information and Services websites. [3, 4]

[1] Laws of Antigua and Barbuda. Act No. 10 of 2013. "Data Protection Act, 2013". [<http://laws.gov.ag/wp-content/uploads/2019/02/a2013-10.pdf>]. Accessed 2 August 2020.

[2] STOP. THINK. CONNECT. "About Us". [<https://www.stophinkconnect.org.ag/about-us/>]. Accessed 2 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

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

Current Year Score: 0

There is no evidence that the government of Antigua and Barbuda has 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 for one or more diseases. Antigua and Barbuda is a Member State of the Caribbean Public Health Agency (CARPHA), which—according to Article 5 of the Agreement Establishing CARPHA—states that CARPHA's functions include provision of accurate, reliable, timely and relevant public health information to "various Caribbean and international audiences". [1] A July 2020 CARPHA Situation Report on the COVID-19 pandemic in the region includes data from Antigua and Barbuda. [2] However, there is no evidence that a CARPHA information sharing agreement was created, and there is no evidence of such a commitment through the Ministry of Health or the Government Information and Services websites. [3, 4]

[1] Caribbean Public Health Agency (CARPHA). 2011. "Agreement Establishing the Caribbean Public Health Agency (CARPHA)". [<https://caricom.org/documents/legaldocuments/10375-carpha-iga.pdf>]. Accessed 2 August 2020.

[2] Caribbean Public Health Agency (CARPHA). 31 July 2020. "CARPHA Situation Report No. 77 - Coronavirus Disease (COVID-19) Pandemic". [<https://carpha.org/Portals/0/Documents/COVID%20Situation%20Reports/Situation%20Report%2077%20-%20July%2031,%202020.pdf>]. Accessed 2 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

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 no evidence that Antigua and Barbuda has a national system in place to provide support at the sub-national level to conduct contact tracing in the event of active or future public health emergencies. The websites for the Ministry of Health, Health Watch Antigua and Barbuda—a government website that communicates health information to the public—and Government Information and Services offer no such information. [1, 2, 3] The country's COVID-19 Dashboard Update mentions "contact tracing and testing are ongoing," but there is no more detailed information on the COVID-19 contact tracing strategy or support at the sub-national level. [4] The government's Tenders Board put out a request for proposal for the Development of Contact Tracing App and Website during the COVID-19 pandemic, with proposals due in September 2020. [5] No more recent information is available regarding a contact tracing app and website for the country. According to the Latin American and Caribbean COVID-19 Map (LACCOM), a tool from the Georgetown University documenting the impact of the ongoing COVID-19 pandemic on the countries of Latin America and the Caribbean, mentions that the Caribbean Public Health Agency (CARPHA) has "praised the contact tracing and quarantine measures taken by the [Antigua and Barbuda] government...", however, no further details are available. [6] In an April 2020 press release from the Government Information and Services, the Director of the Pan American Health Organisation (PAHO) recommends that countries expand their capacity, including contact tracing. [7] In 2015, the Caribbean Public Health Agency (CARPHA) held a workshop on Strengthening Caribbean Regional Health Security, Preparedness and Response, which focused on contact tracing, but there is no detail on Antigua and Barbuda's involvement. [8]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[2] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 4 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 4 August 2020.

[4] Antigua and Barbuda's Government Information and Services. 29 January 2021. "COVID-19 Dashboard Update for January 28th 2021." [https://ab.gov.ag/media_page.php?page=321]. Accessed 27 February 2021.

[5] Public Procurement in Antigua and Barbuda. 10 August 2020. "Tender Notice: Request for Proposal - Development of Contact Tracing App and Website COVID-19 Pandemic." [<http://www.tendersboard.gov.ag/2020/08/request-for-proposal-development-of-contact-tracing-app-and-website-covid-19-pandemic/>]. Accessed 27 February 2021.

[6] Latin American and Caribbean COVID-19 Map (LACCOM). N.d. "Antigua and Barbuda - Governance and the Rule of Law." [<http://lacom.georgetown.domains/antigua-and-barbuda/>]. Accessed 27 February 2021.

[7] Antigua and Barbuda's Government Information and Services. 23 April 2020. "PAHO Director Urges Accelerate and Expand Testing for COVID-19 in the Americas." [https://ab.gov.ag/media_page.php?page=237]. Accessed 4 August 2020.

[8] Caribbean Public Health Agency (CARPHA). 25 July 2015. "Workshop on Contact Tracing held by CARPHA to Strengthen Caribbean Health Security." [<https://carpha.org/More/Media/Articles/ArticleID/118>]. Accessed 4 August 2020.

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 evidence that Antigua and Barbuda provides wraparound services—neither economic support nor medical attention—to enable infected people and their contacts to self-isolate or quarantine as recommended. The Ministry of Health and Government Information and Services website has no such evidence, including on the page with Novel Coronavirus Information. [1, 2, 3] A social media post from May 2020 describes the Government Assistance Programme (GAP), which provides cash-transfer assistance to individuals with children who are unemployed as a direct result of the COVID-19 pandemic. [4] There is no evidence of wraparound services available for Antigua and Barbuda through the regional

Caribbean Community (CARICOM) or Caribbean Public Health Agency (CARPHA). [5, 6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 4 August 2020.

[3] Antigua and Barbuda's Government Information and Services. "Novel Coronavirus Information." [https://ab.gov.ag/detail_page.php?page=42]. Accessed 4 August 2020.

[4] Facebook - Office of The Prime Minister Antigua and Barbuda. 5 May 2020. "Ministry of Social Transformation COVID-19 Government Assistance Food Voucher Programme."

[<https://www.facebook.com/OPMAntiguaBarbuda/posts/660719324726573:0>]. Accessed 4 August 2020.

[5] Caribbean Community (CARICOM). [<https://caricom.org/>]. Accessed 4 August 2020.

[6] Caribbean Public Health Agency (CARPHA). [<https://carpha.org>]. Accessed 4 August 2020.

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 insufficient evidence that Antigua and Barbuda makes de-identified data on contact tracing efforts for COVID-19 available on government websites. The Caribbean Community (CARICOM) provides data provided by Member States' Ministries of Health, including Antigua and Barbuda. [1] However, it is unclear what period the data covers and how frequently the data is updated, and the number of cases and deaths listed for the country does not align with the periodically updated information provided on the Government Information and Services' Novel Coronavirus Information webpage. [2, 3] The CARICOM COVID-19 Dashboard and the country's Government Information and Services do not refer to contact tracing efforts. [1, 3] There is no evidence of daily reports of contact tracing efforts for COVID-19 from the Ministry of Health or the Caribbean Public Health Agency (CARPHA). [4, 5]

[1] Caribbean Community (CARICOM) Today. "CARICOM: COVID-19 Dashboard." [<https://today.caricom.org/covid19/regional/>]. Accessed 4 August 2020.

[2] Caribbean Community (CARICOM) Today. "CARICOM: COVID-19 Dashboard - Antigua and Barbuda." [<https://today.caricom.org/covid19/antigua-and-barbuda/>]. Accessed 4 August 2020.

[3] Antigua and Barbuda's Government Information and Services. "Novel Coronavirus Information." [https://ab.gov.ag/detail_page.php?page=42]. Accessed 4 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[5] Caribbean Public Health Agency (CARPHA). [<https://carpha.org>]. Accessed 4 August 2020.

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 no evidence of a joint plan or cooperative agreement between the Antigua and Barbuda 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. A June 2020 letter from the Prime Minister of Antigua and Barbuda refers to the detection and quarantining of 39 new "imported" COVID-19 cases that "demonstrate the effectiveness of the procedures that have been established." [1] However, no further information on such procedures could be found through the Ministry of Health, Ministry of Foreign Affairs, International Trade and Immigration, or Government Information and Services. [2, 3, 4] There is no evidence of a joint plan or cooperative agreement available through the Caribbean Community (CARICOM) or Caribbean Public Health Agency (CARPHA). [5, 6]

[1] Antigua and Barbuda's Government Information and Services. 24 June 2020. "The Honorable Gaston A. Browne Prime Minister of Antigua and Barbuda Statement: Update on COVID-19 Cases."

[https://ab.gov.ag/pdf/covid_news/2020_06_25_COVID-19_Update.pdf]. Accessed 7 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[3] Department of Immigration, Ministry of Health, Ministry of Foreign Affairs, International Trade and Immigration of Antigua and Barbuda. [<http://www.immigration.gov.ag/>]. Accessed 7 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag>]. Accessed 7 August 2020.

[5] Caribbean Community (CARICOM) Today. [<https://caricom.org/>]. Accessed 7 August 2020.

[6] Caribbean Public Health Agency (CARPHA). [<https://carpha.org>]. Accessed 7 August 2020.

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

Antigua and Barbuda has an applied epidemiology training program as part of the Caribbean Public Health Agency (CARPHA). The Caribbean Regional Field Epidemiology and Laboratory Training Programme (CR-FELTP) offers "a core curriculum of competency-based classroom learning and on-the-job training, to develop field epidemiology skills and tools to respond to public health issues in the Caribbean through surveillance, outbreak investigation, and operational research and analysis". [1] CR-FELTP Country Coordinators coordinate in-country training courses and sessions, though there is no evidence of where recent trainings have been held. [2] There is no indication by CARPHA, Ministry of Health, or the Government Information and Services websites that resources are provided by the government to send citizens to another country to participate in

the program. [3, 4, 5]

[1] Caribbean Public Health Agency (CARPHA). "FELTP - What is FELTP?". [<https://carpha.org/What-We-Do/FELTP/Introduction>]. Accessed 2 August 2020.

[2] Caribbean Public Health Agency (CARPHA). "CARPHA's Role: Coordinating the CR-FELTP". [<https://carpha.org/What-We-Do/FELTP/Overview>]. Accessed 20 August 2020.

[3] Caribbean Public Health Agency (CARPHA). [<https://carpha.org/>]. Accessed 2 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[5] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

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 indication that the available field epidemiology training programs are explicitly inclusive of animal health professionals, and there is no specific animal health field epidemiology training program offered. The Field Epidemiology and Laboratory Training Programme (FELTP) of the Caribbean Public Health Agency does not mention animal health, nor animal health professionals. [1] There is no indication of a field epidemiology training inclusive of animal health professionals by the Ministry of Health, Ministry of Agriculture, or the Government Information and Services websites. [2, 3, 4]

[1] Caribbean Public Health Agency (CARPHA). "FELTP - What is FELTP?". [<https://carpha.org/What-We-Do/FELTP/Introduction>]. Accessed 2 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 2 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

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: 0

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 evidence that Antigua and Barbuda has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential. Although there is reference to planning, there is insufficient evidence that an overarching plan or disease-specific plans exist. The 2016 Country Document for Disaster Risk Reduction lists human/animal epidemics among the types of hazards in Antigua and Barbuda—mentioning avian influenza, swine flu, and zika—and describes the National Health Disaster Committee (NHDC), under the Ministry of Health, which is responsible for developing policies for the efficient management of health emergency/disaster. However, the document does not specifically address public health emergency response. [1] In June 2017, Health Watch Antigua and Barbuda posted a news article describing a recent three-day workshop towards updating the "current health disaster response plan," but there is no mention of planning for multiple communicable diseases with pandemic potential and the current plan was described as needing "updating and upgrading to include multi-hazards and not just hurricanes". [2] There is no health disaster response plan available through the Ministry of Health or Government Information and Services. [3, 4] Antigua and Barbuda is part of the Caribbean Disaster Emergency Management Agency (CDEMA) for disaster management in the Caribbean Community (CARICOM). [5] CDEMA's mandate includes "coordinating the establishment, enhancement and maintenance of adequate emergency disaster response capabilities among the Participating States". [6] Health emergency preparedness and response is one of the functions of the Caribbean Public Health Agency (CARPHA), but there is no evidence of a regional public health emergency response plan. [7]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 4 August 2020.

[2] Health Watch Antigua and Barbuda. ND "Health Disaster Management Plan Updated and Upgraded". [<http://www.healthwatchantiguaandbarbuda.com/health-disaster-management-plan-to-be-updated>]. Accessed 4 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[5] Caribbean Disaster Emergency Management Agency (CDEMA). "About Us". [<https://www.cdema.org/about-us>]. Accessed 4 August 2020.

[6] Caribbean Disaster Emergency Management Agency (CDEMA). "What is CDEMA's Mandate?". [<https://www.cdema.org/about-us#what-is-cdema-s-mandate>]. Accessed 4 August 2020.

[7] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)".

[<https://carpha.org/Who-We-Are/Role-and-Function>]. Accessed 4 August 2020.

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 evidence that Antigua and Barbuda has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential. Although there is reference to planning, there is no detail available about these documents via publicly available sources. The 2016 Country Document for Disaster Risk Reduction lists human/animal epidemics among the types of hazards in Antigua and Barbuda "mentioning avian influenza, swine flu, and zika" and describes the National Health Disaster Committee (NHDC), under the Ministry of Health, which is responsible for developing policies for the efficient management of health emergency/disaster. However, the document does not specifically address public health emergency response. [1] In June 2017, Health Watch Antigua and Barbuda posted a news article describing a recent three-day workshop towards updating the current health disaster response plan, but there is no mention of planning for multiple communicable diseases with pandemic potential. [2] There is no health disaster response plan available through the Ministry of Health or Government Information and Services. [3, 4] Antigua and Barbuda is part of the Caribbean Disaster Emergency Management Agency (CDEMA) for disaster management in the Caribbean Community (CARICOM). [5] CDEMA's mandate includes "coordinating the establishment, enhancement and maintenance of adequate emergency disaster response capabilities among the Participating States". [6] Health emergency preparedness and response is one of the functions of the Caribbean Public Health Agency (CARPHA), but there is no evidence of a regional public health emergency response plan. [7]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 4 August 2020.

[2] Health Watch Antigua and Barbuda. ND "Health Disaster Management Plan Updated and Upgraded". [<http://www.healthwatchantiguaandbarbuda.com/health-disaster-management-plan-to-be-updated>]. Accessed 4 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[5] Caribbean Disaster Emergency Management Agency (CDEMA). "About Us". [<https://www.cdema.org/about-us>]. Accessed 4 August 2020.

[6] Caribbean Disaster Emergency Management Agency (CDEMA). "What is CDEMA's Mandate?". [<https://www.cdema.org/about-us#what-is-cdema-s-mandate>]. Accessed 4 August 2020.

[7] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)". [<https://carpha.org/Who-We-Are/Role-and-Function>]. Accessed 4 August 2020.

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 evidence that Antigua and Barbuda has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential. Although there is reference to planning, there is no detail available about these documents via publicly available sources. The 2016 Country Document for Disaster Risk Reduction lists human/animal epidemics among the types of hazards in Antigua and Barbuda "mentioning avian influenza, swine flu, and zika" and describes the National Health Disaster Committee (NHDC), under the Ministry of Health, which is responsible for developing policies for the efficient management of health emergency/disaster. However, the document does not specifically address public health emergency response. [1] In June 2017, Health Watch Antigua and Barbuda posted a news article describing a recent three-day workshop towards updating the current health disaster response plan, but there is no mention of planning for multiple communicable diseases with pandemic potential. [2] There is no health disaster response plan available through the Ministry of Health or Government Information and Services. [3, 4] Antigua and Barbuda is part of the Caribbean Disaster Emergency Management Agency (CDEMA) for disaster management in the Caribbean Community (CARICOM). [5] CDEMA's mandate includes "coordinating the establishment, enhancement and maintenance of adequate emergency disaster response capabilities among the Participating States". [6] Health emergency preparedness and response is one of the functions of the Caribbean Public Health Agency (CARPHA), but there is no evidence of a regional public health emergency response plan. [7]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 4 August 2020.

[2] Health Watch Antigua and Barbuda. ND "Health Disaster Management Plan Updated and Upgraded". [<http://www.healthwatchantiguaandbarbuda.com/health-disaster-management-plan-to-be-updated>]. Accessed 4 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[5] Caribbean Disaster Emergency Management Agency (CDEMA). "About Us". [<https://www.cdema.org/about-us>]. Accessed 4 August 2020.

[6] Caribbean Disaster Emergency Management Agency (CDEMA). "What is CDEMA's Mandate?". [<https://www.cdema.org/about-us#what-is-cdema-s-mandate>]. Accessed 4 August 2020.

[7] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)". [<https://carpha.org/Who-We-Are/Role-and-Function>]. Accessed 4 August 2020.

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 evidence that Antigua and Barbuda has a specific mechanism for engaging with the private sector to assist with outbreak emergency preparedness and response. The Coordinating Unit of National Office of Disaster Service (NODS), which is mandated to deal with emergency/disaster situations, is responsible for coordinating national assets "in partnership with the private sector and civil society at all phases of disaster management." [1] The NODS 2016 Country Document for Disaster Risk Reduction states that "private sector participation in disaster risk reduction is confined primarily to the telecommunication companies and the media broadcast stations", but there is no mention of the private sector specific to outbreak emergencies. [2] There is no mention of mechanisms for engaging with the private sector by the Ministry of Health or the Government Information and Services websites. [3, 4] The Caribbean Disaster Emergency Management Agency (CDEMA) mentions involvement of the private sector, but there is no evidence of a specific mechanism for engagement from either agency. [5] There is no evidence that the Caribbean Public Health Agency (CARPHA) involves the private sector in assisting with outbreak emergency preparedness and response. [6]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. "What is NODS". [<http://nods.gov.ag/what-is-nods/>]. Accessed 2 August 2020.

[2] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 2 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[5] Caribbean Disaster Emergency Management Agency (CDEMA). "CDEMA News". Vol. 3, Iss. 1. [https://www.cdema.org/CDEMANewsletter-iss1_2017.pdf]. Accessed 2 August 2020.

[6] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 2 August 2020.

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

Antigua and Barbuda has guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic, but only for COVID-19. The government's COVID-19 website contains a number of guidelines that include NPIs, such as Guidelines for Cleaning and Disinfection. [1, 2] According to the CARPHA's Caribbean Countries Prevention Measures, on 5 April 2020, it became mandatory for residents going outside in Antigua and Barbuda to wear masks, and a number of curfews have been instated over the course of the pandemic. [3] The Government also provides information and "guidance"

on a Novel Coronavirus Information webpage with recommendations from the Pan American Health Organization (PAHO) and other national and international entities, including NPIs. [4, 5] This webpage also has Ministry of Health COVID-19 guidance, which includes NPIs, for daycares and preschools. [4] Much of this information is also available on Antigua and Barbuda's more recently updated COVID-19 website. [1] There is no evidence of a policy, plan, or guidelines in place for implementing NPIs during an epidemic or pandemic for other diseases available through the Ministry of Health or Government and Information Services, or National Office of Disaster Services. [6, 7, 8]

[1] COVID19.gov.ag. 2021. [<https://covid19.gov.ag/>]. Accessed 27 February 2021.

[2] COVID19.gov.ag. 20 August 2020. "Guidelines for Cleaning and Disinfection."

[<https://covid19.gov.ag/2020/08/20/guidelines-for-cleaning-disinfection/>]. Accessed 27 February 2021.

[3] Caribbean Public Health Agency (CARPHA). 12 June 2020. "Precautionary prevention measures implemented by Caribbean Countries (outside travel-related measures) because of COVID-19 - as of June 12th."

[https://carpha.org/Portals/0/Documents/Caribbean%20Countries%20Prevention%20Measures/Update%2011%20June12_Caribbean%20Countries%20Prevention%20Measures.pdf]. Accessed 7 August 2020.

[4] Antigua and Barbuda's Government Information and Services. "Novel Coronavirus Information."

[https://ab.gov.ag/detail_page.php?page=42]. Accessed 7 August 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. "Guidance Document for Daycares and Pre-Schools." [https://ab.gov.ag/pdf/Guidance_Document_for_Nurseries_Daycares_and_Pre-Schools.pdf]. Accessed 7 August 2020.

[6] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[8] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 7 August 2020.

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: 0

There is insufficient evidence that Antigua and Barbuda has activated their national emergency response plan for an infectious disease outbreak in the past year and that the country has completed a national-level biological threat-focused exercise in the past year. There is no evidence available through the Ministry of Health or Government Information and Services. [1, 2] Antigua and Barbuda is part of the Caribbean Disaster Emergency Management Agency (CDEMA) for disaster management in the Caribbean Community (CARICOM). [3] CDEMA's mandate includes "coordinating the establishment, enhancement and maintenance of adequate emergency disaster response capabilities among the Participating States". [4] Health emergency preparedness and response is one of the functions of the Caribbean Public Health Agency (CARPHA), but there is no evidence of a regional public health emergency response plan. [5] According to a 2020 CARPHA COVID-19

pandemic response situation report, CARPHA activated its Incident Management Team-Emergency Response (IMT-ER) in January 2020, but there is no publicly available documentation of what the IMT-ER entails. [6] CDEMA's situation report no. 4 states that Antigua and Barbuda has activated National Emergency Operation Centre but does not provide any further evidence on activation of a national emergency plan. [7] There is no evidence of simulation exercise activities in Antigua and Barbuda from the World Health Organization. [8]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 4 August 2020.

[2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

[3] Caribbean Disaster Emergency Management Agency (CDEMA). "About Us". [<https://www.cdema.org/about-us>]. Accessed 4 August 2020.

[4] Caribbean Disaster Emergency Management Agency (CDEMA). "What is CDEMA's Mandate?". [<https://www.cdema.org/about-us#what-is-cdema-s-mandate>]. Accessed 4 August 2020.

[5] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)". [<https://carpha.org/Who-We-Are/Role-and-Function>]. Accessed 4 August 2020.

[6] Caribbean Public Health Agency (CARPHA). 2020. "Commemorating the CARPHA 100th situation report: CARPHA COVID-19 pandemic response." [<https://carpha.org/Portals/0/Publications/CARPHA%20COVID-19%20Response%20Interactive%20Document.pdf?ver=2020-10-13-094823-237×tamp=1602597124663>]. Accessed 7 March 2021.

[7] Caribbean Disaster Emergency Management Agency (CDEMA). 2 April 2020. "COVID-19 Outbreak in CDEMA Participating States - Situation Report No. 4".

[<https://reliefweb.int/sites/reliefweb.int/files/resources/CDEMA%20Situation%20Report%20%234%20-%20COVID-19%20Outbreak%20in%20CDEMA%20Participating%20States%20-%20as%20of%208%20pm%20on%20April%202%2C%202020.pdf>]. Accessed 1 April 2021.

[8] World Health Organization - Strategic Partnership for International Health Regulations (2005) and Health Security. "Simulation Exercise." [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 4 August 2020.

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 evidence that Antigua and Barbuda has identified a list of gaps and best practices in response and developed a plan to improve response capabilities within the past year. A June 2018 news article in the Jamaica Observer describes a recent two-day after action review (AAR) by health representatives from countries "including Antigua and Barbuda" impacted by the 2017 hurricane season. [1] While this AAR included health dimensions of a natural disaster, it was not focused on a public health emergency. [1] Antigua and Barbuda does not appear on the World Health Organization's (WHO) list of after action reviews, and there is no indication of an after action review on the WHO country and regional page. [2, 3, 4] No indication of an after action review or a biological threat-focused IHR was found through Antigua and Barbuda's Ministry of Health, Ministry of Agriculture, Government Information and Services, or National Office of Disaster Services. [5, 6, 7, 8]

[1] Jamaica Observer. 1 June 2018. "Regional health officials review response after 2017 hurricanes".

[<http://www.jamaicaobserver.com/news/regional-health-officials-review-response-after-2017->

hurricanes_134644?profile=1470]. Accessed 7 August 2020.

[2] World Health Organization (WHO). "Strategic Partnership for International Health Regulations (2005) and Health Security (SPH) - After Action Review". [<https://extranet.who.int/sph/after-action-review>]. Accessed 7 August 2020.

[3] Pan American Health Organization / World Health Organization (WHO) - Regional Office for the Americas. [<https://www.paho.org/hq/index.php?lang=en>]. Accessed 7 August 2020.

[4] World Health Organization (WHO). "Antigua and Barbuda". [<https://www.who.int/countries/atg/en/>]. Accessed 7 August 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[6] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 7 August 2020.

[7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[8] National Office of Disaster Services (NODS) of Antigua and Barbuda. "About Us". [<http://nods.gov.ag/what-is-nods/>]. Accessed 7 August 2020.

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 evidence that Antigua and Barbuda in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives. Antigua and Barbuda does not appear on the World Health Organization's (WHO) list of simulation exercises, and there is no further indication on the WHO country and regional page. [1, 2, 3] There is no evidence of a national-level biological threat-focused exercise through Antigua and Barbuda's Ministry of Health, Ministry of Agriculture, Government Information and Services, or National Office of Disaster Services. [4, 5, 6, 7]

[1] World Health Organization (WHO). "Strategic Partnership for International Health Regulations (2005) and Health Security (SPH) - Simulation Exercises". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 7 August 2020.

[2] Pan American Health Organization / World Health Organization (WHO) - Regional Office for the Americas. [<https://www.paho.org/hq/index.php?lang=en>]. Accessed 7 August 2020.

[3] World Health Organization (WHO). "Antigua and Barbuda". [<https://www.who.int/countries/atg/en/>]. Accessed 7 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[5] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 7 August 2020.

[6] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[7] National Office of Disaster Services (NODS) of Antigua and Barbuda. "About Us". [<http://nods.gov.ag/what-is-nods/>]. Accessed 7 August 2020.

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

Antigua and Barbuda has in place an Emergency Operations Center. The National Office of Disaster Service (NODS) indicates that there is a National Emergency Operations Centre (NEOC), which is also mentioned in the Country Document for Disaster Risk Reduction. [1, 2] NODS is the national agency that coordinates across agencies regarding emergency/disaster situations. [3] Although there is no specific mention of the NEOC for health-related emergencies by NODS, a Caribbean Disaster Emergency Management Agency (CDEMA) COVID-19 Situation Report from April 2020 indicates that the NEOC was activated in response to COVID-19. [1, 4]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. "History of NODS". [<http://nods.gov.ag/about-us/history-of-nods/>]. Accessed 7 August 2020.

[2] National Office of Disaster Services (NODS) of Antigua and Barbuda. February 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 7 August 2020.

[3] National Office of Disaster Services (NODS) of Antigua and Barbuda. "About Us". [<http://nods.gov.ag/what-is-nods/>]. Accessed 7 August 2020.

[4] Caribbean Disaster Emergency Management Agency (CDEMA). 2 April 2020. "COVID-19 Outbreak in CDEMA Participating States - Situation Report No. 4".

[<https://reliefweb.int/sites/reliefweb.int/files/resources/CDEMA%20Situation%20Report%20%234%20-%20COVID-19%20Outbreak%20in%20CDEMA%20Participating%20States%20-%20as%20of%208%20pm%20on%20April%20%2C%202020.pdf>]. Accessed 7 August 2020.

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 evidence that the Emergency Operations Center in Antigua and Barbuda is required to conduct a drill at least once per year, and there is no evidence that they conduct a drill at least once per year. The National Office of Disaster Service (NODS) indicates that there is a National Emergency Operations Centre (NEOC), which is also mentioned in the Country Document for Disaster Risk Reduction. [1, 2] Although there is no specific mention of the NEOC for health-related emergencies by NODS, a Caribbean Disaster Emergency Management Agency (CDEMA) COVID-19 Situation Report from April 2020 indicates that the NEOC was activated in response to COVID-19. [1, 3] NODS is the national agency that coordinates across agencies regarding emergency/disaster situations. [4] The Ministry of Health is listed as one of NODS key agencies, and the Caribbean Disaster Emergency Management Agency (CDEMA), the Pan American Health Organization (PAHO), and the Caribbean Epidemiology Centre (CAREC) are listed as support partners. [4] CAREC was among the regional health institutions that, as of 2013, merged to form the Caribbean Public Health Association (CARPHA). [5] NODS indicates that

regular training and exercises are part of the Office's emergency preparedness and response, but there is no indication that this is specific to the National Emergency Operations Centre (NEOC). [6] An undated article on Health Watch Antigua and Barbuda—a Ministry of Health website that communicates health information to the public—mentions a Ministry of Health and the Environment Emergency Drill as part of the policies and priorities established in follow up to a recent preparedness workshop, but no additional information is available. [7] There is no mention that the NEOC is required to conduct a drill at least once a year by the Ministry of Health or Government Information and Services. [8, 9] There is no evidence that the Caribbean Disaster Emergency Management Agency (CDEMA) has an EOC in place, however CDEMA provides training for national EOCs. [10] There is no evidence that the Caribbean Public Health Agency has an EOC in place. [11] The latest available CDEMA annual report is from 2013-2014. [12]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. "History of NODS". [<http://nods.gov.ag/about-us/history-of-nods/>]. Accessed 7 August 2020.

[2] National Office of Disaster Services (NODS) of Antigua and Barbuda. February 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 7 August 2020.

[3] Caribbean Disaster Emergency Management Agency (CDEMA). 2 April 2020. "COVID-19 Outbreak in CDEMA Participating States - Situation Report No. 4".

[<https://reliefweb.int/sites/reliefweb.int/files/resources/CDEMA%20Situation%20Report%20%234%20-%20COVID-19%20Outbreak%20in%20CDEMA%20Participating%20States%20-%20as%20of%208%20pm%20on%20April%20%2C%202020.pdf>]. Accessed 7 August 2020.

[4] National Office of Disaster Services (NODS) of Antigua and Barbuda. "About Us". [<http://nods.gov.ag/what-is-nods/>]. Accessed 7 August 2020.

[5] Pan American Health Organization - World Health Organization Regional Office for the Americas. "PAHO director welcomes new Caribbean health agency, CARPHA". 2 July 2013.

[https://www.paho.org/hq/index.php?option=com_content&view=article&id=8842:2013-paho-director-welcomes-new-caribbean-health-agency-carpha&Itemid=135&lang=en]. Accessed 7 August 2020.

[6] National Office of Disaster Services (NODS) of Antigua and Barbuda. "Preparedness". [<http://nods.gov.ag/disaster-management/preparedness/>]. Accessed 7 August 2020.

[7] Health Watch Antigua and Barbuda. "Major Boost for Disaster Response Services".

[http://www.healthwatchantiguaandbarbuda.com/disaster_response_services_boost]. Accessed 7 August 2020.

[8] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[9] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[10] Caribbean Disaster Emergency Management Agency (CDEMA). "Emergency Operations Center Training 19th - 21st October, 2015". [https://www.cdema.org/index.php?option=com_content&view=article&id=1532:emergency-operations-center-training-19th-21st-october-2015&catid=58:turks-and-caicos-islands&Itemid=284]. Accessed 7 August 2020.

[11] Caribbean Disaster Emergency Management Agency (CDEMA). "Emergency Operations Center Training 19th - 21st October, 2015". [https://www.cdema.org/index.php?option=com_content&view=article&id=1532:emergency-operations-center-training-19th-21st-october-2015&catid=58:turks-and-caicos-islands&Itemid=284]. Accessed 7 August 2020.

[12] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 7 August 2020.

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 public evidence to show that the Emergency Operations Center can conduct, or 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. The National Office of Disaster Service (NODS) indicates that there is a National Emergency Operations Centre (NEOC), which is also mentioned in the Country Document for Disaster Risk Reduction. [1, 2] Although there is no specific mention of the NEOC for health-related emergencies by NODS, a Caribbean Disaster Emergency Management Agency (CDEMA) COVID-19 Situation Report from April 2020 indicates that the NEOC was activated in response to COVID-19. [1, 3] NODS is the national agency that coordinates across agencies regarding emergency/disaster situations. [4] The Ministry of Health is listed as one of NODS key agencies, and the Caribbean Disaster Emergency Management Agency (CDEMA), the Pan American Health Organization (PAHO), and the Caribbean Epidemiology Centre (CAREC) are listed as support partners. [3] CAREC was among the regional health institutions that, as of 2013, merged to form the Caribbean Public Health Association (CARPHA). [5] NODS indicates that regular training and exercises are part of the Office's emergency preparedness and response, but there is no indication that this is specific to the National Emergency Operations Centre (NEOC). [6] There is no evidence that the NEOC can or has conducted an emergency response or emergency response exercise provided by the Ministry of Health, National Office of Disaster Services, the Government Information and Services, or Health Watch Antigua and Barbuda. [7, 8, 9, 10] There is no evidence that CDEMA has an EOC in place, however CDEMA provides training for national EOCs. [11] There is no evidence that the Caribbean Public Health Agency has an EOC in place. [12]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. "History of NODS". [<http://nods.gov.ag/about-us/history-of-nods/>]. Accessed 7 August 2020.

[2] National Office of Disaster Services (NODS) of Antigua and Barbuda. February 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 7 August 2020.

[3] Caribbean Disaster Emergency Management Agency (CDEMA). 2 April 2020. "COVID-19 Outbreak in CDEMA Participating States - Situation Report No. 4".

[<https://reliefweb.int/sites/reliefweb.int/files/resources/CDEMA%20Situation%20Report%20%234%20-%20COVID-19%20Outbreak%20in%20CDEMA%20Participating%20States%20-%20as%20of%208%20pm%20on%20April%20%2C%202020.pdf>]. Accessed 7 August 2020.

[4] National Office of Disaster Services (NODS) of Antigua and Barbuda. "About Us". [<http://nods.gov.ag/about-us/>]. Accessed 7 August 2020.

[5] Pan American Health Organization - World Health Organization Regional Office for the Americas. "PAHO director welcomes new Caribbean health agency, CARPHA". 2 July 2013.

[https://www.paho.org/hq/index.php?option=com_content&view=article&id=8842:2013-paho-director-welcomes-new-caribbean-health-agency-carpha&Itemid=135&lang=en]. Accessed 7 August 2020.

[6] National Office of Disaster Services (NODS) of Antigua and Barbuda. "Preparedness". [<http://nods.gov.ag/disaster-management/preparedness/>]. Accessed 7 August 2020.

[7] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[8] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[9] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 7 August 2020.

[10] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 7 August 2020.

[11] Caribbean Disaster Emergency Management Agency (CDEMA). "Emergency Operations Center Training 19th - 21st October, 2015". [https://www.cdema.org/index.php?option=com_content&view=article&id=1532:emergency-operations-center-training-19th-21st-october-2015&catid=58:turks-and-caicos-islands&Itemid=284]. Accessed 7 August 2020.

[12] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 7 August 2020.

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 public evidence that public health and national security authorities in Antigua and Barbuda have carried out an exercise to respond to a potential deliberate biological event. An undated article by Health Watch Antigua and Barbuda "a Ministry of Health website that communicates health information to the public" describes a one-week management course for multi-sector representatives, including from the health sector, to respond to disasters. [1] The article mentions that bioterrorism was covered in the course, but there is no indication that there was a response exercise performed. [1] In 2017, the Caribbean Public Health Agency (CARPHA), of which Antigua and Barbuda is a Member State, participated in a training exercise aimed at improving regional responses during an emergency situation and coordination between relevant agencies, however, no information could be found on whether this included exercise related to a potential deliberate biological event. [2] A May 2017 newsletter from the Ministry of Health describes a week-long mass casualty management training course that covered bioterrorism, but no details are provided. [3] There is no evidence of 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 by the Ministry of Health, Defence Force, or the Government Information and Services. [4, 5, 6]

[1] Health Watch Antigua and Barbuda. "Better equipped to handle Mass Casualty incidents".

[<http://healthwatchantiguaandbarbuda.com/better-equipped-to-handle-mass-casualties>]. Accessed 7 August 2020.

[2] Caribbean Public Health Agency (CARPHA). "Caribbean Regional Security, Health and Disaster Agencies Face Comprehensive Readiness Test". [<https://carpha.org/More/Media/Articles/ArticleID/169/Caribbean-regional-security-health-and-disaster-agencies-face-comprehensive-readiness-test>]. Accessed 7 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. 2017. "Newsletter - May 2017".

[<http://www.healthwatchantiguaandbarbuda.com/Newsletter/May%202017%20Newsletter.pdf>]. Accessed 7 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[5] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 7 August 2020.

[6] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

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 not sufficient evidence that the risk communication plan for Antigua and Barbuda, through the regional Caribbean Public Health Agency (CARPHA), outlines how messages will reach populations and sectors with different communications needs. In March 2020, CARPHA published the Communication Strategy for Coronavirus Disease (COVID-19). While the Strategy was created amidst the COVID-19 outbreak, the stated purpose of the document is "intended to assist public health authorities from CARPHA Member States in their development and execution of a risk communication strategy for a public health outbreak or emergency." [1, 2] The section of the document specific to COVID-19 covers different communication channels and audiences, however it does not specifically address how messages will reach populations and sectors with different communication needs. [1] In 2016, CARPHA conducted risk communication training with senior health officials and public health professionals, however, there is no mention of a plan or strategy document and whether representatives from Antigua and Barbuda participated. [3, 4] Antigua and Barbuda's 2016 Country Document for Disaster Risk Reduction mentions that part of the National Health Disaster Committee (NHDC)'s responsibilities are to develop alert systems and refers to a "Health Sector Disaster Management Plan 2016", but there is no publicly available evidence of such a plan. [5] There is no other information about how messages will reach populations and sectors with different communications needs through the Ministry of Health the Government Information and Services. [6, 7]

[1] Caribbean Public Health Agency (CARPHA). 11 March 2020. "Communication Strategy for Coronavirus Disease (COVID-19)".

[<https://carpha.org/Portals/0/Documents/Technical%20Guidance/CARPHA%20COVID19%20Communication%20Strategy.pdf>]. Accessed 7 August 2020.

[2] Caribbean Public Health Agency (CARPHA). 24 June 2020. "CARPHA Situation Report No. 61 - Coronavirus Disease (COVID-19) Pandemic". [<https://carpha.org/Portals/0/Documents/COVID%20Situation%20Reports/Situation%20Report%2061%20-%20June24,%202020.pdf>]. Accessed 7 August 2020.

[3] Caribbean Public Health Agency (CARPHA). 21 June 2016. "Risk Communication Training to Help Senior Health Officials Better Manage Health Threats". [<https://carpha.org/More/Media/Articles/ArticleID/146/Risk-Communication-Training-to-Help-Senior-Health-Officials-Better-Manage-Health-Threats>]. Accessed 7 August 2020.

[4] Caribbean Public Health Agency (CARPHA). 29 September 2016. "Public Health Professionals Receive Training in Risk and Crisis Communication for Public Health Emergencies". [<https://carpha.org/More/Media/Articles/ArticleID/158/Public-Health-Professionals-Receive-Training-in-Risk-and-Crisis-Communication-for-Public-Health-Emergencies>]. Accessed 7 August 2020.

[5] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 7 August 2020.

[6] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

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: 0

There is insufficient evidence that Antigua and Barbuda has a risk communication plan that is specifically intended for use during a public health emergency. The regional Caribbean Public Health Agency (CARPHA) in March 2020, CARPHA published the Communication Strategy for Coronavirus Disease (COVID-19). While the Strategy was created amidst the COVID-19 outbreak, the stated purpose of the document is "intended to assist public health authorities from CARPHA Member States in their development and execution of a risk communication strategy for a public health outbreak or emergency." [1, 2] The plan describes a Regional Health Communication Network (RHCN) of health promotion and communication specialists from the Member States, established by CARPHA in 2015 and details communications during the different phases of a crisis and how to convey key messages during a public health emergency. [2] In 2016, CARPHA conducted risk communication training with senior health officials and public health professionals, however, there is no mention of a plan or strategy document and whether representatives from Antigua and Barbuda participated. [3, 4] Antigua and Barbuda's 2016 Country Document for Disaster Risk Reduction mentions that part of the National Health Disaster Committee (NHDC)'s responsibilities are to develop alert systems and refers to a "Health Sector Disaster Management Plan 2016", but there is no publicly available evidence of such a plan. [5]

[1] Caribbean Public Health Agency (CARPHA). 11 March 2020. "Communication Strategy for Coronavirus Disease (COVID-19)".

[<https://carpha.org/Portals/0/Documents/Technical%20Guidance/CARPHA%20COVID19%20Communication%20Strategy.pdf>]. Accessed 7 August 2020.

[2] Caribbean Public Health Agency (CARPHA). 24 June 2020. "CARPHA Situation Report No. 61 - Coronavirus Disease (COVID-19) Pandemic". [<https://carpha.org/Portals/0/Documents/COVID%20Situation%20Reports/Situation%20Report%2061%20-%20June24,%202020.pdf>]. Accessed 7 August 2020.

[3] Caribbean Public Health Agency (CARPHA). 21 June 2016. "Risk Communication Training to Help Senior Health Officials Better Manage Health Threats". [<https://carpha.org/More/Media/Articles/ArticleID/146/Risk-Communication-Training-to-Help-Senior-Health-Officials-Better-Manage-Health-Threats>]. Accessed 7 August 2020.

[4] Caribbean Public Health Agency (CARPHA). 29 September 2016. "Public Health Professionals Receive Training in Risk and Crisis Communication for Public Health Emergencies". [<https://carpha.org/More/Media/Articles/ArticleID/158/Public-Health-Professionals-Receive-Training-in-Risk-and-Crisis-Communication-for-Public-Health-Emergencies>]. Accessed 7 August 2020.

[5] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 7 August 2020.

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: 0

There is insufficient evidence that the risk communication plan for Antigua and Barbuda designates a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. In March 2020, the Caribbean Public Health Agency (CARPHA) published the Communication Strategy for Coronavirus Disease (COVID-19). While the Strategy was created amidst the COVID-19 outbreak, the stated purpose of the document is "intended to assist public health authorities from CARPHA Member States in their development and execution of a risk communication strategy for a public health outbreak or emergency." [1, 2] The strategy refers to identifying and training official spokespersons who can be a trusted source of information. [1] However, there is no evidence that Antigua and Barbuda has designated a primary spokesperson in line with this document. In 2016, CARPHA conducted risk communication training with senior health officials and public health professionals, however, there is no mention of a plan or strategy document and whether representatives from Antigua and Barbuda participated. [3, 4] Antigua and Barbuda's 2016 Country Document for Disaster Risk Reduction mentions that part of the National Health Disaster Committee (NHDC)'s responsibilities are to develop alert systems and refers to a "Health Sector Disaster Management Plan 2016", but there is no publicly available evidence of such a plan. [5]

[1] Caribbean Public Health Agency (CARPHA). 11 March 2020. "Communication Strategy for Coronavirus Disease (COVID-19)".

[<https://carpha.org/Portals/0/Documents/Technical%20Guidance/CARPHA%20COVID19%20Communication%20Strategy.pdf>]. Accessed 7 August 2020.

[2] Caribbean Public Health Agency (CARPHA). 24 June 2020. "CARPHA Situation Report No. 61 - Coronavirus Disease (COVID-19) Pandemic". [<https://carpha.org/Portals/0/Documents/COVID%20Situation%20Reports/Situation%20Report%2061%20-%20June24,%202020.pdf>]. Accessed 7 August 2020.

[3] Caribbean Public Health Agency (CARPHA). 21 June 2016. "Risk Communication Training to Help Senior Health Officials Better Manage Health Threats". [<https://carpha.org/More/Media/Articles/ArticleID/146/Risk-Communication-Training-to-Help-Senior-Health-Officials-Better-Manage-Health-Threats>]. Accessed 7 August 2020.

[4] Caribbean Public Health Agency (CARPHA). 29 September 2016. "Public Health Professionals Receive Training in Risk and Crisis Communication for Public Health Emergencies". [<https://carpha.org/More/Media/Articles/ArticleID/158/Public-Health-Professionals-Receive-Training-in-Risk-and-Crisis-Communication-for-Public-Health-Emergencies>]. Accessed 7 August 2020.

[5] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 7 August 2020.

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: 1

There is evidence that the public health system has actively shared messages via online media platforms to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation, but only in the context of an active emergency. The Government Information and Services website has a regularly updated webpage with Novel

Coronavirus Information, including a "Coronavirus disease advice for the public: Myth busters" resource from March 2020 that links to the World Health Organization webpage that dispels misinformation. [1] The Ministry of Health maintains active Facebook page, including frequent updates and information pertaining to COVID-19. [2] In March 2020, the Facebook page for the Office of The Prime Minister Antigua and Barbuda posted to the public to "Get the facts; not the rumors and misinformation", providing resources from the Pan American Health Organization and directing the public to a COVID-19 inquiries hotline in the country. [3] The Ministry of Health no longer has a Twitter account, and the last post from the Official Twitter page for the Government of Antigua and Barbuda is from 2018. [4, 5]

[1] Antigua and Barbuda's Government Information and Services. "Novel Coronavirus Information."

[https://ab.gov.ag/detail_page.php?page=42]. Accessed 7 August 2020.

[2] Facebook. "Ministry of Health - Antigua and Barbuda". [<https://www.facebook.com/investingforwellness/>]. Accessed 7 August 2020.

[3] Facebook. 11 March 2020. "Office of The Prime Minister Antigua and Barbuda".

[https://www.facebook.com/OPMAntiguaBarbuda/posts/625598218238684?comment_id=626009951530844]. Accessed 7 August 2020.

[4] Twitter. "Ministry of Health - Antigua and Barbuda". [<https://twitter.com/MOHEAntigua>]. Accessed 7 August 2020.

[5] Twitter. "Official Twitter page for the Government of Antigua and Barbuda". [<https://twitter.com/antiguagov?lang=en>]. Accessed 7 August 2020.

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 evidence that senior leaders in Antigua and Barbuda and in the Caribbean region have shared misinformation or disinformation on infectious diseases in the past two years. In March 2020, the Facebook page for the Office of The Prime Minister Antigua and Barbuda posted to the public to "Get the facts; not the rumors and misinformation", providing resources from the Pan American Health Organization and directing the public to a COVID-19 inquiries hotline in the country. [1] In April 2020, the Executive Director of the Caribbean Public Health Agency (CARPHA) gave an interview where she "debunked a number of myths that have been circulating." [2] There is no further information on international and national news outlets.

[1] Facebook. 11 March 2020. "Office of The Prime Minister Antigua and Barbuda".

[https://www.facebook.com/OPMAntiguaBarbuda/posts/625598218238684?comment_id=626009951530844]. Accessed 7 August 2020.

[2] CARICOM Today. 8 April 2020. "CARPHA Now Testing for Novel Coronavirus."

[<https://today.caricom.org/2020/02/13/carpha-now-testing-for-novel-coronavirus/>]. Accessed 7 August 2020.

3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

3.6.1 Internet users

3.6.1a

Percentage of households with Internet

Input number

Current Year Score: 76

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: 192.82

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: 3.14

2018-2019

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: 4.24

2018-2019

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 evidence that Antigua and Barbuda has issued a restriction on the export/import of medical goods due to an infectious disease outbreak. The Ministry of Health, Ministry of Agriculture, and the Government Information and Services make no mention of such a restriction, and there is no mention from media outlets. [1, 2, 3] The World Health Organization (WHO) Disease Outbreak News and the World Organisation for Animal Health (OIE) Weekly Disease Information does not indicate there have been any restrictions in the past year. [4, 5]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 7 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[4] World Health Organization. "Emergencies preparedness, response - Disease Outbreak News (DONs)". [<http://www.who.int/csr/don/en/>]. Accessed 7 August 2020.

[5] World Organisation for Animal Health (OIE). "World Animal Health Information System (WAHIS) - Weekly Disease Information". [https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI]. Accessed 7 August 2020.

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 evidence that Antigua and Barbuda has issued a restriction on the export/import of non-medical goods due to an infectious disease outbreak. There is no evidence of such restrictions through the Ministry of Health, Ministry of Agriculture, Ministry of Foreign Affairs, International Trade and Immigration, or the Government Information and Services, and there is no mention from media outlets. [1, 2, 3, 4] The World Health Organization (WHO) Disease Outbreak News and the World Organisation for Animal Health (OIE) Weekly Disease Information does not indicate there have been any restrictions in the past year. [5, 6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 August 2020.

[2] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 7 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[4] Ministry of Foreign Affairs, International Trade and Immigration. [<http://www.immigration.gov.ag/>]. Accessed 7 August 2020.

2020.

[5] World Health Organization. "Emergencies preparedness, response - Disease Outbreak News (DONs)".

[<http://www.who.int/csr/don/en/>]. Accessed 7 August 2020.

[6] World Organisation for Animal Health (OIE). "World Animal Health Information System (WAHIS) - Weekly Disease

Information". [https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI]. Accessed 7 August 2020.

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

In the past year, Antigua and Barbuda has implemented a ban on travelers arriving from a specific country or countries due to an infectious disease outbreak. On March 12, 2020, the Government of Antigua and Barbuda advised that foreign nationals who had travelled to China, Italy, Iran, Japan, Korea and Singapore within the past twenty-eight (28) days would be denied entry. [1] On March 13, 2020, the government announced a suspension of cruise line services. [2] In late March 2020, Antigua and Barbuda closed the V.C. International airport to incoming commercial flights, inbound commercial traffic from North America and Europe would be denied entry, all ports of entry on Barbuda were closed for 14 days and there was a consolidated maritime border on Antigua. [3] On 1 June 2020, the government opened its borders in a phased approach. [4] An July 2020 article in Caribbean Community (CARICOM) Today reported that Antigua and Barbuda was looking to establish a travel bubble with other Organisation of Eastern Caribbean States (OECS) that would allow citizens from identified states to travel to Antigua without having to have COVID-19 tests and certificates of entry. [5]

[1] Antigua and Barbuda High Commission. 16 March 2020. "Travel Advisory from the Government of Antigua & Barbuda."

[<https://antigua-barbuda.com/travel-advisory-from-the-government-of-antigua-barbuda>]. Accessed 7 August 2020.

[2] Antigua Cruise Port. 17 March 2020. "Suspension of Cruise Line Services Due to Novel Coronavirus COVID-19 Pandemic".

[https://ab.gov.ag/pdf/Antigua_Cruise_Port.pdf]. Accessed 7 August 2020.

[3] Caribbean Public Health Agency (CARPHA). 7 August 2020. "Caribbean Countries that have issued Travel Advisories due to COVID-19".

[https://www.carpha.org/Portals/0/Documents/Caribbean%20Countries%20Travel%20Advisories/Update%2021%20August%202020_Caribbean%20Countries%20that%20have%20issued%20Travel%20AdvisoriesduetoCovid-19.pdf]. Accessed 7 August 2020.

[4] Ministry of Foreign Affairs, Immigration and Trade. 2 June 2020. "Antigua and Barbuda Travel Advisory."

[<https://ab.gov.ag/pdf/Antigua%20and%20Barbuda%20Travel%20Advisory%2002.06.20.pdf>]. Accessed 7 August 2020.

[5] Caribbean Community (CARICOM) Today. 17 July 2020. "Antigua and Barbuda to Create Regional travel bubble".

[<https://today.caricom.org/2020/07/17/antigua-and-barbuda-to-create-regional-travel-bubble/>]. Accessed 7 August 2020.

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: 295.6

2017

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 451.71

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 evidence that Antigua and Barbuda has a public workforce strategy in place, updated within the last five years, to identify fields where there is an insufficient workforce and strategies to address these shortcomings. The 2016-2020 National Strategic Plan for Health indicates that shortages in the public health workforce have been reported"though no ratio data is "readily available"and the Government of Cuba provides medical personnel to fill gaps. [1] The Ministry of Health and the Environment does not possess a human resources plan to address these gaps. [2] There is no additional information provided by the Ministry of Health, Health Watch Antigua and Barbuda, Ministry of Education, or Government Information and Services website. [2, 3, 4, 5]

[1] Health Watch Antigua and Barbuda. ND. "National Strategic Plan for Health, 2016-2020".

[http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 2 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 2 August 2020.

[3] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 2 August 2020.

[4] Ministry of Education, Science and Technology of Antigua and Barbuda. [<http://www.education.gov.ag/>]. Accessed 2 August 2020.

[5] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 2 August 2020.

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 289

2017

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: 1

Antigua and Barbuda has 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. A news article from May 2020 describes the new \$4 million Infectious Disease Control Centre, at the former Holbertson Hospital that was empty since 2009, ready for use for COVID-19 patients requiring hospitalization. [1] The Centre includes 17 isolation rooms, including negative air machines. [1] Prior to COVID-19, in 2009, Mount St. John's Medical Centre (MSJMC) "the country's main public hospital" issued a press release stating "isolation precautions" would be taken for patients with suspected or confirmed swine flu, and placed in a negative air pressure room, but the release does not make mention of the country's ability to treat patients in the isolation room. [2, 3, 4]

[1] Handy, Gemma. 1 May 2020. "Infectious Disease Control Centre declared ready for patients." The Daily Observer. [<https://antiguaobserver.com/infectious-disease-control-centre-declared-ready-for-patients/>]. Accessed 7 August 2020.

[2] USAID. 2011. "Antigua and Barbuda Health Systems and Private Sector Assessment 2011". [<https://www.hfgproject.org/wp-content/uploads/2015/02/Antigua-and-Barbuda-Health-Systems-and-Private-Sector-Assessment-2011.pdf>]. Accessed 7 August 2020.

[3] Mount St. John's Medical Centre (MSJMC). 27 April 2009. "Mount St. John's Medical Centre (MSJMC) Responds to Swine Flu". [<http://www.msjmc.org/press/MSJMC%20Responds%20to%20Swine%20Flu%20Outbreak.pdf>]. Accessed 7 August 2020.

[4] Mount St. John's Medical Centre (MSJMC). [<http://www.msjmc.org/>]. Accessed 7 August 2020.

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: 1

There is evidence that Antigua and Barbuda has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years. A news article from May 2020 describes the new \$4 million Infectious Disease Control Centre, at the former Holbertson Hospital that was empty since 2009, ready for use for COVID-19 patients requiring hospitalization. [1] The Centre includes 17 isolation rooms, including negative air machines. [1] The January 2021 Budget Statement from the Prime Minister and Minister for Finance indicated that the conversion of the Margetson Ward at Holberton into an Infectious Disease Control Centre took place at the "onset of the [COVID-19] crisis". [2]

[1] Handy, Gemma. 1 May 2020. "Infectious Disease Control Centre declared ready for patients." The Daily Observer.

[<https://antiguaobserver.com/infectious-disease-control-centre-declared-ready-for-patients/>]. Accessed 7 August 2020.

[2] Antigua and Barbuda Prime Minister and Minister for Finance, Corporate Governance and Public Private Partnerships. 28 January 2021. "2021 Budget Statement". [https://ab.gov.ag/pdf/budget/Budget_Speech_2021.pdf]. Accessed 7 March 2021.

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

There is evidence of a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition medical supplies, however, there is insufficient evidence of a procurement protocol for laboratory needs. The 2016-2020 National Strategic Plan for Health indicates that the Ministry of Health is responsible for the procurement of pharmaceuticals and medical supplies through the Organisation of Eastern Caribbean States (OECS) Pooled Procurement Service, though there is no specific mention of acquisition of laboratory needs. [1] The Ministry of Health and Ministry of Agriculture are among the government agencies and statutory bodies that are the clients of the country's Public Procurement, however there is no mention of procurement for medical supplies or laboratory needs. [2] The Procurement and Contract Administration Act of 2011 was created to modernize and encourage transparency in the Government procurement process and includes reference to small and large emergency solicitations that can be made if the "[Procurement] Board determines that there exists a threat to public health, welfare or safety". [3] Additionally, Antigua and Barbuda is a member of the Caribbean Health Agency (CARPHA), which is a partner of the Caribbean Med Labs Foundation (CMLF), a non-governmental organisation dedicated to assisting governments around best practice in medical laboratory

services in the Caribbean region. [4] CMLF has published the Regional Guidelines for Procurement and Inventory Management, which is intended to set out guidelines for laboratory acquisition and management of goods and services, though the resource is undated. [5]

[1] Health Watch Antigua and Barbuda. "National Strategic Plan for Health, 2016-2020".

[http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 8 August 2020.

[2] Public Procurement in Antigua and Barbuda. "Clients". [<http://www.tendersboard.gov.ag/clients/>]. Accessed 8 August 2020.

[3] Laws of Antigua and Barbuda. "The Procurement and Contract Administration Act, 2011". [<http://laws.gov.ag/wp-content/uploads/2020/07/No.-16-of-2011-Procurement-Administration-Act-2011.pdf>]. Accessed 8 August 2020.

[4] Caribbean Med Labs Foundation. "About Us". [<http://cmedlabsfoundation.net/index.php/about-us/cmlf-objectives>]. Accessed 8 August 2020.

[5] Caribbean Med Labs Foundation. ND. "Regional Guidelines for Procurement and Inventory Management". [<http://cmedlabsfoundation.net/images/pguide/introduction.html>]. Accessed 8 August 2020.

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

Current Year Score: 0

There is insufficient evidence that Antigua and Barbuda has a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency. The Ministry of Health, Health Watch Antigua and Barbuda, and the Government Information and Services does not indicate the country maintains a stockpile of medical supplies—including MCMs, medicines, vaccines, medical equipment, and PPE—or has agreements in place. [1, 2, 3] In July 2020, the Caribbean Development Bank procured and purchased US\$3 million worth of "critically needed" PPE to the Caribbean, delivered to Barbados to be stored, sorted, and repacked for distribution to 14 countries in the Caribbean, including Antigua and Barbuda. [4] In early August 2020, the Prime Minister announced a donation of \$1 million worth of PPE from the Government of India. [5] There is also no such information through the National Office of Disaster Services and Antigua and Barbuda Defence Force. [6, 7] There is no information about stockpile of medical supplies available through the regional Caribbean Public Health Agency (CARPHA). [8]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 8 August 2020.

[2] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 8 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 8 August 2020.

[4] CARICOM Today. 23 July 2020. "Critical Personal Protective Equipment Procured for Caribbean Frontline Medical Workers." [<https://today.caricom.org/2020/07/23/critical-personal-protective-equipment-procured-for-caribbean-frontline-medical-workers/>]. Accessed 8 August 2020.

[5] Facebook - Office of The Prime Minister of Antigua and Barbuda. "Antigua and Barbuda receives US\$ 1 million worth of PPE from the Government of India during virtual handover ceremony".

[<https://www.facebook.com/OPMAntiguaBarbuda/posts/724536875011484>]. Accessed 8 August 2020.

[6] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 8 August 2020.

[7] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 8 August 2020.

[8] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 8 August 2020.

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 insufficient evidence that Antigua and Barbuda has a stockpile of laboratory supplies for national use during a public health emergency. The Ministry of Health, Health Watch Antigua and Barbuda, and the Government Information and Services does not indicate the country maintains a stockpile of laboratory supplies or has agreements in place. [1, 2, 3] There is also no such information through the National Office of Disaster Services and Antigua and Barbuda Defence Force. [4, 5] There is no information about stockpile of laboratory supplies available through the regional Caribbean Public Health Agency (CARPHA). [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 8 August 2020.

[2] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 8 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 8 August 2020.

[4] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 8 August 2020.

[5] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 8 August 2020.

[6] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 8 August 2020.

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 that Antigua and Barbuda conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. There is no evidence of an annual review of national stockpile available through the Ministry of Health, Health Watch Antigua and Barbuda, or the Government Information and Services. [1, 2, 3] There is also no such information through the National Office of Disaster Services and Antigua and Barbuda Defence Force. [4, 5] There is no information regarding an annual review of national or regional stockpiles available through the regional Caribbean Public Health Agency (CARPHA). [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 7 March 2021.

[2] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 7 March 2021.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 March 2021.

[4] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 7 March 2021.

[5] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 7 March 2021.

[6] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 7 March 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 insufficient evidence that Antigua and Barbuda has 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 or to procure medical supplies for national use during a public health emergency. In May 2020, the company RUBIS—which distributes products including petroleum and aviation fuels, LPG and lubricants throughout the Eastern Caribbean—donated 2000 KN95 masks, 2000 surgical masks and 2000 surgical gloves to the Ministry of Health. [1, 2] In July 2020, the Caribbean Development Bank procured and purchased US\$3 million worth of "critically needed" personal protective equipment (PPE) to the Caribbean, delivered to Barbados to be stored, sorted, and repacked for distribution to 14 countries in the Caribbean, including Antigua and Barbuda. [3] In early August 2020, the Prime Minister announced a donation of \$1 million worth of PPE from the Government of India. [4] However, there is no evidence that these efforts are related to domestic manufacturing capacity or procurement for national use, including through the Ministry of Health, Health Watch Antigua and Barbuda, and the Government and Information Services. [5, 6, 7] There is also no such information through the National Office of Disaster Services and Antigua and Barbuda Defence Force. [8, 9] Beginning in April 2020, the European Development Fund provided 8 million euro (US\$9.4m) to the Caribbean Public Health Agency (CARPHA) to improve health security in the region, with direct/immediate impacts including procurement and distribution of PPE and vaccines and/or other treatments for COVID-19, and strengthening diagnostic testing for Caribbean Member States. [10] However, CARPHA does not have information about plans for domestic manufacturing capacity or procurement available throughout the region. [11]

[1] Facebook - Ministry of Health & The Environment, Antigua and Barbuda. 22 May 2020. "Rubis Antigua handing over four thousand Personal Protective Equipment (Masks and Gloves) to the Ministry of Health".

[<https://www.facebook.com/watch/?v=909146892846196>]. Accessed 8 August 2020.

[2] RUBIS. 22 May 2020. "RUBIS Donates PPE Gear To Frontline Workers In Antigua". [<https://www.rubis-caribbean.com/rubis-donates-ppe-gear-to-frontline-workers-in-antigua/>]. Accessed 8 August 2020.

[3] CARICOM Today. 23 July 2020. "Critical Personal Protective Equipment Procured for Caribbean Frontline Medical Workers." [<https://today.caricom.org/2020/07/23/critical-personal-protective-equipment-procured-for-caribbean-frontline-medical-workers/>]. Accessed 8 August 2020.

[4] Facebook - Office of The Prime Minister of Antigua and Barbuda. "Antigua and Barbuda receives US\$ 1 million worth of PPE from the Government of India during virtual handover ceremony".

[<https://www.facebook.com/OPMAntiguaBarbuda/posts/724536875011484>]. Accessed 8 August 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 8 August 2020.

[6] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 8 August 2020.

[7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 8 August 2020.

[8] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 8 August 2020.

[9] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 8 August 2020.

[10] Caribbean Public Health Agency (CARPHA). 2020. "11th EDF Programme of Support for Health Security Strengthening for

Prevention and Control of Outbreaks of Communicable Diseases in the Caribbean". [<https://carpha.org/What-We-Do/Projects/11th-EDF-Regional-Health-Security>]. Accessed 8 August 2020.

[11] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 8 August 2020.

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 insufficient evidence that Antigua and Barbuda has a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies for national use during a public health emergency or to procure medical supplies for national use during a public health emergency. In a press release from April 2020, regarding COVID-19, the Director of the Pan American Health Organization (PAHO) stated that PAHO was working with leading manufactures to meet shortages of PCR tests in the region and is providing guidance to regulatory and health authorities to help ensure countries procure reliable products. [1] There is no evidence of production or procurement of laboratory supplies for national use through the Ministry of Health, Health Watch Antigua and Barbuda, and the Government and Information Services. [2, 3, 4] There is also no such information through the National Office of Disaster Services and Antigua and Barbuda Defence Force. [5, 6] Beginning in April 2020, the European Development Fund provided 8 million euro (US\$9.4m) to the Caribbean Public Health Agency (CARPHA) to improve health security in the region, with direct/immediate impacts including "strengthening diagnostic testing for Communicable Diseases, including COVID-19, at CARPHA and CARPHA Member States through the procurement of test kits, reagents and consumables as well as new equipment." [7] However, CARPHA does not have information about plans for production or procurement of laboratory supplies available throughout the region. [8]

[1] Antigua and Barbuda's Government Information and Services. 23 April 2020. "PAHO Director Urges Accelerate and Expand Testing for COVID-19 in the Americas." [https://ab.gov.ag/media_page.php?page=237]. Accessed 8 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 8 August 2020.

[3] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 8 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 8 August 2020.

[5] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 8 August 2020.

[6] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 8 August 2020.

[7] Caribbean Public Health Agency (CARPHA). 2020. "11th EDF Programme of Support for Health Security Strengthening for Prevention and Control of Outbreaks of Communicable Diseases in the Caribbean". [<https://carpha.org/What-We-Do/Projects/11th-EDF-Regional-Health-Security>]. Accessed 8 August 2020.

[8] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 8 August 2020.

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 evidence that Antigua and Barbuda has a plan, program, or guidelines in place for dispensing medical countermeasures, as there is no evidence that the country maintains a stockpile of medical countermeasures for national use during a public health emergency. The Ministry of Health, Health Watch Antigua and Barbuda, and the Government Information and Services does not indicate the country maintains a stockpile of medical countermeasures or has agreements in place. [1, 2, 3] There is also no such information through the National Office of Disaster Services and Antigua and Barbuda Defence Force. [4, 5] There is also no information available about the plan for dispensing medical countermeasures available from the Caribbean Public Health Agency (CARPHA). [6]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 8 August 2020.

[2] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 8 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 8 August 2020.

[4] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 8 August 2020.

[5] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 8 August 2020.

[6] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 8 August 2020.

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 there is a public plan in place for Antigua and Barbuda to receive health personnel from other countries to respond to a public health emergency, which accounts for how the country plans to facilitate the arrival and movement of foreign personnel during and emergency. The 2016-2020 National Strategic Plan for Health indicates that the Government of Cuba provides medical personnel to fill gaps in public health workforce shortages. [1] In March 2020, 29 doctors and nurses from Cuba arrived in Antigua and Barbuda to support the country during the COVID-19 pandemic. [2] The National Strategic Plan and response of Cuban health personnel during COVID-19 do not address how the country plans to facilitate health personnel arrival and movement. [1, 2] The Caribbean Public Health Agency (CARPHA), in accordance with the Inter-Governmental Agreement (IGA), is mandated to respond to emergencies, including pandemics, in Member States. [3, 4] Also, health specialists are among the technical personnel that may be deployed by the Caribbean Disaster Emergency Management Agency's (CDEMA) Rapid Needs Assessment Team (RNAT)—according to CDEMA's Regional Response Mechanism—immediately after a disastrous event. [5] There is no evidence of a plan in place for Antigua and Barbuda to

receive health personnel from other countries to respond to a public health emergency, including through the Ministry of Health, National Defense Force, and National Office of Disaster Services, and Government Information and Services. [6, 7, 8, 9]

- [1] Health Watch Antigua and Barbuda. ND. "National Strategic Plan for Health, 2016-2020". [http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 8 August 2020.
- [2] Antigua and Barbuda's Government Information and Services. 26 March 2020. "Cuban anti-COVID Medical Team Arrives in Antigua". [https://ab.gov.ag/media_page.php?page=230]. Accessed 8 August 2020.
- [3] Caribbean Public Health Agency (CARPHA). 2011. "Agreement Establishing the Caribbean Public Health Agency (CARPHA)". [<https://caricom.org/documents/legaldocuments/10375-carpha-iga.pdf>]. Accessed 8 August 2020.
- [4] Caribbean Community (CARICOM). 16 September 2017. "CARPHA Deploys Staff to Assist Hurricane-Devastated British Virgin Islands". [<https://caricom.org/communications/view/carpha-deploys-staff-to-assist-hurricane-devastated-british-virgin-islands>]. Accessed 8 August 2020.
- [5] Caribbean Disaster Emergency Management Agency's (CDEMA). 2016. "Regional Response Mechanism". [https://www.cdema.org/RRM_Booklet_Final_PDF_version.pdf]. Accessed 8 August 2020.
- [6] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 10 September 2020.
- [7] Antigua and Barbuda Defence Force. [<http://abdf.gov.ag/>]. Accessed 10 September 2020.
- [8] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 10 September 2020.
- [9] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 10 September 2020.

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: 100

2014

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: 374.61

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 evidence that Antigua and Barbuda has issued legislation, a policy or a public statement committing to provide prioritized health care services to healthcare workers who become sick as a result of responding to a public health emergency. The Ministry of Health, Government Information and Services, and the National Office of Disaster Services does not mention prioritization of healthcare workers who become sick. [1, 2, 3] Antigua and Barbuda is part of the Caribbean Disaster Emergency Management Agency (CDEMA) for disaster management in the Caribbean Community (CARICOM) and health emergency preparedness and response is one of the functions of the Caribbean Public Health Agency (CARPHA). [4, 5] However, there is no evidence from CDEMA or CARPHA of a policy prioritizing healthcare workers who become sick as a result of responding to a public health emergency. [6, 7]

[1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[2] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.

[3] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 9 August 2020.

[4] Caribbean Disaster Emergency Management Agency (CDEMA). "About Us". [<https://www.cdema.org/about-us#what-is-cdema-s-mandate>]. Accessed 9 August 2020.

[5] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)". [<http://carpha.org/Who-We-Are/Role-and-Functions>]. Accessed 9 August 2020.

[6] Caribbean Disaster Emergency Management Agency (CDEMA). [<https://www.cdema.org/>]. Accessed 9 August 2020.

[7] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 9 August 2020.

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 no evidence that there is a system in place for public health officials and healthcare workers to communicate during a public health emergency. The National Office of Disaster Services, Ministry of Health, and the Government Information and Services do not offer any indication of such a system. [1, 2, 3] The Caribbean Public Health Agency (CARPHA) March 2020 Communication Strategy for Coronavirus Disease (COVID-19)—"intended to assist public health authorities from CARPHA Member States in their development and execution of a risk communication strategy for a public health outbreak or emergency"—does not address a system for communication between public health officials and healthcare workers. [4] There is no evidence of such a system available from CARPHA. [5] In 2011, Antigua and Barbuda was among a group of CARICOM member states that gathered for updates on the United Nations Development Programme (UNDP) regarding emergency support access. [6] Improving communication among key agencies was among the recommendations that came out of the meetings, but there was no specific mention of a current system. [6]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 9 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.

[4] Caribbean Public Health Agency (CARPHA). 11 March 2020. "Communication Strategy for Coronavirus Disease (COVID-19)".

[<https://carpha.org/Portals/0/Documents/Technical%20Guidance/CARPHA%20COVID19%20Communication%20Strategy.pdf>]. Accessed 9 August 2020.

[5] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 9 August 2020.

[6] Antigua.com. 15 June 2011. "United Nations Development Programme (UNDP) Meeting Report".

[<http://www.antiguanice.com/v2/client.php?id=859&news=2112>]. Accessed 9 August 2020.

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 no evidence that there is a system in place for public health officials and healthcare workers to communicate during a public health emergency. The National Office of Disaster Services, Ministry of Health, and the Government Information and

Services do not offer any indication of such a system. [1, 2, 3] The Caribbean Public Health Agency (CARPHA) March 2020 Communication Strategy for Coronavirus Disease (COVID-19)—"intended to assist public health authorities from CARPHA Member States in their development and execution of a risk communication strategy for a public health outbreak or emergency"—does not address a system for communication between public health officials and healthcare workers. [4] There is no evidence of such a system available from CARPHA. [5] In 2011, Antigua and Barbuda was among a group of CARICOM member states that gathered for updates on the United Nations Development Programme (UNDP) regarding emergency support access. [6] Improving communication among key agencies was among the recommendations that came out of the meetings, but there was no specific mention of a current system. [6]

- [1] National Office of Disaster Services (NODS) of Antigua and Barbuda. [<http://nods.gov.ag/>]. Accessed 9 August 2020.
- [2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.
- [3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.
- [4] Caribbean Public Health Agency (CARPHA). 11 March 2020. "Communication Strategy for Coronavirus Disease (COVID-19)". [<https://carpha.org/Portals/0/Documents/Technical%20Guidance/CARPHA%20COVID19%20Communication%20Strategy.pdf>]. Accessed 9 August 2020.
- [5] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 9 August 2020.
- [6] Antiguanice.com. 15 June 2011. "United Nations Development Programme (UNDP) Meeting Report". [<http://www.antiguanice.com/v2/client.php?id=859&news=2112>]. Accessed 9 August 2020.

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: 0

There is no evidence that Antigua and Barbuda's public health system monitors and tracks the number of health care associated infections (HCAIs) that take place in healthcare facilities. There is no evidence of monitoring and tracking HCAIs by the Ministry of Health, Health Watch Antigua and Barbuda, and the Government Information and Services. [1, 2, 3] In 2013, there was a three-day regional workshop on the surveillance of HCAIs, but there is no description of established processes in Antigua and Barbuda, nor next steps. [4] The Caribbean Public Health Agency (CARPHA) provides a FAQ one-pager from 2015 about HCAIs, which indicates that healthcare facilities should have training and surveillance to monitor HCAIs. [5]

- [1] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.
- [2] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 9 August 2020.
- [3] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.
- [4] Caribbean Community (CARICOM). 24 April 2013. "Caribbean Countries Discussing Healthcare Associated Infections". [<https://caricom.org/caribbean-countries-discussing-healthcare-associated-infections/>]. Accessed 9 August 2020.
- [5] Caribbean Public Health Agency (CARPHA). "Healthcare-Associated Infections".

[https://new.carpha.org/Portals/0/Documents/CARPHA_HCAIs_Factsheet_Oct2015.pdf]. Accessed 9 August 2020.

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: 0

There is insufficient evidence that there is a national requirement for ethical review before beginning a clinical trial. A 2015 article by the United Nations Educational, Scientific and Cultural Organization (UNESCO) describes a workshop to be held in Antigua and Barbuda, in October of that year, aimed at building capacity in research ethics for the country and other Caribbean countries. [1] The agenda for this workshop included remarks from the Institutional Review Board (IRB) Chair from the Ministry of Health. [2] There is no information about Antigua and Barbuda's research ethics review process available through Health Research Web, a resource on countries established health research processes. [3] There is no information on the country's IRB national requirements for ethical review available through the Ministry of Health, Health Watch Antigua and Barbuda, the Government Information and Services, or the Caribbean Public Health Agency (CARPHA) nor indication of an expedited process for medical countermeasures. [4, 5, 6, 7] CARPHA's Caribbean Network of Research Ethics Committees (CANREC) is a network of Research Ethics Committees (RECs/IRBs) across the CARPHA member states, with a purpose "to promote, exchange, and cooperate intra-regionally and internationally in matters of research and research ethics." [8]

[1] United Nations Educational, Scientific and Cultural Organization (UNESCO). 28 September 2015. "Workshop of the Ethics Committee Research and Institutional Review Boards to be held in Antigua and Barbuda".

[http://www.unesco.org/new/en/media-services/single-view/news/workshop_of_the_ethics_committee_research_and_institutional/]. Accessed 9 August 2020.

[2] United Nations Educational, Scientific and Cultural Organization (UNESCO). "Agenda: Research ethics training workshop in Antigua/Barbuda by CARPHA & UNESCO regional bioethics programme".

[<http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Montevideo/pdf/Bioet-AgendaTrainingWorkshopAntigua.pdf>]. Accessed 9 August 2020.

[3] Health Research Web. "Antigua and Barbuda". [<https://healthresearchweb.org/en/antigua+and+barbuda/ethics>]. Accessed 9 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[5] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 9 August 2020.

[6] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[7] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 9 August 2020.

[8] Caribbean Public Health Agency (CARPHA). "Caribbean Network of Research Ethics Committees (CANREC) - About CANREC". [<https://carpha.org/What-We-Do/Networks/CANREC/Caribbean-Network-of-Research-Ethics-Committees>]. Accessed 9 August 2020.

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 evidence that there is an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics in Antigua and Barbuda. A 2015 article by the United Nations Educational, Scientific and Cultural Organization (UNESCO) describes a workshop to be held in Antigua and Barbuda, in October of that year, aimed at building capacity in research ethics for the country and other Caribbean countries. [1] The agenda for this workshop included remarks from the Institutional Review Board (IRB) Chair from the Ministry of Health. [2] There is no information about Antigua and Barbuda's research ethics review process available through Health Research Web, a resource on countries established health research processes. [3] There is no information on the country's IRB national requirements for ethical review available through the Ministry of Health, Health Watch Antigua and Barbuda, the Government Information and Services, or the Caribbean Public Health Agency (CARPHA) nor indication of an expedited process for medical countermeasures. [4, 5, 6, 7] CARPHA's Caribbean Network of Research Ethics Committees (CANREC) is a network of Research Ethics Committees (RECs/IRBs) across the CARPHA member states, with a purpose "to promote, exchange, and cooperate intra-regionally and internationally in matters of research and research ethics." [8]

[1] United Nations Educational, Scientific and Cultural Organization (UNESCO). 28 September 2015. "Workshop of the Ethics Committee Research and Institutional Review Boards to be held in Antigua and Barbuda".

[http://www.unesco.org/new/en/media-services/single-view/news/workshop_of_the_ethics_committee_research_and_institutional/]. Accessed 9 August 2020.

[2] United Nations Educational, Scientific and Cultural Organization (UNESCO). "Agenda: Research ethics training workshop in Antigua/Barbuda by CARPHA & UNESCO regional bioethics programme".

[<http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Montevideo/pdf/Bioet-AgendaTrainingWorkshopAntigua.pdf>]. Accessed 9 August 2020.

[3] Health Research Web. "Antigua and Barbuda". [<https://healthresearchweb.org/en/antigua+and+barbuda/ethics>]. Accessed 9 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[5] Health Watch Antigua and Barbuda. [<http://www.healthwatchantiguaandbarbuda.com/>]. Accessed 9 August 2020.

[6] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 7 August 2020.

[7] Caribbean Public Health Agency (CARPHA). [<http://carpha.org/>]. Accessed 9 August 2020.

[8] Caribbean Public Health Agency (CARPHA). "Caribbean Network of Research Ethics Committees (CANREC) - About CANREC". [<https://carpha.org/What-We-Do/Networks/CANREC/Caribbean-Network-of-Research-Ethics-Committees>]. Accessed 9 August 2020.

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: 0

There is insufficient evidence that there is a government agency responsible for approving new medical countermeasures in humans. According to the 2016-2020 National Strategic Plan for Health, the Ministry of Health in Antigua and Barbuda is responsible for the procurement of pharmaceuticals and medical supplies, but there is no mention of approval for medicines provided by the Ministry of Health. [1, 2] The Caribbean Regulatory System of the Caribbean Public Health Agency (CARPHA) oversees safety, quality, and efficacy of medicines and vaccines in the Caribbean. [3] CARPHA's Medicines Quality Control and Surveillance Department monitors medicinal quality and is the sole ISO/IEC 17025 accredited pharmaceutical quality control laboratory in the Caribbean. [4] The 2013 Caribbean Pharmaceutical Policy does not mention medical countermeasures. [5]

[1] Health Watch Antigua and Barbuda. "National Strategic Plan for Health, 2016-2020".

[http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 9 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[3] Caribbean Public Health Agency (CARPHA) "Caribbean Regulatory System". [<https://carpha.org/What-We-Do/CRS/Caribbean-Regulatory-System>]. Accessed 9 August 2020.

[4] Caribbean Public Health Agency (CARPHA) "About Medicine Quality Control and Surveillance". [<https://carpha.org/What-We-Do/MQCSD/Medicines-Quality-Control-and-Surveillance-Department>]. Accessed 9 August 2020.

[5] Caribbean Public Health Agency (CARPHA) / Pan American Health Organization (PAHO) / World Health Organization (WHO). 2013. "Caribbean Pharmaceutical Policy". [<https://www.paho.org/en/file/36577/download?token=ltppewWs>]. Accessed 9 August 2020.

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 evidence that there is an expedited process for approving medical countermeasures for human use during public health emergencies. The 2016-2020 National Strategic Plan for Health indicates that the Ministry of Health in Antigua and Barbuda is responsible for the procurement of pharmaceuticals and medical supplies, but there is no mention of approval for medical countermeasures. [1] The Caribbean Regulatory System of the Caribbean Public Health Agency (CARPHA) oversees safety, quality, and efficacy of medicines and vaccines in the Caribbean, though there is no indication that this includes medical countermeasures. [2] The 2013 Caribbean Pharmaceutical Policy does not mention medical countermeasures. [3] There is no information about approving medical countermeasures through the Ministry of Health or the Government Information and Services. [4, 5]

[1] Health Watch Antigua and Barbuda. "National Strategic Plan for Health, 2016-2020".

[http://www.healthwatchantiguaandbarbuda.com/Files/National_Strategic_Plan_for_Health.pdf]. Accessed 9 August 2020.

[2] Caribbean Public Health Agency (CARPHA) "Caribbean Regulatory System". [<https://carpha.org/What-We-Do/CRS/Caribbean-Regulatory-System>]. Accessed 9 August 2020.

[3] Caribbean Public Health Agency (CARPHA) / Pan American Health Organization (PAHO) / World Health Organization (WHO). 2013. "Caribbean Pharmaceutical Policy". [<https://www.paho.org/en/file/36577/download?token=ltppewWs>]. Accessed 9 August 2020.

[4] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[5] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.

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: 0

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: 1

Pandemics are integrated into Antigua and Barbuda's national risk reduction strategy. The 2016 Country Document for Disaster Risk Reduction encompasses health risks and lists human/animal epidemics among the types of hazards in Antigua and Barbuda, mentioning avian influenza, swine flu, and zika. The Document states that the Ministry of Health has internal processes for Comprehensive Disaster Management (CDM) and describes the National Health Disaster Committee (NHDC), which is housed under the Ministry of Health and is responsible for developing policies and alert systems for the efficient management of health emergency/disaster. [1] The Document also mentions the "Health Sector Disaster Management Plan 2016", however, no evidence of this plan specific to health is available. [1] In June 2017, Health Watch Antigua and Barbuda posted a news article, "Health Disaster Management Plan Updated and Upgraded," which describes a recent three-day workshop towards updating the current health disaster response plan. [2] However, this article does not mention planning for multiple communicable diseases with pandemic potential, and no such plan could be found, including through the Ministry of Health or the Government Information and Services. [3, 4]

[1] National Office of Disaster Services (NODS) of Antigua and Barbuda. February, 2017. "Country Document for Disaster Risk Reduction: Antigua and Barbuda, 2016". [<http://dipecholac.net/docs/country-doc-antigua-and-barbuda.pdf>]. Accessed 9 August 2020.

[2] Health Watch Antigua and Barbuda. ND "Health Disaster Management Plan Updated and Upgraded".

[<http://www.healthwatchantiguaandbarbuda.com/health-disaster-management-plan-to-be-updated>]. Accessed 9 August 2020.

[3] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.

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

Antigua and Barbuda is part of a regional group with regards to public health emergencies. Article 4 of the Agreement Establishing the Caribbean Public Health Agency (CARPHA) signed by the Government of Antigua and Barbuda states that supporting the Caribbean Community in "preparing for and responding to public health emergencies" is one of CARPHA's objectives. [1] Health emergency preparedness and response is therefore one of the functions of the CARPHA. [1, 2] CARPHA has supported Member States during the COVID-19 pandemic, including laboratory assistance, technical guidance, and communications. [3] In addition, the Caribbean Disaster Emergency Management Agency (CDEMA) is a regional agency for disaster management in the Caribbean Community (CARICOM), of which Antigua and Barbuda is a Member State. [4] CDEMA's mandate includes "coordinating the establishment, enhancement and maintenance of adequate emergency disaster response capabilities among the Participating States". [5]

[1] Caribbean Public Health Agency (CARPHA). 2011. "Agreement Establishing the Caribbean Public Health Agency (CARPHA)". [<https://caricom.org/documents/legaldocuments/10375-carpha-iga.pdf>]. Accessed 1 August 2020.

[2] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)". [<https://carpha.org/Who-We-Are/Role-and-Function>]. Accessed 9 August 2020.

[3] Caribbean Public Health Agency (CARPHA). "Coronavirus Disease (COVID-19)". [<https://www.carpha.org/What-We-Do/Public-Health/Novel-Coronavirus>]. Accessed 9 August 2020.

[4] Caribbean Disaster Emergency Management Agency (CDEMA). "About Us". [<https://www.cdema.org/about-us>]. Accessed 9 August 2020.

[5] Caribbean Disaster Emergency Management Agency (CDEMA). "What is CDEMA's Mandate?". [<https://www.cdema.org/about-us#what-is-cdema-s-mandate>]. Accessed 9 August 2020.

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: 2

Antigua and Barbuda is part of a regional group, with regards to animal health emergencies. The Caribbean Animal Health Network (CaribVET), of which Antigua and Barbuda is a member, is responsible for prevention and emergency preparedness plans for priority diseases. [1] Rabies, Salmonellosis, and Leptospirosis are identified by CaribVET as priority diseases. [2] The

2010 charter for CaribVET states that one of the roles of the Veterinary epidemiologist / para-epidemiologist (VEP) project is to support and operate a rapid national and regional emergency response task force. [3] Representatives from CaribVET have also been involved in the development of the Caribbean's Global Health Security Agenda (GHSA) roadmap. [4, 5]

[1] Caribbean Animal Health Network (CaribVET). "About the Network". [<https://www.caribvet.net/about-the-network>]. Accessed 9 August 2020.

[2] Caribbean Animal Health Network (CaribVET). "Veterinary Public Health". [<https://www.caribvet.net/thematics/veterinary-public-health>]. Accessed 9 August 2020.

[3] Caribbean Animal Health Network (CaribVET). "Caribbean Animal Health Network Charter". [https://www.caribvet.net/content/download/4499/33474/version/1/file/CaribVET_CHARTER_FINAL_EN2011%28detailed%29.pdf]. Accessed 9 August 2020.

[4] Caribbean Animal Health Network (CaribVET). "The Caribbean Animal Health Network (CaribVET) establishes high-level ties with Caribbean Disaster Emergency Management Agency (CDEMA)". [<https://www.caribvet.net/news/the-caribbean-animal-health-network-caribvet-establishes-high-level-ties-with-caribbean-disaster-emergency-management-agency-cdema>]. Accessed 9 August 2020.

[5] Caribbean Community (CARICOM). 29 May 2017. "Working towards Regional Health Security in the Caribbean". [<https://caricom.org/working-towards-regional-health-security-in-the-caribbean/>]. Accessed 9 August 2020.

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 Antigua and Barbuda has allocated national funds to improve capacity to address epidemic threats within the past three years. The Ministry of Health was allocated EC\$113.6 million in the country's 2020 Budget, but no detail on funding towards epidemic threats is available. [1] There is no evidence of allocated national funds for this purpose available through the Ministry of Health, Ministry of Agriculture, or Government Information and Services. [2, 3, 4]

[1] Government of Antigua and Barbuda. 2020. "2020 Budget Estimates: Recurrent and Development".

[https://ab.gov.ag/pdf/budget/2020_Antigua_Estimates.pdf]. Accessed 9 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 9 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020

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 a publicly identified special emergency public financing mechanism and funds that Antigua and Barbuda can access in the face of a public health emergency. The Stop Epidemics There and Here (SETH) Fund provides financial support and assistance to the Caribbean Public Health Agency (CARPHA) and its Member States, which includes Antigua and Barbuda, in managing outbreaks and emergencies with health and humanitarian consequences. [1] Activities of the SETH Fund include immediate response interventions against vaccine-preventable diseases and deployment of rapid response personnel during outbreaks, public health emergencies, severe natural disasters, chemical and other events with health consequences. [1] Antigua and Barbuda is not eligible for World Bank pandemic financing. [2]

[1] Caribbean Public Health Agency (CARPHA) Foundation. "Stop Epidemics There and Here (SETH) Fund ".
[<http://carphafoundation.carpha.org/SETH-Fund>]. Accessed 4 August 2020.

[2] International Development Association (IDA) - World Bank Group. "Borrowing Countries".
[<http://ida.worldbank.org/about/borrowing-countries>]. Accessed 4 August 2020.

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 no evidence that, in the past three years, senior leaders in Antigua and Barbuda have made a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or support, or to improve its own domestic capacity to address epidemic threats. The Caribbean Public Health Agency (CARPHA) was established in 2013 as the public health agency for the Caribbean Community (CARICOM) and coordinates responses to public health crisis in the Caribbean by providing resources for disease prevention and control strategies in outbreak and epidemic situations. [1, 2] Caribbean Community Member States contribute quotas to make up CARPHA's funding, in addition to funding obtained from partners supporting health and development work in the Caribbean, though there is no publicly available detail on financial

or technical commitments Antigua and Barbuda has made towards CARPHA. [3] Beyond the regional commitment through CARPHA, there is no evidence that Antigua and Barbuda has made a public commitment to support other countries to improve capacity to address epidemic threats from the Global Health Security Funding Tracking Dashboard. [4] The Ministry of Health, Ministry of Foreign Affairs, and Government Information and Services provide no evidence that the country has made or fulfilled public commitments. [5, 6, 7] Antigua and Barbuda is not among the countries that contribute to the World Health Organization (WHO)'s Contingency Fund for Emergencies (CFE), and the WHO makes no other mention of this type of public commitment by Antigua and Barbuda. [8, 9]

[1] Caribbean Public Health Agency (CARPHA) Foundation. "About CARPHA". [<http://carphafoundation.carpha.org/Who-We-Are/About-CARPHA>]. Accessed 9 August 2020.

[2] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)". [<https://carpha.org/Who-We-Are/Role-and-Function>]. Accessed 9 August 2020.

[3] Caribbean Public Health Agency (CARPHA). "Frequently Asked Questions - How is CARPHA funded?". [<http://carpha.org/who-we-are/faqs>]. Accessed 9 August 2020.

[4] Global Health Security Funding Tracking Dashboard. [<https://tracking.ghscosting.org/#analysis/AG/d>]. Accessed 9 August 2020.

[5] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[6] Ministry of Foreign Affairs, International Trade and Immigration of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=20]. Accessed 9 August 2020.

[7] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.

[8] World Health Organization (WHO). "Contingency Fund for Emergencies (CFE)". [<http://www.who.int/emergencies/funding/contingency-fund/en/>]. Accessed 9 August 2020.

[9] World Health Organization (WHO). [<http://www.who.int/>]. Accessed 9 August 2020.

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: 0

There is insufficient evidence that, in the past three years, Antigua and Barbuda has requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats. Although there is evidence of funding for improved global health security, evidence only exists for funding supporting response. Evidence of funding for capacity development is over three years old. According to the Georgetown Global Health Security Tracking Dashboard, US\$2.78 million have been disbursed to Antigua and Barbuda since 2014, including funds disbursed within the past three years. [1] The majority of disbursed funds have gone towards core capacities including workforce development. [1] In June 2020, the Government of Canada contributed US\$5.3 million to the Pan American Health Organization for increase access to personal protective equipment (PPE) and other critical supplies for COVID-19, with Antigua and Barbuda among the countries it would benefit. [2] The Caribbean Public Health Agency (CARPHA) was established in 2013 as the public health agency for the Caribbean Community (CARICOM) and coordinates responses to public health crisis in the Caribbean by providing resources for disease prevention and control strategies in outbreak and epidemic situations. [3, 4] Caribbean Community Member States contribute quotas to make up CARPHA's funding, in addition to funding obtained from partners supporting health and development work in the Caribbean, though there is no publicly available detail on financial or technical commitments

Antigua and Barbuda has made towards CARPHA. [5] Antigua and Barbuda is not among the countries that have been allocated funding by the World Health Organization (WHO)'s Contingency Fund for Emergencies (CFE), and the WHO makes no other mention of this type of public commitment by Antigua and Barbuda. [6, 7]

[1] Georgetown Global Health Security Tracking Dashboard. "Recipient Profile: Antigua and Barbuda.

[<https://tracking.ghscosting.org/details/15/recipient>]. Accessed 9 August 2020.

[2] ReliefWeb. 11 June 2020. "Government of Canada contributes \$5.3 million to PAHO for response to COVID-19".

[<https://reliefweb.int/report/antigua-and-barbuda/government-canada-contributes-53-million-paho-response-covid-19>]. Accessed 9 August 2020.

[3] Caribbean Public Health Agency (CARPHA) Foundation. "About CARPHA". [<http://carphafoundation.carpha.org/Who-We-Are/About-CARPHA>]. Accessed 9 August 2020.

[4] Caribbean Public Health Agency (CARPHA). "The Role and Functions of the Caribbean Public Health Agency (CARPHA)". [<https://carpha.org/Who-We-Are/Role-and-Function>]. Accessed 9 August 2020.

[5] Caribbean Public Health Agency (CARPHA). "Frequently Asked Questions - How is CARPHA funded?". [<http://carpha.org/who-we-are/faqs>]. Accessed 9 August 2020.

[6] World Health Organization (WHO). "Contingency Fund for Emergencies (CFE) - Allocations 2015-2020". [https://www.who.int/docs/default-source/documents/emergencies/cfe-allocations-2015-30april2020-pdf.pdf?sfvrsn=ffb5d564_2]. Accessed 9 August 2020.

[7] World Health Organization (WHO). [<http://www.who.int/>]. Accessed 9 August 2020.

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 publicly available plan or policy by Antigua and Barbuda to share genetic data, epidemiological data or clinical specimens with international organizations and/or other countries that goes beyond influenza. There is no evidence that

such an information sharing agreement was created through the Caribbean Public Health Agency (CARPHA). [1] There is no evidence of a sharing plan or policy provided by the Ministry of Health, Ministry of Agriculture, or Government Information and Services. [2, 3, 4]

[1] Caribbean Public Health Agency (CARPHA). [<https://carpha.org/>]. Accessed 9 August 2020.

[2] Ministry of Health, Wellness & The Environment of Antigua and Barbuda. [https://ab.gov.ag/detail_page.php?page=29]. Accessed 9 August 2020.

[3] Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs of Antigua and Barbuda. [<http://agriculture.gov.ag/>]. Accessed 9 August 2020.

[4] Antigua and Barbuda's Government Information and Services. [<https://ab.gov.ag/>]. Accessed 9 August 2020.

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 public evidence that Antigua and Barbuda has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years in local media outlets or through the WHO. [1]

[1] World Health Organization (WHO). "Virus sharing". [http://www.who.int/influenza/pip/virus_sharing/en/]. Accessed 4 August 2020.

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 Antigua and Barbuda has not shared pandemic pathogen samples during an outbreak in the past two years, including during the COVID-19 pandemic, in media outlets or through the WHO. [1]

[1] World Health Organization (WHO). "News Releases". [<http://www.who.int/news-room/releases>]. Accessed 4 August 2020.

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: 2

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: 58.44

2020

Transparency International

6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

6.1.1g

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

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: 3

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: 3

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: 4

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: 4

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: 99

2015

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: 0.67

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: 0.3

2008-2018

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

The share of employment in the informal sector in Antigua and Barbuda is around 30%, as of the early 2000s, according to a 2008 working paper from the International Monetary Fund (IMF). [1] No more recent data is available, including through the ILOSTAT database and the World Bank. [2, 3]

[1] International Monetary Fund (IMF). 2008. "Measuring the Informal Economy in Latin America and the Caribbean". [<https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Measuring-the-Informal-Economy-in-Latin-America-and-the-Caribbean-21898>]. Accessed 9 August 2020.

[2] International Labour Organization (ILOSTAT). "Country Profiles". [<https://ilostat.ilo.org/data/country-profiles/>]. Accessed 9 August 2020.

[3] The World Bank. "Informal employment (% of total non-agricultural employment)". [<https://data.worldbank.org/indicator/SL.ISV.IFRM.ZS>]. Accessed 9 August 2020.

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: 1

2021

Economist Intelligence Democracy Index

6.2.6 Inequality

6.2.6a

Gini coefficient

Scored 0-1, where 0=best

Current Year Score: 0.53

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: 3

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: 24.51

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: -1.51

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: 0

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: 76.89

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: 501.1

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 9.05

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 14.78

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 18.9

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: 96.74

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 87.5

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: 780.36

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: 1

2018

Wellcome Trust Global Monitor 2018