

Uganda

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

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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: 2

There is evidence of an AMR plan, and it covers surveillance, detection, and reporting. Uganda has a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens. The country's "Antimicrobial Resistance National Action Plan (2018-2023)", released in March 2019, seeks to generate knowledge and evidence of AMR pathogens through surveillance, and raise awareness and understanding of the AMR problem. It also aims to produce an understanding of AMR containment options, as well as improve the prevention, detection and control of infectious agents, and the data management and reporting of AMR. [1] The 2017 Joint External Evaluation (JEE) for Uganda notes, "the Government of Uganda has in place a National Strategy for Antimicrobial Resistance and an Antimicrobial Resistance Surveillance Plan (2017 - 2022), which incorporates a multisectoral approach toward combating AMR". However, the plan referred to in the JEE seems to have been updated by the "Antimicrobial Resistance National Action Plan". [2]

[1] Republic of Uganda. Antimicrobial Resistance National Action Plan (2018-2023). [<https://cddep.org/wp-content/uploads/2019/03/Final-Signed-NAP-AMR-2018-2023-Final.pdf>]. Accessed January 5, 2021.

[2] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 5, 2021.

1.1.1b

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

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

Current Year Score: 1

There is evidence that the Government of Uganda's laboratory system can test for 7+ 1 AMR pathogens, but these are not clearly named and identified. The 2017 Joint External Evaluation (JEE) for Uganda notes that the country "has 25 health facilities and institutions performing Antimicrobial Susceptibility Testing towards all IHR priority AMR Pathogens and national priority AMR pathogens such as Mycobacterium tuberculosis". The report further notes that "all IHR AMR priority pathogens are detected in country". However, the JEE does not name the individual pathogens. [1] The Global Health Security Agenda Pilot Assessment Report, the Ministry of Health, the Central Public Health Laboratories and the "Antimicrobial Resistance National Action Plan (2018-2023)" contain no further information about Uganda's capacity to test for AMR pathogens. [2,3,4,5,6]

- [1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 5, 2021.
- [2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.
- [3] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/directories>]. Accessed January 5, 2021.
- [4] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed January 5, 2021
- [5] World Health Organisation - Anti Microbial Resistance - Library of National Action Plans. [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed January 5, 2021.
- [6] Republic of Uganda. Antimicrobial Resistance National Action Plan (2018-2023). [<https://cddep.org/wp-content/uploads/2019/03/Final-Signed-NAP-AMR-2018-2023-Final.pdf>]. Accessed January 5, 2021.

1.1.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Uganda conducts environmental surveillance for AMR pathogens or antimicrobial residues. No information is available through the Ministry of Health, the 2017 Joint External Evaluation (JEE) for Uganda, the Global Health Security Agenda Pilot Assessment of Uganda, the "One Health Strategic Plan" from 2018-2022 or the "Antimicrobial Resistance National Action Plan (2018-2023)" to suggest that Uganda's government environmental agency conducts detection or surveillance activities (e.g. in soil, waterways, etc.) for antimicrobial residues or AMR organisms. [1,2,3,4,5] That notwithstanding, the Uganda National State of Environment Report for 2018/9 (the latest available year) details a series of research programs funded by the Ministry of Water and Environment to detect specific presence of Escherichia coli (E. coli), Biological Oxygen Demand (BOD5) and Total Suspended Solids (TSS) in the country's water sources. However, it does not mention drug resistant E.coli detection. [6] No further information is available on the One Health Strategic Plan either [7]

- [1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.
- [2] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 5, 2021.
- [3] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed January 5, 2021.
- [4] Republic of Uganda - One Health Strategic Plan 2018-2022. [<https://bit.ly/2CQwSWM>]. Accessed January 5, 2021.
- [5] Republic of Uganda. Antimicrobial Resistance National Action Plan (2018-2023). [<https://cddep.org/wp-content/uploads/2019/03/Final-Signed-NAP-AMR-2018-2023-Final.pdf>]. Accessed January 5, 2021.
- [6] The Republic of Uganda. "National State of the Environment Report 2018/2019. [<https://www.nema.go.ug/sites/default/files/NSOER%202018-2019.pdf>]. Accessed January 5, 2021.
- [7] Republic of Uganda - One Health Strategic Plan 2018-2022. [<https://bit.ly/2CQwSWM>]. Accessed January 5, 2021.

1.1.2 Antimicrobial control

1.1.2a

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

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

Current Year Score: 1

There is evidence of national legislation or regulation in place requiring prescriptions for antibiotic use for humans, but there is evidence of gaps in enforcement. According to the 2017 Joint External Evaluation (JEE) for Uganda, conducted in June 2017, the 1993 "National Drug Policy and Authority Act" clearly classifies antibiotics as controlled drugs. [1] A check on the act confirms this. The Second Schedule of the Act classifies antibiotics as controlled drugs. It goes further to state that "the following drugs [including many antibiotics] may be supplied by retail only on the prescription of a duly qualified medical practitioner, dentist or veterinary surgeon, and only for medical, dental or animal treatment respectively.[2] The country's "Antimicrobial Resistance National Action Plan (2018-2023)" resolves to sensitise private providers of antibiotics of the National Drug Act and regulations so as to increase compliance. [3] That said, the JEE report notes that "AMR policies, plans and guidelines in place are inadequately enforced", and recommends that the Ugandan authorities "enforce existing policies and regulations for antibiotic prescription and use in humans". [1]

[1] World Health Organization. June 2017. Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [https://bit.ly/2F6Oi3v]. Accessed January 5, 2021.

[2] Republic of Uganda - National Drug Policy and Authority Act 1993. [https://ulii.org/ug/legislation/consolidated-act/206]. Accessed January 5, 2021.

[3] Republic of Uganda. Antimicrobial Resistance National Action Plan (2018-2023). [https://cddep.org/wp-content/uploads/2019/03/Final-Signed-NAP-AMR-2018-2023-Final.pdf]. Accessed January 5, 2021.

1.1.2b

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

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

Current Year Score: 0

There is no publicly available information on legislation or regulation in place requiring prescriptions for antibiotic use for animals. No such evidence could be found via the 2017 Joint External Evaluation (JEE) for Uganda, the Ministry of Health, the Ministry of Agriculture, the Pharmaceutical Society of Uganda, The 1993 National Drug Policy and Authority Act or the recently published "Antimicrobial Resistance National Action Plan (2018-2023)", suggesting that the country has no national legislation or regulation in place requiring prescriptions for antibiotic use in animals. The National Drug Policy and Authority Act mentions prescriptions for classified drugs but not, specifically, prescriptions for antibiotic use in animals. [1,2,3,4,5,6]

[1] World Health Organization. "Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [https://bit.ly/2F6Oi3v]. Accessed January 5 2021.

[2] Republic of Uganda - Ministry of Health. [http://health.go.ug]. Accessed January 5 2021

[3] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [https://www.agriculture.go.ug]. Accessed January 5 2021.

[4] Uganda Legal Information Institute - "National Drug Policy and Authority Act 1993 Chapter 206". [https://ulii.org/ug/legislation/consolidated-act/206]. Accessed January 5 2021.

[5] The Pharmaceutical Society of Uganda. [http://psu.or.ug/]. Accessed January 5 2021.

[6] Republic of Uganda. Antimicrobial Resistance National Action Plan (2018-2023). [https://cddep.org/wp-

content/uploads/2019/03/Final-Signed-NAP-AMR-2018-2023-Final.pdf]. Accessed January 5 2021.

1.2 ZONOTIC DISEASE

1.2.1 National planning for zoonotic diseases/pathogens

1.2.1a

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of national legislation, plans, or equivalent strategy documents on zoonotic disease. This is included in its "One Health Strategic Plan (2018-2022)", put in place to address animal, human and environmental health challenges. The plan specifically mentions zoonotic diseases and goes on to say that the strategy focuses on three priority public health threats: zoonotic disease, antimicrobial resistance and biosecurity. The Uganda One Health Strategic Plan (2018-2022) identifies a list of priority zoonotic diseases, namely: Anthrax, Zoonotic Influenza viruses, VHFs, Brucellosis, Trypanosomiasis, Plague and Rabies. The plan addresses such prioritised zoonotic diseases with respect to human, livestock and wildlife health. [1]

[1] Republic of Uganda - "One Health Strategic Plan 2018-2022".

[[https://health.go.ug/sites/default/files/Uganda%20HSP%20Final%20Launched%2015-02-2018%20\[1\].pdf](https://health.go.ug/sites/default/files/Uganda%20HSP%20Final%20Launched%2015-02-2018%20[1].pdf)]. Accessed January 5 2021.

1.2.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence of 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. Uganda's One Health Strategic Plan 2018-2022 includes a section on zoonotic diseases which encompasses measures such as "passive syndromic surveillance using the Integrated Disease Surveillance and Response (IDSR) strategy", with IDSR being a comprehensive strategy to implement public health vigilance in the African continent. Additionally, lower health facilities are mandated to compile and report surveillance data on zoonotic diseases a weekly, monthly, quarterly and annual data; mentioned data is then analyzed by higher-level health facilities, which provided feedback and measures for spillover reduction. The surveillance on risks ensuing from zoonotic diseases is thus continuous. [1] According to the 2017 Joint External Evaluation (JEE) for Uganda, however, such surveillance mechanisms perform very poorly and present substantial challenges with data quality and timelines [2]. No further information is available on the Ministry of Health's or Agriculture's websites [3, 4]

[1] Republic of Uganda. "One Health Strategic Plan 2018-2022".

[[https://health.go.ug/sites/default/files/Uganda%20HSP%20Final%20Launched%2015-02-2018%20\[1\].pdf](https://health.go.ug/sites/default/files/Uganda%20HSP%20Final%20Launched%2015-02-2018%20[1].pdf)]. Accessed January 5 2021.

[2] World Health Organization. "Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [<https://bit.ly/2F6Oi3v>]. Accessed January 5 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.

[4] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 5 2021.

1.2.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Uganda has national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern and there are substantial gaps in implementation. The Uganda One Health Strategic Plan (2018-2022) identifies a list of priority zoonotic diseases, namely: Anthrax, Zoonotic Influenza viruses, VHFs, Brucellosis, Trypanosomiasis, Plague and Rabies. However, such plan does not outline details of how surveillance and control are to be conducted. As for surveillance, the plan mentions: "passive syndromic surveillance using the Integrated Disease Surveillance and Response (IDSR) strategy", with IDSR being a comprehensive strategy to implement public health vigilance in the African continent; that lower health facilities are mandated compile and report surveillance data on zoonotic diseases a weekly, monthly, quarterly and annual data; and that mentioned data is then analyzed by higher-level health facilities, which provided feedback and measures for spillover reduction. Additionally, the One Health Strategic Plans also refers to control mechanisms for zoonotic diseases control, such as: "guidelines for responding to the prioritised zoonoses are available" and "ministry-specific response plans are available" for priority zoonotic diseases. The very plan, however, mentions "limited resources to implement known effective interventions to control the prioritised zoonotic diseases" as well as other significant risks to disease control. [1] The 2017 Joint External Evaluation (JEE) for Uganda, notes that "whereas an animal health surveillance system exists, the country team reported the system's attributes perform very poorly. There are substantial challenges with reporting rates, data quality, timeliness and sensitivity", and "Lack of formal zoonotic disease control and prevention coordination structures at sub-national level". [2] Additionally, Uganda's Animal Disease Act does mention strategies for surveillance and control of epizootic diseases but does not include details. The diseases to which the plan refers are: "cattle plague (rinderpest), anthrax, pleuropneumonia, trypanosomiasis, tuberculosis, foot and mouth disease, rabies, sheep pox, sheep scab, goat scab, goat pox, swine fever, swine erysipelas, glanders, farcy, mange (scabies) in horses, mules and donkeys, dourine, ulcerative lymphangitis, epizootic lymphangitis, and blackquarter." [3] There is no further evidence via the Ministry of Health or Ministry of Agriculture. [4,5]

[1] Republic of Uganda - "One Health Strategic Plan [2018-2022]". [<https://bit.ly/2CQwSWM>]. Accessed January 5, 2021.

[2] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 5, 2021.

[3] Government of Uganda. 31 December 2000. "Animal Diseases Act." [<https://ulii.org/node/23789>]. Accessed January 5, 2021.

[4] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.

[5] Republic of Uganda -Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 5, 2021.

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: 1

There is evidence that Uganda has a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries.

According to the 2017 Joint External Evaluation (JEE) report for Uganda, the country has a One Health Coordination Office (ZDCO) that co-ordinates the control and prevention of zoonotic diseases. This office was established through a memorandum of understanding between the line ministries responsible for human, livestock, wildlife and environmental health. [1] The "One Health Strategic Plan (2018-2022)" also notes, "the ZDCO is the secretariat of the National One Health Platform in Uganda and is responsible for co-ordinating the implementation of One Health activities by government under the supervision of the One Health Technical Working Group". [2] According to a USAID report, the ZDCO operates at national level, serving as the secretariat across ministries, and provides technical direction for the prevention of zoonotic diseases [3]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 5 2021.

[2] Republic of Uganda - "One Health Strategic Plan [2018-2022]". [<https://bit.ly/2CQwSWM>]. Accessed January 5 2021.

[3] USAID - One Health In Action - Preparedness & Response - Uganda.

[<http://preparednessandresponse.org/countries/uganda/>]. Accessed January 5 2021.

1.2.2 Surveillance systems for zoonotic diseases/pathogens

1.2.2a

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence to suggest Uganda has a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency. According to the "One Health Strategic Plan (2018-2022)", surveillance in the domestic animal sector in Uganda is not as developed as that in the human sector. However, generally, when a livestock farmer suspects a disease on his or her farm, he or she notifies the Sub-County veterinary officer (SCVO), who, if available, will attend to the incident. If the suspected disease is of public interest, the SCVO will immediately notify the District Veterinary Officer (DVO). The DVO then informs the Commissioner for Animal Health, who in turn liaises with National Animal Disease Diagnostics and Epidemiology Centre laboratory and the Epidemic Surveillance Unit to constitute a team to collect samples and deliver them to the National Animal Disease Diagnostics and Epidemiology Centre or any other collaborating laboratory for confirmatory diagnosis. [1] There is no clear information available on how the reporting takes place within the One Health Strategic plan or the Ministry of Health's and Agriculture's websites. [1, 2, 3]

[1] Republic of Uganda - "One Health Strategic Plan [2018-2022]". [<https://bit.ly/2CQwSWM>]. Accessed January 5 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug>]. Accessed January 5 2021

[3] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 5 2021.

1.2.2b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available information on legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners). No such evidence could be found via the Ministry of Health or Ministry of Agriculture, Animal Industry and Fisheries . [1, 2] The Data Protection and Privacy Bill 2015 only protects the privacy of individuals and personal information without making any reference to confidentiality of information generated through surveillance activities for animals. Neither does the One Health Strategic Plan (2018-2022) talk about the protection and confidentiality of information generated through surveillance activities involving animals. [3,4]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.

[2] Republic of Uganda -Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 5, 2021.

[3] Republic of Uganda - One Health Strategic Plan [2018-2022]. [<https://bit.ly/2CQwSWM>]. Accessed January 5, 2021.

[4] Republic of Uganda - Data Protection and Privacy Bill 2015. [<https://bit.ly/2Qr8ZZc>]. Accessed January 5, 2021.

1.2.2c

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence suggesting that Uganda conduct surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors). According to the "One Health Strategic Plan (2018-2022)", although there is no officer in charge of wildlife surveillance at the district level, the Uganda Wildlife Authority has officers in charge of zoonotic diseases surveillance in parks and protected areas. The plan does not elaborate on which animals or diseases are assessed, not on how surveillance is conducted. [1] The "Uganda Wildlife Authority Strategic Plan 2013-2018" mentions that the agency conducts surveillance on zoonotic disease, but does not specify on which animals and diseases it conducts surveillance. No updated plan is available [2] No further information is available on the Ministry of Health or the Ministry of Agriculture websites [3, 4]

[1] Republic of Uganda - "One Health Strategic Plan [2018-2022]". [<https://bit.ly/2CQwSWM>]. Accessed January 5, 2021.

[2] Uganda Wildlife Authority. "Strategic Plan 2013-2018." [<http://www.ugandawildlife.org/download/category/4-strategic-plans>]. Accessed January 5, 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5 2021

[3] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 5 2021.

1.2.3 International reporting of animal disease outbreaks

1.2.3a

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

Yes = 1 , No = 0

Current Year Score: 0

2019

OIE WAHIS database

1.2.4 Animal health workforce

1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: 2.14

2018

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 insufficient evidence that 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. The One Health Strategic Plan (2018-2022) which addresses issues involving zoonotic diseases mentions specifically that the private sector has an important role to play in addressing better prevention, detection and response to endemic and emerging zoonoses. It also mentions that individual private-sector bodies will be engaged directly to fill an advisory role, and contribute to policy development and budgetary support. Although the plan states that the Ministry of Health has already engaged some private-sector entities, it fails to name them. [1] There is no additional information on collaboration with the private sector for zoonotic disease response in either the 2017 Joint External Evaluation (JEE) for Uganda, the Ministry of Health or the Office of the Prime Minister (which oversees emergency response). [2,3,4]

- [1] Republic of Uganda - One Health Strategic Plan [2018-2022]. [<https://bit.ly/2CQwSWM>]. Accessed 5 January 2021.
- [2] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 5 January 2021.
- [3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 5 January 2021.
- [4] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed 5 January 2021.

1.3 BIOSECURITY

1.3.1 Whole-of- government biosecurity systems

1.3.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available information that the country has 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. No evidence is available from the Ministry of Health, Ministry of Agriculture, Animal Industry and Fisheries, Ministry of Defence and Veterans Affairs, the 2017 Joint External Evaluation (JEE) for Uganda, or the "One Health Strategic Plan (2018-2022)". [1,2,3,4,5] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [6] No further evidence is available on the VERTIC database, either [7].

- [1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 5 January 2021.
- [2] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed 5 January 2021.
- [3] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.
- [4] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 5 January 2021.
- [5] Republic of Uganda - One Health Strategic Plan 2018-2022. [<https://bit.ly/2CQwSWM>]. Accessed 5 January 2021.
- [6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed 5 January 2021.
- [7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

1.3.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available information that the country has 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. No such evidence is available from the Ministry of Health, Ministry of Agriculture, Animal Industry and Fisheries, Ministry of Defence and Veterans Affairs, the "One Health Strategic Plan", or the 2017 Joint External Evaluation (JEE) for Uganda [1,2,3,4, 5] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [6] The JEE report further states that there is the need to expedite enactment of the Biosecurity legislation to ensure designation of a national competent authority for biosafety and biosecurity. [4] No further evidence is available via the VERTIC database [7]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 5 January 2021.

[2] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed 5 January 2021.

[3] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.

[4] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 5 January 2021.

[5] Republic of Uganda - One Health Strategic Plan 2018-2022. [<https://bit.ly/2CQwSWM>]. Accessed 5 January 2021.

[6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed 5 January 2021.

[7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

1.3.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available information of an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations. No evidence is available from the Ministry of Health, Ministry of Agriculture, Animal Industry and Fisheries, Ministry of Defence and Veterans Affairs, the Joint External Evaluation, or the "One Health Strategic Plan (2018-2022)". [1,2,3,4,5] The 2017 Joint External Evaluation (JEE) for Uganda states that there is the need to expedite enactment of the Biosecurity legislation to ensure designation of a national competent authority for biosafety and biosecurity. [4] Although Uganda is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [6] No further evidence is available on the VERTIC database, either [7].

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 5 January 2021.

[2] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed 5 January 2021.

[3] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.

[4] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 5 January 2021.

[5] Republic of Uganda - One Health Strategic Plan 2018-2022. [<https://bit.ly/2CQwSWM>]. Accessed 5 January 2021.

[6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed 5 January 2021.

[7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

1.3.1d

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient public evidence to show that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. No such evidence is available through the Ministry of Health, Ministry of Agriculture, Animal Industry and Fisheries, the Central Public Health Laboratories and the "Antimicrobial Resistance National Action Plan (2018-2023)". [1,2,3,4,5] That said, the 2017 Joint External Evaluation (JEE) for Uganda notes that Uganda has conducted an initial inventory of select agents in both the human health and animal health sectors, which is maintained by the Uganda National Council of Science and Technology. However, there is no comprehensive pathogen consolidation plan across the sectors. This is listed as a priority action in the JEE. [4] There are however no further details either in the JEE, or via the Ministry of Health, Ministry of Agriculture, Animal Industry and Fisheries, Central Public Health Laboratories or the "Antimicrobial Resistance National Action Plan (2018-2023)" of the consolidation of inventories of especially dangerous pathogens and toxins into a minimum number of facilities. [1,2,3,4,5]. Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [6] No further evidence is available on the VERTIC database or on the Ministry of Defence, either [7, 8].

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5 2021.

[2] Republic of Uganda -Ministry of Agriculture, Animal Industry and Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 5 2021.

[3] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 5 2021.

[4] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 5 2021.

[5] Republic of Uganda. Antimicrobial Resistance National Action Plan (2018-2023). [<https://cddep.org/wp-content/uploads/2019/03/Final-Signed-NAP-AMR-2018-2023-Final.pdf>]. Accessed January 5 2021. 6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 5 2021.

[7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

[8] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.

1.3.1e

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

Yes = 1 , No = 0

Current Year Score: 0

There is no 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. There is no public evidence available through either the 2017 Joint External Evaluation (JEE) for Uganda or the Ministry of Health. [1,2] However, there is reportedly a laboratory run by the US Centres of Disease Control and Prevention based at the Uganda Virus Research Institute (UVRI) at Entebbe that has the capacity to track and confirm Ebola infections but there is insufficient evidence that it involves PCR-testing. [3,4] No

further evidence is available on the Ministry of Health, Agriculture or Defense websites. [2, 5, 6]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[3] Republic of Uganda - Uganda Viral Research Institute. [<http://www.uvri.go.ug/about-us>]. Accessed January 6 2021.

[4] SciTechDaily - Home - Biology - News. [<https://scitechdaily.com/ebola-outbreak-in-uganda-tests-readiness/>]. Accessed January 6 2021.

[5] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 5 2021.

[6] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.

1.3.2 Biosecurity training and practices

1.3.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is not enough evidence that 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. No such evidence is available through the 2017 Joint External Evaluation (JEE) for Uganda or the Ministry of Health . However, the completed JEE notes that there is a common training curriculum available within the human health sector that has been harmonised for use by all sectors. it also notes that biosafety and biosecurity training is received annually by all health laboratory workers as a national requirement. [1,2] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago.[3] No further evidence is available on the Ministry of Health, Agriculture or Defense websites, nor on the VERTIC database. [2, 4, 5, 6]

[1] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021

[3] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6 2021.

[4] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 5 2021.

[5] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.

[6] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

1.3.3 Personnel vetting: regulating access to sensitive locations

1.3.3a

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

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

Current Year Score: 0

There is no evidence that 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. No information is available via the 2006 Occupational Safety and Health Act, Ministry of Health, Ministry of Agriculture, Animal Industry and Fisheries, Central Public Health Laboratories, the 2017 Joint External Evaluation (JEE) for Uganda or the "One Health Strategic Plan (2018-2022) [1,2,3,4,5,6] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [7] No further information is available on the VERTIC website and on the Ministry of Defence [8, 9].

[1] Republic of Uganda - Occupational safety and Health Act 2006. [<https://bit.ly/2ReQA7d>]. Accessed January 6, 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6, 2021.

[3] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 6, 2021.

[4] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6, 2021.

[5] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6, 2021.

[6] Republic of Uganda - "One Health Strategic Plan 2018-2022". [<https://bit.ly/2CQwSWM>]. Accessed January 6, 2021.

[7] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6, 2021.

[8] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

[9] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.

1.3.4 Transportation security

1.3.4a

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

Yes = 1 , No = 0

Current Year Score: 0

Uganda does not have publicly available information on national regulations on the safe and secure transport of infectious substances (Categories A and B). The Uganda Public Health Act of 1935 and The Occupational Safety and Health Act of 2006 do not mention safe and secure transport of infectious substances. The Ministry of Health, Ministry of Agriculture and Ministry of Works and Transport make no mention of regulations on the safe and secure transport of infectious substances (Categories A and B), neither do the "One Health Strategic Plan" or the 2017 Joint External Evaluation (JEE) for Uganda.

[1,2,3,4,5,6,7] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [8] No further information is available on the VERTIC database nor on the Ministry of Defence website, either [9, 10].

- [1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6, 2021.
- [2] Republic of Uganda - Ministry of Agriculture, Animal Industry and Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 6, 2021.
- [3] Republic of Uganda - Ministry of Works and Transport. [<https://www.works.go.ug/>]. Accessed January 6, 2021.
- [4] Republic of Uganda - "Occupational Safety and Health Act 2006". [<https://bit.ly/2ReQA7d>]. Accessed January 6, 2021.
- [5] Republic of Uganda - Public Health Act 1935. [http://www.vertic.org/media/National%20Legislation/Uganda/UG_Public_Health_Act_1935.pdf]. Accessed January 6, 2021.
- [6] World Health Organization. Global Health Security Agenda - "Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [<https://bit.ly/2F6Oi3v>]. Accessed January 6, 2021.
- [7] Republic of Uganda - "One Health Strategic Plan 2018-2022". [<https://bit.ly/2CQwSWM>]. Accessed January 6, 2021.
- [8] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6, 2021.
- [9] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.
- [10] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021..

1.3.5 Cross-border transfer and end-user screening

1.3.5a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence on 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. No available information is provided by the Ministry of Health, Ministry of Agriculture, Animal Industry and Fisheries, The Ministry of Defence and Veterans Affairs, Ministry of Trade, the One Health Strategic Plan (2018-2022), or the 2017 Joint External Evaluation (JEE) for Uganda.

[1,2,3,4,5,6] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [7] No further evidence is available on the VERTIC database [8]

- [1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6, 2021.
- [2] Republic of Uganda - Ministry of Agriculture, Animal Industry and Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 6, 2021.
- [3] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021..
- [4] Republic of Uganda - Ministry of Trade Industry and Cooperatives [<http://www.mtic.go.ug/>]. Accessed January 6, 2021.
- [5] World Health Organization. Global Health Security Agenda - "Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [<https://bit.ly/2F6Oi3v>]. Accessed January 6, 2021.
- [6] Republic of Uganda - "One Health Strategic Plan 2018-2022". [<https://bit.ly/2CQwSWM>]. Accessed January 6, 2021.
- [7] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6, 2021.
- [8] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

1.4 BIOSAFETY

1.4.1 Whole-of-government biosafety systems

1.4.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available information that the country has in place national biosafety legislation and/or regulations. No information is available through the 2017 Joint External Evaluation (JEE) for Uganda, Ministry of Health, Ministry of Agriculture or the Central Public Health Laboratories. [1,2,3,4,5] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [6] No further information is available on the VERTIC database, either. [7].

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed January 6 2021.

[4] Republic of Uganda - Ministry of Agriculture, Animal Industry and Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 6 2021.

[5] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6 2021.

[6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6 2021.

[7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 6 2021.

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 insufficient evidence that Uganda has in place an established agency responsible for the enforcement of biosafety legislation and regulations. Neither the 2017 Joint External Evaluation (JEE) for Uganda nor Uganda's Ministry of Health indicates that the country has biosafety regulations in place. [1,2] However, the Global Health Security Agenda Pilot Assessment of Uganda notes that Uganda's Ministry of Health is the national competent authority responsible for biosecurity and biosafety issues; it adds that many other partners are collaborating on these matters, including the National Council of Science and Technology, and the Ministry of Defence and Veterans Affairs. [3] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [4] No further evidence is available on the Ministry of Agriculture, National Laboratory or VERTIC database [5, 6, 7]

[1] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed January 6 2021.

[2] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

- [3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.
- [4] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6 2021.
- [5] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 5 2021.
- [6] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6 2021.
- [7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 6 2021.

1.4.2 Biosafety training and practices

1.4.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that the country 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. According to the 2017 Joint External Evaluation (JEE) for Uganda, "biosafety and biosecurity training is received annually by all health laboratory workers as a national requirement." Furthermore, the report states that "a common training curriculum is available within the human health sector and has been harmonised for use by all sectors." [1] There is however no clear information on how does the training take place in the JEE, the Ministry of Health's, Defense's and Agriculture's website and the VERTIC database [1, 2, 3, 4] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago. [5]

- [1] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.
- [2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021
- [3] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 5 2021.
- [4] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.
- [5] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.
- [6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6 2021.

1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

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

1.5.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There isn't 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. The 2017 Joint External Evaluation (JEE) for Uganda, or the Ministry of Health, Ministry of Agriculture or Ministry of Science Technology and Innovation provides no information on such topic [1,2,3,4,5] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago.[6] No further evidence is available on the VERTIC database or on the Ministry of Defence, either [7]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed January 6 2021.

[4] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 6 2021.

[5] Republic of Uganda - Ministry of Science Technology and Innovation. [<https://mosti.go.ug/>]. January 6 2021.

[6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6 2021.

[7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 6 2021.

[8] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021..

1.5.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There isn't publicly available evidence on legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research. No information is available via the 2017 Joint External Evaluation (JEE) for Uganda, or the Ministry of Health, Ministry of Agriculture or Ministry of Science Technology and Innovation. [1,2,3,4,5] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago.[6] No further evidence is available on VERTIC database or on the Ministry of Defence website [7].

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6, 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6, 2021.

[3] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed January 6, 2021.

[4] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 6, 2021.

[5] Republic of Uganda - Ministry of Science Technology and Innovation. [<https://mosti.go.ug/>]. Accessed January 6, 2021.

[6] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6, 2021.

[7] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation->

database/u/]. Accessed January 6 2021.

[8] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021..

1.5.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research. The 2017 Joint External Evaluation (JEE) for Uganda notes that the Multi-Sectoral Biosafety Committee of the Ugandan National Council for Science and Technology (UNCST) is the agency responsible for reviewing applications for research and responsible for the oversight in handling of dangerous pathogens but not for the oversight on dual use research. At the institutional level, there are Institutional Biosafety Committees/Review Boards accredited by the UNCST who are responsible for overseeing handling of dangerous pathogens. [1] Although Uganda is party to the Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago.[2] No further evidence is available on the Ministry of Agriculture, Defence, the National Laboratory System and the the VERTIC database [3, 4, 5, 6]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[2] Uganda - Confidence Building Measures. [<https://bwc-ecbm.unog.ch/state/uganda>]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Agriculture, Animal Industry and Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 6, 2021.

[4] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021..

[5] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6, 2021.

[6] VERTIC. BWC database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>]. Accessed January 5, 2021.

1.5.2 Screening guidance for providers of genetic material

1.5.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of legislation and/or regulation requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold. The Ministry of Health, Ministry of Defence, Ministry of Agriculture or Ministry of Science Technology and Innovation, Ministry of Works and Transport, and the 2017 Joint External Evaluation (JEE) for Uganda, do not mention any legislation, regulation, policy or other guidance as such on their websites and documents. [1,2,3,4,5,6] Although Uganda is party to the UN Biological Weapons Convention, it has not submitted Confidence Building Measures since 1996, more than 20 years ago.[7] No further information is available on the VERTIC

website [8]

[1] Republic of Uganda - Ministry of Health. [http://health.go.ug/]. Accessed 19 January 2019.

[2] Republic of Uganda - Ministry of Agriculture, Animal Industry and Fisheries. [https://www.agriculture.go.ug]. Accessed 19 January 2019.

[3] Republic of Uganda - Ministry of Defence and veterans Affairs. [http://www.defence.go.ug/]. Accessed 5 January 2021.

[4] Republic of Uganda - Ministry of Science Technology and Innovation. [https://mosti.go.ug/]. 19 January.

[5] Republic of Uganda - Ministry of Works and Transport. [https://www.works.go.ug/]. Accessed 19 January 2019.

[6] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [https://bit.ly/2F6Oi3v]. Accessed 4 January 2019.

[7] Uganda - Confidence Building Measures. [https://bwc-ecbm.unog.ch/state/uganda]. Accessed 5 February 2019.

[8] VERTIC. BWC database. [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/]. Accessed January 5, 2021.

1.6 IMMUNIZATION

1.6.1 Vaccination rates

1.6.1a

Immunization rate (measles/MCV2)

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

Current Year Score: 0

2019

World Health Organization

1.6.1b

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

Yes = 1, No = 0

Current Year Score: 1

2020

OIE WAHIS database

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

2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

2.1.1 Laboratory testing for detection of priority diseases

2.1.1a

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

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

Current Year Score: 1

There is some evidence that the national laboratory system of the country has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests although these tests are not named. Uganda scores 4 on D.1.1 in the 2017 Joint External Evaluation (JEE) for Uganda however no further detail on the tests is provided. [1] However, there is no publicly available evidence through the Ministry of Health or the Ministry of Agriculture that the country's national laboratory system has the capacity to do so. [2, 3, 4] The JEE report notes that Uganda has well established reference laboratories, such as the Uganda Virus Research Institute, the National Tuberculosis Reference Laboratory, the Central Public Health Laboratories (CPHL) and the National Animal Disease Diagnostic and Epidemiological Centre. Apart from that of the CPHL, the websites of these laboratories are not publicly accessible, meaning that they provide no evidence to suggest they have the capacity to specifically conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests. [1,2,3,4]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[3] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 6 2021.

[4] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/directories>]. Accessed January 6 2021.

2.1.1b

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

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

Current Year Score: 1

There is no evidence of 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, although there is evidence of plans for a specific disease. Research confirms that Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address health risk emergencies, and it includes mechanisms to identifying

risks and hazards that pose the greatest threat to health and property in Uganda using scientific and reliable methods; prevent and reduce the likelihood of disease outbreaks and other public health hazards; to build the country's capacity and capability to detect public health threats early; and guide a coordinated, rapid, effective and multi-sectoral response to public health threats and emergencies". [1] However, such plan is not available online and there is therefore no way to confirm it exists or includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing. The Ugandan and the United States governments have drafted an HIV Country Operational Plan in 2017. Such plan includes a revised testing policy aligned to the WHO guidelines, which emphasize "targeted testing to identify the undiagnosed positive", as well as priority testing among key vulnerable populations [2]. Additionally, experience from the 2018 Ebola outbreak does not mention any information regarding an overarching plan for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing [3]. Lastly, the Coronavirus Disease - 2019 Preparedness and Response Plan mentions measures for scaling capacity and defines goals for testing. [4]. There is no language in either of these plans suggesting they could be applied beyond a specific disease. No further evidence is available on the Ministry of Health or Agriculture Websites [5, 6].

[1] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.

[2] Government of Uganda. Country Operational Plan 2017. [<https://www.state.gov/wp-content/uploads/2019/08/Uganda-18.pdf>]. Accessed January 6 2021.

[3] BMC. Ario et Al. Uganda's experience in Ebola virus disease outbreak preparedness, 2018-2019.

[<https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-020-00548-5>]. Accessed January 6 2021.

[4] Covid-19 Preparedness and Response Plan. 2020. <http://library.health.go.ug/sites/default/files/resources/COVID-19%20Preparedness%20%26%20Response%20Plan-1%20march%202020-June%202021.pdf>. Accessed January 6 2021.

[5] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[6] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 6 2021.

2.1.2 Laboratory quality systems

2.1.2a

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

Yes = 1, No = 0

Current Year Score: 1

The Uganda National Health Laboratory Service (UNHLS), which serves as a reference facility, is accredited ISO:15189:2012 by the South African National Accreditation System. [1,2] This ISO standard defines technical competence for a defined scope and the operation of a quality management system.

[1] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed 7 January 2021.

[2] New Vision Online - Home - National. "Uganda National Health Lab Results Accepted Globally".

[https://www.newvision.co.ug/new_vision/news/1448717/uganda-national-health-lab-results-accepted-globally]. Accessed 7 January 2021.

2.1.2b

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of a national laboratory that serves as a reference facility which is subject to external quality assurance review. According to the 2017 Joint External Evaluation (JEE) for Uganda, there is an established External Quality Assessment (EQA) program for national referral laboratories in the human sector as well as the Government Analytical Laboratory (GAL). [1] No further information is available on the Ministry of Health website. [2]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 5, 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.

2.2 LABORATORY SUPPLY CHAINS

2.2.1 Specimen referral and transport system

2.2.1a

Is there a nationwide specimen transport system?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Uganda has a nationwide specimen transport system in place. Although there is evidence of a system, there is insufficient evidence that it is nationwide. According to the 2017 Joint External Evaluation (JEE) for Uganda, "Uganda has a good national health laboratory specimen referral system via Health Centres III and IV, General Hospitals, Regional Referral Hospital laboratories, National Referral Hospital Laboratories and National Reference Laboratories: It is a well-developed national specimen referral system for human specimens and it is accessible from any part of Uganda." [1] However, the JEE scores Uganda as a 3 on the JEE for D.1.2, indicating that a "system is in place to transport specimens to national laboratories from 50- 80% of intermediate level/districts within the country for advanced diagnostics," indicating that this system is not nationwide." [1,2] No further evidence is available on the Ministry of Health's and Agriculture's websites [3, 4].

[1] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[2] World Health Organisation (WHO). 2016. "Joint External Evaluation Tool".

[https://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.

[4] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 5 2021.

2.2.2 Laboratory cooperation and coordination

2.2.2a

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

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

Current Year Score: 0

There is no evidence of 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. Research confirms that Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address public health emergencies, and it includes mechanisms to "identify risks and hazards that pose the greatest threat to health and property in Uganda using scientific and reliable methods; prevent and reduce the likelihood of disease outbreaks and other public health hazards; to build the country's capacity and capability to detect public health threats early; and guide a coordinated, rapid, effective and multi-sectoral response to public health threats and emergencies". [1] However, such plan it is not available online and there is therefore no way to confirm it includes 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. The Ugandan and the United States governments have drafted an HIV Country Operational Plan in 2017. Such plan includes strategies to target and scale-up testing, but there is no explicit mention of rapid authorization or licensing for laboratories.[2]. Additionally, experience from the 2018 Ebola outbreak does not mention any information regarding authorization of laboratories to scale-up testing [3]. Lastly, the Coronavirus Disease - 2019 Preparedness and Response Plan mentions measures for scaling laboratory capacity such and that "the MoH plans to scale up this further by establishing Port Health Facilities with laboratories for surveillance" and plans to "Support Laboratory Accreditation" with several indicators to assess progress on this last point. There is however no mention of a rapid accreditation systems. [4]. There is no language in either of these plans suggesting they could be applied beyond a specific disease. No further evidence is available on the Ministry of Health or Agriculture Websites [5, 6].

[1] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.

[2] Government of Uganda. Country Operational Plan 2017. [<https://www.state.gov/wp-content/uploads/2019/08/Uganda-18.pdf>]. Accessed January 6 2021.

[3] BMC. Ario et Al. Uganda's experience in Ebola virus disease outbreak preparedness, 2018-2019. [<https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-020-00548-5>]. Accessed January 6 2021.

[4] Covid-19 Preparedness and Response Plan. 2020. <http://library.health.go.ug/sites/default/files/resources/COVID-19%20Preparedness%20%26%20Response%20Plan-1%20march%202020-June%202021.pdf>. Accessed January 6 2021.

[5] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[6] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 6 2021.

2.3 REAL-TIME SURVEILLANCE AND REPORTING

2.3.1 Indicator and event-based surveillance and reporting systems

2.3.1a

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

Yes, there is evidence of ongoing event-based surveillance and evidence that the data is being analyzed on a daily basis = 2,
Yes, there is evidence of ongoing event-based surveillance, but no evidence that the data are being analyzed on a daily basis
= 1, No = 0

Current Year Score: 0

There is no publicly available information that the country is conducting ongoing event-based surveillance and analysis for infectious disease. No evidence is available via the Ministry of Health, Ministry of Agriculture, the Central Public Health Laboratories, the 2017 Joint External Evaluation (JEE) for Uganda or the Global Health Security Agenda Pilot Assessment report [1,2,3,4,5]

[1] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed 7 January 2019.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 6 January 2019.

[3] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed 6 January 2019.

[4] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed 3 January 2019.

[5] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 5 January 2019

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: 1

There is publicly available evidence showing that Uganda has reported a potential public health emergency of international concern to the World Health Organisation (WHO) within the past two years. Uganda reported the incidence of Yellow Fever in February 2020 and an Ebola virus outbreak in June 2019 according to the WHO Disease Outbreak News page. COVID-19 was not reported as a public health emergency of international concern (PHEIC) for Uganda [1,2]

[1] World Health Organization. February 2020. "Yellow Fever - Uganda." [<https://www.who.int/csr/don/21-february-2020-yellow-fever-uganda/en/>]. Accessed 6 January 2021.

[2] World Health Organization. October 2017. "Ebola - Uganda." [<https://www.who.int/csr/don/13-june-2019-ebola-uganda/en/>] Accessed 6 January.

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

Although there is public evidence that the Ugandan government operates an electronic reporting surveillance system at the national level, there is insufficient evidence that the system encompasses the sub-national level. The 2017 Joint External Evaluation (JEE) for Uganda notes that "Uganda has in place interoperable and inter-connected electronic reporting for

human health and can share data in real time for this sector." The report notes that reporting at the sub-national level for animal health surveillance is weak but does not indicate if the electronic surveillance system for human health reaches the sub-national level. [1] The GHSA pilot assessment for Uganda notes that Uganda uses the Health Information Management System as the "primary electronic system used for health data reporting" but does not indicate if this is operational at the sub-national level. [2] The Ministry of Health does not have further information about this. [3,4]

[1] World Health Organization. Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda.

[https://bit.ly/2F6Oi3v]. Accessed January 6 2021.

[2] Global Health Security Agenda Pilot Assessment of Uganda. [https://bit.ly/2H8ITLs]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health. [http://health.go.ug/]. Accessed January 6 2021.

[4] Republic of Uganda - Ministry of Health. "Epidemiology and Surveillance". [http://www.health.go.ug/epidemiology-and-surveillance]. Accessed January 6 2021.

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 publicly available information suggesting that the electronic reporting surveillance system collects ongoing or real-time laboratory data. The 2017 Joint External Evaluation (JEE) for Uganda states that "laboratory data cannot be linked through an interoperable inter-connected electronic system." [1] No additional information is available via the Ministry of Health, Ministry of Agriculture or the Central Public Health Laboratories. [2,3,4,5]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [https://bit.ly/2F6Oi3v]. Accessed January 6 2021.

[2] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [http://cphl.go.ug/directories]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [http://library.health.go.ug/]. Accessed January 6 2021.

[4] Republic of Uganda - Ministry of Health. [http://health.go.ug/]. Accessed January 6 2021.

[5] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [https://www.agriculture.go.ug]. Accessed January 6 2021.

2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

2.4.1 Coverage and use of electronic health records

2.4.1a

Are electronic health records commonly in use?

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

Current Year Score: 1

There is enough evidence that electronic health records are commonly in use in Uganda. No such evidence is available via the Ministry of Health, the Central Public Health Laboratory or the 2017 Joint External Evaluation (JEE) for Uganda [1,2,3] A

World Health Organisation (WHO) country-level analysis of e-health facilities and e-health usage in Uganda does not provide evidence to assert electronic health record is commonly use. [4] There is however evidence of an EHR platform, called Stre@mline, developed locally in Southwester Uganda, which operates without internet access and is used by over 60,000 patients at 2 hospitals, with plans to expand across Uganda. [5]

[1] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed 6 March 2019.

[2] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6 2021.

[3] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[4] World Health Organization (WHO) - Uganda - EHR Country Overview. [<https://www.who.int/goe/publications/atlas/2015/uga.pdf>]. Accessed January 6 2021.

[5] Liang L, Wiens MO, Lubega P, Spillman I, Mugisha S. A Locally Developed Electronic Health Platform in Uganda: Development and Implementation of Stre@mline. JMIR Form Res. 2018;2 [2] :e20. Published 2018 Sep 24. [doi:10.2196/formative.9658]. Accessed January 6 2021.

2.4.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is not enough evidence that the national public health system have access to electronic health records of individuals in their country. No such evidence is available via the Ministry of Health, the Central Public Health Laboratory or the 2017 Joint External Evaluation (JEE) for Uganda [1,2,3] A World Health Organisation (WHO) country-level analysis of e-health facilities and e-health usage in Uganda does not provide evidence to assert electronic health record is commonly use. [4] There is however evidence of an EHR platform, called Stre@mline, developed locally in Southwester Uganda, which operates without internet access and is used by over 60,000 patients at 2 hospitals, with plans to expand across Uganda. [5]

[1] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed 6 March 2019.

[2] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6 2021.

[3] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[4] World Health Organization (WHO) - Uganda - EHR Country Overview. [<https://www.who.int/goe/publications/atlas/2015/uga.pdf>]. Accessed January 6 2021.

[5] Liang L, Wiens MO, Lubega P, Spillman I, Mugisha S. A Locally Developed Electronic Health Platform in Uganda: Development and Implementation of Stre@mline. JMIR Form Res. 2018;2

[2] :e20. Published 2018 Sep 24. [doi:10.2196/formative.9658]. Accessed January 6 2021.

2.4.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that there are data standards to ensure data is comparable (e.g., ISO standards). No such evidence is available via the Central Public Health Laboratory, Ministry of Health, or the 2017 Joint External Evaluation (JEE) for Uganda. [1,2,3, 4]

[1] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed 6 March 2019.

[2] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6 2021.

[3] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[4] World Health Organization (WHO) - Uganda - EHR Country Overview. [<https://www.who.int/goe/publications/atlas/2015/uga.pdf>]. Accessed January 6 2021.

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

2.4.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence publicly available of established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data (e.g., through mosquito surveillance, brucellosis surveillance). No such evidence could be found via the Central Public Health Laboratories, Ministry of Health, Ministry of Agriculture, Animal Industries and Fisheries, National Environmental Authority or the "One Health Strategic Plan (2018-2022)". [1,2,3,4,5] The 2017 Joint External Evaluation (JEE) for Uganda also notes that sharing of data between sectors in Uganda needs to be implemented. [6]

[1] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 6 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed January 6 2021.

[4] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 6 2021.

[5] Republic of Uganda - One Health Strategic Plan 2018-2022. [<https://bit.ly/2CQwSWM>]. Accessed January 6 2021.

[6] World Health Organization. Global Health Security Agenda - "Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

2.4.3 Transparency of surveillance data

2.4.3a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that the country makes 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). No such information is available via the 2017 Joint External Evaluation (JEE) for Uganda, Global Health Security Agenda Pilot Assessment report, Ministry of Health or the Ministry of Agriculture websites. [1,2,3,4]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 6 January 2021.

[2] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed 6 January 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 6 January 2021.

[4] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed 6 January 2021.

2.4.3b

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

Yes = 1 , No = 0

Current Year Score: 0

There is evidence that the country makes 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), but the information is shared less than on a weekly basis. Uganda does provide de-identified health surveillance data on infectious diseases publicly available via government websites, but the pace of the updates is unclear and usually less than weekly. [1]

[1] Republic of Uganda - Covid-19 Response Hub. [<https://covid19.gou.go.ug/>]. Accessed 6 January 2021.

2.4.4 Ethical considerations during surveillance

2.4.4a

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of legislation and/or regulations that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. "The Health Commission Act" (2001), which provides the working framework around the health commission in Uganda, protects the confidentiality of information relating to patients and their families. Part IV 30 (5) of the Act states, "A health worker shall respect the confidentiality of information relating to a patient and his or her family; such information shall not be disclosed to anyone without the patient's or appropriate guardian's consent, except where it is in the best interest of the patient." The act further states that "such information shall not be disclosed to anyone without the patient's or appropriate guardian's written consent, except where it is required by law." [1] The "HIV and AIDS Prevention and Control Act" (2014), passed to provide for the prevention and

control of HIV and AIDS, including protection, counselling, testing, and care of persons living with and affected by HIV and AIDS, provides for the confidentiality of patient testing results. It states specifically, "a person in possession of information relating to HIV status shall observe confidentiality in handling that information" [2] Uganda also has a "Patients' Charter", which was adopted by the Ugandan Ministry of Health to raise the standard of healthcare. This pledge specifically states, "patients have the right to privacy in the course of consultation and treatment. Information concerning one's health, including information regarding treatment, may only be disclosed with informed consent, except when required by law or on court order". [3] In 2019 Uganda approved Data Protection and Privacy Act, which provides additional protection to the confidentiality of identifiable health information for individuals via Section 9 of mentioned bill, which states "A person shall not collect or process personal data which relates to the religious or philosophical beliefs, political opinion, sexual life, financial information, health status or medical records of an individual". [4,5]

[1] Republic of Uganda - "Health Commission Act 2001". [<https://bit.ly/2VGgf7y>]. Accessed 7 January 2021.

[2] Republic of Uganda - "The HIV and AIDS Prevention and Control Act 2014". [<https://bit.ly/2RFRw3X>]. Accessed 7 January 2021.

[3] Republic of Uganda - Department of Quality Assurance - "Patients' Charter 2009".

[<http://cphl.go.ug/sites/default/files/library-resources/PATIENTS%27%20CHARTER.pdf>]. Accessed 7 January 2021.

[4] UN Conference on Trade and Development. "Cyberlaw Tracker: The case of Uganda."

[https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/CountryDetail.aspx?country=ug]. Accessed January 7 2021.

[5] Government of Uganda. 2019. Data Protection and Privacy Act. [<http://library.health.go.ug/download/file/fid/2572>] Accessed January 7 2021.

2.4.4b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of 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). No such evidence is available via the Ugandan Ministry of Justice and Constitutional Affairs or the Ministry of Health. [1,2] The Health Commission Act of 2001, which outlines confidentiality protections, including for health information, makes no mention of protections from cyber attacks. [3] In 2019 Uganda approved Data Protection and Privacy Act, which provides additional protection to the confidentiality of identifiable health information for individuals, but does not mention cyber attacks. [4,5]

[1] Republic of Uganda - Ministry of Justice and Constitutional Affairs. [<https://www.justice.go.ug/>]. Accessed January 7 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 7 2021.

[3] Republic of Uganda - "Health Commission Act 2001". [<https://bit.ly/2VGgf7y>]. Accessed January 7 2021.

[4] UN Conference on Trade and Development. "Cyberlaw Tracker: The case of Uganda."

[https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/CountryDetail.aspx?country=ug]. Accessed January 7 2021.

[5] Government of Uganda. 2019. Data Protection and Privacy Act. [<http://library.health.go.ug/download/file/fid/2572>] Accessed January 7 2021.

2.4.5 International data sharing

2.4.5a

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

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

Current Year Score: 0

There is no evidence that 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 for one or more diseases. According to the 2017 Joint External Evaluation report for Uganda, "a multilateral regional/inter-state reporting system exists through the East Africa Community (EAC) Electronic Management Information System (eHMIS)". [1] Available information via the EAC website demonstrates systems in place for the early detection of disease, but includes no details on a commitment to share data during an active emergency. [2,3,4] There is no evidence via the GHSA pilot assessment, the Ministry of Health or the Central Public Health Laboratories of a commitment to share data during an active emergency. [5,6,7].

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 7 January 2021.

[2] East African Community. "East African Integrated Disease Surveillance Network". [<https://www.eac.int/health/disease-prevention/east-african-integrated-disease-surveillance-network>]. Accessed 7 January 2021.

[3] East African Community Health Sector - "Project Proposal & Protocol Towards establishment of an East African Community regional integrated ehealth management information system (ehmis) & geomatics initiative: 2007 - 2009". [<https://bit.ly/2FkWIJr>]. Accessed 7 January 2021.

[4] East African Community. [<https://www.eac.int>]. Accessed 7 January 2021.

[5] World Health Organisation. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 7 January 2021.

[6] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 7 January 2021.

[7] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/directories>]. Accessed 7 January 2021.

2.5 CASE-BASED INVESTIGATION

2.5.1 Case investigation and contact tracing

2.5.1a

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

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

Current Year Score: 0

There is no evidence of 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 an active or future public health

emergency. Research confirms that Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address health risk emergencies, and it includes mechanisms to "identifying risks and hazards that pose the greatest threat to health and property in Uganda using scientific and reliable methods; prevent and reduce the likelihood of disease outbreaks and other public health hazards; to build the country's capacity and capability to detect public health threats early; and guide a coordinated, rapid, effective and multi-sectoral response to public health threats and emergencies". [1] However, such plan it is not available online and there is therefore no way to confirm it exists or includes a 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. The Ugandan and the United States governments have drafted an HIV Country Operational Plan in 2017. Such plan includes a revised testing policy aligned to the WHO guidelines, which includes considerations on contact tracing but does not outline specific mechanisms to implement it [2]. Additionally, experience from the 2018 Ebola outbreak reports that a "preparedness assessment found that all 30 high- and moderate-risk Ugandan districts had less than a 50% score for EVD readiness at baseline. It also found that the average score for EVD preparedness was highest in laboratory and lowest in budgets, safe burials, and contact tracing" [3]. Lastly, the Coronavirus Disease - 2019 Preparedness and Response Plan does refer to contact tracing measures but does not provide any details on a national system in place to provide support at the sub-national level. [4]. There is no language in either of these plans suggesting they could be applied beyond a specific disease. No further evidence is available on the Ministry of Health or Agriculture Websites [5, 6].

[1] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies.

[<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.

[2] Government of Uganda. Country Operational Plan 2017. [<https://www.state.gov/wp-content/uploads/2019/08/Uganda-18.pdf>]. Accessed January 6 2021.

[3] BMC. Ario et Al. Uganda's experience in Ebola virus disease outbreak preparedness, 2018-2019.

[<https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-020-00548-5>]. Accessed January 6 2021.

[4] Covid-19 Preparedness and Response Plan. 2020. <http://library.health.go.ug/sites/default/files/resources/COVID-19%20Preparedness%20%26%20Response%20Plan-1%20march%202020-June%202021.pdf>. Accessed January 6 2021.

[5] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[6] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 6 2021.

2.5.1b

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

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

Current Year Score: 0

There is insufficient evidence that the country provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention.

In 2006, Uganda implemented the Occupational Safety and Health Act, which mandates the employers with over 25 employees to have in place an Occupational Safety and Health (OSH) policy. The OSH policy can include, among others: "Imposing mandatory work-from-home measures for vulnerable persons e.g. pregnant women, the disabled, employees with pre-existing diseases, etc.; and roll out contingency measures to respond to the variety of OSH issues" [1]. Under the 2006 Employment Act (Section 41(6)), it can be understood that "Employees who are quarantined and/or are required to self-isolate without being ill are entitled to wages for the period of absence since such absence would be on account of reasons

beyond their control" should their absence be attributable to exceptional events that prevent access to workplace [2]. However, this applies only in the case of an employee who has completed at least three months of continuous service with his/her employer. [3]

Additionally, absence from work based on showing symptoms of illness will count against an employee's sick days' quota. Employees that have exhausted sick leave days and have not been granted an exception can be terminated on grounds of medical incapacity, with the exception of a disease acquired in course of duty. If the virus was acquired in the course of duty, the Worker's Compensation Act Cap. 225 would kick in to provide compensation for any period up to 96 months". [2]

There is no specific mention of medical attention or other economic support for cases and suspected cases recommended to self-isolate on the Ministry of Health website [4]. During the Covid-19 emergency, the Government of Uganda received support from the World Bank to implement policy measures to directly benefit low-income households, which include support to farmers, social protection programs through cash for work labor intensive programs and access to essential utilities guaranteed through subsidies and tax exemption [5,6]. There is however no mention that such measures could be applied beyond Covid-19.

[1] Government of Uganda. 2006. THE OCCUPATIONAL SAFETY AND HEALTH ACT, 2006.

[<http://library.health.go.ug/download/file/fid/1556>]. Accessed January 7 2021.

[2] DLA Piper. Employment alert: Coronavirus COVID-19 outbreak in Uganda. 2020.

[<https://www.dlapiper.com/en/us/insights/publications/2020/03/employment-alert-coronavirus-covid-19-outbreak/>]. Accessed January 7 2021.

[3] Government of Uganda. 2006. The Employment Act, 2006.

[<https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/74416/127308/F-831045940/UGA74416.pdf>]. Accessed June 24 2021.

[4] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 6 January 2021.

[5] The World Bank. Uganda: World Bank Provides \$300 Million to Close COVID-19 Financing Gap and Support Economy Recover. 2020. [<https://www.worldbank.org/en/news/press-release/2020/06/29/uganda-world-bank-provides-300-million-to-close-covid-19-financing-gap-and-support-economy-recover>]. Accessed 6 January 2021.

[6] Republic of Uganda - Covid-19 Intervention Report.

[https://covid19.gou.go.ug/uploads/document_repository/authors/ministry_of_finance,planning_and_economic_development/document/COVID-19_Interventions_Report.pdf]. Accessed January 6 2021.

2.5.1c

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

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that the country makes 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). Uganda's COVID-19 portal does not include de-identified data on contact tracing efforts for COVID-19. [1] There is no further information available on the Ministry of Health website. [2]

[1] Republic of Uganda - Covid-19 Knowledge Hub. [<https://covid19.gou.go.ug/#>]. Accessed January 7 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 6 January 2021.

2.5.2 Point of entry management

2.5.2a

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

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

Current Year Score: 0

There is no evidence of a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active or future public health emergency, but there is evidence of collaboration with border authorities. During the Ebola outbreak in 2018, Uganda implemented measures to curb cross-border transmission of the virus from the adjacent Democratic Republic of the Congo (DRC), namely: "Volunteers were trained on Ebola virus disease (EVD) screening at border Points of Entry (PoE) and refugee reception centers with support from various partners. A PoE coordination committee developed a PoE toolkit which was approved by the National Task Force and adapted for use by Ministry of Health. The PoE teams screened everyone crossing into Uganda from DRC with infrared thermometers for body temperature, including all refugees at reception centers. Persons found with elevated body temperatures (>38 degrees Celsius) were further screened for Ebola-like symptoms." [1] Despite the interventions, Uganda still received a large influx of people from both official and unofficial PoEs, thereby augmenting the risks of an EVD outbreak. [1] During the Covid-19 outbreak, Uganda implemented measures to strengthen "surveillance at Point of Entry, as well as on cargo in transit within Uganda and at designated transit points along trans-national trunk roads connecting ports of entry". Such measures included the constitution and deployment of teams for management of PoEs, as well as the support of cross-border monitoring. [2] No further information is available on further agreements between the public health system and border control authorities, and there is no language in either plan suggesting they could find application beyond Covid-19. No further evidence is available on the Ministry of Health, the Directorate of Citizenship and Immigration of the Ministry of Interior websites [3, 4]

[1] BMC. Ario et Al. Uganda's experience in Ebola virus disease outbreak preparedness, 2018-2019.

[<https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-020-00548-5>]. Accessed January 6 2021.

[2] Covid-19 Preparedness and Response Plan. 2020. <http://library.health.go.ug/sites/default/files/resources/COVID-19%20Preparedness%20%26%20Response%20Plan-1%20march%202020-June%202021.pdf>. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[4] Ministry of Interior. Directorate of Citizenship and Immigration. [<https://immigration.go.ug/content/border-management>]. Accessed January 6 2021.

2.6 EPIDEMIOLOGY WORKFORCE

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

2.6.1a

Does the country meet one of the following criteria?

- Applied epidemiology training program (such as FETP) is available in country

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

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

Current Year Score: 1

There is evidence that the country has epidemiology training program (such as FETP) available in country, but no evidence that resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP). The 2017 Joint External Evaluation (JEE) for Uganda states that Uganda possesses the capability to train staff for public health, including a robust FETP programme. The private sector also provides clinical epidemiology and masters modules targeting veterinary and human officers in the country. [1] In addition, the Global Health Security Agenda (GHSA) Pilot Assessment report notes that the country has basic and intermediate FETP or comparable applied epidemiology training programmes in place. [2] However, there is no evidence from the Ministry of Health, the JEE or the GHSA Pilot Assessment Report that resources are provided by the government for citizens to participate in applied epidemiology training programs outside of the country. [1,2,3]

[1] World Health Organization. Global Health Security Agenda - "Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [<https://bit.ly/2F6Oi3v>]. Accessed January 8 2021.

[2] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed January 8 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 8 2021.

2.6.1b

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

Yes = 1 , No = 0

Current Year Score: 1

There is public evidence available of 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). According to the 2017 Joint External Evaluation (JEE) for Uganda, Uganda operates an FETP that covers Integrated Disease Surveillance and Response, District Level Epidemiology Training Program (DLETP), Frontline FETP, National and Regional Rapid Response Training, and an Advanced FETP - 2-year postgraduate field training. The JEE further mentions that the private sector clinical epidemiology and masters modules targeting veterinary and human officers. The JEE concludes, "Uganda has integrated veterinarians into FETP, which provides not only training but an opportunity for cross-sector bonding". [1] Additionally, in 2018, the FAO and the Institute for Infectious Animal Diseases (IIAD) at Texas A&M AgriLife Research launched the In-Service Applied Veterinary Epidemiology (ISAVET) program in 14 countries, including Uganda. [2,3] The program is a four-month frontline field epidemiology program to train veterinary field epidemiologists. [4]

[1] World Health Organisation. Global Health Security Agenda - "Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [<https://bit.ly/2F6Oi3v>]. Accessed January 8 2021.

[2] Food and Agriculture Organisation (FAO) of the United Nations. October 2018. "New training for veterinarians in 14 African countries to help combat infectious diseases." [<http://www.fao.org/emergencies/fao-in-action/stories/stories-detail/en/c/1161401>]. Accessed January 8 2021.

[3] Institute for Infectious Animal Diseases. "Frontline ISAVET." [<https://iiad.tamu.edu/frontline-isavet/>]. Accessed January 8 2021.

[4] Food and Agriculture Organisation (FAO) of the United Nations. October 2019. "First FAO ISAVET training programme held

in Uganda." [<http://www.fao.org/resilience/news-events/detail/en/c/1171750>]. Accessed January 8 2021.

2.6.2 Epidemiology workforce capacity

2.6.2a

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

Yes = 1, No = 0

Current Year Score: 1

2020

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

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

3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

3.1.1 National public health emergency preparedness and response plan

3.1.1a

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

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

Current Year Score: 1

There is insufficient evidence that Uganda has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential, but there is evidence of disease-specific plans. Namely, Uganda implemented disease-specific plans in place for Covid-19 (2020) and a HIV (2017) [1, 2] Additionally, according to a medical article reviewing Uganda's health sector preparedness for public health threats and emergencies, Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address health risk emergencies, and it includes mechanisms to: "address risks and hazards that pose the greatest threat to health and property in Uganda using scientific and reliable methods, prevent and reduce the likelihood of disease outbreaks and other public health hazards; build the country's capacity and capability to detect public health threats early; and guide a coordinated, rapid, effective and multi-sectoral response to public health threats and emergencies". [3] However, such plan is not publicly available and no additional information on such plan could be found. The country's 2010 "National Policy for Disaster Preparedness and Management" addresses policy actions for pandemics, but does not provide evidence of an overarching response plan. [4] There is no evidence of an emergency response plan in the 2017 Joint External Evaluation (JEE) for Uganda. [5] The website of the Ministry of Health discusses strategies for public health emergency response, but

there is no evidence of a plan to guide emergency response. [6].

[1] Government of Uganda. Country Operational Plan 2017. [<https://www.state.gov/wp-content/uploads/2019/08/Uganda-18.pdf>]. Accessed January 6 2021.

[2] Republic of Uganda. Covid-19 Preparedness and Response Plan. 2020. <http://library.health.go.ug/sites/default/files/resources/COVID-19%20Preparedness%20%26%20Response%20Plan-1%20march%202020-June%202021.pdf>. Accessed January 6 2021

[3] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.

[4] Republic of Uganda - "National Policy for Disaster Preparedness and Management". [<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 6 January 2021.

[5] World Health Organization. Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 6 January 2021.

[6] Republic of Uganda - Ministry of Health. "Public Health Emergencies (PHE)". [<http://health.go.ug/community-health-departments/public-health-emergencies-phe>]. Accessed 6 January 2021..

3.1.1b

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

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

Current Year Score: 0

There is insufficient evidence that Uganda has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential, therefore no evidence that it has been updated in the past 3 years. The country's 2010 "National Policy for Disaster Preparedness and Management" addresses policy actions for pandemics, but does not provide evidence of an overarching response plan. [1] There is no evidence of an emergency response plan in the 2017 Joint External Evaluation (JEE) for Uganda. [2] The website of the Ministry of Health discusses strategies for public health emergency response, but there is no evidence of a plan to guide emergency response. [3] A medical article addressing Uganda's health sector preparedness for public health threats and emergencies states that Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address health risk emergencies, and it includes mechanisms to: "address risks and hazards that pose the greatest threat to health and property in Uganda using scientific and reliable methods, prevent and reduce the likelihood of disease outbreaks and other public health hazards; build the country's capacity and capability to detect public health threats early; and guide a coordinated, rapid, effective and multi-sectoral response to public health threats and emergencies". Such plan is not publicly available and there is no further information to confirm this [4] No further information is available on Uganda's Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre (NECOC) [5]

[1] Republic of Uganda - "National Policy for Disaster Preparedness and Management".

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed January 6 2021.

[2] World Health Organization. Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health. "Public Health Emergencies (PHE)". [<http://health.go.ug/community-health-departments/public-health-emergencies-phe>]. Accessed January 6 2021.

[4] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre.

[<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

3.1.1c

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

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

Current Year Score: 0

There is insufficient evidence that Uganda has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential, therefore no evidence that it includes considerations for pediatric and/or other vulnerable populations. The country's 2010 "National Policy for Disaster Preparedness and Management" addresses policy actions for pandemics, but does not provide evidence of an overarching response plan. [1] There is no evidence of an emergency response plan in the 2017 Joint External Evaluation (JEE) for Uganda. [2] The website of the Ministry of Health discusses strategies for public health emergency response, but there is no evidence of a plan to guide emergency response. [3] A medical article addressing Uganda's health sector preparedness for public health threats and emergencies states that Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address health risk emergencies, and it includes mechanisms to: "address risks and hazards that pose the greatest threat to health and property in Uganda using scientific and reliable methods, prevent and reduce the likelihood of disease outbreaks and other public health hazards; build the country's capacity and capability to detect public health threats early; and guide a coordinated, rapid, effective and multi-sectoral response to public health threats and emergencies". Such plan is not publicly available and there is no further information to confirm it includes considerations on vulnerable populations. No further information is available on Uganda's Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre (NECOC) [5]

[1] Republic of Uganda - "National Policy for Disaster Preparedness and Management".

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed January 6 2021.

[2] World Health Organization. Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda.

[<https://bit.ly/2F6Oi3v>]. Accessed January 6 2021.

[3] Republic of Uganda - Ministry of Health. "Public Health Emergencies (PHE)". [<http://health.go.ug/community-health-departments/public-health-emergencies-phe>]. Accessed January 6 2021.

[4] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

3.1.1d

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

Yes = 1 , No = 0

Current Year Score: 0

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

3.1.2 Private sector involvement in response planning

3.1.2a

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

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that the country has a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response. No evidence is available via the Ministry of Health, the 2017 Joint External Evaluation (JEE) for Uganda or the Office of the Prime Minister. [1,2,3] That notwithstanding, the 2010 "National Policy for Disaster Preparedness and Management" has a section dedicated to parastatals and private-sector engagement in emergency preparedness and response, as well as including a guiding principle: "There is need to ensure that the private sector integrates disaster management programmes into their action plans". [4]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 6 January 2021.

[2] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 6 January 2021.

[3] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed 6 January 2021

[4] Republic of Uganda - "National Policy for Disaster Preparedness and Management".

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 6 January 2021

3.1.3 Non-pharmaceutical interventions planning

3.1.3a

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

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

Current Year Score: 2

There is evidence that the country has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic for more than one disease. The country's 2010 "National Policy for Disaster Preparedness and Management" addresses policy actions for pandemics, but does not provide evidence of an overarching response plan addressing NPIs. [1] Research confirms that Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address health risk emergencies but the plan itself is not publicly accessible, and the information available show no evidence of a plan to implement NPIs [2]. There is evidence of disease-specific plans that include NPIs, although none of these plans include language that suggests they can be applied to other diseases. During the 2018 Ebola epidemics, the Uganda Ministry of Health activated the Public Health Emergency Operations Centre (PHEOC) and the National Task Force (NTF) for public health emergencies to plan, guide, and coordinate EVD preparedness in the country; the intervention measures included "1) epidemiological surveillance (contact tracing, capacities at PoEs, and laboratory incorporated); 2) case management and Infection Prevention and Control (IPC) including psycho-social support, waste management and safe and dignified burials; 3) risk communication and community engagement; 4) vaccination, therapeutics, and research; 5) emergency coordination including budgeting and resource mobilisation; and 6) logistics". There is no evidence of a coordinated plan or guidelines. [3]. The Ugandan and the United States governments

have drafted an HIV Country Operational Plan in 2017. Such plan includes a revised testing policy aligned to the WHO guidelines, which includes tailored intervention like: Voluntary Male Medical Circumcision (VMMC), Program Activities for Epidemic Control in Scale-up Locations and Population, Prevention Programs for Key and Priority Populations (for example: condom and lubricant access and promotion, STI screening). [4] Additionally, the COVID-19 preparedness and response plan of 2020 includes NPIs such as social distancing, hand washing, lockdowns, school closures and other [5]. There is no evidence of language in any of these plans suggesting they could be applied to other diseases. No further evidence is available on the Ministry of Health website, nor on the Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre [6, 7].

- [1] Republic of Uganda - "National Policy for Disaster Preparedness and Management". [<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed January 6 2021.
- [2] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.
- [3] BMC. Ario et Al. Uganda's experience in Ebola virus disease outbreak preparedness, 2018-2019. [<https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-020-00548-5>]. Accessed January 6 2021.
- [4] Government of Uganda. Country Operational Plan 2017. [<https://www.state.gov/wp-content/uploads/2019/08/Uganda-18.pdf>]. Accessed January 6 2021.
- [5] Covid-19 Preparedness and Response Plan. 2020. <http://library.health.go.ug/sites/default/files/resources/COVID-19%20Preparedness%20%26%20Response%20Plan-1%20march%202020-June%202021.pdf>. Accessed January 6 2021.
- [6] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.
- [7] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

3.2 EXERCISING RESPONSE PLANS

3.2.1 Activating response plans

3.2.1a

Does the country meet one of the following criteria?

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

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

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

Current Year Score: 1

There is evidence that the country has activated their national emergency response plan for an infectious disease outbreak in the past year not that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year. On the former point, in 2020 the Uganda Ministry of Health activated the Covid-19 Preparedness and Response Plan. Although the plan can be considered a contingency plan as per the 2010 "National Policy for Disaster Preparedness and Management", this latter document addresses policy actions for pandemics, but does not provide evidence of an overarching response plan [1, 2] Research confirms that Uganda developed a National Multi-hazard Emergency Preparedness and Response Plan (NMEPRP) to address health risk emergencies but the plan itself is not publicly accessible [3]. On the latter point, there is no evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year. [4]. No further evidence is available on the Ministry of

Health website, nor on the Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre [5, 6].

- [1] Covid-19 Preparedness and Response Plan. 2020. <http://library.health.go.ug/sites/default/files/resources/COVID-19%20Preparedness%20%26%20Response%20Plan-1%20march%202020-June%202021.pdf>. Accessed January 6 2021.
- [2] Republic of Uganda - "National Policy for Disaster Preparedness and Management". [<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed January 6 2021.
- [3] NCBI. Ario et al. The logic model for Uganda's health sector preparedness for public health threats and emergencies. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6758612/#CIT0010>]. Accessed January 6 2021.
- [4] WHO Extranet. Simulation Exercises. [<https://extranet.who.int/sph/simulation-exercise?region=All&country=195>]. Accessed January 14 2021.
- [5] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.
- [6] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

3.2.1b

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

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

Current Year Score: 0

There is no clear 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. Namely, there is evidence that in 2019 Uganda performed an after action review to evaluate the performance of the different EVD response pillars, identify lessons learned for improved future preparedness and response. No full after action review report, however, has been published and only a "mini-report" is available. [1] No further evidence is available on the WHO website, Ministry of Health and Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [2, 3, 4, 5, 6]

- [1] WHO. After Action Review. [<https://extranet.who.int/sph/after-action-review?region=All&country=195>]. Accessed January 13 2021.
- [2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.
- [3] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.
- [4] WHO. Uganda. [<https://www.who.int/countries/uga/>]. Accessed January 13 2021.
- [5] WHO. IHR. [https://www.who.int/health-topics/international-health-regulations#tab=tab_1]. Accessed January 13 2021.
- [6] WHO. Regional Office for Africa. [<https://www.afro.who.int/>]. Accessed January 13 2021.

3.2.2 Private sector engagement in exercises

3.2.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives. There is evidence that Uganda performed an Ebola Simulation Exercise from 11 Apr 2019 to 12 Apr 2019, but no evidence shows the involvement of private sector representatives [1]. No further evidence is available on the WHO website, Ministry of Health, Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre and WHO's Simulation Exercise. [2, 3, 4, 5, 6, 7]

[1] WHO. After Action Review. [<https://extranet.who.int/sph/after-action-review?region=All&country=195>]. Accessed January 13 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[3] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

[4] WHO. Uganda. [<https://www.who.int/countries/uga/>]. Accessed January 13 2021.

[5] WHO. IHR. [https://www.who.int/health-topics/international-health-regulations#tab=tab_1]. Accessed January 13 2021.

[6] WHO. Regional Office for Africa. [<https://www.afro.who.int/>]. Accessed January 13 2021.

[7] WHO Extranet. Simulation Exercises. [<https://extranet.who.int/sph/simulation-exercise?region=All&country=195>]. Accessed January 14 2021.

3.3 EMERGENCY RESPONSE OPERATION

3.3.1 Emergency response operation

3.3.1a

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that Uganda has in place an Emergency Operations Center (EOC). In 2013 the Ugandan Ministry of Health established a public health emergency control centre, as reported by the 2017 Joint External Evaluation (JEE) for Uganda. The centre serves as the focal point for managing, co-ordinating and steering all matters of public health emergency response. [1]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 11 January 2021.

3.3.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that 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. No evidence is available via the Ministry of Health, the Office of the Prime Minister or the 2017 Joint External Evaluation (JEE) for Uganda.

There is also no evidence from the 2010 "Disaster Preparedness and Management Policy" or the Ministry of Health detailing a requirement of conducting drills at least once per year. [1,2,3,4]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 14 January 2021.

[2] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed 14 January 2021.

[3] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed 14 January 2021.

[4] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 14 January 2021.

3.3.1c

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

Yes = 1, No = 0

Current Year Score: 0

There is no 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. No such evidence is available through the 2017 Joint External Evaluation (JEE) for Uganda, the Ministry of Health or the Office of the Prime Minister. No further information is available on Uganda's Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre (NECOC) either. [1,2,3,4]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 13 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 13 2021

[3] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed January 13 2021.

[4] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

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

3.4.1a

Does the country meet one of the following criteria?

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

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

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

Current Year Score: 0

There is no 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), and there is insufficient evidence on public 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). There is no publicly available evidence from the 2017 Joint External Evaluation (JEE) for Uganda, the Ministry of Health or the Office of the Prime Minister to suggest that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (a bioterrorism attack. [1, 2, 3] The "National Policy for Disaster Preparedness and Management" reports standard operating procedures between the public health and security authorities to respond to emergencies. Throughout the plan, the Ministry Health, Ministry of Defence and Veterans Affairs, Ministry of Agriculture, and Ministry of Environment, among others, are listed as responsible institutions for policy actions. That notwithstanding, there is no potential biological event or bioterrorism listed as a hazard or disaster in the "National Policy for Disaster Preparedness and Management". Neither the Ministry of Health or Ministry of Defence mention agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e. bioterrorism attack). [1,2,3,4, 5]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 6 March 2019.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 6 March 2019.

[3] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed 6 March 2019.

[4] Republic of Uganda - "National Policy for Disaster Preparedness and Management".

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 6 March 2019.

[5] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed 5 January 2021.

3.5 RISK COMMUNICATIONS

3.5.1 Public communication

3.5.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that 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). Although the 2010 "National Policy for Disaster Preparedness and Management", the document used to guide national public health response, recognises the importance of the effective use of communication and media mechanisms in preparing for and responding to emergencies, it does not provide any guide on how messages will reach populations and sectors with different communications needs. [1] There is also no evidence from the Ministry of Health, on the website of the Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre nor on the 2017 Joint External Evaluation (JEE) for Uganda showing a strategy (or other legislation, regulation or strategy document used to guide national public health response) to outline how messages will reach populations and sectors with different communications needs [2,3, 4] The Ministry of Health's

website mention a dedicated pillar to Risk Communication and Social Mobilization (RCSM) within the Covid-19 response, which also includes to "Develop the COVID-19 Communication Strategy". However, there is no evidence that such strategy has been drafted and/or put in place [5].

[1] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 13 January 2021.

[2] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 13 January 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 13 January 2021.

[4] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

[5] Ministry of Health. Covid-19 response info hub. [<https://covid19.gou.go.ug/pillar7.html>]. Accessed 13 January 2021.

3.5.1 Risk communication planning

3.5.1a

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that Uganda has 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. The 2010 "National Policy for Disaster Preparedness and Management" contains a section detailing a risk communications plan that is specifically intended for use during a public health emergency. The plan has a section on risk communication titled "Effective use of media communication mechanisms" that provides the framework for communication during emergencies. It states that an Inter Agency Technical Committee will co-ordinate with agencies or ministries with the duty of information and the private sector to safeguard accurate, consistent and co-ordinated flow of information. It also mentions that the media will propagate government disaster preparedness and management plans when there is a disaster impending. [1]

[1] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 13 January 2021.

3.5.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that 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. The 2010 "National Policy for Disaster Preparedness and

Management" contains a section detailing a risk communications plan that is specifically intended for use during a public health emergency. The plan has a section on risk communication titled "Effective use of media communication mechanisms" that provides the framework for communication during emergencies. It states that an Inter Agency Technical Committee will co-ordinate with agencies or ministries with the duty of information and the private sector to safeguard accurate, consistent and co-ordinated flow of information, but it provides no information on a specific position within the ministry/government to serve as the primary spokesperson during a public health emergency. [1] No further information could be found on the Ministry of Health or on the Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre website [2, 3]

[1] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 13 January 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 6 2021.

[3] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

3.5.2 Public communication

3.5.2a

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

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

Current Year Score: 2

There is 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. There is evidence that the Ministry of Health communicates information via Facebook during active emergencies, as testified by the many posts published during the Covid-19 emergency including a post to dispel fake news on the "Draft for Planned COVID-19 Post Election Guidelines to combat the increasing rise in cases and cautions about new COVID-19 variant" [1]. The Facebook page was also utilized fairly regularly before the Covid-19 outbreak, with news, among others, about the rotavirus vaccine schedule or malaria campaigns [2, 3]. The Ministry of Health also has a Twitter channel, used with the same frequency as Facebook. [4] The early warning guidance of the "National Policy for Disaster Preparedness and Management" tasks the Department of Relief, Disaster Preparedness and Management, the telecommunications authority and the Uganda Broadcasting Corporation to create with an agreement with radio stations allowing use of stations' facilities to send out early warning messages when necessary. The policy states that under the functions of the Ministry of Information related to emergency preparedness is to make provisions for liaison and long-distance high frequency radio support to districts and leading bodies so as to facilitate direct communication between the commissions and districts. [5]

[1] Facebook. Ministry of Health-Uganda. [https://www.facebook.com/pg/Ministry-of-Health-Uganda-767949523254855/posts/?ref=page_internal]. Accessed January 13 2021.

[2] Facebook. Ministry of Health-

Uganda. [[https://www.facebook.com/minofhealthUG/posts/1603723769677422?__cft__\[0\]=AZXklmVahSWCGHYFcA4bjm5-yU8NO9MBEgLL6OnZmTMNLSPE1t4o2WIEJ4HQZ6JINWnABGZCHONAAsc_UIClq3XSsPYcxL1CGN1hQq4bR5cXP-n2NP63ZOCf5ENwiPmxjrGLb16CWixYBZleHtTLqIiWBmEDuEwoZTqEJDUfQpdOwqcNIYqZNyqfEwutKc97U&__tn__=%2C0%2C](https://www.facebook.com/minofhealthUG/posts/1603723769677422?__cft__[0]=AZXklmVahSWCGHYFcA4bjm5-yU8NO9MBEgLL6OnZmTMNLSPE1t4o2WIEJ4HQZ6JINWnABGZCHONAAsc_UIClq3XSsPYcxL1CGN1hQq4bR5cXP-n2NP63ZOCf5ENwiPmxjrGLb16CWixYBZleHtTLqIiWBmEDuEwoZTqEJDUfQpdOwqcNIYqZNyqfEwutKc97U&__tn__=%2C0%2C)]

P-R] Accessed January 13 2021.

[3] Facebook. Ministry of Health-Uganda. [<https://www.facebook.com/minofhealthUG/posts/1580729635310169>] Accessed January 13 2021.

[4] Twitter. Ministry of Health Uganda.

[https://twitter.com/MinofHealthUG?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor]. Accessed January 13 2021

[5] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.facebook.com/minofhealthUG/>]. Accessed January 13 2021.

3.5.2b

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

No = 1, Yes = 0

Current Year Score: 1

There is no evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years. In fact, Uganda's Ministry of Health has conducted a webinar to halt the spread of fake news on COVID-19 open to citizens [1]. Additionally, in March 2020 Uganda Communications Commission (UCC) vowed to persecute people spreading fake news "for offending the Computer Misuse Act 2011, the Data Protection and Privacy Act and other Penal laws of Uganda"[2]. There is no further news on the country's main outlets, nor on other international newspapers [3, 4, 5]

[1] Facebook. Ministry of Health Uganda. [<https://www.facebook.com/minofhealthUG/posts/citizen-webinar-on-the-threat-of-fake-news-during-a-pandemicdate-today-6-june-20/3205604832822633/>]. Accessed January 16 2021.

[2] Xinhua. Uganda vows to prosecute people spreading fake news about COVID-19.

[http://www.xinhuanet.com/english/2020-03/23/c_138906907.htm]. Accessed January 16 2021.

[3] The Daily Monitor. [<https://www.monitor.co.ug/>]. Accessed January 16 2021.

[4] The Independent. [<https://www.independent.co.ug/>]. Accessed January 16 2021.

[5] New Vision. [<https://www.newvision.co.ug/>]. Accessed January 16 2021.

3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

3.6.1 Internet users

3.6.1a

Percentage of households with Internet

Input number

Current Year Score: 23.71

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: 57.27

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: 11.0

2019

Gallup; Economist Impact calculation

3.6.4 Female access to the Internet

3.6.4a

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

Input number

Current Year Score: 6

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 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. There is no evidence of

such restriction on the Ministry of Health, Agriculture or Foreign Affairs, nor on relevant media outlets [1, 2, 3, 4, 5]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 5, 2021.

[2] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed January 5 2021.

[3] Republic of Uganda - Ministry of Foreign Affairs. [<https://www.mofa.go.ug/>]. Accessed January 5 2021.

[4] The Daily Monitor. [<https://www.monitor.co.ug/>]. Accessed January 16 2021.

[5] The Independent. [<https://www.independent.co.ug/>]. Accessed January 16 2021.

3.7.1b

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

Yes = 0, No = 1

Current Year Score: 0

There is evidence that, 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. In April 2020, Uganda suspended the importation and clearance of used textile products and used footwear as one of the ways to prevent the spread of Covid19. [1, 2]

[1] Macmap. Covid-19. [<https://www.macmap.org/covid19/>]. Accessed January 16 2021.

[2] UNBS News. [<https://unbs.go.ug/news-highlights.php?news=136&read>]. Accessed January 16 2021.

3.7.2 Travel restrictions

3.7.2a

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

Yes = 0, No = 1

Current Year Score: 0

There is evidence that, in the past year, the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. In April 2020, all international flights to Uganda have been suspended due to Covid-19. The ban does not apply to: a. aircraft in a state of emergency; b. operations related to humanitarian aid, medical and relief flights; c. technical landings where passengers do not disembark; d. safety-related operation flights. Additionally, Uganda closed all land borders on the same date [1, 2].

[1] Travelbans Africa. [<https://travelbans.org/africa/uganda/>]. Accessed January 16 2021.

[2] Reuters. Uganda extends coronavirus lockdown for three more weeks' [<https://www.reuters.com/article/health-coronavirus-uganda/uganda-extends-coronavirus-lockdown-for-three-more-weeks-idUSL5N2C24SS>]. Accessed January 16 2021.

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

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

4.1.1 Available human resources for the broader healthcare system

4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 16.8

2017

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 123.82

2018

WHO; national sources

4.1.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available information that Uganda has 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. No evidence is available through the Ministry of Health, Ministry of Labour or the Ministry of Education [1,2,3,4] This is corroborated by the 2017 Joint External Evaluation (JEE) for Uganda, which notes, "workforce development strategic planning is not done routinely" [5]

[1] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed 17 January 2021.

[2] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed 17 January 2021.

[3] Republic of Uganda - Ministry of Ministry of Gender, Labour and Social Development [http://www.mglsd.go.ug/]. Accessed 17 January 2021.

[4] Republic of Uganda - Ministry of Education and Sports. [http://www.education.go.ug/]. Accessed 17 January 2021.

[5] World Health Organization. Global Health Security Agenda - "Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda". [https://bit.ly/2F6Oi3v]. Accessed 17 January 2021.

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 50

2010

WHO/World Bank; national sources

4.1.2b

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient public evidence that Uganda 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. According to an assessment from the European Centre for Disease Prevention and Control, an isolation ward for confirmed cases was established at Kibaale hospital when an Ebola case was reported in Kibaale district, mid-western Uganda. [1] The Ministry of Health notes on its website that the National Isolation Centre at Entebbe, funded by the World Bank, was completed. [2] However, there is no further detail from the Ministry of Health on what type of isolation facilities are located at the centre, nor whether they were permanently established. [2,3] The National Guidelines for Clinical Management of Covid-19 also include provisions for designed isolation sites, but there is no evidence that such facilities exist in the country [4]. No further evidence is available on the description page of the main hospitals in the country. [5]

1] European Center for Disease Prevention and Control - Rapid Risk Assessment 2012 - Outbreak of Ebola Hemorrhagic Fever in Uganda. [https://bit.ly/2MlvKxa]. Accessed 17 January 2021.

[2] Republic of Uganda - Ministry of Health. "Health Infrastructure". [https://health.go.ug/clinical-services-departments/health-infrastructure]. Accessed 17 January 2021.

[3] Republic of Uganda - Ministry of Health. [http://health.go.ug/]. Accessed 17 January 2021.

[4] National Guidelines for Clinical Management of Covid-19. [https://covidlawlab.org/wp-content/uploads/2020/06/National-Guidelines-for-Clinical-Management-of-Covid-19.pdf]. Accessed 17 January 2021.

[5] Ministry of Health. Hospitals. [https://www.health.go.ug/hospitals/]. Accessed 17 January 2021.

4.1.2c

Does the country meet one of the following criteria?

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

Yes = 1, No = 0

Current Year Score: 0

There is insufficient public evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years, nor there is 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. According to an assessment from the European Centre for Disease Prevention and Control, an isolation ward for confirmed cases was established at Kibaale hospital when an Ebola case was reported in Kibaale district, mid-western Uganda. [1] The Ministry of Health notes on its website that the National Isolation Centre at Entebbe, funded by the World Bank, was completed. [2] However, there is no further detail from the Ministry of Health on what type of isolation facilities are located at the centre, nor whether they were permanently established. [2,3] The National Guidelines for Clinical Management of Covid-19 also include provisions for designed isolation sites, but there is no evidence that such facilities exist in the country, that capacity has expanded or that a plan was developed, updated or tested in order to expand isolation capacity [4]. No further evidence is available on the description page of the main hospitals in the country. [5]

[1] European Center for Disease Prevention and Control - Rapid Risk Assessment 2012 - Outbreak of Ebola Hemorrhagic Fever in Uganda. [<https://bit.ly/2MlvKxa>]. Accessed 17 January 2021.

[2] Republic of Uganda - Ministry of Health. "Health Infrastructure". [<https://health.go.ug/clinical-services-departments/health-infrastructure>]. Accessed 17 January 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 17 January 2021.

[4] National Guidelines for Clinical Management of Covid-19. [<https://covidlawlab.org/wp-content/uploads/2020/06/National-Guidelines-for-Clinical-Management-of-Covid-19.pdf>]. Accessed 17 January 2021.

[5] Ministry of Health. Hospitals. [<https://www.health.go.ug/hospitals/>]. Accessed 17 January 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: 2

There is evidence that Uganda has 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. Uganda operates a public procurement web portal under the Public Procurement and

Disposal of Public Assets Authority (PPDA). The PPDA is "the principal regulatory body for public procurement and disposal of public assets in Uganda." [1] There is evidence via the PPDA that the government has used this portal to procure laboratory supplies and medical supplies for the Ministry of Health (for instance: laboratory supplies, cleaning and electric materials, medical records and others) and the Ministry of Agriculture, Animal Industry and Fisheries (for instance: laboratory reagents, laboratory consumables, carbon dioxide cylinders & accessories, and others) . [2]

[1] The Public Procurement and Disposal of Public Assets Authority. "Role of PPDA". [<https://www.ppda.go.ug/about-us/role-of-ppda/>]. Accessed January 16 2021.

[2] Government of Uganda Procurement Portal. "Current Bid Invitations". [<http://gpp.ppda.go.ug/#/public/bid-invitations>]. Accessed January 16 2021.

4.2.2 Stockpiling for emergencies

4.2.2a

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

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

Current Year Score: 0

There is insufficient public evidence that Uganda maintains a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency. According to the 2017 Joint External Evaluation (JEE) for Uganda, Uganda has well-established national medical stores and blood banks at the regional level. [1] However, there is no evidence of stockpiles. There is no additional evidence of a stockpile of medical supplies (e.g. equipment, PPE) for national use during a public health emergency via the websites of the Office of the Prime Minister or the Ministry of Health, nor on the Ministry of Defence's. [2,3, 4] No further evidence is available on the emergency planning agency nor on the drug regulatory agency's website either [5, 6]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 17 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 17 2021.

[3] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed January 17 2021.

[4] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed January 17 2021.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

[6] National Drug Authority. [<https://www.nda.or.ug/>]. Accessed January 17 2021.

4.2.2b

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

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

Current Year Score: 0

There is insufficient public evidence that Uganda maintains a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. According to the 2017 Joint External Evaluation (JEE) for Uganda, Uganda has

well-established national medical stores and blood banks at the regional level. [1] However, there is no evidence of stockpiles. There is no additional evidence of a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency via the websites of the Office of the Prime Minister or the Ministry of Health, nor on the Ministry of Defence's. [2,3, 4] No further evidence is available on the emergency planning agency nor on the drug regulatory agency's website either [5, 6]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 17 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 17 2021.

[3] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed January 17 2021.

[4] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed January 17 2021.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

[6] National Drug Authority. [<https://www.nda.or.ug/>]. Accessed January 17 2021.

4.2.2c

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

Yes = 1, No = 0

Current Year Score: 0

There is insufficient public evidence that Uganda conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. According to the 2017 Joint External Evaluation (JEE) for Uganda, Uganda has well-established national medical stores and blood banks at the regional level. [1] However, there is no evidence of stockpiles. There is no additional evidence of a stockpile for national use during a public health emergency - nor of a prescribed/conducted annual review - via the websites of the Office of the Prime Minister or the Ministry of Health, nor on the Ministry of Defence's. [2,3, 4] No further evidence is available on the emergency planning agency nor on the drug regulatory agency's website either [5, 6]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 17 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 17 2021.

[3] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed January 17 2021.

[4] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed January 17 2021.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

[6] National Drug Authority. [<https://www.nda.or.ug/>]. Accessed January 17 2021.

4.2.3 Manufacturing and procurement for emergencies

4.2.3a

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g.

MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

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

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

Current Year Score: 0

There is no evidence 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, nor 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. According to the 2017 Joint External Evaluation (JEE) for Uganda, there exists an emergency medical countermeasures (MCM) and supplies fund, positioned at the National Medical Stores, but no further details are provided. [1] There is evidence that Uganda has a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE), but there is no evidence it includes provisions on public health emergencies. Uganda operates a public procurement web portal under the Public Procurement and Disposal of Public Assets Authority (PPDA). The PPDA is "the principal regulatory body for public procurement and disposal of public assets in Uganda." [2] There is evidence via the PPDA that the government has used this portal to procure emergency medical supplies for the Ministry of Health, but it is unclear whether a specific emergency system is in place or the bid followed the routine procurement procedure. [3] There is no additional evidence via the websites of the Office of the Prime Minister or the Ministry of Health, nor on the Ministry of Defence's, the emergency planning agency or the drug regulatory agency. [4,5, 6, 7, 8]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 17 2021.

[2] The Public Procurement and Disposal of Public Assets Authority. "Role of PPDA". [<https://www.ppda.go.ug/about-us/role-of-ppda/>]. Accessed January 16 2021.

[3] Government of Uganda Procurement Portal. "Current Bid Invitations". [<http://gpp.ppda.go.ug/#/public/bid-invitations>]. Accessed January 16 2021.

[4] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 17 2021.

[5] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed January 17 2021.

[6] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed January 17 2021.

[7] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

[8] National Drug Authority. [<https://www.nda.or.ug/>]. Accessed January 17 2021.

4.2.3b

Does the country meet one of the following criteria?

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

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

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

Current Year Score: 0

There is no 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, nor is there evidence of a plan/mechanism to procure

laboratory supplies (e.g. equipment, PPE) for national use during a public health emergency. According to the 2017 Joint External Evaluation (JEE) for Uganda, there exists an emergency medical countermeasures (MCM) and supplies fund, positioned at the National Medical Stores, but no further details are provided. [1] There is evidence that Uganda has a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of medical supplies (e.g. equipment, PPE), but there is no evidence it includes provisions on public health emergencies. Uganda operates a public procurement web portal under the Public Procurement and Disposal of Public Assets Authority (PPDA). The PPDA is "the principal regulatory body for public procurement and disposal of public assets in Uganda." [2] There is evidence via the PPDA that the government has used this portal to procure laboratory supplies for the Ministry of Health, but it is unclear whether a specific emergency system is in place. [3] There is no additional evidence via the websites of the Office of the Prime Minister or the Ministry of Health, nor on the Ministry of Defence's, the emergency planning agency or the drug regulatory agency. [4,5, 6, 7, 8]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 17 2021.

[2] The Public Procurement and Disposal of Public Assets Authority. "Role of PPDA". [<https://www.ppda.go.ug/about-us/role-of-ppda/>]. Accessed January 16 2021.

[3] Government of Uganda Procurement Portal. "Current Bid Invitations". [<http://gpp.ppda.go.ug/#/public/bid-invitations>]. Accessed January 16 2021.

[4] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 17 2021.

[5] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed January 17 2021.

[6] Republic of Uganda - Ministry of Defence and veterans Affairs. [<http://www.defence.go.ug/>]. Accessed January 17 2021.

[7] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

[8] National Drug Authority. [<https://www.nda.or.ug/>]. Accessed January 17 2021.

4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

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

4.3.1a

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

Yes = 1, No = 0

Current Year Score: 0

There is insufficient public evidence that Uganda has 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) According to the 2017 Joint External Evaluation (JEE) for Uganda, Uganda has individual hazard-specific response plans that address deployment of medical countermeasures and personnel. [1] The report further states that there are a number of draft documents addressing personnel deployments and medical countermeasures. However, these draft documents do not appear to be publicly available from the websites of the Office of the Prime Minister or the Ministry of Health. [2,3] There is no additional evidence via the websites of the Office of the Prime Minister or the Ministry of Health, nor on the Ministry of Defence's, the emergency planning agency or the drug regulatory agency. [4,5, 6, 7, 8]

- [1] World Health Organization. Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [https://bit.ly/2F6Oi3v]. Accessed January 17 2021.
- [2] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [https://opm.go.ug/disaster-preparedness-and-management/]. Accessed January 17 2021.
- [3] Republic of Uganda - Ministry of Health. [http://health.go.ug/]. Accessed January 17 2021.
- [4] Republic of Uganda - Ministry of Health. [http://health.go.ug/]. Accessed January 17 2021.
- [5] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [https://opm.go.ug/disaster-preparedness-and-management/]. Accessed January 17 2021.
- [6] Republic of Uganda - Ministry of Defence and veterans Affairs. [http://www.defence.go.ug/]. Accessed January 17 2021.
- [7] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [https://www.necoc-opm.go.ug/]. Accessed January 6 2021.
- [8] National Drug Authority. [https://www.nda.or.ug/]. Accessed January 17 2021.

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

4.3.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of a public plan in place to receive health personnel from other countries to respond to a public health emergency. No evidence is available via the 2017 Joint External Evaluation (JEE) for Uganda, the Office of the Prime Minister, the Ministry of Health, the Ministry of Foreign Affairs, the Ministry of Defence and Veterans Affairs, Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre or the "National Policy for Disaster Preparedness and Management" . [1,2,3,4,5, 6, 7]

- [1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [https://bit.ly/2F6Oi3v]. Accessed January 17 2021.
- [2] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [https://opm.go.ug/disaster-preparedness-and-management/]. Accessed January 17 2021.
- [3] Republic of Uganda - Ministry of Health. [http://health.go.ug/]. Accessed January 17 2021.
- [4] Republic of Uganda - Ministry of Foreign Affairs. [https://www.mofa.go.ug/]. Accessed January 17 2021.
- [5] Republic of Uganda - National Policy for Disaster Preparedness and Management. [https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf]. Accessed January 17 2021.
- [6] Republic of Uganda - Ministry of Defence and veterans Affairs. [http://www.defence.go.ug/]. Accessed January 17 2021.
- [7] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [https://www.necoc-opm.go.ug/]. Accessed January 6 2021.

4.4 HEALTHCARE ACCESS

4.4.1 Access to healthcare

4.4.1a

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

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

Current Year Score: 2

2020

World Policy Analysis Center

4.4.1b

Access to skilled birth attendants (% of population)

Input number

Current Year Score: 74.2

2016

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: 47.34

2017

WHO Global Health Expenditure database

4.4.2 Paid medical leave

4.4.2a

Are workers guaranteed paid sick leave?

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

Current Year Score: 2

2020

World Policy Analysis Center

4.4.3 Healthcare worker access to healthcare

4.4.3a

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available information that the government has 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. No information is available via the Ministry of Health, planning documents or emergency planning documents [1,2,3,4]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 19 January 2021.

[2] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/directories>]. Accessed 19 January 2021.

[3] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 19 January 2021.

[4] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 19 January 2021

4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

4.5.1 Communication with healthcare workers

4.5.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency. No evidence could be found via the 2017 Joint External Evaluation (JEE) for Uganda, the 2010 "National Policy for Disaster Preparedness and Management" or the Ministry of Health. That notwithstanding, the JEE report states that Uganda has a media centre, the Uganda Media Centre (UMC). The UMC also operates a media centre for risk communication in times of emergencies and outbreaks. However, there is no publicly available evidence from the UMC website or the JEE to suggest that the UMC acts as a medium for communication between public health officials and healthcare workers. [1,2,3,4, 5]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 19 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 19 2021.

[3] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed January 19 2021.

[4] Republic of Uganda. Ministry of ICT and National Guidance - Uganda Media Centre. [<https://www.mediacentre.go.ug/>]. Accessed January 19 2021.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

4.5.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector. No evidence is available from the 2017 Joint External Evaluation (JEE) for Uganda, the 2010 "National Policy for Disaster Preparedness and Management" or the Ministry of Health. That notwithstanding, the JEE report states that Uganda has a media centre, the Uganda Media Centre (UMC). The UMC also operates a media centre for risk communication in times of emergencies and outbreaks. However, there is no publicly available evidence from the UMC website or the JEE to suggest that the UMC acts as a medium for communication between public health officials and healthcare workers. [1,2,3,4, 5]

[1] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 19 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 19 2021.

[3] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed January 19 2021.

[4] Republic of Uganda. Ministry of ICT and National Guidance - Uganda Media Centre. [<https://www.mediacentre.go.ug/>]. Accessed January 19 2021.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

4.6.1 Healthcare associated infection (HCAI) prevention and control programs

4.6.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no 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. No evidence is available via the Ministry of Health, Central Public Health Laboratory, Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre or the 2017 Joint External Evaluation (JEE) for Uganda to show that the national public health system monitors and tracks the number of healthcare-associated infections that take place in healthcare facilities. To corroborate this, the JEE states that Uganda doesn't have a national healthcare-acquired infections prevention and control programme. [1,2,3, 4] Nevertheless, Uganda's recently published "Antimicrobial Resistance National Action Plan (2018-2023)" resolves to strengthen infection prevention and control programmes in healthcare facilities, with the anticipated result of reducing the incidence of healthcare-acquired infections. [5] No evidence is reported of monitoring for and tracking the number of

healthcare associated infections (HCAI) during the Covid-19 pandemic [6]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed January 19 2021.

[2] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed January 19 2021.

[3] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed January 19 2021.

[4] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 19 2021.

[5] Republic of Uganda. Antimicrobial Resistance National Action Plan (2018-2023). [<https://cddep.org/wp-content/uploads/2019/03/Final-Signed-NAP-AMR-2018-2023-Final.pdf>]. Accessed January 19 2021.

[6] Covid-19 Response info Hub. [<https://covid19.gou.go.ug/#>]. Accessed January 19 2021.

4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

4.7.1a

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of national requirement for ethical review (e.g., from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial. The "Guideline for the Conduct of Clinical Trials - Uganda National Drug Policy" (2019) sets out the procedures that should be followed by applicants who wish to conduct clinical trials in Uganda. The document talks subtly about the requirement of ethical review in many of its sections. For example, it describes the Institutional Review Committee as "an independent body, constituted by medical professionals and non-medical members, whose responsibility is to verify that the safety, integrity and human rights of the subjects participating in a particular trial are protected". [1] In addition, the "National Guidelines for Research Involving Humans"(2017) stipulates some basic ethical considerations that must be satisfied before approval by a Research Ethics Committee. It includes, among others, "the minimisation of risk to research participants by way of using practices that are coherent with sound research design and that do not unnecessarily expose research participants to risk". [2]

[1] Republic of Uganda - Guidelines for the Conduct of Clinical Trials - Uganda National Drug Authority. [<https://www.nda.or.ug/?download=3943>]. Accessed 19 January 2021.

[2] Uganda National Council for Science and Technology. National Guidelines for Research Involving Humans. [<https://www.uncst.go.ug/download/national-guidelines-for-research-involving-humans/>]. Accessed 19 January 2021.

4.7.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics. No evidence is available via the Ministry of Health, the 2017 Joint External Evaluation (JEE) for Uganda or other allied regulations. [1, 2, 3] The National Drug Authority's "Guidelines for the Conduct of Clinical Trials in Uganda" (2019) sets out procedures that should be followed by applicants who wish to conduct clinical trials in Uganda. [4] Neither this or the National Drug Policy and Authority Act provide any evidence to suggest that there is an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics. [3, 4]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 19 January 2021.

[2] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 6 March 2019.

[3] Republic of Uganda - National Drug Policy and Authority Act. [<https://bit.ly/2FKftAK>]. Accessed 19 January 2019.

[4] Republic of Uganda - Guidelines for the Conduct of Clinical Trials - Uganda National Drug Authority.

[<https://www.nda.or.ug/?download=3943>]. Accessed 19 January 2021.

4.7.2 Regulatory process for approving medical countermeasures

4.7.2a

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

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of a government agency responsible for approving new medical countermeasures (MCM) for humans. The National Drug Authority is empowered by law, namely the National Drug Policy and Authority Act (1993) to approve MCM for humans. The law empowers the authority to conduct post-trial review and audit clinical trial sites, among other responsibilities. [1] The "Guidelines for the Conduct of Clinical Trials"(2019) also rest the responsibility of approving MCM with the National Drug Authority pursuant to the National Guidelines for Research Involving Humans (2017). [2, 3]

[1] Uganda - National Drug Policy & Authority Act Cap 206. [www.nda.or.ug/?download=2214]. Accessed February 11, 2021.

[2] Republic of Uganda - Guidelines for the Conduct of Clinical Trials - Uganda National Drug Authority.

[<https://www.nda.or.ug/?download=3943>]. Accessed 19 January 2021.

[3] Uganda National Council for Science and Technology. National Guidelines for Research Involving Humans.

[<https://www.uncst.go.ug/download/national-guidelines-for-research-involving-humans/>]. Accessed 19 January 2021.

4.7.2b

Is there an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence to confirm that Uganda has an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies. In times of emergency, the National Guidelines for Research Involving Humans (2017) makes provision for exemption from the Review Ethics Committee (REC) ethical review. The guideline also gives the REC the power to use an expedited review process for research involving no more than minimal risk.

[1] However, there is no evidence through the 2017 Joint External Evaluation (JEE) for Uganda, Ministry of Health, other allied agencies, the "Guidelines for the Conduct of Clinical Trials" of Uganda's National Drug Authority, or the National Drug Policy and Authority Act (1993) that there exists an expedited process for approving medical countermeasures for human use during public health emergencies. [2,3,4,5,6,7]

[1] Uganda National Council for Science and Technology. National Guidelines for Research Involving Humans.

[<https://www.uncst.go.ug/download/national-guidelines-for-research-involving-humans/>]. Accessed 19 January 2021.

[2] World Health Organization. Global Health Security Agenda - Joint External Evaluation of IHR Core Capabilities of the Republic of Uganda. [<https://bit.ly/2F6Oi3v>]. Accessed 19 January 2021.

[3] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed 19 January 2021.

[4] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 19 January 2021.

[5] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed 19 January 2021.

[6] Republic of Uganda - National Drug Policy and Authority Act. [<https://www.nda.or.ug/?download=2214>]. Accessed 19 January 2021.

[7] Republic of Uganda - Guidelines for the Conduct of Clinical Trials - Uganda National Drug Authority.

[<http://apps.who.int/medicinedocs/documents/s19724en/s19724en.pdf>]. Accessed 19 January 2021

Category 5: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

5.1 INTERNATIONAL HEALTH REGULATIONS (IHR) REPORTING COMPLIANCE AND DISASTER RISK REDUCTION

5.1.1 Official IHR reporting

5.1.1a

Has the country submitted IHR reports to the WHO for the previous calendar year?

Yes = 1 , No = 0

Current Year Score: 1

2020

World Health Organization

5.1.2 Integration of health into disaster risk reduction

5.1.2a

Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?

Yes = 1, No = 0

Current Year Score: 1

There is evidence that epidemics and pandemics are integrated into the national risk reduction strategy. Pandemics are integrated into Uganda's 2010 National Policy for Disaster Preparedness and Management. Chapter 2.1.8 of this policy is dedicated to pandemics, outlining policy actions by way of strengthening entomological, epidemiological and disease surveillance in order to mitigate risk of pandemics such as influenza. Additionally, the policy also identifies responsible institution for disaster management and mandates to develop appropriate preparedness and response plans [1]

[1] Republic of Uganda - National Policy for Disaster Preparedness and Management.

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 19 January 2021.

5.2 CROSS-BORDER AGREEMENTS ON PUBLIC HEALTH AND ANIMAL HEALTH EMERGENCY RESPONSE

5.2.1 Cross-border agreements

5.2.1a

Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?

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

Current Year Score: 2

There is some evidence to suggest that Uganda has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies. Uganda, together with its neighbours in the East African Community (EAC), issued a joint communique at the 2018 EAC joint heads of state retreat. In the communique, members resolved to strengthen the network of medical reference laboratories and the regional rapid response system in order to protect the region from health threats including pandemics, bio-terrorism and common agents. [1]

[1] East African Community. "2018 EAC Joint heads of State Retreat Communique"

[https://www.scribd.com/document/372189203/Communique-2018-Joint-Eac-Heads-of-State-Retreat-on-Infrastructure-and-Health-Financing-and-Development#from_embed]. Accessed 19 January 2021.

5.2.1b

Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?

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

Current Year Score: 0

There is no publicly available evidence that the country has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies. No evidence is available through the Ministry of Health, Ministry of Agriculture, Ministry of Foreign Affairs, the 2017 Joint External Evaluation (JEE) for Uganda or Uganda's Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre to show that Uganda has cross-border agreements, protocols or MOUs with neighbouring countries or as part of a regional group specifically with regards to animal health emergencies. [1,2,3,4, 5]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 6 March 2019.

[2] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed 6 March 2019.

[3] Republic of Uganda - Ministry of Foreign Affairs. [<https://www.mofa.go.ug/>]. Accessed 6 March 2019.

[4] Global Health Security Agenda Pilot Assessment of Uganda. [<https://bit.ly/2H8ITLs>]. Accessed 6 March 2019.

[5] Department of Disaster Preparedness and Management National Emergency Coordination and Operations Centre. [<https://www.necoc-opm.go.ug/>]. Accessed January 6 2021.

5.3 INTERNATIONAL COMMITMENTS

5.3.1 Participation in international agreements

5.3.1a

Does the county have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?

Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

Current Year Score: 2

2021

Biological Weapons Convention

5.3.1b

Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?

Yes = 1 , No = 0

Current Year Score: 0

2021

Biological Weapons Convention

5.3.1c

Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?

Yes = 1 , No = 0

Current Year Score: 1

2021

Biological Weapons Convention

5.3.1d

Extent of United Nations Security Council Resolution (UNSCR) 1540 implementation related to legal frameworks and enforcement for countering biological weapons:

Very good (60+ points) = 4, Good (45–59 points) = 3, Moderate (30–44 points) = 2, Weak (15–29 points) = 1, Very weak (0–14 points) or no matrix exists/country is not party to the BWC = 0

Current Year Score: 1

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: 1

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: 1

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: 1

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: 1

There is evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years. Namely, the National budget framework Paper for fiscal years 2019/20 to 2023/24 established that the Health Ministry enacts a "Quality and accessible public health services" program, which is targeted to: develop and coordinate standards guidelines and policies on infrastructure, medicines and health supplies, and integrated curative services; Provide support supervision referral hospitals and the districts. The outcome of mentioned program is measured, among others, in terms of epidemics contained. Additionally, the framework paper mentions grants provided by the Ministry of Health to Local Governments to address key health issues such as epidemic preparedness. [1] Finally, there is evidence that in 2019/20 the Ugandan government allocated .59bn USX (about 170,000 USD) to Integrated Epidemiology, Surveillance and Public Health Emergency according to the Ugandan state budget website. [2] No further evidence is available on the Ministry of Health or Agriculture websites [3, 4]

[1] Republic of Uganda. December 2018. NATIONAL BUDGET FRAMEWORK PAPER FY 2019/20 - FY 2023/24.

[<https://budget.go.ug/sites/default/files/National%20Budget%20docs/National%20Budget%20Framework%20Paper%20FY%202019-20.pdf>]. Accessed January 19 2021.

[2] Republic of Uganda. Budget. [<https://www.budget.go.ug/dashboard/>]. Accessed January 19 2021.

[3] Republic of Uganda - Ministry of Health. [<http://health.go.ug>]. Accessed January 5 2021

[4] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed January 5 2021.

5.5.2 Financing under Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS) reports and gap analyses

5.5.2a

Does the Joint External Evaluation (JEE) report, National Action Plan for Health Security (NAPHS), and/or national GHSA roadmap allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a JEE = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

5.5.2b

Does the Performance of Veterinary Services (PVS) gap analysis and/or PVS assessment allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a PVS = 0

Current Year Score: 0

2021

OIE PVS assessments

5.5.3 Financing for emergency response

5.5.3a

Is there a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency (such as through a dedicated national reserve fund, an established agreement with the World Bank pandemic financing facility/other multilateral emergency funding mechanism, or other pathway identified through a public health or state of emergency act)?

Yes = 1, No = 0

Current Year Score: 1

There is 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). Uganda is eligible for International Development Agency support, and thus has access to the International Bank for Reconstruction and Development Pandemic Emergency Financing Facility. [1,2] This is a facility developed by the World Bank and the World Health Organisation (WHO) and their partners as a response effort to aid countries affected by a large-scale outbreak. It is worthy of mentioning that although Uganda's "National Policy for Disaster Preparedness and Management" recommends to the Office of the Prime Minister (OPM) and Parliament the issue of a National Disaster Preparedness and Management Fund Bill, there is no publicly available information via the OPM of the Ministry of Health to show that such a fund exists. [3,4]

[1] International Development Association (IDA). "Borrowing Countries". [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed 19 January 2021.

[2] World Bank Pandemic Financing Facility: [<http://pubdocs.worldbank.org/en/119961516647620597/PEF-Operational-Brief-Dec-2017.pdf>]. Accessed 19 January 2021.

[3] Republic of Uganda - "National Policy for Disaster Preparedness and Management".

[<https://www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf>]. Accessed 19 January 2021.

[4] Republic of Uganda - Office of the Prime Minister - Disaster Preparedness [<https://opm.go.ug/disaster-preparedness-and-management/>]. Accessed 19 January 2021.

5.5.4 Accountability for commitments made at the international stage for addressing epidemic threats

5.5.4a

Is there evidence that senior leaders (president or ministers), in the past three years, have made a public commitment either to:

- Support other countries to improve capacity to address epidemic threats by providing financing or support?
- Improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity?

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

Current Year Score: 0

There is no publicly available 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, or to improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity. No evidence is available through the Ministry of Health, Ministry of Foreign Affairs, UN, World Health Organisation (WHO) or Global Health Security Funding Tracking Dashboard [1,2,3,4,5]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 21 January 2021.

[2] Republic of Uganda - Ministry of Foreign Affairs [<https://www.mofa.go.ug/>]. Accessed 21 January 2021.

[3] United Nations - UN News - Africa. [<https://news.un.org/en/news/region/Africa>]. Accessed 21 January 2021.

[4] World Health Organization -Africa - Uganda. [<http://www.afro.who.int/countries/Uganda>]. Accessed 21 January 2021.

[5] Talus Analytics-GHS Tracking Dashboard. [<https://tracking.ghscosting.org/#analysis/UG/r>]. Accessed 21 January 2021.

5.5.4b

Is there evidence that the country has, in the past three years, either:

- Provided other countries with financing or technical support to improve capacity to address epidemic threats?

- Requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats?

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

Current Year Score: 1

There is publicly available evidence that Uganda has, in the past three years, either provided other countries with financing or technical support to improve capacity to address epidemic threat or requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats. Namely, there is evidence via the Global Health Security Funding Tracker that Uganda has invested donor financed to improve domestic capacity to address epidemic threats. The tracker notes that Uganda has received funding from multiple donors to enhance their capacity on global security preparedness, including just over US\$70,000 from the World Health Organisation to put in place control strategies, plans and capacities developed for diseases such as cholera, viral haemorrhagic fever, meningitis and influenza and those due to vector-borne, emerging and re-emerging pathogens. [1] No further information on investments to improve capacity are available via the Ministry of Health, Ministry of Foreign Affairs, The UN or the WHO; nor is there evidence that Uganda other countries with financing or technical support to improve capacity to address epidemic threats. [2,3,4,5]

[1] Global Health Security Funding Tracker. [<https://tracking.ghscosting.org/#/data>]. Accessed 21 January 2021.

[2] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 21 January 2021.

[3] Republic of Uganda - Ministry of Foreign Affairs [<https://www.mofa.go.ug/>]. Accessed 21 January 2021.

[4] United Nations - UN News - Africa. [<https://news.un.org/en/news/region/Africa>]. Accessed 21 January 2021.

[5] World Health Organization -Africa - Uganda. [<http://www.afro.who.int/countries/Uganda>] Accessed 21 January 2021.

5.5.4c

Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?

Yes = 1 , No = 0

Current Year Score: 0

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

5.6.1a

Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?

Yes = 1, No = 0

Current Year Score: 0

There is no evidence of 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. No evidence could be found via the Ministry of Health, Ministry of Agriculture, Ministry of Science, Technology and Innovation, or the Central Laboratories. [1,2,3]. Nevertheless, Uganda has a "Guidelines for accessing genetic resources and benefit sharing in Uganda" document, enacted to "provide for simple arrangements and procedures including measures for accessing biological and genetic resources, their products, and derivatives for scientific research, commercial use and any other purposes connected therewith and to ensure equitable sharing of the benefits accruing therefrom". [4]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 19 January 2021.

[2] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed 19 January 2021.

[3] Republic of Uganda - Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug/>]. Accessed 19 January 2021.

[4] Republic of Uganda - Ministry of Science Technology and Innovation. [<https://mosti.go.ug/>]. 19 January 2021.

[5] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed 19 January 2021.

5.6.1b

Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?

Yes = 0, No = 1

Current Year Score: 1

There is no public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years. No evidence could be found via the Ministry of Health, Ministry of Agriculture, Ministry of Science and Technology, the Central Public Health Laboratories or the Uganda Viral Research Institute. [1,2,3,4,5,6,7]

[1] Republic of Uganda - Ministry of Health. [<http://health.go.ug/>]. Accessed 19 January 2021.

[2] Republic of Uganda - Ministry of Health - Knowledge Management Portal. [<http://library.health.go.ug/>]. Accessed 19

January 2021.

[3] Republic of Uganda - Ministry of Agriculture, Animal Industry and & Fisheries. [<https://www.agriculture.go.ug>]. Accessed 19 January 2021.

[4] Republic of Uganda - Ministry of Science Technology and Innovation. [<https://mosti.go.ug/>]. 19 January 2021.

[5] Republic of Uganda - Ministry of Health - Central Public Health Laboratories. [<http://cphl.go.ug/>]. Accessed 19 January 2021

[6] Republic of Uganda - Uganda Viral Research Institute. [<http://www.uvri.go.ug/about-us>]. Accessed 19 January 2021.

[7] World Health Organisation. [<http://who.int>]. Accessed 19 January 2021.

5.6.1c

Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?

Yes = 0, No = 1

Current Year Score: 1

There is no public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years. No evidence could be found that Uganda did not share Covid-19 pathogen samples. [1,2,3] There is no further evidence on top international and local media outlets.

[1] World Health Organization -Africa - Uganda. [<http://www.afro.who.int/countries/Uganda>] Accessed 19 January 2021.

[2] Republic of Uganda - Ministry of Health - News and Updates. [<http://health.go.ug/news-and-updates>]. Accessed 19 January 2021.

[3] New Vision - Health. [<https://www.newvision.co.ug/category/features/health/>]. Accessed 19 January 2021.

Category 6: Overall risk environment and vulnerability to biological threats

6.1 POLITICAL AND SECURITY RISK

6.1.1 Government effectiveness

6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

2020

Economist Intelligence

6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

2020

Economist Intelligence

6.1.1d

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

2020

Economist Intelligence

6.1.1e

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 27

2020

Transparency International

6.1.1f

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

Input number

Current Year Score: 1

2020

Economist Intelligence

6.1.1g

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

Input number

Current Year Score: 1

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: 0

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: 1

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: 1

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: 3

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: 3

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: 3

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: 0

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: 1

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: 76.53

2018

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);
The Economist Intelligence Unit

6.2.2 Gender equality

6.2.2a

United Nations Development Programme (UNDP) Gender Inequality Index score

Input number

Current Year Score: 0.47

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: 13.1

2016

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: 2

Data from 2017 indicates that the share of informal employment as a percentage of total non-agricultural employment in Uganda amounts to 85%. [1]

[1] The World Bank/ILO. Informal employment (% of total non-agricultural employment) - Uganda. [<https://data.worldbank.org/indicator/SL.ISV.IFRM.ZS?locations=UG>]. Accessed January 21 2021.

6.2.3c

Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

Current Year Score: 0

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: 0

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: 0.43

Latest available.

World Bank; Economist Impact calculations

6.3 INFRASTRUCTURE ADEQUACY

6.3.1 Adequacy of road network

6.3.1a

What is the risk that the road network will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 1

2021

Economist Intelligence

6.3.2 Adequacy of airports

6.3.2a

What is the risk that air transport will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 2

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: 1

2021

Economist Intelligence

6.4 ENVIRONMENTAL RISKS

6.4.1 Urbanization

6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 24.36

2019

World Bank

6.4.2 Land use

6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: -2.11

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: 3

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: 62.97

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: 572.2

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 1.96

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 9.8

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 5.3

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: 49.1

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 18.47

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: 22.06

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