

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

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

### 1.1 ANTIMICROBIAL RESISTANCE (AMR)

#### 1.1.1 AMR surveillance, detection, and reporting

##### 1.1.1a

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

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

**Current Year Score: 1**

There is publicly available evidence that Egypt has a national AMR plan but insufficient evidence that this accounts for the surveillance, detection, and reporting of priority AMR pathogens.

Egypt's AMR national action plan was developed by the Ministry of Health and Population (MoHP) and the World Health Organization (WHO), and according to the WHO was completed in March of 2018 [1]. The WHO reports that the plan is based on 4 pillars, "infection prevention and control; AMR surveillance; optimizing antimicrobial use; and education and public awareness under the One Health approach [1]. The plan has not been made publicly available as of January 24th 2021, so it cannot be determined whether detection and reporting of priority AMR pathogens are components of this plan.

A review of online sources including Egypt's WHO profile, the WHO's Library of national AMR action plan, the MoHP, and the Ministry of Agriculture and Land Reclamation, which at the time of research was inaccessible, has not yielded any further evidence [2, 3, 4, 5].

[1] World Health Organization. March 2018. "Egypt: Finalizing the national action plan on antimicrobial resistance in Egypt". [<http://www.emro.who.int/egy/egypt-infocus/finalizing-the-national-action-plan-on-antimicrobial-resistance-in-egypt.html>]. Accessed 13 January 2021.

[2] World Health Organization Regional Office for the East Mediterranean. "Country profile - Egypt". [<http://www.emro.who.int/countries/egy/index.html>]. Accessed 13 January 2021.

[3] World Health Organization. "Antimicrobial resistance: Library of national action plans". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 13 January 2021.

[4] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 24 January 2021.

[5] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg/>]. Last attempt to access was on 24 January 2021.

##### 1.1.1b

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

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

**Current Year Score: 1**

There is evidence that Egypt's national laboratory system can test for at least one of the 7+1 priority AMR pathogens.

According to Egypt's World Health Organization (WHO) AMR self-assessment, there is a functioning national AMR surveillance system covering common bacterial infections in hospitalized and community patients, with external quality assurance, and a national coordinating center producing reports on AMR. [1]

According to the Ministry of Health and Population (MoHP), the National Tuberculosis Reference Laboratory in Egypt controls the National Tuberculosis Control Program and is able to conduct sputum smear microscopy testing on suspected tuberculosis pathogens [2].

According to the Ministry of Agriculture and Land Reclamation (MALR), the Central Laboratory of Residue Analysis of Pesticides & Heavy Metals in Food surveils *Escherichia coli* (E.coli), Coagulase (+) *Staphylococcus aureus*, *Salmonella* spp. and *Shigella* spp. [3]. According to an academic paper published by the WHO's East Mediterranean Regional Office, they were able to perform a real-time PCR test on *K. pneumoniae* in Egypt [4]. A review of online sources including the MoHP and the MALR, which at the time of research was inaccessible, didn't yield further information [5, 6].

[1] World Health Organization. "Global Database for Antimicrobial Resistance Country Self Assessment". [<https://amrcountryprogress.org/>]. Accessed 24 January 2021.

[2] Ministry of Health and Population. "National Reference Laboratory in Egypt (NRL)". [[http://ccs.gov.eg/ntp/DOTS\\_Lab\\_NRL.htm](http://ccs.gov.eg/ntp/DOTS_Lab_NRL.htm)]. Accessed 24 January 2021.

[3] Ministry of Agriculture and Land Reclamation. "Central Laboratory of Residue Analysis of Pesticides & Heavy Metals". [<https://www.qcap-egypt.com/en-micro4.php>]. Accessed 24 January 2021.

[4] World Health Organization Regional Office for the East Mediterranean. 2013. "High prevalence of *Klebsiella pneumoniae* carbapenemase-mediated resistance in *K. pneumoniae* isolates from Egypt". [<http://www.emro.who.int/emhj-vol-19-2013/11/high-prevalence-of-klebsiella-pneumoniae-carbapenemase-mediated-resistance-in-k-pneumoniae-isolates-from-egypt.html>]. Accessed 24 January 2021.

[5] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 24 January 2021.

[6] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 24 January 2021.

### 1.1.1c

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence to suggest that the Government of Egypt conducts environmental detection or surveillance activities for antimicrobial residues or AMR organisms.

A review of the Ministry of Health and Population (MoHP), the Ministry of Agriculture and Land Reclamation, which at the time of research was inaccessible, the General Authority for Veterinary Services, and the Ministry of Environment websites has not yielded any further evidence [1, 2, 3, 4].

The Egyptian National Agricultural Library contains several studies on antibiotic residue in animal meat and dairy products, however the studies only addressed the effect of AMR in food and dairy [5]. The Central Administration of Laboratories under the MoHP conducts routine tests on food and various water supplies to ensure that they are free from microbes and pollutants and pathogenic microbes, however, no specific mention of AMR is made [6]. Egypt completed its national AMR

resistance plan in March 2018 according to the World Health Organization (WHO), however, this has not yet been published [7, 8].

- [1] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 24 January 2021.
- [2] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to Access 24 January 2021.
- [3] General Authority for Veterinary Services. [<http://www.govs.gov.eg/FrontEnd/ar/Default.aspx>]. Accessed 24 January 2021.
- [4] Ministry of Environment. [<http://www.eeaa.gov.eg/en-us/home.aspx>]. Accessed 24 January 2021.
- [5] Egyptian National Agricultural Library. "Antibiotic Residue". [[http://nile.enal.sci.eg/cgi-bin/koha/opac-search.pl?idx=kw&q=%D9%85%D8%B6%D8%A7%D8%AF%20%D8%AD%D9%8A%D9%88%D9%8A&sort\\_by=pubdate\\_dsc&limit=su-to:Antibiotic%20residues](http://nile.enal.sci.eg/cgi-bin/koha/opac-search.pl?idx=kw&q=%D9%85%D8%B6%D8%A7%D8%AF%20%D8%AD%D9%8A%D9%88%D9%8A&sort_by=pubdate_dsc&limit=su-to:Antibiotic%20residues)]. Accessed 24 January 2021.
- [6] Central Administration of Laboratories. "Preventive Services". [<https://clab.mohip.gov.eg/>]. Accessed 24 January 2021.
- [7] World Health Organization Regional Office for the Eastern Mediterranean. March 2018. "Egypt: Finalizing the national action plan on antimicrobial resistance in Egypt". [<http://www.emro.who.int/egy/egypt-infocus/finalizing-the-national-action-plan-on-antimicrobial-resistance-in-egypt.html>]. Accessed 24 January 2021.
- [8] World Health Organization. "Antimicrobial resistance: Library of national action plans". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 24 January 2021.

## 1.1.2 Antimicrobial control

### 1.1.2a

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

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

**Current Year Score: 0**

There is insufficient evidence that Egypt has national regulations in place requiring prescriptions for antibiotic use for humans.

Several academic studies including a study published in the Journal of Pure and Applied Microbiology in 2017 and a study published in Research in Social and Administrative Pharmacy in 2013 noted that it is prohibited by law to dispense antibiotics without a prescription in Egypt. [1, 2]. However, several studies have noted inadequate enforcement of drug regulations and the fact that antibiotics are very easily accessible and dispensed at community pharmacies without prescriptions [1, 2, 3]. One study published in the International Journal of Pharmacology and Pharmaceutical Sciences in 2016 estimates that 86% of the population using antibiotics do so without a physician's consultation [4]. However, the actual laws that restrict the use of antibiotics were not referenced in these studies and they were not found on the Egyptian Drug Authority's website or on Egypt's official State Information Service(SIS) website [5,6]. A review of Egypt's most credible news outlets didn't provide any further evidence [7]. The Egyptian government has a portal for Egypt's laws, however, at the time of the research, it was inaccessible [8]. A review of the Ministry of Health and Population, the Ministry of Agriculture and Land Reclamation, which at the time of research was inaccessible, and the Ministry of Environment websites has not yielded any further evidence [9,10,11].

- [1] Maryam Kotb and Marwan ElBagour. 2018. "Sale of Antibiotics without Prescriptions in Alexandria, Egypt". Journal of Pure and Applied Microbiology Vol 12 [1]. [[https://www.researchgate.net/publication/324262326\\_Sale\\_of\\_Antibiotics\\_without\\_Prescriptions\\_in\\_Alexandria\\_Egypt](https://www.researchgate.net/publication/324262326_Sale_of_Antibiotics_without_Prescriptions_in_Alexandria_Egypt)]. Accessed 24 January 2021.
- [2] Nirmeen Sabry; Samar Farid and Dalia M Dawoud. 2013. "Antibiotic dispensing in Egyptian community pharmacies: An

observational study". Research in Social and Administrative Pharmacy Vol 10.

[https://www.researchgate.net/publication/236690927\_Antibiotic\_dispensing\_in\_Egyptian\_community\_pharmacies\_An\_observational\_study]. Accessed 24 January 2021.

[3] Zakaa El-Din M, et al. 2018. "Egyptian community pharmacists' attitudes and practices towards antibiotic dispensing and antibiotic resistance; a cross-sectional survey in Greater Cairo". Current Medical Research and Opinion Vol 2.

[https://www.ncbi.nlm.nih.gov/pubmed/30388895]. Accessed 24 January 2021.

[4] Dalia El Maraghy; Amr Younis and Nahid Abbas. 2016. "Survey on the irrational use of antibiotics among adults in Egyptian community". International Journal of Pharmacology and Pharmaceutical Sciences Vol. 3

[6].

[https://www.researchgate.net/profile/Nahid\_Abbas3/publication/314724672\_Survey\_on\_the\_irrational\_use\_of\_antibiotics\_among\_adults\_in\_Egyptian\_community/links/58c526be92851c0ccb937a4/Survey-on-the-irrational-use-of-antibiotics-among-adults-in-Egyptian-community.pdf]. Accessed 24 January 2021.

[5] Egypt Drug Authority. [https://www.edaegypt.gov.eg/ar/%D8%A7%D9%84%D9%85%D8%B1%D9%83%D8%B2-%D8%A7%D9%84%D8%A7%D8%B9%D9%84%D8%A7%D9%85%D9%89/%D8%A7%D9%84%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/]. Accessed March 6 2021.

[6] State Information Service. [https://sis.gov.eg/News/Search?]. Accessed March 6 2021.

[7] Akhbark Egyptian news outlets portal. [t.ly/MsT4]. Accessed March 6 2021.

[8] Egyptian Government Laws portal. [http://www.egypt.gov.eg/english/laws/default.aspx]. Accessed March 6 2021.

[9] Ministry of Health and Population. [http://www.mohp.gov.eg/Default.aspx]. Accessed 24 January 2021.

[10] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg]. Last attempt to access 24 January 2021.

[11] Ministry of Environment. [http://www.eea.gov.eg/en-us/home.aspx]. Accessed 24 March 2021.

### 1.1.2b

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

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

**Current Year Score: 0**

There is insufficient evidence that Egypt has national regulations in place requiring prescriptions for antibiotic use for animals. According to a report published by the Center for Disease Dynamics, Economics and Policy in 2014, Egypt does have a national policy restricting the availability of antibiotics without a prescription, however the report also notes that, respondents from Egypt who contributed to the study reported that the policies were not enforced or were minimally enforced [1]. Additionally, Egypt does not have a national-level body to address antibiotic issues, including resistance [1]. However, the actual laws that restrict the use of antibiotics were not referenced in these studies and they were not found on the Egyptian Drug Authority's website or on Egypt's official State Information Service (SIS) website [2,3]. A review of Egypt's most credible news outlets didn't provide further evidence [4]. The Egyptian government has a portal for Egypt's laws, however, at the time of the research it was inaccessible [5]. A review of the Ministry of Health and Population, the General Authority for Veterinary Services, the Ministry of Agriculture and Land Reclamation, which at the time of research was inaccessible, and the Ministry of Environment websites did not yield any further evidence [6,7,8,9].

[1] Center for Disease Dynamics, Economics and Policy. 2014. "Policies to Address Antibiotic Resistance in Low- and Middle-Income Countries: National and International Action on Antimicrobial Resistance". [https://www.cddep.org/wp-content/uploads/2017/06/abrinlmics\_cddep\_gelband\_and\_delahoy\_9-14.pdf]. Accessed 24 January 2021.

[2] Egypt Drug Authority. [https://www.edaegypt.gov.eg/ar/%D8%A7%D9%84%D9%85%D8%B1%D9%83%D8%B2-%D8%A7%D9%84%D8%A7%D8%B9%D9%84%D8%A7%D9%85%D9%89/%D8%A7%D9%84%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/]. Accessed March 6 2021.

[3] State Information Service. [https://sis.gov.eg/News/Search?]. Accessed March 6 2021.

- [4] Akhbark Egyptian news outlets portal. [t.ly/MsT4]. Accessed March 6 2021.
- [5] Egyptian Government Laws portal. [http://www.egypt.gov.eg/english/laws/default.aspx]. Accessed March 6 2021.
- [6] Ministry of Health and Population. [http://www.moHP.gov.eg/Default.aspx]. Accessed 24 January 2021.
- [7] General Authority for Veterinary Services. [http://www.govs.gov.eg/FrontEnd/ar/Default.aspx]. Accessed 24 January 2021.
- [8] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg]. Last attempt to access 24 January 2021.
- [9] Ministry of Environment. [http://www.eeaa.gov.eg/en-us/home.aspx]. Accessed 24 March 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: 0**

There is insufficient evidence that Egypt has national legislation, plans, or equivalent strategy documents on zoonotic diseases. The agency assigned to zoonotic diseases in Egypt, the General Organization for Veterinary Services (GOVS) has a document specifically for rabies that was published in 2018 under the name: Treat dogs with kindness and sensitivity and protect yourself from rabies, it discusses how it transmits and how dog owners can avoid transmission[1]. According to a report published by the World Health Organization (WHO) in 2017, Egypt has developed, under the Ministry of Health and Population [MoHP], an integrated surveillance system for pneumonia, avian influenza, severe acute respiratory infections and influenza-like illness, all reporting to the Central Public Health Laboratory. The system links community-based surveillance, healthcare facilities at several levels and laboratories. It builds on a strong collaboration between public health and veterinary sections, notably in sharing information, producing joint risk assessment and joint field investigation [2].

The WHO's Health Profile for Egypt, published 2016, notes that “all levels of the health system have the Core Capacities of preparedness, detection, surveillance, investigation and response to public health events” and that “all health facilities in the public sector are involved in notification of targeted diseases, including acid-fast bacilli, fever and rash surveillance, as well as in the reporting and management of any emerging diseases or unusual public health event, such as preparedness for Ebola virus disease, Middle East respiratory syndrome coronavirus and avian influenza” [3]. This further suggests that a system is in place for the surveillance of multiple zoonotic pathogens.

The World Organization for Animal Health reports that the CDC's Global Disease Detection Program (GDD) has a GDD Center located in Egypt [4]. The GDD Center in Egypt helps contain outbreaks close to the source by building up local resources, drawing on combined expertise in emerging infectious disease detection and response; pandemic influenza preparedness and response and Zoonotic disease research and control [5]. However, according to an academic study published in the Pathogens journal in 2017, Egypt faces a gap of knowledge regarding the epidemiology of zoonotic diseases in different localities in Egypt, which hinders accurate assessment of the human health burden. Surveillance activity is high for some viral diseases such as influenza and MERS but is still weak or neglected for others, particularly at the human-animal interface [6]. The report concludes that there is an urgent need for collaborative surveillance and intervention plans for the control of zoonotic diseases in Egypt [5]. A review of the General Authority of Veterinary Services, the Ministry of Agriculture and Land Reclamation, which was inaccessible at the time of the research, and the MoHP websites has not provided further evidence [7,8,9].

- [1] The General Organization for Veterinary Services. 2018. "Treat dogs with kindness and sensitivity and protect yourself from rabies". [<http://www.govs.gov.eg/FrontEnd/ar/Publications.aspx>]. Accessed 29 January 2021.
- [2] World Health Organization Regional Office for the Eastern Mediterranean. 2017. "Summary report on the Regional consultative meeting on the Emerging and Dangerous Pathogens Laboratory Network (EDPLN) Cairo, Egypt 22-23 August 2017". [[http://applications.emro.who.int/docs/IC\\_meet\\_rep\\_2018\\_EN\\_20272.pdf?ua=1](http://applications.emro.who.int/docs/IC_meet_rep_2018_EN_20272.pdf?ua=1)]. Accessed 25 January 2021.
- [3] World Health Organization Regional Office for the Eastern Mediterranean. 2016. "Egypt: Health Profile 2015". [[http://applications.emro.who.int/dsaf/EMROPUB\\_2016\\_EN\\_19264.pdf?ua=1](http://applications.emro.who.int/dsaf/EMROPUB_2016_EN_19264.pdf?ua=1)]. Accessed 25 January 2021.
- [4] World Organization for Animal Health (OIE). 2017. "OIE Collaborating Centers Reports Activities". [[http://www.oie.int/fileadmin/Home/fr/Our\\_scientific\\_expertise/colcenterreports/2017/report\\_92\\_2017\\_Emerging\\_and\\_Re-Emerging\\_Zoonotic\\_Diseas\\_UNITED\\_STATES\\_OF\\_AMERICA.pdf](http://www.oie.int/fileadmin/Home/fr/Our_scientific_expertise/colcenterreports/2017/report_92_2017_Emerging_and_Re-Emerging_Zoonotic_Diseas_UNITED_STATES_OF_AMERICA.pdf)]. Accessed 24 January 2021.
- [5] Centers for Disease Control and Prevention. "Global Disease Detection Program: Egypt". [<https://www.cdc.gov/globalhealth/countries/egypt/>]. Accessed 24 January 2021.
- [6] Yosra A. Helmy, et al. 2017. "A Comprehensive Review of Common Bacterial, Parasitic and Viral Zoonoses at the Human-Animal Interface in Egypt". Pathogens Vol. 6
- [3]. [<https://www.ncbi.nlm.nih.gov/pubmed/28754024>]. Accessed 25 January 2021.
- [7] General Authority for Veterinary Services. [<http://www.govs.gov.eg/FrontEnd/ar/Default.aspx>]. Accessed 24 March 2021.
- [8] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 24 January 2021.
- [9] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 24 January 2021.

### 1.2.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that Egypt has a national strategy document that includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans.

The agency assigned to zoonotic diseases in Egypt, the General Organization for Veterinary Services (GOVS) has a document specifically for rabies that was published in 2018 under the name: Treat dogs with kindness and sensitivity and protect yourself from rabies. It discusses how it transmits and how dog owners can avoid the transmission [1]. A review of the Ministry of Agriculture and Land Reclamation, which was inaccessible at the time of research, and the Ministry of Health and Population (MoHP) website did not provide further evidence [2,3].

- [1] The General Organization for Veterinary Services. 2018. "Treat dogs with kindness and sensitivity and protect yourself from rabies". [<http://www.govs.gov.eg/FrontEnd/ar/Publications.aspx>]. Accessed 29 January 2021.
- [2] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.
- [3] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 29 January 2021.

### 1.2.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Egypt has national plans, guidelines, or laws that account for the surveillance and control of multiple zoonotic pathogens of public health concern. The agency assigned to zoonotic diseases in Egypt, the General Organization for Veterinary Services (GOVS) have a document specifically for rabies that was published in 2018 under the name: Treat dogs with kindness and sensitivity and protect yourself from rabies. It discussed how rabies is transmitted and how dog owners can avoid transmission. However, the document does not mention surveillance and control of rabies [1]. According to a report published by the World Health Organization (WHO) in 2017, Egypt has developed, under the Ministry of Health and Population (MoHP), an integrated surveillance system for pneumonia, avian influenza, severe acute respiratory infections and influenza-like illness, all reporting to the Central Public Health Laboratory. The system links community-based surveillance, health care facilities at several levels and laboratories. It builds on a strong collaboration between public health and veterinary sectors, notably in sharing information, and in performing joint risk assessments and joint field investigations. However, the document that prescribes the surveillance process couldn't be found and there is no mention of control in the WHO report [2]. The WHO's Health Profile for Egypt, published in 2016, notes that all levels of the health system have the Core Capacities of preparedness, detection, surveillance, investigation and response to public health events and that all health facilities in the public sector are involved in notification of targeted diseases, including acid-fast bacilli, fever and rash surveillance, as well as in the reporting and management of any emerging diseases or unusual public health event, such as preparedness for Ebola virus disease, Middle East respiratory syndrome coronavirus and avian influenza [3]. However, according to an academic study published in the Pathogens journal in 2017, Egypt faces a gap of knowledge regarding the epidemiology of zoonotic diseases in different localities in Egypt, which hinders accurate assessment of the human health burden. Surveillance activity is high for some viral diseases such as influenza and MERS but is still weak or neglected for others particularly at the human-animal interface. The report concludes that there is an urgent need for collaborative surveillance and intervention plans for the control of zoonotic diseases in Egypt [4]. A review of the General Authority of Veterinary Services, the Ministry of Agriculture and Land Reclamation (which was inaccessible by the time of the research) and the MoHP websites has not provided further evidence [5,6,7].

[1] The General Organization for Veterinary Services. 2018. "Treat dogs with kindness and sensitivity and protect yourself from rabies". [<http://www.govs.gov.eg/FrontEnd/ar/Publications.aspx>]. Accessed 29 January 2021.

[2] World Health Organization Regional Office for the Eastern Mediterranean. 2017. "Summary report on the Regional consultative meeting on the Emerging and Dangerous Pathogens Laboratory Network (EDPLN) Cairo, Egypt 22-23 August 2017". [[http://applications.emro.who.int/docs/IC\\_meet\\_rep\\_2018\\_EN\\_20272.pdf?ua=1](http://applications.emro.who.int/docs/IC_meet_rep_2018_EN_20272.pdf?ua=1)]. Accessed 25 January 2021.

[3] World Health Organization Regional Office for the Eastern Mediterranean. 2016. "Egypt: Health Profile 2015". [[http://applications.emro.who.int/dsaf/EMROPUB\\_2016\\_EN\\_19264.pdf?ua=1](http://applications.emro.who.int/dsaf/EMROPUB_2016_EN_19264.pdf?ua=1)]. Accessed 25 January 2021.

[4] Yosra A. Helmy, et al. 2017. "A Comprehensive Review of Common Bacterial, Parasitic and Viral Zoonoses at the Human-Animal Interface in Egypt". Pathogens Vol. 6

[3]. [<https://www.ncbi.nlm.nih.gov/pubmed/28754024>]. Accessed 25 January 2021.

[5] General Authority for Veterinary Services. [<http://www.govs.gov.eg/FrontEnd/ar/Default.aspx>]. Accessed 25 March 2021.

[6] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 24 January 2021.

[7] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 25 January 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: 0**

There is insufficient publicly available evidence that Egypt has a unit dedicated to zoonotic diseases that functions across ministries. While there is some evidence of committees present that undertake some of the functions of a zoonotic disease unit, there is no public evidence of a permanent unit in place with dedicated staff and resources to take on this role.





the research wasn't accessible) websites has not provided any further evidence. [6, 7]

- [1] Privacy International. January 2019. "State of Privacy Egypt". [<https://privacyinternational.org/state-privacy/1001/state-privacy-egypt#righttoprivacy>]. Accessed 29 January 2021.
- [2] DLA Piper. 2017. "Egypt". [<https://www.dlapiperdataprotection.com/index.html?t=law&c=EG>]. Accessed 29 January 2021.
- [3] Government of Egypt. 2014. "Egyptian Constitution. Constitute Project". [[https://www.constituteproject.org/constitution/Egypt\\_2014.pdf](https://www.constituteproject.org/constitution/Egypt_2014.pdf)]. Accessed 29 January 2021.
- [4] Lexis Middle East. 12 August 2018. "Weekly Spotlight: Egyptian Draft Data Protection Law Approved". [<https://www.lexis.ae/2018/08/12/egypt-draft-data-protection-law-approved/>]. Accessed 29 January 2021.
- [5] Egypt Today. 7 August 2018. "Cabinet approves draft law protecting personal data". [<http://www.egypttoday.com/Article/2/55513/Cabinet-approves-draft-law-protecting-personal-data>]. Accessed 29 January 2021.
- [6] Ministry of Health and Population. [<http://www.mohep.gov.eg/Default.aspx>]. Accessed 29 January 2021.
- [7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

### 1.2.2c

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that Egypt conducts surveillance of zoonotic diseases in wildlife across the country.

While the Ministry of Environment (MoE) is mandated to preserve the country's natural resource base and biodiversity with the long-term goal of minimizing health hazards and improving the general quality of life, there is no evidence that the Ministry conducts surveillance of zoonotic diseases in wildlife. [1] The MoE has a nature conservation section on the website. However, there is no information on surveillance activities in wildlife being conducted. [2]

A review of the Ministry of Health and Population, the Ministry of Agriculture and Land Reclamation (which was inaccessible at the time of the research), and the General Authority for Veterinary Services websites has not yielded any further evidence. [3, 4, 5] A review of online sources has yielded some evidence that surveillance in wildlife is conducted. However, this does not appear to be systematic surveillance nor is it surveillance conducted by a government agency. For example, surveillance was conducted on avian influenza subtypes by faculty at Cairo University in 2012-2013, and on leptospirosis in 2015 also by faculty at Cairo University. [6, 7]

- [1] Ministry of Environment. "Environmental Objectives and Policies". [<http://www.eeaa.gov.eg/en-us/aboutus/aboutministry/policies.aspx>]. Accessed 29 January 2021.
- [2] Ministry of Environment. "Nature Conservation". [<http://www.eeaa.gov.eg/en-us/topics/nature.aspx>]. Accessed 29 January 2021.
- [3] Ministry of Health and Population. [<http://www.mohep.gov.eg/Default.aspx>]. Accessed 29 January 2021.
- [4] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 24 January 2021.
- [5] General Authority for Veterinary Services. [<http://www.govs.gov.eg/FrontEnd/ar/Default.aspx>]. Accessed 29 January 2021.
- [6] Shakal MA, et al. 2013. "Surveillance on Avian Influenza H5N1 and H9N2 Subtypes In Egypt 2012-2013". Poultry, Fisheries & Wildlife Sciences". [<https://www.longdom.org/open-access/surveillance-on-avian-influenza-hn-and-hn-subtypes-in-egypt-pfw.1000111.pdf>]. Accessed 29 January 2021.
- [7] Samir A, et al. 2015. "Leptospirosis in animals and human contacts in Egypt: broad range surveillance". Revista de

Sociedade Brasileira de Medicina Tropical Vol. 48

[3]. [https://www.ncbi.nlm.nih.gov/pubmed/26108004]. Accessed 29 January 2021.

### 1.2.3 International reporting of animal disease outbreaks

#### 1.2.3a

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

Yes = 1, No = 0

Current Year Score: 0

2019

OIE WAHIS database

### 1.2.4 Animal health workforce

#### 1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: 62.76

2019

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 publicly available evidence that Egypt has a national plan or other legislation or regulation on zoonotic disease that includes a mechanism for working with the private sector in controlling or responding to zoonosis.

There is only evidence that Egypt is part of a program administered by the Food and Agriculture Organization that aims to incorporate the private sector with other stakeholders in preventing and discovering zoonotic diseases. However, there is no evidence on whether this has happened already or not, or the mechanisms through which the private sector is included. [1]

A review of online sources including the websites of the General Authority of Veterinary Services, the Ministry of Agriculture and Land Reclamation (which was inaccessible at the time of research), and the Ministry of Health and Population (MoHP), including the MoHP's Strategic Planning Sector, has not provided evidence that such a plan, legislation or regulation is in place. [2, 3, 4, 5] A review of the MoHP's plan for combatting avian influenza for the years 2014 to 2016 has not provided any evidence. [6] A review of Egypt's Sustainable Development Vision 2030 Strategy for health has also not provided any evidence. [7]

[1] Masrawy. 2021. "FAO and Veterinary Services develop a plan for emerging animal diseases threats". [https://rb.gy/kk95de]. Accessed 24 January 2021.

[2] General Authority for Veterinary Services. [http://www.govs.gov.eg/FrontEnd/ar/Default.aspx]. Accessed 24 January 2021.

[3] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg]. Last attempt to access 24 January 2021.

[4] Ministry of Health and Population. [http://www.moHP.gov.eg/Default.aspx]. Accessed 24 January 2021.

[5] Ministry of Health and Population. "Strategic Planning Sector".

[http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=55&&SectorCode=3]. Accessed 24 January 2021.

[6] Ministry of Health and Population. 2014. "Plan to Combat Avian Influenza".

[http://www.moHP.gov.eg/UserFiles/LibraryFiles/605869.pdf]. Accessed 24 January 2021.

[7] Sustainable Development Strategy. 2015. "Egypt Vision 2030 Goals and KPIs. Health strategy for the vision of Egypt 2030". [http://www.consulateofegyptohouston.com/ar/wp-content/uploads/2015/03/Goals-and-KPIs.pdf]. Accessed 31 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 insufficient evidence that Egypt 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. According to SciDev, The Ministry of Environment (MoE) has a designated department for medical and electronic waste. This department tracks the incoming waste from all health facilities and ensures the safety of the receipt and delivery process, in addition to monitoring their quantities. According to the department's head, there is a designated person that updates the department's database including the quantity of waste, the time of receipt and the facility it came from. [1] However, there is no record that includes all facilities in which especially dangerous pathogens and toxins are stored or processed. A review of Ministry of Health and population, the Ministry of Defense, and the Ministry of Agriculture and Land Reclamation (which at the time of the research was inaccessible), Central

Health Laboratories (which at the time of the research was inaccessible), the VERTIC database and the National Center for Research's Egyptian Microbial Culture Collections Network didn't yield further evidence. [2,3,4,5] Furthermore, Egypt is a signatory state to the Biological Weapons Convention. However, there is no evidence that Confidence Building Measures have been submitted yet. [6]

- [1] Sci Dev. 2020. "Tendency to accentuate hospital waste due to Covid-19". [https://www.scidev.net/mena/news/aggravated-procedures-waste-covid-19-hospitals/]. Accessed 29 January 2021.
- [2] Ministry of Health and Population. [http://www.mohp.gov.eg/Default.aspx]. Accessed 29 January 2021.
- [3] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg]. Last attempt to access 29 January 2021.
- [4] Ministry of Defense. [https://www.mod.gov.eg/ModWebSite/Default.aspx]. Accessed 29 January 2021.
- [5] Egyptian Microbial Culture Collections Network. [http://www.emccn.eg.net/index.php/en/]. Accessed 29 January 2021.
- [6] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/]. Accessed March 6 2021.
- [7] Biological Weapons Convention. "States Parties". [https://bwc-ecbm.unog.ch/browse]. Accessed 29 January 2021.

### 1.3.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence to determine whether Egypt 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.

Egypt has Central Health Laboratories. However, the link to the Central Health Laboratories website was not working during the time of access (January 29th 2021) [1].

Egypt also has an Egyptian Biosafety Association (EGBSA), which is referred to on several websites including the International Federation of Biosafety Associations (IFBA). However, the link to the EGBSA website was not working during the time of access (January 29, 2021) [2]. The EGBSA have a Facebook page. However, the link provided on the Facebook page was also not working [3].

Several reports, including a publication by the Global Agricultural Information Network (GAIN) in 2018, note the absence of a biosafety framework and biosafety legislation. No mention is made regarding biosecurity [4]. The GAIN report also mentions the existence of a National Biosafety Committee. However, it also notes that the Committee has not met since 2014 and it does not appear as though the Committee has a website [4].

Egypt is a signatory state to the Biological Weapons Convention. However, there is no evidence that Confidence Building Measures have been submitted yet [5].

A review of the VERTIC database, the Ministry of Health and Population, the Ministry of Agriculture and Land Reclamation and the Ministry of Defense websites has not provided any evidence that such legislation related to biosecurity is in place [6,7,8,9].

[1] Central Health Laboratories. [http://www.healthlabs.net/]. Last attempt to access 29 January 2021.

[2] International Federation of Biosafety Associations. "Member Associations".

[https://www.internationalbiosafety.org/index.php/ifba-members/ifba-membership/member-associations]. Accessed 24 March 2021.

- [3] Facebook. Egyptian Biosafety Association Egybsa. [<https://www.facebook.com/egybsa/>]. Accessed 29 January 2021.
- [4] Global Agricultural Information Network (GAIN). 2018. "Egypt: Agricultural Biotechnology Annual 2018 - Egypt Needs a Biosafety Framework for Agriculture Biotechnology". [[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_10-11-2018.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_10-11-2018.pdf)]. Accessed 29 January 2021.
- [5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.
- [6] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed 6 March 2021.
- [7] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 29 January 2021.
- [8] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.
- [9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 2021.

### 1.3.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence to determine whether Egypt has an established agency responsible for the enforcement of biosecurity legislation and regulations. It is also unclear whether Egypt has such regulations in place.

Egypt has Central Health Laboratories. However, the link to the Central Health Laboratories website was not working during the time of access (January 29th 2021) [1].

Egypt also has an Egyptian Biosafety Association (EGBSA), which is referred to on several websites including the International Federation of Biosafety Associations (IFBA). However, the link to the EGBSA website was not working during the time of access (January 29, 2021) [2]. The EGBSA have a Facebook page. However, the link provided on the Facebook page was also not working [3].

Several reports, including a publication by the Global Agricultural Information Network (GAIN) in 2018, note the absence of a biosafety framework and biosafety legislation. No mention is made regarding biosecurity [4]. The GAIN report also mentions the existence of a National Biosafety Committee. However, it also notes that the Committee has not met since 2014 and it does not appear as though the Committee has a website [4].

Egypt is a signatory state to the Biological Weapons Convention. However, there is no evidence that Confidence Building Measures have been submitted yet [5]. A review of the VERTIC database, the Ministry of Health and Population, the Ministry of Agriculture and Land Reclamation and the Ministry of Defense websites has not provided any further evidence [6, 7, 8, 9].

[1] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 29 January 2021.

[2] International Federation of Biosafety Associations. "Member Associations".

[<https://www.internationalbiosafety.org/index.php/ifba-members/ifba-membership/member-associations>]. Accessed 24 March 2021.

[3] Facebook. Egyptian Biosafety Association Egybsa. [<https://www.facebook.com/egybsa/>]. Accessed 29 January 2021.

[4] Global Agricultural Information Network (GAIN). 2018. "Egypt: Agricultural Biotechnology Annual 2018 - Egypt Needs a Biosafety Framework for Agriculture Biotechnology".

[[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_10-11-2018.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_10-11-2018.pdf)].

2018.pdf]. Accessed 29 January 2021.

[5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[6] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed 6 March 2021.

[7] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[8] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 2021.

### 1.3.1d

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that indicates that Egypt has taken action to consolidate its inventories of dangerous pathogens and toxins into a minimum number of facilities. Egypt has a Central Health Laboratory. However the link to its website was not working during the time of access (January 29th 2021) [1]. A review of the websites of the Ministry of Health and Population (MoHP), the Ministry of Agriculture and Land Reclamation website, which was inaccessible at the time of the research and the Verification, Research, Training and Information Center (VERTIC) database has yielded no evidence that a record of these facilities exists, or of actions taken to consolidate inventories [2, 3, 4]. A review of online sources as well as the websites of several accredited laboratories, including Alfa Laboratories and Cairo Scan Radiology & Labs has also not provided any evidence to suggest that a centralized record exists listing these facilities or their inventories, nor are the inventories listed on the websites of these facilities [5, 6, 7]. Furthermore, Egypt is a signatory state to the Biological Weapons Convention however there is no evidence that Confidence Building Measures have been submitted yet [8].

[1] Central Health Laboratories. "About us". [<http://www.healthlabs.net/Index.aspx?uc=../UI/Links/AboutUs>]. Last attempt to access 29 January 2021.

[2] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[3] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[4] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed 6 March 2021.

[5] Egyptian Accreditation Council. "Accredited CABs: Medical Labs".

[[http://www.egac.gov.eg/certificates.php?type=medical\\_labs&status=Accredited](http://www.egac.gov.eg/certificates.php?type=medical_labs&status=Accredited)]. Accessed 29 January 2021.

[6] Alfa Laboratories. "Test Menu". [<http://www.alfalaboratory.com/index.php/test-menu>]. Accessed 29 January 2021.

[7] Cairo Scan Radiology & Labs. "Lab: PCR". [[http://www.cairoscan.com.eg/Services\\_/Lab](http://www.cairoscan.com.eg/Services_/Lab)]. Accessed 29 January 2021.

[8] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 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 insufficient publicly available evidence Egypt has in-country capacity to conduct Polymerase Chain Reaction (PCR) diagnostic testing for anthrax or Ebola. According to a news release posted by the American Chamber of Commerce in Egypt in December of 2001 following the global anthrax scare, a medical unit consisting of epidemic specialists exists to provide treatment should it be needed, while the Cairo located US Naval Medical Research Unit -3 (NAMRU-3), is charged with analyzing suspicious substances [1]. However, A review of NAMRU-3's website didn't provide evidence for a PCR test for either Anthrax or Ebola[2]. Moreover, A research paper was published in 2017 under the title: "External quality assessment study for Ebolavirus PCR-diagnostic promotes international preparedness during the 2014-2016 Ebola outbreak in West Africa" that had a contribution from the International Emerging Infections Program-Damanhour Laboratory among other international agencies, however, it's unclear if the laboratory had the capacity of doing PCR tests [3]. A review of online sources as well as the testing services offered by several accredited laboratories, including Alfa Laboratories and Cairo Scan Radiology & Labs has shown that Egypt is able to conduct PCR testing on a range of diseases and pathogens, however there is no evidence of PCR testing capacity for anthrax or Ebola [4, 5, 6]. The Egyptian ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research [7]. A review of the Ministry of Health, Ministry of Defense and Population websites has not yielded any further evidence [8,9].

- [1] American Chamber of Commerce in Egypt. 2001. "Reports: Anthrax scares hit Egypt".  
[<https://www.amcham.org.eg/publications/business-monthly/issues/12/December-2001/1797/anthrax-scares-hit-egypt>]. Accessed 29 January 2021.
- [2] US Naval Medical Research Unit-3 (NAMRU-3) [<https://www.med.navy.mil/sites/nmrc/Cairo/Pages/HomeCairo.aspx>]. Accessed 7 March 2021.
- [3] Ellerbrok. H, et al. 2017 "External quality assessment study for ebolavirus PCR-diagnostic promotes international preparedness during the 2014- 2016 Ebola outbreak in West Africa". PLoS Negl Trop Dis 11 [5] : e0005570. [<https://doi.org/10.1371/journal.pntd.0005570>]. Accessed March 7 2021.
- [4] Egyptian Accreditation Council. "Accredited CABs: Medical Labs".  
[[http://www.egac.gov.eg/certificates.php?type=medical\\_labs&status=Accredited](http://www.egac.gov.eg/certificates.php?type=medical_labs&status=Accredited)]. Accessed 29 January 2021.
- [5] Alfa Laboratories. "Test Menu". [<http://www.alfalaboratory.com/index.php/test-menu>]. Accessed 29 January 2021.
- [6] Cairo Scan Radiology & Labs. "Lab: PCR". [[http://www.cairoscan.com.eg/Services\\_/Lab](http://www.cairoscan.com.eg/Services_/Lab)]. Accessed 29 January 2021.
- [7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.
- [8] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 29 January 2021.
- [9] Ministry of Defense. [<https://www.mod.gov.eg/ModWebSite/Default.aspx>]. Accessed March 7 2021.

## 1.3.2 Biosecurity training and practices

### 1.3.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that Egypt has a standardized approach to biosecurity training in place for personnel working in facilities holding dangerous pathogens, toxins or biological materials. Egypt has a Central Health Laboratory. However the link to its website was not working during the time of access (January 29th 2021) [1]. Egypt also has an Egyptian Biosafety Association (EGBSA), which is referred to on several websites including the International Federation of Biosafety Associations (IFBA), however the link to the EGBSA website was not working during the time of access (January 29, 2021) [2]. The EGBSA have a Facebook page, however the link provided there was also not working [3]. The EGBSA was featured in the

64th Annual Biosafety and Biosecurity Conference, the presenters said that EGBSA has created a template with biosafety training materials and biosecurity practical examples for professional organizations. However, this is not a governmental effort and it's not mandated. [4]. Several reports including a publication by the Global Agricultural Information Network (GAIN) in 2018 notes the absence of a biosafety framework and biosafety legislation (no mention is made regarding biosecurity) [5]. The GAIN report also mentions the existence of a National Biosafety Committee, however it also notes that the Committee has not met since 2014 and it does not appear as though the Committee has a website [5]. Egypt is a signatory state to the Biological Weapons Convention (BWC) however there is no evidence that Confidence Building Measures have been submitted yet [6]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research[7]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, Ministry of Health and Population, and Ministry of Defense websites did not provide any further evidence [8, 9, 10].

[1] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 29 January 2021.

[2] International Federation of Biosafety Associations. "Member Associations".

[<https://www.internationalbiosafety.org/index.php/ifba-members/ifba-membership/member-associations>]. Accessed 24 March 2021.

[3] Egyptian Biosafety Association (Egybsa). "Facebook page". [<https://www.facebook.com/egybsa/>]. Accessed 29 January 2021.

[4] 64th Annual Biosafety and Biosecurity Conference. 2017. "Using a Mobile Training Kit to Promote Biosafety, Biosecurity and EGBSA (ID #21)". [[https://absaconference.org/wp-content/uploads/2017/12/ABSA2018\\_Poster21\\_Zaki\\_Emad.pdf](https://absaconference.org/wp-content/uploads/2017/12/ABSA2018_Poster21_Zaki_Emad.pdf)]. Accessed 29 January 2021.

[5] Global Agricultural Information Network (GAIN). 2018. "Egypt: Agricultural Biotechnology Annual 2018 - Egypt Needs a Biosafety Framework for Agriculture Biotechnology".

[[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_10-11-2018.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_10-11-2018.pdf)]. Accessed 29 January 2021.

[6] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[8] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

[9] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[10] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 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 insufficient publicly available evidence that Egypt has regulations or licensing conditions that specify personnel with access to dangerous pathogens, toxins or biological materials must be subject to any of the four checks. Egypt has a Central Health Laboratory. However the link to its website was not working during the time of access (January 29th 2021) [1]. Egypt also has an Egyptian Biosafety Association (EGBSA), which is referred to on several websites including the International

Federation of Biosafety Associations (IFBA), however the link to the EGBSA website was not working during the time of access (January 24, 2021) [2]. The EGBSA have a Facebook page, however the link provided there was also not working [3]. However, it cannot be determined whether EGBSA provide regulations or licensing conditions for personnel with access to dangerous pathogens. Several reports including a publication by the Global Agricultural Information Network (GAIN) in 2018 notes the absence of a biosafety framework and biosafety legislation (no mention is made regarding biosecurity) [4]. Egypt is a signatory state to the Biological Weapons Convention (BWC), however, there is no evidence that Confidence Building Measures have been submitted yet [5]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research[6]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, the Ministry of Health and Population, , and the Ministry of Defense websites did not provide any further evidence [7, 8, 9].

[1] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 29 January 2021.

[2] International Federation of Biosafety Associations. "Member Associations".

[<https://www.internationalbiosafety.org/index.php/ifba-members/ifba-membership/member-associations>]. Accessed 24 March 2019.

[3] Egyptian Biosafety Association (Egybsa). "Facebook page". [<https://www.facebook.com/egybsa/>]. Accessed 29 January 2021.

[4] Global Agricultural Information Network (GAIN). 2018. "Egypt: Agricultural Biotechnology Annual 2018 - Egypt Needs a Biosafety Framework for Agriculture Biotechnology".

[[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_10-11-2018.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_10-11-2018.pdf)]. Accessed 29 January 2021.

[5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[6] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[7] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

[8] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 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**

There is insufficient publicly available evidence that Egypt has national regulations on the safe and secure transport of infectious substances (Category A and B). The Ministry of Environment has a manual on how to handle medical waste. In this manual, they mention that infectious medical waste should be packed in red bags to be consistent with global standards and then tie it with self-locked plastic caps after being under 75% of their capacities. However, there is no specific mentioning for category A or B [1]. Egypt has a Central Health Laboratory. However the link to its website was not working during the time of access (January 29th 2021) [2]. A review of the Ministry of Health and Population, the Ministry of Agriculture and Land Reclamation, which was inaccessible at the time of the research, and the Ministry of Higher Education and Scientific Research, the Ministry of Transport, which was inaccessible at the time of the research and the Verification, Research, Training and Information Center (VERTIC) Database websites did not provide any further evidence [3, 4, 5, 6, 7, 8]. Furthermore, Egypt is a signatory state to the Biological Weapons Convention (BWC), however, there is no evidence that

Confidence Building Measures have been submitted yet [9].

- [1] Ministry of Environment. "Egyptian Environmental Affairs Agency. Collection, treatment and disposal of medical waste". [[http://www.eeaa.gov.eg/portals/0/eeaaReports/N-env\\_waste/CH11\\_A.PDF](http://www.eeaa.gov.eg/portals/0/eeaaReports/N-env_waste/CH11_A.PDF)]. Accessed 30 January 2021.
- [2] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 30 January 2021.
- [3] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 30 January 2021.
- [4] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg/>]. Last attempt to access 30 January 2021.
- [5] Ministry of Higher Education and Scientific Research. [<http://portal.mo hesr.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 January 2021.
- [6] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 7 March 2021.
- [7] Ministry of Transport. [<http://www.mot.gov.eg/>]. Last attempt to access March 7 2021.
- [8] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 7 2021.
- [9] Biological Weapons Convention. Browse States Parties. [<https://bwc-ecbm.unog.ch/browse>]. Accessed 30 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 insufficient publicly available evidence that Egypt has a national legislation or regulation or other guidance in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins and pathogens with pandemic potential. Egypt has a Central Health Laboratory. However the link to its website was not working during the time of access (January 29th 2021) [1]. Egypt also has an authority for the surveillance of imports and exports under the Ministry of Trade and Industry, they mention on their website that they do microbiological tests without any further specifications [2]. Moreover, the Ministry of Health and Population has a unit to surveil and monitor infections, but they didn't specify on their website any specific procedures for he cross-border transfer and end-user screening of pathogens [3]. The Ministry of Health issued a statement in 2019 after being accused that they import AIDS-contaminated blood that all blood samples get tested for Hepatitis C and AIDS before landing [4]. Furthermore, Egypt is a signatory state to the Biological Weapons Convention (BWC), however, there is no evidence that Confidence Building Measures have been submitted yet [5]. A review of the Ministry of Higher Education and Scientific Research, the Ministry of Agriculture and Land Reclamation, which was inaccessible at the time of the research, the Verification, Research, Training and Information Center (VERTIC) database and the Ministry of Defense websites did not provide any further evidence [6, 7, 8, 9].

- [1] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 29 January 2021.
- [2] General Authority for the Monitoring of Imports and Exports. [<https://www.goEIC.gov.eg/ar/pages/default/view/id/89/m/6-13>]. Accessed 30 January 2021.
- [3] Ministry of Health and Population. "General Administration for Pandemics and Surveillance". [<http://www.mo hp.gov.eg/SectorServices.aspx?Deptcode=39&&SectorCode=6>]. Accessed 30 January 2021.
- [4] Dostoor. "Ministry of Health and Population: The import of blood units is carried out according to strict control". [<https://www.dostoor.org/2906536>]. Accessed 30 January 2021.
- [5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[6] Ministry of Higher Education and Scientific Research. [<http://portal.mohe.sr.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 January 2021.

[7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 30 January 2021.

[8] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 7 2021.

[9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 30 January 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 insufficient publicly available evidence that Egypt has national biosafety legislation and/or regulations in place.

The closest to biosafety regulations that Egypt has at the moment is Article 210 of the Occupational Health and Safety Law. It affirms the Government's commitment to protecting workers from risks of infections from bacteria, viruses, fungi, parasites, or biological hazards for professionals who are exposed to such materials due to the nature of their work, with explicit reference to medical care, analysis, and examinations [1].

Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 29th 2021) [2]. Egypt also has an Egyptian Biosafety Association (EGBSA), which is referred to on several websites including the International Federation of Biosafety Associations (IFBA), however, the link to the EGBSA website was not working during the time of access (January 29th, 2021) [3]. The EGBSA has a Facebook page, however, the link provided there was also not working [4].

Several reports including a publication by the Global Agricultural Information Network (GAIN) in 2018 notes the absence of a biosafety framework and biosafety legislation (no mention is made regarding biosecurity) [5]. The GAIN report also mentions the existence of a National Biosafety Committee, however, it also notes that the Committee has not met since 2014 and it does not appear as though the Committee has a website [5].

Egypt is a signatory state to the Biological Weapons Convention (BWC) however there is no evidence that Confidence Building Measures have been submitted yet [6]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research [7]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, Ministry of Health and Population, and Ministry of Defense websites did not provide any further evidence [8, 9, 10].

[1] Government of Egypt. "Occupational Health and Safety in the Work Environment".

[[https://www.egypt.gov.eg/arabic/laws/labour/Law\\_health/F\\_worklaw\\_in.aspx](https://www.egypt.gov.eg/arabic/laws/labour/Law_health/F_worklaw_in.aspx)]. Accessed 30 January 2021

[2] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 29 January 2021.

[3] International Federation of Biosafety Associations. "Member Associations".

[<https://www.internationalbiosafety.org/index.php/ifba-members/ifba-membership/member-associations>]. Accessed 24 March 2021.

- [4] Egyptian Biosafety Association (Egybsa). "Facebook page". [<https://www.facebook.com/egybsa/>]. Accessed 29 January 2021.
- [5] Global Agricultural Information Network (GAIN). 2018. "Egypt: Agricultural Biotechnology Annual 2018 - Egypt Needs a Biosafety Framework for Agriculture Biotechnology". [[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_10-11-2018.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_10-11-2018.pdf)]. Accessed 29 January 2021.
- [6] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.
- [7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.
- [8] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.
- [9] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 29 January 2021.
- [10] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 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 publicly available evidence to determine whether Egypt has an established agency responsible for the enforcement of biosafety legislation and regulations. It is also unclear whether Egypt has such regulations in place.

Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 29th, 2021) [1]. Egypt also has an Egyptian Biosafety Association (EGBSA), which is referred to on several websites including the International Federation of Biosafety Associations (IFBA), however, the link to the EGBSA website was not working during the time of access (January 29, 2021) [2]. The EGBSA has a Facebook page, however, the link provided there was also not working [3].

Several reports including a publication by the Global Agricultural Information Network (GAIN) in 2018 notes the absence of a biosafety framework and biosafety legislation (no mention is made regarding biosecurity) [4]. The GAIN report also mentions the existence of a National Biosafety Committee, however, it also notes that the Committee has not met since 2014 and it does not appear as though the Committee has a website [4].

Egypt is a signatory state to the Biological Weapons Convention (BWC), however, there is no evidence that Confidence Building Measures have been submitted yet [5]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research [6]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, Ministry of Health and Population, and Ministry of Defense websites did not provide any further evidence [7, 8, 9].

[1] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 29 January 2021.

[2] International Federation of Biosafety Associations. "Member Associations".

[<https://www.internationalbiosafety.org/index.php/ifba-members/ifba-membership/member-associations>]. Accessed 24 March 2021.

[3] Egyptian Biosafety Association (Egybsa). "Facebook page". [<https://www.facebook.com/egybsa/>]. Accessed 29 January 2021.

[4] Global Agricultural Information Network (GAIN). 2018. "Egypt: Agricultural Biotechnology Annual 2018 - Egypt Needs a Biosafety Framework for Agriculture Biotechnology".

[[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_10-11-2018.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_10-11-2018.pdf)]. Accessed 29 January 2021.

[5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[6] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[7] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

[8] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 2021

## 1.4.2 Biosafety training and practices

### 1.4.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that Egypt has a standardized approach to biosafety training in place for personnel working in facilities holding dangerous pathogens, toxins or biological materials.

Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 29th, 2021) [1]. Egypt also has an Egyptian Biosafety Association (EGBSA), which is referred to on several websites including the International Federation of Biosafety Associations (IFBA), however, the link to the EGBSA website was not working during the time of access (January 29th, 2021) [2]. The EGBSA has a Facebook page, however, the link provided there was also not working [3]. The EGBSA was featured in the 64th Annual Biosafety and Biosecurity Conference, the presenters said that EGBSA has created a template with biosafety training materials and biosecurity practical examples for professional organizations. However, this is not a governmental effort and it's not mandated. [4].

Several reports including a publication by the Global Agricultural Information Network (GAIN) in 2018 notes the absence of a biosafety framework and biosafety legislation (no mention is made regarding biosecurity) [5]. The GAIN report also mentions the existence of a National Biosafety Committee, however, it also notes that the Committee has not met since 2014 and it does not appear as though the Committee has a website [5].

Egypt is a signatory state to the Biological Weapons Convention however there is no evidence that Confidence Building Measures have been submitted yet [6]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research [7]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, Ministry of Health and Population, Ministry of Defense and Ministry of Higher Education and Scientific Research websites did not provide any further evidence [8, 9, 10,11].

[1] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 29 January 2021.

[2] International Federation of Biosafety Associations. "Member Associations".

[<https://www.internationalbiosafety.org/index.php/ifba-members/ifba-membership/member-associations>]. Accessed 24 March 2021.

[3] Egyptian Biosafety Association (Egybsa). "Facebook page". [<https://www.facebook.com/egybsa/>]. Accessed 29 January

2021.

[4] 64th Annual Biosafety and Biosecurity Conference. 2017. "Using a Mobile Training Kit to Promote Biosafety, Biosecurity and EGBSA (ID #21)". [[https://absaconference.org/wp-content/uploads/2017/12/ABSA2018\\_Poster21\\_Zaki\\_Emad.pdf](https://absaconference.org/wp-content/uploads/2017/12/ABSA2018_Poster21_Zaki_Emad.pdf)]. Accessed 29 January 2021.

[5] Global Agricultural Information Network (GAIN). 2018. "Egypt: Agricultural Biotechnology Annual 2018 - Egypt Needs a Biosafety Framework for Agriculture Biotechnology". [[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_10-11-2018.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_10-11-2018.pdf)]. Accessed 29 January 2021.

[6] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[7] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[8] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[9] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

[10] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 2021.

[11] Ministry of Higher Education and Scientific Research. [<http://portal.moHESR.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 January 2021

## 1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

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

#### 1.5.1a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that Egypt has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, and/or pathogens with pandemic potential and/or other dual-use research.

The Ministry of Health and Population (MoHP) has a Central Administration for Health Research and Development. The administration's webpage states the MoHP maintains regulatory oversight over all research activities (clinical and statistical studies) conducted under the auspices of the MoHP in the field of research or health development [1]. However, no explicit reference is made regarding dual-use research or such research being conducted by entities not under the auspices of the MoHP.

Furthermore, according to a World Health Organization's Health System Profile for Egypt published in 2006, The MoHP regulates the process of research through the ministerial decree No 95 issued in May 2005. Under the ministerial decree, the scientific health researchers are restricted from carrying out their research before being submitted to the Central Administration for Research and Health Development, the decree applies whether the research is carried out by different sectors of MOHP, hospitals, organizations, or associations belonging to MOHP or in partnership with others. The policy applies also to clinical research with therapeutics. The Central Administration for Research and Health Development is responsible for submitting the protocols of these researches to scientific and ethical committees [2].

The MoHP website contains guideline documents on research ethics committees, and the research ethics committee follow up report contains a section where researchers are required to fill out a section detailing suspected unexpected serious adverse reactions, however, this appears to be a self-reporting mechanism rather than an indication of regulatory oversight [1, 3, 4].

Egypt is a signatory state to the Biological Weapons Convention however there is no evidence that Confidence Building Measures have been submitted yet [5]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research [6]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, Ministry of Health and Population, Ministry of Defense and Ministry of Higher Education and Scientific Research websites did not provide any further evidence [7,8, 9, 10].

[1] Ministry of Health and Population. "Administration for Health Research and Development".

[<http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=24&&SectorCode=4>]. Accessed 30 January 2021.

[2] World Health Organization. 2006. "Health System Profile: Egypt". [<https://digicollections.net/medicinedocs/#d/s17293e>]. Accessed 30 January 2021.

[3] Ministry of Health and Population. "Administration for Health Research and Development REC MoHP Guidelines".

[<http://www.moHP.gov.eg/UserFiles/Userfiles/24/f2e5e27a-a357-42dd-a0ba-ae29ca3c73a6.pdf>]. Accessed 30 January 2021.

[4] Ministry of Health and Population. "Administration for Health Research and Development REC Follow Up Report".

[<http://www.moHP.gov.eg/UserFiles/Userfiles/24/7ad87f4a-ce81-47fa-a4c8-8787113e3752.docx>]. Accessed 30 January 2021.

[5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[6] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[8] Verification Research, Training and Information Center (VERTIC) Database "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

[9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 2021.

[10] Ministry of Higher Education and Scientific Research. [<http://portal.moHesr.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 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 is no publicly available evidence that Egypt has a legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

The Ministry of Health and Population (MoHP) has a Central Administration for Health Research and Development. The administration's webpage states the MoHP maintains regulatory oversight over all research activities (clinical and statistical studies) conducted under the auspices of the MoHP in the field of research or health development [1]. However, no explicit reference is made regarding dual-use research or such research being conducted by entities not under the auspices of the MoHP.

Furthermore, according to a World Health Organization's Health System Profile for Egypt published in 2006, The MoHP regulates the process of research through the ministerial decree No 95 issued in May 2005. Under the ministerial decree, the scientific health researchers are restricted from carrying out their research before being submitted to the Central Administration for Research and Health Development, the decree applies whether the research is carried out by different sectors of MOHP, hospitals, organizations, or associations belonging to MOHP or in partnership with others. The policy also applies to clinical research with therapeutics. The Central Administration for Research and Health Development is responsible for submitting the protocols of these researches to scientific and ethical committees [2].

The MoHP website contains guideline documents on research ethics committees, and the research ethics committee follow up report contains a section where researchers are required to fill out a section detailing suspected unexpected serious adverse reactions, however, this appears to be a self-reporting mechanism rather than an indication of regulatory oversight [1, 3, 4].

Egypt is a signatory state to the Biological Weapons Convention however there is no evidence that Confidence Building Measures have been submitted yet [5]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research [6]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, Ministry of Health and Population, Ministry of Defense and Ministry of Higher Education and Scientific Research websites did not provide any further evidence [7,8, 9, 10].

[1] Ministry of Health and Population. "Administration for Health Research and Development".

[<http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=24&&SectorCode=4>]. Accessed 30 January 2021.

[2] World Health Organization. 2006. "Health System Profile: Egypt". [<https://digicollections.net/medicinedocs/#d/s17293e>]. Accessed 30 January 2021.

[3] Ministry of Health and Population. "Administration for Health Research and Development REC MoHP Guidelines".

[<http://www.moHP.gov.eg/UserFiles/Userfiles/24/f2e5e27a-a357-42dd-a0ba-ae29ca3c73a6.pdf>]. Accessed 30 January 2021.

[4] Ministry of Health and Population. "Administration for Health Research and Development REC Follow Up Report".

[<http://www.moHP.gov.eg/UserFiles/Userfiles/24/7ad87f4a-ce81-47fa-a4c8-8787113e3752.docx>]. Accessed 30 January 2021.

[5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[6] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[8] Verification Research, Training and Information Center (VERTIC) Database "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

[9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 2021.

[10] Ministry of Higher Education and Scientific Research. [<http://portal.moHesr.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 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 publicly available evidence that Egypt has an agency responsible for overseeing research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential or dual-use research.

The Ministry of Health and Population (MoHP) has a Central Administration for Health Research and Development. The administration's webpage states the MoHP maintains regulatory oversight over all research activities (clinical and statistical studies) conducted under the auspices of the MoHP in the field of research or health development [1]. However, no explicit reference is made regarding dual-use research or such research being conducted by entities not under the auspices of the MoHP.

Furthermore, according to a World Health Organization's Health System Profile for Egypt published in 2006, The MoHP regulates the process of research through the ministerial decree No 95 issued in May 2005. Under the ministerial decree, the scientific health researchers are restricted from carrying out their research before being submitted to the Central Administration for Research and Health Development, the decree applies whether the research is carried out by different sectors of MOHP, hospitals, organizations, or associations belonging to MOHP or in partnership with others. The policy applies also to clinical research with therapeutics. The Central Administration for Research and Health Development is responsible for submitting the protocols of these researches to scientific and ethical committees [2].

The MoHP website contains guideline documents on research ethics committees, and the research ethics committee follow up report contains a section where researchers are required to fill out a section detailing suspected unexpected serious adverse reactions, however, this appears to be a self-reporting mechanism rather than an indication of regulatory oversight [1, 3, 4].

Egypt is a signatory state to the Biological Weapons Convention however there is no evidence that Confidence Building Measures have been submitted yet [5]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research[6]. A review of the Verification, Research, Training and Information Center (VERTIC) Database, the Ministry of Health and Population, Ministry of Defense and Ministry of Higher Education and Scientific Research websites did not provide any further evidence [7,8, 9, 10].

[1] Ministry of Health and Population. "Administration for Health Research and Development".

[<http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=24&&SectorCode=4>]. Accessed 30 January 2021.

[2] World Health Organization. 2006. "Health System Profile: Egypt". [<https://digicollections.net/medicinedocs/#d/s17293e>]. Accessed 30 January 2021.

[3] Ministry of Health and Population. "Administration for Health Research and Development REC MoHP Guidelines".

[<http://www.moHP.gov.eg/UserFiles/Userfiles/24/f2e5e27a-a357-42dd-a0ba-ae29ca3c73a6.pdf>]. Accessed 30 January 2021.

[4] Ministry of Health and Population. "Administration for Health Research and Development REC Follow Up Report".

[<http://www.moHP.gov.eg/UserFiles/Userfiles/24/7ad87f4a-ce81-47fa-a4c8-8787113e3752.docx>]. Accessed 30 January 2021.

[5] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 29 January 2021.

[6] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 29 January 2021.

[7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 29 January 2021.

[8] Verification Research, Training and Information Center (VERTIC) Database "Egypt profile".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

[9] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 29 January 2021.

[10] Ministry of Higher Education and Scientific Research. [<http://portal.moHesr.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 January 2021.

## 1.5.2 Screening guidance for providers of genetic material

### 1.5.2a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that Egypt has a national legislation, regulation, policy or other guidance in place requiring the screening of synthesized DNA before it is sold.

A report published by the Global Agricultural Information Network (GAIN) in 2017, add that In January of 2017, the Egyptian Ministry of Environment submitted a new biosafety bill to the cabinet. The draft biosafety law encourages the safe utilization of genetically-engineered (GE) products and tools to the maximum extent possible, while pursuing transparency and collaboration with other countries on the safe use of genetically-engineered products. This bill aims to address GE products' impact on socioeconomic considerations and the environment, ensuring the sustainability of local biodiversity [1]. The report states that Egypt requires a functional biosafety framework that implements a transparent and clear policy. Without one, Egypt cannot move forward in the area of biotechnology, and that the bill was being revised by the cabinet's Judicial Reform Committee prior to submission to the Parliament of Egypt for ratification [1].

A review of the laws and decrees issued by the Ministry of Environment does not indicate that this has come into force to date [2]. Egypt is a signatory state to the Biological Weapons Convention, however, there is no evidence that Confidence Building Measures have been submitted yet [3]. A review of the Ministry of Health and Population, Ministry of Agriculture and Land Reclamation, Ministry of Defense, Ministry of Higher Education and Scientific Research, Verification, Research, Training and Information Center (VERTIC) database, National Council of Research Centers and Institutes, National Center for Research and Ministry of Transport websites did not provide evidence of the existence of a such an assessment [4,5,6,7, 8, 9, 10, 11].

- [1] Global Agricultural Information Network (GAIN). 2017. "Egypt: Agricultural Biotechnology Annual 2017 - Egypt Still Searching for a Biosafety Framework for Agriculture Biotechnology". [[https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Cairo\\_Egypt\\_11-16-2017.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Cairo_Egypt_11-16-2017.pdf)]. Accessed 30 January 2021.
- [2] Ministry of Environment. "Laws". [<http://www.eeaa.gov.eg/en-us/laws.aspx>]. Accessed 30 January 2021.
- [3] Biological Weapons Convention. "States Parties". [<https://bwc-ecbm.unog.ch/browse>]. Accessed 18 January 2021.
- [4] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 30 January 2021.
- [5] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg/>]. Last attempt to access 30 January 2021.
- [6] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 30 January 2021.
- [7] Ministry of Higher Education and Scientific Research. [<http://portal.mohe.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 January 2021.
- [8] National Council of Research Centers and Institutes. [<http://www.crci.sci.eg/>]. Accessed 30 January 2021.
- [9] National Center for Research. [<https://www.nrc.sci.eg/>]. Accessed 30 January 2021.
- [10] Ministry of Transport. [<http://mot.gov.eg/en/>]. Accessed 30 January 2021.
- [11] Verification Research, Training and Information Center (VERTIC) Database. "Egypt profile". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/e/>]. Accessed March 6 2021.

## 1.6 IMMUNIZATION

### 1.6.1 Vaccination rates

#### 1.6.1a

Immunization rate (measles/MCV2)

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

Current Year Score: 1

2019

World Health Organization

#### 1.6.1b

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

Yes = 1, No = 0

Current Year Score: 1

2020

OIE WAHIS database

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

## 2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

### 2.1.1 Laboratory testing for detection of priority diseases

#### 2.1.1a

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

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

Current Year Score: 0

There is insufficient evidence that Egypt's national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 World Health Organization (WHO)-defined core tests. [2].

Alfa Laboratory is able to conduct blood and stool cultures on salmonella, the Malaria LDH (rapid) test, the H1N1 (Swine Flu)

polymerase chain reaction (PCR) test, and the Antibiogram (microscopy) for M.tuberculosis (KA) tests [1]. Alfa Laboratory also performs the HIV 1, 2 antibodies (AIDS test), however, they don't perform the serology test for HIV [1].

The WHO also reports that Egypt's laboratory system has the capacity to test for poliovirus, according to a Disease Outbreak News report from 2013. There is evidence also that avian influenza is tested at the Central Public Health Laboratories and NAMRU-3, a WHO reference laboratory according to the WHO in 2012, however it is unclear what tests are conducted on poliovirus [2, 3]. This may be some of Egypt's own core-defined tests but it cannot be confirmed as there is no evidence that Egypt has its own 4 defined tests.

Other laboratories in Egypt, including Al Mokhtabar and Alborg test for Poliovirus using the Anti-Poliovirus Antibodies, Serum test [4,5]. Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 30th, 2021) [6]. A review of the Ministry of Health and Population's website did not provide more evidence [7].

[1] Alfa Laboratories. "Test Menu". [<http://www.alfalaboratory.com/index.php/test-menu>]. Accessed 30 January 2021.

[2] World Health Organization. 2013. "Disease Outbreak News: Poliovirus detected from environmental samples in Egypt". [[https://www.who.int/csr/don/2013\\_02\\_11/en/](https://www.who.int/csr/don/2013_02_11/en/)]. Accessed 30 January 2021.

[3] World Health Organization. 2012. "Disease Outbreak News: Avian influenza situation in Egypt update". [[https://www.who.int/csr/don/2012\\_06\\_07/en/](https://www.who.int/csr/don/2012_06_07/en/)]. Accessed 30 January 2021.

[4] AlMokhtabar Labs. "Test Library". [<https://results.almokhtabar.com/TestLibrary.html>]. Accessed 30 January 2021.

[5] AlBorg Labs. "Test Library". [<https://webresults.alborglab.com/#search-result>]. Accessed 30 January 2021.

[6] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 30 January 2021.

[7] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 30 January 2021.

### 2.1.1b

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

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

**Current Year Score: 0**

There is no evidence of 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.

The Ministry of Health and Population (MoHP) has a strategy document on how to deal with Covid-19 but it doesn't include testing plans [1]. MoHP also has a strategy document on how to deal with infectious diseases generally for people traveling abroad [2]. However, testing is not mentioned in these documents and they are all for already known diseases. Egypt has a Central Health Laboratory Administration. However, the link to its website was not working during the time of access (January 30th, 2021) [2]. A review of The Ministry of Agriculture and Land Reclamation's website was attempted but it was inaccessible at the time of the research [3].

[1] Ministry of Health and Population. "Publications". [<http://www.mo hp.gov.eg/UserFiles/LibraryFiles/567401.pdf>]. Accessed 30 January 2021.

[2] Ministry of Health and Population. "Publications". [<http://www.mo hp.gov.eg/UserFiles/LibraryFiles/696293.doc>]. Accessed 30 January 2021.

[3] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 30 January 2021.

[4] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 30 January 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**

Egypt does have a national laboratory that serves as a reference facility that has received accreditation.

According to the US Centers for Disease Control and Prevention (CDC) in 2016, Egypt's Central Public Health Laboratory (CPHL) is the national reference laboratory [1]. According to the Egyptian Accreditation Council, the CPHL received 15189:2012 accreditation in October 2017 for "clinical chemistry, hormones, hematology, narcotics, therapeutics, tuberculosis, bacteriology, virology, and molecular biology tests [2].

Additionally, the Naval Medical Research Unit Three (NAMRU-3) is a WHO reference laboratory located in Egypt [3, 4]. According to the Naval Medical Research and Development website, NAMRU-3 "is the only laboratory in Africa with an animal facility accredited by the American Association of Accreditation of Laboratory Animal Care. It is the largest DOD overseas laboratory, with bio-safety level 3 bio-containment space and NAMRU-3's clinical laboratory is accredited by the College of American Pathologists [5, 6].

[1] US Centers for Disease Control and Prevention (CDC). 2016. "Decentralizing and Strengthening Egypt's Surveillance Lab System. [<https://www.cdc.gov/globalhealth/healthprotection/fieldupdates/fall-2016/egypt-surveillance-lab.html>]. Accessed 30 January 2021.

[2] Egyptian Accreditation Council. 2017. "Central Health Laboratory Ministry of Health and Population". [<http://www.egac.gov.eg/uploads/directories/certificates/513012.pdf>]. Accessed 30 January 2021.

[3] World Health Organization. 2012. "Disease Outbreak News: Avian influenza situation in Egypt update". [[https://www.who.int/csr/don/2012\\_06\\_07/en/](https://www.who.int/csr/don/2012_06_07/en/)]. Accessed 30 January 2021.

[4] US Embassy and Consulate in Egypt. "US Naval Medical Research Unit No. 3". [<https://eg.usembassy.gov/wp-content/uploads/sites/156/2016/10/NAMRU-3.pdf>]. Accessed 30 January 2021.

[5] Naval Medical Research and Development Enterprise Laboratories. "Naval Medical Research Unit No. 3". [<https://www.med.navy.mil/sites/nmrc/cairo/Pages/HomeCairo.aspx>]. Accessed 30 January 2021.

[6] Naval Medical Research and Development Enterprise Laboratories. "Naval Medical Research Unit No. 3, Cairo: Factsheet". [<https://www.med.navy.mil/sites/nmrc/news/SiteAssets/Pages/Fact-Sheets/NAMRU3.pdf>]. Accessed 30 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**

Egypt has a national laboratory that serves as a reference facility that is subject to external quality assurance review from the Egyptian Accreditation Council (EGAC).

The Central Health Laboratory (CHL) is accredited by the Egyptian Accreditation Council (EGAC) [1]. According to the EGAC, the accreditation process involves pre-assessment and post-assessment annual surveillance visits [2]. EGAC is the national authority for accreditation in Egypt, it was created through a presidential decree number 312/19996 and is headed by the Minister of Trade & Industry[3]. However, there is no evidence that CHL is subject to a foreign quality assurance review. CHL and the Ministry of Agriculture and Land Reclamation websites were inaccessible at the time of the research [4,5]. A review of the Ministry of Health and Population's website didn't provide further evidence [6].

[1] Egyptian Accreditation Council. "Accredited CABs: Medical Labs".

[<http://www.egac.gov.eg/uploads/directories/certificates/513012.pdf>]. Accessed 30 January 2021.

[2] Egyptian Accreditation Council. "Accreditation". [<https://www.egac.gov.eg/egac.php?id=8>]. Accessed 30 January 2021.

[3] Egyptian Accreditation Council. "About Us". [<https://www.egac.gov.eg/egac.php?id=1>]. Accessed March 7 2021.

[4] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 30 January 2021.

[5] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 31 January 2021.

[6] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 30 January 2021

## 2.2 LABORATORY SUPPLY CHAINS

### 2.2.1 Specimen referral and transport system

#### 2.2.1a

**Is there a nationwide specimen transport system?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that Egypt has a specimen transport system in place that works nationwide.

A review of the Ministry of Health and Population and the Ministry of Agriculture and Land Reclamation, which was inaccessible at the time of the research, websites did not provide any further evidence [1,2]. Egypt has a Central Health Laboratory, however, the link to its website was not working during the time of access (January 30th, 2021) [3]

[1] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 30 January 2021

[2] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 31 January 2021.

[3] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 30 January 2021.

### 2.2.2 Laboratory cooperation and coordination

#### 2.2.2a

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

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

**Current Year Score: 0**

There is no evidence of a plan in place by the Egyptian government to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak.

In October 2020, the Ministry of Health and Population (MoHP) stated that they will increase both the number of labs and

their testing capacity to meet the Covid-19 pandemic's needs [1]. This was the second increase after they already increased the number of central health laboratories to 30 labs in May 2020 [2]. However, after reviewing MoHP's website, there is no evidence that this happened according to a prearranged plan before the emergence of coronavirus [3].

Egypt has a Central Health Laboratory, however, the link to its website was not working during the time of access (January 30th, 2021) [4]. Similarly, the Ministry of Agriculture and Land Reclamation's website wasn't accessible at the time of the research [5].

[1] Alyom Alsaba. "The Ministry of Health announces an increase in Corona testing laboratories to 81 laboratories with a capacity of 50,000 tests per day". [t.ly/pNJB]. Accessed 31 January 2021.

[2] AlBorsa. 27 May 2020. "Health: Increasing the number of central laboratories to 30 to speed up the results of Corona tests". [https://alborsa.news.com/2020/05/27/1350640]. Accessed January 31 2021.

[3] Ministry of Health and Population. [http://www.moHP.gov.eg/Default.aspx]. Accessed 30 January 2021.

[4] Central Health Laboratories. [http://www.healthlabs.net/]. Last attempt to access 30 January 2021.

[5] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg]. Last attempt to access 31 January 2021.

## 2.3 REAL-TIME SURVEILLANCE AND REPORTING

### 2.3.1 Indicator and event-based surveillance and reporting systems

#### 2.3.1a

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

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

**Current Year Score: 0**

There is insufficient evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease.

The Ministry of Health and Population's Pandemics and Surveillance Unit states that one of their goals is to surveil medical events and to monitor intermittent, short-term, and long-term trends of infectious diseases [1]. While they publish periodic bulletins, there is no evidence that they analyze data on a daily basis [1]. Moreover, there is evidence that the type of surveillance they adapt includes looking at reports, stories, rumors, and other information about health events that could be a serious risk to public health. Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 30th, 2021) [2]. Similarly, the Ministry of Agriculture and Land Reclamation's website wasn't accessible at the time of the research [3]. A review of the Ministry of Health and Population's website didn't provide further evidence [4].

[1] Ministry of Health and Population "Pandemics and Surveillance Unit".

[http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=39&&SectorCode=6 Accessed 31 January 2021.

[2] Central Health Laboratories. [http://www.healthlabs.net/]. Last attempt to access 31 January 2021.

[3] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg]. Last attempt to access 31 January 2021.

[4] Ministry of Health and Population. [http://www.moHP.gov.eg/Default.aspx]. Accessed 31 January 2021.

### 2.3.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years.

Egypt reported the first Covid-19 case in February 14th, 2020 although it was not reported as a PHEIC to the WHO. [1, 2] In the WHO's Disease Outbreak News for the years 2018 -2020, Egypt has not reported a PHEIC [1]. A review of all the events reported by the Ministry of Health and Population over the past two years doesn't yield any further evidence [2]. Egypt has a Central Health Laboratory Administration. However, the link to its website was not working during the time of access (January 30th, 2021) [3].

[1] World Health Organization. 25 February 2020. "A second Covid-19 case is confirmed in Africa".

[https://www.afro.who.int/news/second-covid-19-case-confirmed-africa]. Accessed 7 March 2021.

[2] Aljazeera. 14 February 2020. "Egypt confirms coronavirus case, the first in Africa".

[https://www.aljazeera.com/news/2020/2/14/egypt-confirms-coronavirus-case-the-first-in-africa]. Accessed 7 March 2021.

[3] World Health Organization. "Disease outbreaks by year. 2018-2021". [https://www.who.int/csr/don/archive/year/en/]. Accessed 31 January 2021.

[4] Ministry of Health and Population. "News". [http://www.moHP.gov.eg/News.aspx]. Accessed 31 January 2021.

[5] Central Health Laboratories. [http://www.healthlabs.net/]. Last attempt to access 31 January 2021.

## 2.3.2 Interoperable, interconnected, electronic real-time reporting systems

### 2.3.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that the government operates an electronic reporting surveillance system at both the national and the sub-national levels.

While there is no publicly available real-time data at the subnational level, the Ministry of Health and Population (MoHP) frequently reported the breakdown of the Covid-19 cases by governorate [1, 2]. Moreover, the MoHP reports daily national estimates of Covid-19 cases on their Facebook page based on the test results that got released nationwide [3]. However, there is no evidence for a system that includes a way healthcare practitioners can report covid and other diseases identified by the Ministry of Health to the central authorities and a certain form of database. Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 30th, 2021) [4]. A review of the Ministry of Health and Population's website did not provide more evidence [5].

[1] CNN. December 2020. "In numbers... the ranking of Egypt's governorates with the most corona infection".

[https://arabic.cnn.com/health/article/2020/12/24/egypt-cities-coronavirus-numbers]. Accessed January 31 2021.

[2] Sky News. June 2020. "Egypt announces the governorates most affected by Corona... and a warning for an age group".

[t.ly/8Zop]. Accessed January 31 2021.

[3] Ministry of Health and Population. "Facebook page". [<https://www.facebook.com/egypt.mohp/>]. Accessed January 31 2021.

[4] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 31 January 2021.

[5] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 31 January 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 insufficient evidence that the government operates an electronic reporting surveillance system at both the national and the sub-national levels.

While there is no publicly available real-time data at the subnational level, the Ministry of Health and Population (MoHP) frequently reported the breakdown of the Covid-19 cases by governorate [1, 2]. Moreover, the MoHP reports daily national estimates of Covid-19 cases on their Facebook page based on the test results that got released nationwide [3]. However, there is no evidence for a system that includes a way healthcare practitioners can report covid and other diseases identified by the Ministry of Health to the central authorities and a certain form of database. Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 30th, 2021) [4]. A review of the Ministry of Health and Population's website did not provide more evidence [5].

[1] CNN. December 2020. "In numbers... the ranking of Egypt's governorates with the most corona infection".

[<https://arabic.cnn.com/health/article/2020/12/24/egypt-cities-coronavirus-numbers>]. Accessed January 31 2021.

[2] Sky News. June 2020. "Egypt announces the governorates most affected by Corona... and a warning for an age group". [[t.ly/8Zop](https://www.skynewsarabia.com/egypt/8Zop)]. Accessed January 31 2021.

[3] Ministry of Health and Population. "Facebook page". [<https://www.facebook.com/egypt.mohp/>]. Accessed January 31 2021.

[4] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 31 January 2021.

[5] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 31 January 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 publicly available evidence the Electronic Health Records (EHR) are being used in Egypt.

Several academic studies have indicated that the wide-spread use of EHR is not yet in place. For example, according to an academic study published by the Communications on Applied Electronics in 2017, the Egyptian government conducted several trials to implement EHR nationwide. However, all the trials were not completed for different reasons (financial,

administrative, and technical barriers) [1].

A study published in the British Journal of Applied Science & Technology in 2015 which sought to evaluate the data standards of EHR implemented in Egyptian found that 26% out of a sample of 49 hospitals had implemented EHR [2].

A study published in the World Health Organization (WHO)'s Eastern Mediterranean Health Journal in 2014 notes that an EHR system in public health care facilities is in place, however, it provides limited data on implementation rates. The WHO study seeks to assess the accuracy of paper-based and EHR in public healthcare (PHC) facilities in Alexandria, Egypt, and found that data recorded in e-records were significantly less complete when compared with paper-based records and that there were very wide ranges of completeness of e-records across different PHC units [3]. However, it appears as though efforts to roll-out a nationwide EHR system are underway. The Ministry of Communications and Information Technology has a project titled Digital Medical Files (Family Health Units). The project seeks to automate electronic records and build a national database and national e-health information system [4].

According to an article published by Egypt Today in July of 2018, an electronic medical file will be developed for every family with a sub-file for every family member. A specific doctor and health unit will be designated for every family, and the electronic files will include details of the patient's medical history. Each doctor will be responsible for 20,000 patients from the same geographical area [5]. However, there is no evidence that this system has rolled out yet. An online review did not provide further details on the implementation rate of the project thus far. A review of the Ministry of Health and Population website and the Central Administration of Laboratories, which was inaccessible at the time of the research, website did not provide any further evidence [6, 7].

[1] Sayed Abdelgaber, et al. 2017. "A Roadmap to Implement EHR Nationwide in Egypt". Communications on Applied Electronics Vol 7

[6]. [[https://www.researchgate.net/publication/320022866\\_A\\_Roadmap\\_to\\_Implement\\_EHR\\_Nationwide\\_in\\_Egypt](https://www.researchgate.net/publication/320022866_A_Roadmap_to_Implement_EHR_Nationwide_in_Egypt)]. Accessed 31 January 2021.

[2] Ahmed Sharaf Eldin, et al. 2015. "Evaluation of Health Level Seven (HL7) Standards Implementation in Egyptian Hospitals". British Journal of Applied Science & Technology Vol. 11

[6]. [[http://www.journalrepository.org/media/journals/BJAST\\_5/2015/Sep/Fahmy1162015BJAST19590.pdf](http://www.journalrepository.org/media/journals/BJAST_5/2015/Sep/Fahmy1162015BJAST19590.pdf)]. Accessed 31 January 2021.

[3] M. Noureldin, et al. 2014. "Quality of documentation of electronic medical information systems at primary health care units in Alexandria, Egypt". Eastern Mediterranean Health Journal Vol. 20

[2]. [<http://www.emro.who.int/emhj-vol-20-2014/volume-20-issue-2/quality-of-documentation-of-electronic-medical-information-systems-at-primary-health-care-units-in-alexandria-egypt.html>]. Accessed 31 January 2021.

[4] Youm7. December 2020. "The Ministers of Health and Military Production are following up the implementation of the automation of the comprehensive health system". [t.ly/g1V6]. Accessed 31 January 2021.

[5] Egypt Today. 22 July 2018. "New Health Insurance Law to be implemented in Egypt soon".

[<http://www.egypttoday.com/Article/2/54455/New-Health-Insurance-Law-to-be-implemented-in-Egypt-soon>]. Accessed 31 January 2021.

[6] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 31 January 2021.

[7] Central Administration of Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 31 January 2021.

### 2.4.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence to determine whether the national public health system currently has access to electronic health records (EHR) of individuals in Egypt.

Firstly, the extent of the implementation of an EHR system in Egypt is unclear and several academic studies have indicated that wide-spread use of EHR is not yet in place. For example, according to an academic study published by the Communications on Applied Electronics in 2017, the Egyptian government conducted several trials to implement EHR nationwide. However, all the trials were not completed for difference reasons (financial, administrative and technical barriers) [1]. A study published in the World Health Organization (WHO)'s Eastern Mediterranean Health Journal in 2014 notes that an EHR system in public healthcare (PHC) facilities is in place. The study states that PHC units in Egypt are owned and operated by the Ministry of Health and Population and comprise family health units and family health centers. The family health units provide all first-encounter PHC services to a roster of families, likely suggesting that the government does have access to the EHRs that are currently in place [2].

There is evidence of government-driven efforts to roll-out a nationwide EHR system. The Ministry of Communications and Information Technology has a project titled Digital Medical Files (Family Health Units). The project seeks to automate electronic records, establish an e-health register for citizens, build a national database and national e-health information system, build a geographic health information system and link rural and urban health units through a nationwide network [3]. The objectives of the system alone indicate that the government would have access to the EHRs of citizens. An online review did not provide further details on the implementation rate of the project thus far. A review of the Ministry of Health and Population website and the Central Administration of Laboratories, which was inaccessible at the time of the research, websites did not provide any further evidence [4,5].

[1] Sayed Abdelgaber, et al. 2017. "A Roadmap to Implement EHR Nationwide in Egypt". Communications on Applied Electronics Vol 7

[6]. [[https://www.researchgate.net/publication/320022866\\_A\\_Roadmap\\_to\\_Implement\\_EHR\\_Nationwide\\_in\\_Egypt](https://www.researchgate.net/publication/320022866_A_Roadmap_to_Implement_EHR_Nationwide_in_Egypt)]. Accessed 31 January 2021.

[2] M. Noureldin, et al. 2014. "Quality of documentation of electronic medical information systems at primary health care units in Alexandria, Egypt". Eastern Mediterranean Health Journal Vol. 20

[2]. [<http://www.emro.who.int/emhj-vol-20-2014/volume-20-issue-2/quality-of-documentation-of-electronic-medical-information-systems-at-primary-health-care-units-in-alexandria-egypt.html>]. Accessed 31 January 2021.

[3] Youm7. December 2020. "The Ministers of Health and Military Production are following up the implementation of the automation of the comprehensive health system". [t.ly/g1V6]. Accessed 31 January 2021.

[4] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 31 January 2021.

[5] Central Administration of Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 31 January 2021.

### 2.4.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence that Egypt has data standards to ensure data is comparable.

In July 2019, the President of Egypt, Abdel Fattah el-Sisi initiated the New Health Insurance Law (NHIL) [1]. One of the dimensions of NHIL is the automation of patients' records [2]. The Ministers of Health and Population, Communication and

IT, and War Production are leading the automation efforts jointly [2]. Moreover, the Deputy Minister of Communications and IT has stated that the database for the automation project has been built according to world-class standards to ensure total security and privacy and will be monitored by the Administrative Control Authority to ensure the accuracy of data [2]. A review of the Ministry of Health and Population website and the Central Administration of Laboratories, which was inaccessible at the time of the research, websites did not provide any further evidence [3, 4].

[1] State Information Service. November 2020. "Actual start of the comprehensive health insurance law in Egypt". [t.ly/ElvY]. Accessed January 31 2021.

[2] Youm7. December 2020. "The Ministers of Health and Military Production are following up the implementation of the automation of the comprehensive health system". [t.ly/g1V6]. Accessed 31 January 2021.

[3] Ministry of Health and Population. [http://www.mohip.gov.eg/Default.aspx]. Accessed 31 January 2021.

[4] Central Administration of Laboratories. [http://www.healthlabs.net/]. Last attempt to access 31 January 2021.

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

### 2.4.2a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence of established mechanisms at the relevant ministries responsible for the animal, human, and wildlife surveillance to share data.

According to a report published by the Food and Agriculture Organization of the United Nations (FAO) in 2018, Egypt has a National Steering Committee which is comprised of representatives from the Ministry for Agriculture and Land Reclamation, the Ministry of Environment, the Ministry of Health and Population and the Central Agency for Public Mobilization and Statistics (CAPMAS). The Committee "has developed an expert elicitation protocol to assemble quantitative information on zoonoses and antimicrobial resistance (AMR) in Egypt. As the Egyptian livestock sector is heterogeneous, it was agreed to start designing and testing the protocol for two livestock types, four zoonoses and AMR [1]. The FAO report also indicates that there is room for improvement in data reporting, stating that the public data reporting mechanism for zoonoses in animals does not include either salmonellosis or information on the use of antibiotics in animals. However, information on highly pathogenic avian influenza outbreaks in poultry is considered accurate [1].

Moreover, the Ministry of Health and Population has issued a statement in October 2020 that both the ministers of Health and Population and Agriculture and Land Reclamation have met to ensure that all the food labs are integrated [2]. This suggests that relevant ministries do share data, however it is unclear whether a formal data sharing mechanism or protocol is in place.

A report published by the World Bank in 2014, also notes that Egypt "has coordinated a national communication plan with the Ministry of Agriculture (MOA) and the Ministry of Health and Population (MOHP) along with other national and international partners to catch and contain in the bird population before crossing into the human population", which may be indicative of surveillance sharing between animal and health authorities for the containment of avian influenza, although this is not explicitly clear [3].

On the other hand, the FAO report adds that Egyptian Ministries in charge of livestock and public health are not in a position to generate accurate estimates of the incidence and prevalence of zoonoses or to create the necessary partnership between the government and citizens to address issues that interweave public and private dimensions. The government, therefore, faces what is here defined as the antimicrobial and AMR information trap [1].

The dearth of surveillance data is also noted in a study published in the Pathogens journal in 2017, which states that "There is a gap of knowledge about the epidemiology of zoonotic diseases in different localities in Egypt, which hinders accurate assessment of the human health burden. Surveillance activity is high for some viral diseases such as influenza and MERS but is still weak or neglected for others particularly at the human-animal interface" [4]. This likely suggests that some data sharing does take place between the relevant ministries, however, there is insufficient evidence to determine whether a formally established mechanism is in place.

A review of the General Authority of Veterinary Services, the Ministry of Agriculture and Land Reclamation, which was inaccessible at the time of the research, and the MoHP websites did not provide further evidence [5,6,7].

[1] Food and Agriculture Organization of the United Nations (FAO). 2018. "Africa Sustainable Livestock 2050 - Zoonotic diseases spotlight Egypt - The case for an expert elicitation protocol on zoonoses".

[<http://www.fao.org/3/i8476en/i8476EN.pdf>]. Accessed 31 January 2021.

[2] Ministry of Health and Population. October 2020. "The Ministers of Health and Agriculture are discussing means of cooperation to tighten control over food imports". [<https://www.facebook.com/egypt.mohp/posts/232289341655019/>]. Accessed 31 January 2021.

[3] World Bank. 2014. "Global Program for Avian Influenza Control and Human Pandemic Preparedness and Response: Project Accomplishments".

[<http://documents.worldbank.org/curated/en/527421468329073537/pdf/940430WP0Box385430B0GPAIOFinal00PUBLIC0.pdf>]. Accessed 31 January 2021.

[4] Yosra A. Helmy, et al. 2017. "A Comprehensive Review of Common Bacterial, Parasitic and Viral Zoonoses at the Human-Animal Interface in Egypt". Pathogens Vol. 6

[3]. [<https://www.ncbi.nlm.nih.gov/pubmed/28754024>]. Accessed 31 January 2021.

[5] General Authority for Veterinary Services. [<http://www.govs.gov.eg/FrontEnd/ar/Default.aspx>]. Accessed 31 January 2021.

[6] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 31 January 2021.

[7] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 31 January 2021.

### 2.4.3 Transparency of surveillance data

#### 2.4.3a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that Egypt makes de-identified health surveillance data on disease outbreaks publicly available via reports (or other formats) on government websites on a weekly basis.

The Ministry of Health and Population's website also shows evidence of statistics on influenza published in bi-weekly reports, however, this data was not disaggregated at the sub-national level.[1] Moreover, a study evaluating Egypt's surveillance of

communicable diseases published by the WHO in 2016, mentions a National Electronic Diseases Surveillance System for Communicable Diseases managed by the Ministry of Health and Population (MoHP) [2]. The study states that the annual reports on communicable diseases published by the MoHP provide a large volume of data and information about selected communicable diseases. The reports provide background on the activities of the MoHP for the prevention and control of those diseases. In addition, the reports show trends over time for different diseases at the national level. However, the reports do not provide information on weekly basis with a lag time that is less than a month [2]. The MoHP's Department of Endemic Diseases contains a publication that provides data on annual confirmed cases of Malaria (for the years 2010 to 2015); Filariasis (for the years 2012 to 2015) and Leishmania (for the years 2007 to 2015) [3,4].

The Central Agency for Public Mobilization and Statistics statistical yearbook for the year 2020 also contains limited information. The yearbook provides annual statistics for the broad grouping of certain infections and parasitic diseases for the years 2015 to 2017, disaggregated by gender [5]. The Ministry of Agriculture and Land Reclamation's website wasn't accessible at the time of the research [6].

- [1] Ministry of Health and Population. "Ministry Publications: Preventative". [http://www.moHP.gov.eg/Publications.aspx?cat\_id=1020]. Accessed 31 January 2021.
- [2] Madiha Abdel-Razik; Hoda Rizk and Mahmoud Hassan. 2016. "Surveillance of communicable diseases for decision-making in Egypt: 2006-2013". World Health Organization Middle East Health Journal Vol 23 [6]. [http://applications.emro.who.int/EMHJ/v23/06//EMHJ\_2017\_23\_06\_395\_403.pdf]. Accessed 31 January 2021.
- [3] Ministry of Health and Population. "Endemic Diseases". [http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=10&&SectorCode=6]. Accessed 31 January 2021.
- [4] Ministry of Health and Population. "Endemic Diseases Sector General Department of Malaria, Filariasis & Leishmania The Three Diseases". [http://www.moHP.gov.eg/UserFiles/Userfiles/10/3333ac31-c974-4180-8556-b5b387a01680.doc]. Accessed 31 January 2021.
- [5] Central Agency for Public Mobilization and Statistics. 2020. "Statistical Yearbook Vital Statistics". [https://www.capmas.gov.eg/Pages/StaticPages.aspx?page\_id=5034]. Accessed 31 January 2021.
- [6] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg]. Last attempt to access 31 January 2021.

### 2.4.3b

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that Egypt makes de-identified health surveillance data on disease outbreaks publicly available via reports (or other formats) on government websites on a daily basis. The Ministry of Health and Population (MoHP) reports daily national estimates of Covid-19 cases on their Facebook page based on the test results that got released nationwide [1].

- [1] Ministry of Health and Population. "Facebook page". [https://www.facebook.com/egypt.moHP/]. Accessed January 31 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**

Egypt does have laws and regulations in place that safeguard the confidentiality of identifiable health information for individuals.

The Egyptian Medical Syndicate's Professional Ethics Regulation, issued by resolution No. 238 in 2003 by the Ministry of Health and Population serves to safeguard the confidentiality of health data and imposes regulations on disclosing such data without the patient's consent, although this is not specific to surveillance activities [1]. Several other laws also serve to protect individual data. For example, article 57 of Egypt's Constitution (amended in 2014), states that Telegraph, postal, and electronic correspondence, telephone calls, and other forms of communication are inviolable, their confidentiality is guaranteed and they may only be confiscated, examined or monitored by causal judicial order, for a limited period of time, and in cases specified by the law. The state shall protect the rights of citizens to use all forms of public means of communication, which may not be arbitrarily disrupted, stopped or withheld from citizens, as regulated by the law [2]. Furthermore, article 99 stipulates that "any assault on individual freedom or the inviolability of citizens' private lives and any other public rights and liberties guaranteed by the Constitution shall be considered a crime" [2].

Furthermore, in August of 2018, the Egyptian Cabinet approved a draft law to protect personal data [3]. According to an Egypt Today article from August 2018, the law protects citizens' "fully or partially electronically treated personal data", and the Minister of Communications and Information Technology stated that the law prohibits gathering or processing individuals' personal data or spreading them by any means without the permission of the concerned individuals, except in cases authorized legally, which likely includes surveillance data although this is not explicit [4]. According to Lexis Middle East, under the proposed law, personal data may not be collected, processed, or disclosed by any means except with the consent of the relevant person or in cases authorized by law. The relevant person will have the right to access and obtain their own personal data. Penalties include jail terms of at least one year and/or a fine of EGP100,000 (US\$5806) to EGP1,000,000 (US\$58,066). Those disclosing or making personal data available by any means other than those authorized by law or without the consent of the relevant person will face the same penalties [3, 4]. A copy of the law is not publicly available online and so cannot be determined whether health data is explicitly included or not.

[1] Egyptian Medical Syndicate. 2003. "Profession Ethics Regulations - Issued By the Resolution of the Minister of Health & Population No. 238/2003". [<https://abortion-policies.srhr.org/documents/countries/04-Egypt-Code-of-Medical-Ethics-Ministry-of-Health-and-Population-2003.pdf>]. Accessed 31 January 2021.

[2] Government of Egypt. 2014. "Egyptian Constitution. Constitute Project". [[https://www.constituteproject.org/constitution/Egypt\\_2014.pdf](https://www.constituteproject.org/constitution/Egypt_2014.pdf)]. Accessed 31 January 2021.

[3] Lexis Middle East. 12 August 2018. "Weekly Spotlight: Egyptian Draft Data Protection Law Approved". [<https://www.lexis.ae/2018/08/12/egypt-draft-data-protection-law-approved/>]. Accessed 31 January 2021.

[4] Egypt Today. 7 August 2018. "Cabinet approves draft law protecting personal data". [<http://www.egypttoday.com/Article/2/55513/Cabinet-approves-draft-law-protecting-personal-data>]. Accessed 31 January 2021.

### 2.4.4b

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that Egypt's laws, regulations, or guidelines safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber-attacks.

Egypt has a Supreme Cybersecurity Council (ESCC). However, the ESCC's 2017-2021 strategy was mainly concerned with protecting the government's facilities and didn't address explicitly protecting personal data [1].

A review of news articles does not suggest that the draft data protection law that was approved in August of 2018 safeguards such information [2,3].

Similarly, a review of the Professional Ethics Regulations issued by the Egyptian Medical Syndicate, and Egypt's Anti-Cybercrime Law (Law No. 175 of 2018) do not contain provisions safeguarding health information from cyber attacks [4,5]. A review of the Ministry of Health and Population's webpage has not yielded any further evidence, nor has it indicated that specific legislation is in place to make health surveillance data de-identified [6].

[1] Egyptian Supreme Cybersecurity Council (ESCC). "ESCC's 2017-2021 strategy".

[[https://www.mcit.gov.eg/Upcont/Documents/Publications\\_12122018000\\_ar\\_AR\\_National\\_Cybersecurity\\_Strategy\\_2017\\_2021.pdf](https://www.mcit.gov.eg/Upcont/Documents/Publications_12122018000_ar_AR_National_Cybersecurity_Strategy_2017_2021.pdf)] Accessed 31 January 2021.

[2] Lexis Middle East. 12th August 2018. "Weekly Spotlight: Egyptian Draft Data Protection Law Approved".

[<https://www.lexis.ae/2018/08/12/egypt-draft-data-protection-law-approved/>]. Accessed 31 January 2021.

[3] Egypt Today. 7 August 2018. "Cabinet approves draft law protecting personal data".

[<http://www.egypttoday.com/Article/2/55513/Cabinet-approves-draft-law-protecting-personal-data>]. Accessed 31 January 2021.

[4] Egyptian Medical Syndicate. 2003. "Profession Ethics Regulations - Issued By the Resolution of the Minister of Health & Population No. 238/2003". [<https://abortion-policies.srhr.org/documents/countries/04-Egypt-Code-of-Medical-Ethics-Ministry-of-Health-and-Population-2003.pdf>]. Accessed 31 January 2021.

[5] Government of Egypt. 2018. "Law No. 175 of 2018 Regarding Combatting Cybercrimes".

[[https://drive.google.com/file/d/1ra7NlKn7Uh\\_YU5fL7NBKt18JE2mKAKm8/view](https://drive.google.com/file/d/1ra7NlKn7Uh_YU5fL7NBKt18JE2mKAKm8/view)]. Accessed 31 January 2021.

[6] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 31 January 2021.

## 2.4.5 International data sharing

### 2.4.5a

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

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

**Current Year Score: 0**

There is insufficient publicly available evidence that the government of Egypt has made 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 more than one disease.

Egypt participates in the EpiSouth Network, which was established among countries of South-East Europe, North Africa and Middle-East to create a framework for collaboration on epidemiological issues for enhancing communicable diseases surveillance and control of public health risks through communication, training, information exchange and technical support to countries in the Mediterranean region [1]. EpiSouth lists one of its objectives as enhancing 'Mediterranean Early Warning Systems (EW) allowing alerts and epidemic intelligence information sharing among EpiSouth countries and developing interoperability with other EW platforms', which entails disseminating weekly-based information on international health events occurring in EpiSouth and non-EpiSouth countries through the network's electronic platform [2]. Furthermore, according to a study published in the journal of Health Security in 2017, the EpiSouth Network has implemented two projects, the first focuses on communicable disease surveillance and training, while the second focuses on strengthening preparedness for common health threats and biosecurity risks, further suggesting that sharing surveillance data during health emergency is an integral component of the network [3].

Egypt is also a member of the African Center for Disease Control (CDC), which is also working towards strengthening regional disease surveillance. According to the African CDC's strategic plan for the years 2017 to 2020, one of the specific strategic objectives of the group's members is to 'facilitate and strengthen Regional Coordinating Centers (RCC) in promoting inter-country and regional collaboration on surveillance, shared data use, and engagement with laboratory networks, to collaborate with Member States and ensure that they comply with promoting prevention, surveillance, emergency preparedness and response, and to ensure core laboratory surveillance capacities are available in member states, suggesting that surveillance data sharing is the prevention and response of health emergencies is also an integral component of the African CDC [4].

Egypt is also a member of the Organization of Islamic Cooperation (OIC), which has information sharing agreements in place. During the OIC Islamic Conference of Health Ministers (ICHM) in 2011, there were talks to establish a web-based OIC ICHM information-sharing mechanism within the OIC Secretariat, however it is unclear whether this has been established [5, 6].

[1] EpiSouth. [<http://www.episouthnetwork.org/>]. Accessed 7 March 2021.

[2] EpiSouth. "Cross-border Epidemic Intelligence". [<http://www.episouthnetwork.org/content/cross-border-epidemic-intelligence>]. Accessed 7 March 2021.

[3] Maria Grazia Dente, et al. (EpiSouth Working Group). 2017. "Contribution of Regional Networks to the Control of Cross-Border Public Health Threats: EpiSouth in the Mediterranean Region and Southeast Europe". Health Security Vol. 15

[4]. [[http://www.episouthnetwork.org/sites/default/files/episouth\\_article\\_contribution\\_of\\_regional\\_networks.pdf](http://www.episouthnetwork.org/sites/default/files/episouth_article_contribution_of_regional_networks.pdf)]. Accessed 7 March 2021.

[4] Africa Centers for Disease Control and Prevention. 2017. "Strategic Plan 2017 - 2021".

[[http://www.ianphi.org/\\_includes/documents/Strategy%20Africa%20English%20CDC.PDF](http://www.ianphi.org/_includes/documents/Strategy%20Africa%20English%20CDC.PDF)]. Accessed 7 March 2021.

[5] Organization of Islamic Cooperation. 2011. "Proposal to Establish an Institutional Mechanism to Follow Up and Monitor the Implementation of the Declarations and Resolutions Adopted by the Islamic Conferences of Health Ministers".

[[http://ww1.oic-oci.org/external\\_web/health\\_ministers/3rd/en/docs/Concept%20on%20establishment%20of%20Health%20Org%20and%20Health%20Secretariat%20-%20Final%20version.pdf](http://ww1.oic-oci.org/external_web/health_ministers/3rd/en/docs/Concept%20on%20establishment%20of%20Health%20Org%20and%20Health%20Secretariat%20-%20Final%20version.pdf)]. Accessed 7 March 2021.

[6] Organization of Islamic Cooperation. September -October 2011. "Report of the Secretary General". [[http://ww1.oic-oci.org/external\\_web/health\\_ministers/3rd/en/docs/ICHM%20report%20July%202011.pdf](http://ww1.oic-oci.org/external_web/health_ministers/3rd/en/docs/ICHM%20report%20July%202011.pdf)]. Accessed 7 March 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 in Egypt for a national system in place to provide support at the sub-national level to conduct contact tracing in the event of an active or future public health emergency.

The Ministry of Health and Population (MoHP) has a designated unit for surveillance, the Pandemic, and Surveillance Unit (PSU). The PSU mentions that its target segments include people who were in contact with patients who got infected with an infectious disease, however, they don't mention any more details on how they do contact tracing and whether they have an emergency plan for it [1]. Moreover, at the start of the Covid-19 crisis in April 2020, the MoHP stated that if the country's cases exceeded 1000, it's going to be difficult for medical authorities to perform contact tracing [2]. Egypt has a Central Health Laboratory Administration. However, the link to its website was not working during the time of access (January 31st, 2021) [3]

[1] Ministry of Health and Population. "General Administration for Pandemics and Surveillance".

[<http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=39&&SectorCode=6>]. Accessed 31 January 2021.

[2] BBC. 2 April 2020. "Coronavirus: Egypt warns its citizens of the third stage of the outbreak".

[<https://www.bbc.com/arabic/middleeast-52139635>]. Accessed 31 January 2021.

[3] Central Health Laboratories. [<http://www.healthlabs.net/>]. Last attempt to access 31 January 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 Egypt provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support and medical attention.

While there is no evidence that Egypt provides services to help patients/suspected cases to self-isolate, the only type of services there is evidence Egypt provides are hospital care and isolation services for hospitalized Covid patients and economic relief for the most disadvantaged [1,2]. The Ministry of Health and Population (MoHP) has a designated department for Curative Medicine (CM). The CM head announced that the MoHP will designate a team for Covid-19 patient medical services in all MoHP hospitals [1]. The job of this team is to guide patients from the moment they enter the hospital and direct them about what they must do. Another team will receive patients after completing their journey in treatment, and make a

decision on whether patients are healthy or their symptoms are simple, moderate or severe [1].

The Ministry of Local Development (MLD) has announced an Economic Relief packages aimed at those who are most affected economically by the crisis, especially those living in the most impoverished villages in Egypt [2]. Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 31st, 2021) [3]

[1] Al Watan. 12 June 2020. "Ministry of Health: A decision to follow the Corona services support team in every hospital". [https://www.elwatannews.com/news/details/4836608 Accessed 31 January 2021.

[2] Al Shorouk. 29 April 2020. "Cooperation protocol between Egypt and the World Food Program to support people affected by Corona". [https://www.shorouknews.com/news/view.aspx?cdate=29042020&id=23b323e2-4f55-440d-a6eb-0a74e16c28f6]. Accessed January 31 2021.

[3] Central Health Laboratories. [http://www.healthlabs.net/]. Last attempt to access 31 January 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 Egypt makes de-identified data on contact tracing efforts for Covid-19 available via daily reports (or other formats) on government websites.

The Ministry of Health and Population (MoHP) has a designated unit for surveillance, the Pandemic and Surveillance Unit (PSU). The PSU mentions that their target segments include people who were in contact with patients who have been infected with an infectious disease, however, they don't share any data for contact tracing [1].

Moreover, at the start of the Covid-19 crisis in April 2020, the MoHP stated that if the country's cases exceeded 1000, it's going to be difficult for medical authorities to perform contact tracing [2]. A review of the MoHP's webpage did not yield any further evidence [3]. Egypt has a Central Health Laboratory. However, the link to its website was not working during the time of access (January 31st, 2021) [4]

[1] Ministry of Health and Population. "General Administration for Pandemics and Surveillance".

[http://www.mo hp.gov.eg/SectorServices.aspx?Deptcode=39&&SectorCode=6]. Accessed 31 January 2021.

[2] BBC. 2 April 2020. "Coronavirus: Egypt warns its citizens of the third stage of the outbreak".

[https://www.bbc.com/arabic/middleeast-52139635]. Accessed 31 January 2021.

[3] Ministry of Health and Population. [http://www.mo hp.gov.eg/Default.aspx]. Accessed 31 January 2021.

[4] Central Health Laboratories. [http://www.healthlabs.net/]. Last attempt to access 31 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: 1**

There is evidence that Egypt has 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 public health emergency, but only in response to an ongoing emergency.

The quarantining authorities have released information before the surge of Covid-19 on how they handle the situation at the airports. They stated the following: "In the event of suspicion of any case among the passengers arriving on flights, the passenger is immediately isolated and transferred to the Fever Hospital in Abbasiya under the supervision of Mahmoud Ghneim, the airport ambulance supervisor, for medical examinations to ensure that s/he is free of infection, while all passengers are given health cards to follow up on their health conditions for a period of up to 14 days from their presence in the country" [1]. This was illustrated by the actions taken when Egypt discovered the first Covid-19 case, they immediately traced his contacts and quarantined them for 14 days [2].

Egypt has an official Quarantining Authority (QA) under the Ministry of Health and Population (MoHP) that works with all airports and other entry points to Egypt, however, the QA's section on the MoHP's website doesn't state explicitly what regulations are in place generally for suspected infectious cases [3] A review of the websites of the MoHP and the Ministry of Civil Aviation didn't yield further evidence[4,5].

[1] Sot Al-Oma. 1 February 2020. "The quarantine plan to prevent the spread of "Corona" into Egypt through airports". [t.ly/FdPn Accessed 31 January 2021.

[2] Alarabiya. 14 February 2020. "Egypt announces the first person infected with Corona virus... and this is his nationality". [t.ly/j6f1]. Accessed 31 January 2021.

[3] Ministry of Health and Population. "Quarantine Authority".

[http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=12&&SectorCode=6] Accessed 31 January 2021.

[4] Ministry of Health and Population. [http://www.moHP.gov.eg Accessed 31 January 2021.

[5] Ministry of Civil Aviation. [http://www.civilaviation.gov.eg/]. Accessed 7 March 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**

Egypt does have an applied epidemiology training program (such as the Field Epidemiology Training Program (FETP)) is available in-country.

The Egyptian Field Epidemiology Training Program (E-FETP) is a two-year program that began in 1993 in collaboration with the US Centers for Disease Control and Prevention. The E-FETP is under the auspices of the Epidemiology & Surveillance department of the Ministry of Health and Population (MoHP). As of 2018, a total of 123 epidemiologists had graduated from the E-FETP [1].

There is insufficient publicly available evidence to determine if the Egyptian government provides citizens with resources to undergo this training. Egypt is part of the Mediterranean Program for Intervention Epidemiology Training (MediPIET), an ongoing field epidemiology training [2]. The MediPIET website was not working during the time of access, and a review of online sources has not yielded any evidence suggesting that the government provides its citizens with the resources necessary to undergo a foreign FETP program [3].

According to a news report published by the Eastern Mediterranean Public Health Network in 2014, MediPIET aims to benefit 17 non-EU partner countries covered by the EU Enlargement and southern European Neighborhood policies, which includes Egypt. The news release adds that the desired outcome from the program is to form a competent workforce with the necessary skills needed for practicing intervention epidemiology and the carrying out of essential public health functions for prevention and control of national and cross-border challenges posed by communicable diseases [2]. In order to do this, the MediPIET program is designed to train national trainers and supervisors from participating public health institutions and to provide support to training endeavors down to sub-national and local levels [2]. Thus it may be the case that resources are not required to send citizens abroad as MediPIET appears to adopt a localized approach to training. The news report adds that MediPIET training modules are attended by program fellows, public health epidemiologists working at the national and local (regional) level in the early stages of their career, senior epidemiologists, and public health workers in trainers role. Participants are nominated by their country and specifically by national authorities through the MediPIET National Focal Point (NFP) and the national MediPIET committee, however, it does not clarify where the resources to send participants who partake in regional training events come from. Egypt is also a member of the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) [4]. However, it remains unclear whether the government of Egypt sends Egyptian citizens abroad to undergo TEPHINET FETP training. A review of the Ministry of Health and Population website has not yielded any further evidence [5].

[1] Egyptian Field Epidemiology Training Program (E-FETP). "About FETP". [<https://egfep.org/about-fetp>]. Accessed 31 January 2021.

[2] Eastern Mediterranean Public Health Network. October 2014. "News: EMPHNET Attends MediPIET Meeting". [<http://emphnet.net/?news=emphnet-attends-medipiet-meeting>]. Accessed 31 January 2021.

[3] Mediterranean and Black Sea Field Epidemiology Training Program Network (MediPIET). [<http://medipiet.eu/>]. Accessed 31 January 2021.

[4] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). "Egypt Field Epidemiology Training Program". [<https://www.tephinet.org/training-programs/egypt-field-epidemiology-training-program>]. Accessed 31 January 2021.

[5] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 31 January 2021.

### 2.6.1b

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient public evidence that Egypt has field epidemiology training programs explicitly inclusive of animal health professionals or that there is a specific animal health field epidemiology training program offered (such as the Field Epidemiology Training Program for Veterinarians (FETPV)).

The Egyptian Field Epidemiology Training Program (E-FETP) website includes veterinarians in the E-FETP eligibility requirements, however, a review of the two-year curriculum and the training workshops that have been conducted do not provide any indication of a FETPV being in place [1, 2]. Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) lists veterinary medicine under the E-FETPs areas of work, however, a TEPHINET publication from October 2018, which categorizes whether member states have an FETP, FETPV, or Field Epidemiology and Laboratory Training Program (FELTP) in place, only listed an FETP for Egypt, further suggesting that a FETPV is not yet in place [3, 4]. A review of online sources including the Ministry of Agriculture and Land Reclamation website, which was inaccessible at the time of the research, and the Ministry of Health and Population website did not provide any further evidence [5, 6].

[1] Egyptian Field Epidemiology Training Program(E-FETP). "About FETP". [<https://egfetp.org/about-fetp>]. Accessed 31 January 2021.

[2] Egyptian Field Epidemiology Training Program (E-FETP). "Training Workshops". [<https://egfetp.org/training-workshops>]. Accessed 31 January 2021.

[3] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). "Egypt Field Epidemiology Training Program". [<https://www.tephinet.org/training-programs/egypt-field-epidemiology-training-program>]. Accessed 31 January 2021.

[4] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). October 2018. "TEPHINET Member Programs". [<https://www.tephinet.org/sites/tephinet/files/content/attachment/2018-11-05/TEPHINET%20Member%20Programs%20at%20a%20Glance.pdf>]. Accessed 31 January 2021.

[5] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 31 January 2021.

[6] Ministry of Health and Population. [<http://www.mohep.gov.eg/Default.aspx>]. Accessed 31 January 2021.

## 2.6.2 Epidemiology workforce capacity

### 2.6.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

2020

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

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

### 3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

#### 3.1.1 National public health emergency preparedness and response plan

##### 3.1.1a

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

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

**Current Year Score: 0**

There is insufficient evidence that Egypt has a publicly available overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential.

While there is no overarching plans for the nation, the Ministry of Health and Population (MoHP)'s Communicable Disease Control (CDC) Department has a plan published in 2013 for preventing and dealing with infectious diseases in the country's schools. The plan was made public on the Ministry of Education's website [1]. Moreover, the MoHP's CDC has a national program to control infections, the plan is published in 2016 and is referenced on MoHP's CDC webpage. However, the plan was inaccessible at the time of the research (1st February 2021) [2]. CDC states that one of their mission is "coordination with various concerned authorities to ensure the implementation of the national infection control program" [2]. However, there is no evidence that this entails any emergency response plans in action. Furthermore, the Ministry of Health and Population (MoHP) published the National Plan for Combatting Avian Influenza for the years 2014 - 2016 [3]. The MoHP's National Tuberculosis Control Program published the "Tuberculosis Control Guidelines" in 2017 [4]. According to news sources (Youm 7 and ElWatan News), in January of 2018 the MoHP has announced that a new strategic plan is being devised to eradicate tuberculosis in Egypt by 2030 [5,6]. However, an online review does not suggest that this plan has been made publicly available yet. Moreover, the President of Egypt has started an initiative to eliminate Hepatitis C from Egypt, the initiative succeeded and Egypt was declared free of Hepatitis C on 29th July 2020 [7].

[1] Ministry of Education. 2013. "Ministry of Health and Population plan for prevention and handling with infectious diseases and health conditions that must be met at the level of Educational facilities".

[[http://moe.gov.eg/departments/Environment\\_Edu\\_population/doc/Health\\_Plan.pdf](http://moe.gov.eg/departments/Environment_Edu_population/doc/Health_Plan.pdf)]. Accessed 1 February 2021.

[2] Ministry of Health and Population Communicable Disease Control (CDC) Department.

[<http://www.mohip.gov.eg/SectorServices.aspx?Deptcode=41&&SectorCode=6>]. Accessed 1 February 2021.

[3] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 7 March 2021.

[3] Ministry of Health and Population. 2014. "Ministry of Health and Population Plan to Combat Avian Influenza".

[<http://www.mohip.gov.eg/UserFiles/LibraryFiles/605869.pdf>]. Accessed 27 January 2021.

[4] Ministry of Health and Population. 2017. "National Tuberculosis Control Program - Tuberculosis Control Guidelines".

[<http://www.mohip.gov.eg/UserFiles/LibraryFiles/651017.pdf>]. Accessed 27 January 2021.

[5] Youm 7 News. January 2018. "A Strategic Plan to End Tuberculosis by 2030".

[<https://www.youm7.com/story/2018/3/25/%D8%A7%D9%84%D8%B5%D8%AD%D8%A9-%D8%AE%D8%B7%D8%A9-%D8%A7%D8%B3%D8%AA%D8%B1%D8%A7%D8%AA%D9%8A%D8%AC%D9%8A%D8%A9-%D9%84%D9%84%D9%82%D8%B6%D8%A7%D8%A1-%D8%B9%D9%84%D9%89-%D9%85%D8%B1%D8%B6->

%D8%A7%D9%84%D8%AF%D8%B1%D9%86-%D8%A8%D8%AD%D9%84%D9%88%D9%84-%D8%B9%D8%A7%D9%85-2030/3711843]. Accessed 27 January 2021.

[6] El Watan News. January 2018. "A strategic plan to eradicate tuberculosis in Egypt by 2030". [https://www.elwatannews.com/news/details/3203945]. Accessed 27 January 2021.

[7] State Information Service. 28 July 2020. "President Sisi's campaign to eradicate virus C and noncommunicable diseases". [t.ly/Sfwa]. Accessed 6 February 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 Egypt has a publicly available overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential.

While there is no overarching plans for the nation, the Ministry of Health and Population (MoHP)'s Communicable Disease Control (CDC) Department has a plan published in 2013 for preventing and dealing with infectious diseases in the country's schools. The plan was made public on the Ministry of Education's website [1]. Moreover, the MoHP's CDC has a national program to control infections, the plan was published in 2016 and is referenced on the MoHP's CDC webpage. However, the plan was inaccessible at the time of the research (1st February 2021) [2]. CDC states that one of their mission is "coordination with various concerned authorities to ensure the implementation of the national infection control program" [2]. However, there is no evidence that this entails any emergency response plans in action. Furthermore, the Ministry of Health and Population (MoHP) published the National Plan for Combatting Avian Influenza for the years 2014 - 2016 [3]. The MoHP's National Tuberculosis Control Program published the "Tuberculosis Control Guidelines" in 2017 [4]. According to news sources (Youm 7 and ElWatan News), in January of 2018 the MoHP announced that a new strategic plan was being devised to eradicate tuberculosis in Egypt by 2030 [5,6]. However, an online review does not suggest that this plan has been made publicly available yet. Moreover, the President of Egypt has started an initiative to eliminate Hepatitis C from Egypt, the initiative succeeded and Egypt was declared free of Hepatitis C on 29th July 2020 [7].

[1] Ministry of Education. 2013. "Ministry of Health and Population plan for prevention and handling with infectious diseases and health conditions that must be met at the level of Educational facilities".

[http://moe.gov.eg/departments/Environment\_Edu\_population/doc/Health\_Plan.pdf]. Accessed 1 February 2021.

[2] Ministry of Health and Population Communicable Disease Control (CDC) Department.

[http://www.mohip.gov.eg/SectorServices.aspx?Deptcode=41&&SectorCode=6]. Accessed 1 February 2021.

[3] Ministry of Health and Population. [http://www.mohip.gov.eg/Default.aspx]. Accessed 7 March 2021.

[3] Ministry of Health and Population. 2014. "Ministry of Health and Population Plan to Combat Avian Influenza".

[http://www.mohip.gov.eg/UserFiles/LibraryFiles/605869.pdf]. Accessed 27 January 2021.

[4] Ministry of Health and Population. 2017. "National Tuberculosis Control Program - Tuberculosis Control Guidelines".

[http://www.mohip.gov.eg/UserFiles/LibraryFiles/651017.pdf]. Accessed 27 January 2021.

[5] Youm 7 News. January 2018. "A Strategic Plan to End Tuberculosis by 2030".

[https://www.youm7.com/story/2018/3/25/%D8%A7%D9%84%D8%B5%D8%AD%D8%A9-%D8%AE%D8%B7%D8%A9-%D8%A7%D8%B3%D8%AA%D8%B1%D8%A7%D8%AA%D9%8A%D8%AC%D9%8A%D8%A9-%D9%84%D9%84%D9%82%D8%B6%D8%A7%D8%A1-%D8%B9%D9%84%D9%89-%D9%85%D8%B1%D8%B6-%D8%A7%D9%84%D8%AF%D8%B1%D9%86-%D8%A8%D8%AD%D9%84%D9%88%D9%84-%D8%B9%D8%A7%D9%85-2030/3711843]. Accessed 27 January 2021.

[6] El Watan News. January 2018. "A strategic plan to eradicate tuberculosis in Egypt by 2030".

[<https://www.elwatannews.com/news/details/3203945>]. Accessed 27 January 2021.

[7] State Information Service. 28 July 2020. "President Sisi's campaign to eradicate virus C and noncommunicable diseases". [<t.ly/Sfwa>]. Accessed 6 February 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 Egypt has a publicly available overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential.

While there is no overarching plans for the nation, the Ministry of Health and Population (MoHP)'s Communicable Disease Control (CDC) Department has a plan published in 2013 for preventing and dealing with infectious diseases in the country's schools. The plan was made public on the Ministry of Education's website [1]. Moreover, the MoHP's CDC has a national program to control infections, the plan is published in 2016 and is referenced on MoHP's CDC webpage. However, the plan was inaccessible at the time of the research (1st February 2021) [2]. The CDC states that one of their missions is "coordination with various concerned authorities to ensure the implementation of the national infection control program" [2]. However, there is no evidence that this entails any emergency response plans in action. Furthermore, the Ministry of Health and Population (MoHP) published the National Plan for Combatting Avian Influenza for the years 2014 - 2016 [3]. The MoHP's National Tuberculosis Control Program published the "Tuberculosis Control Guidelines" in 2017 [4]. According to news sources (Youm 7 and ElWatan News), in January 2018, the MoHP has announced that a new strategic plan is being devised to eradicate tuberculosis in Egypt by 2030 [5,6]. However, an online review does not suggest that this plan has been made publicly available yet. Moreover, the President of Egypt has started an initiative to eliminate Hepatitis C from Egypt, the initiative succeeded and Egypt was declared free of Hepatitis C on 29th July 2020 [7].

[1] Ministry of Education. 2013. "Ministry of Health and Population plan for prevention and handling with infectious diseases and health conditions that must be met at the level of Educational facilities".

[[http://moe.gov.eg/departments/Environment\\_Edu\\_population/doc/Health\\_Plan.pdf](http://moe.gov.eg/departments/Environment_Edu_population/doc/Health_Plan.pdf)]. Accessed 1 February 2021.

[2] Ministry of Health and Population Communicable Disease Control (CDC) Department.

[<http://www.mohip.gov.eg/SectorServices.aspx?Deptcode=41&&SectorCode=6>]. Accessed 1 February 2021.

[3] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 7 March 2021.

[3] Ministry of Health and Population. 2014. "Ministry of Health and Population Plan to Combat Avian Influenza".

[<http://www.mohip.gov.eg/UserFiles/LibraryFiles/605869.pdf>]. Accessed 27 January 2021.

[4] Ministry of Health and Population. 2017. "National Tuberculosis Control Program - Tuberculosis Control Guidelines".

[<http://www.mohip.gov.eg/UserFiles/LibraryFiles/651017.pdf>]. Accessed 27 January 2021.

[5] Youm 7 News. January 2018. "A Strategic Plan to End Tuberculosis by 2030".

[<https://www.youm7.com/story/2018/3/25/%D8%A7%D9%84%D8%B5%D8%AD%D8%A9-%D8%AE%D8%B7%D8%A9-%D8%A7%D8%B3%D8%AA%D8%B1%D8%A7%D8%AA%D9%8A%D8%AC%D9%8A%D8%A9-%D9%84%D9%84%D9%82%D8%B6%D8%A7%D8%A1-%D8%B9%D9%84%D9%89-%D9%85%D8%B1%D8%B6-%D8%A7%D9%84%D8%AF%D8%B1%D9%86-%D8%A8%D8%AD%D9%84%D9%88%D9%84-%D8%B9%D8%A7%D9%85-2030/3711843>]. Accessed 27 January 2021.

[6] El Watan News. January 2018. "A strategic plan to eradicate tuberculosis in Egypt by 2030".

[<https://www.elwatannews.com/news/details/3203945>]. Accessed 27 January 2021.

[7] State Information Service. 28 July 2020. "President Sisi's campaign to eradicate virus C and noncommunicable diseases".

[t.ly/Sfwa]. Accessed 6 February 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: 1**

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 insufficient public evidence that Egypt has a specific mechanism for engaging with the private sector to assist with outbreak emergency preparedness and response. A review of the Ministry of Health and Population's (MoHP) plan for combatting avian influenza for the years 2014 to 2016 did not provide any evidence [1]. The MoHP's National Tuberculosis Control Program published the 'Tuberculosis Control Guidelines' in 2017, which states that the engagement of communities, civil society organizations, and public and private care providers is an important pillar that was adopted by the Egyptian TB control program since the TB Strategy was developed, however no further details are provided [2]. Egypt's 'National Strategy For Crisis/ Disaster Management and Disaster Risk Reduction (DDR)', published in 2010, notes that the Higher Ministerial Committee for Crisis/ Disaster Management and DDR is comprised of various members including the MoHP, heads of institutions, experts, representatives of the Egyptian Red Crescent and the private sector [3]. It also states that 'Non-Governmental Organizations (NGOs) and civil society organizations such as the Red Crescent have an effective and critical role in mitigating the aftermath. They also assist in raising preventive awareness, by publishing flyers, promulgating information on preventive and security measures, which aim to raise social awareness among the whole society. They also play an effective role during the crisis/disaster, in collaboration with the different government bodies in assuming their duties. Besides, their major role in relief activities and assisting afflicted civilians, by providing the emergency medical treatment, means of living and shelter camps, until the concerned bodies restore their balance and uproot the problem' [3]. No further details on specific mechanisms for engagement are provided. A review of the MoHP website, including the Strategic Planning Sector's webpage did not provide any further evidence [4, 5].

[1] Ministry of Health and Population. 2014. "Ministry of Health and Population Plan to Combat Avian Influenza". [<http://www.mohip.gov.eg/UserFiles/LibraryFiles/605869.pdf>]. Accessed 27 January 2021.

[2] Ministry of Health and Population. 2017. "National Tuberculosis Control Program - Tuberculosis Control Guidelines". [<http://www.mohip.gov.eg/UserFiles/LibraryFiles/651017.pdf>]. Accessed 27 January 2021.

[3] Egyptian Cabinet Information and Decision Support Center. 2010. "National Strategy For Crisis/Disaster Management and Disaster Risk Reduction". [[https://www.preventionweb.net/files/13353\\_nationlstrategyforcrisisdisasterman.pdf](https://www.preventionweb.net/files/13353_nationlstrategyforcrisisdisasterman.pdf)]. Accessed 27 January 2021.

[4] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 27 January 2021.

[5] Ministry of Health and Population. "Strategic Planning Sector".

[<http://www.mo hp.gov.eg/SectorServices.aspx?Deptcode=55&&SectorCode=3>]. Accessed 27 January 2021.

### 3.1.3 Non-pharmaceutical interventions planning

#### 3.1.3a

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

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

**Current Year Score: 1**

There is evidence that Egypt has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic but it only applies for Covid-19.

Egypt's State Information Service has announced a list of NPIs enforced by MoHP to control Covid-19 including social distancing [1]. However, there is no evidence that those NPIs are directly applicable to other infectious diseases. The Ministry of Health and Population (MoHP)'s Communicable Disease Control (CDC) Department has a plan published in 2013 for preventing and dealing with infectious diseases in the country's schools. However, the plan is just for Educational facilities and it's not mentioned as a national plan [2].

Egypt has a general program to control infections that was developed in 2005 and then renewed in 2016 [3,4]. However, the renewed version, referenced on the Ministry of Health and Population (MoHP)'s Communicable Disease Control (CDC) Department's webpage, was inaccessible at the time of the research (1st February 2021) [4]. As per the 2005 version of the program, it was only concerned with infections within public health facilities and there was no mention of epidemics or pandemics [3].

A review of the Ministry of Health and Population's website didn't yield further evidence [5]. Egypt has a Central Health Laboratory Administration. However the link to its website was not working during the time of access (1st February 2021) [6].

[1] State Information Service. 14 May 2020. "Egypt's Covid-19 co-existence plan". [<https://www.sis.gov.eg/Story/146118/-Egypt%E2%80%99s-Covid-19-co-existence-plan?lang=en-us>] Accessed 1 February 2021.

[2] Ministry of Education. 2013. "Ministry of Health and Population plan for prevention and handling With infectious diseases and health conditions that must be met at the level of Educational facilities".

[[http://moe.gov.eg/departments/Environment\\_Edu\\_population/doc/Health\\_Plan.pdf](http://moe.gov.eg/departments/Environment_Edu_population/doc/Health_Plan.pdf)]. Accessed 1 February 2021.

[3] World Health Organization Regional Office for the Eastern Mediterranean & Ministry of Health and Population. 2005. "National Index to Control Contagion". [<https://apps.who.int/iris/handle/10665/119757>]. Accessed 1 February 2021.

[4] Ministry of Health and Population's Communicable Disease Control (CDC) Department.

[<http://www.mo hp.gov.eg/SectorServices.aspx?Deptcode=41&&SectorCode=6>]. Accessed 1 February 2021.

[5] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 1 February 2021.

[6] Central Health Laboratories. [<http://www.healthlabs.net/>] last attempt to access 1 February 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 Egypt has completed a national-level biological threat-focused exercise with the World Health Organization (WHO) in the past year. However, there is insufficient evidence that that Egypt has activated it's national emergency response plan for an infectious disease outbreak.

The WHO stated that Egypt has conducted a national-level biological threat-focused exercise from 23 Sep 2019 to 27 Sep 2019 [1]. The purpose of the simulation exercise was to support the International Health Regulations 2005 (IHR 2005) system in the Region of Eastern Mediterranean through testing critical processes embedded within the IHR framework therefore becomes an ideal mode to identify gaps and improve upon national capacities for IHR National Focal Points (IHR NFP) and their multi-sectoral national exchanges. This is done in order for member states to practice implementing key IHR responsibilities according to the IHR 2005 and to work together for global health security. The exercise is a Functional Exercise simulating a serious outbreak of a novel infectious disease in the region. [1]

Moreover, Egypt's president, Abdelattah Alsisi has announced the state of emergency amid the spread of Covid-19 in 28th April 2020, which was approved by the parliament to grant the Alsisi the right to take the necessary measures to face health emergencies [2]. However, there is no evidence of activating the emergency plan on the website of the Ministry of Health and Population and the Ministry of Agriculture and Land Reclamation. [3,4]

[1] World Health Organization. Health Security and Emergency Preparedness (SPH) Portal. "Simulation Exercise". [https://extranet.who.int/sph/simulation-exercise]. Accessed 1 February 2021.

[2] Alarabiya. 28 April 2020. "In light of the outbreak of Corona... Al-Sisi extends the state of emergency for 3 months". [t.ly/uOis]. Accessed 1 February 2021.

[3] Ministry of Health and Population. [http://www.mohp.gov.eg/]. Last accessed 1 February 2021.

[4] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg/]. Last attempt to access 5 February 2021.

#### 3.2.1b

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

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

**Current Year Score: 0**

There is no evidence that Egypt in the past year has identified a list of gaps and best practices in response and developed a plan to improve response capabilities.

The World Health Organization (WHO) extranet maintains a list of after-action reviews which have been planned and/or conducted, the extranet shows no data for after reviews made by Egypt [1]. The UN mentioned that they worked on a Country Preparedness and Response Plan (CPRP) for Egypt. They mentioned that one of the plan goals is to identify key gaps in Egypt's preparedness and response capacity. However, this plan is developed in support of the Government of Egypt and not developed by the government itself [2].

A review of WHO's Egypt profile, WHO's Global Health Observatory and the Ministry of Health and Population's websites didn't provide any further evidence [3,4,5]. Egypt's Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research (5th February 2021) [6].

[1] World Health Organization. "After Action Reviews - Egypt". [<https://extranet.who.int/sph/after-action-review?region=All&country=278>]. Accessed 5 February 2021.

[2] United Nations Office on Drugs and Crime. July 2020. "Egypt Covid-19 Response and Recovery Interventions of the United Nations in Egypt". [[https://www.unodc.org/documents/middleeastandnorthafrica//2020/COVID19/COVID\\_19\\_Egypt\\_Final.pdf](https://www.unodc.org/documents/middleeastandnorthafrica//2020/COVID19/COVID_19_Egypt_Final.pdf)]. Accessed 5 February 2021.

[3] World Health Organization Regional Office for the East Mediterranean. "Country Profile - Egypt". [<http://www.emro.who.int/countries/egy/index.html>]. Accessed 5 February 2021.

[4] World Health Organization Global Health Observatory. "Country Profile - Egypt". [<https://www.who.int/data/gho/data/countries/country-details/GHO/egypt?countryProfileId=769a6347-35ca-4f43-8bf7-54ff8d1c951f>]. Accessed 5 February 2021.

[5] Ministry of Health and Population. [<http://www.moHP.gov.eg/>]. Last accessed 1 February 2021.

[6] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg/>]. Last attempt to access 5 February 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 Egypt has, in the past year, undergone a national-level biological threat-focused exercise that has included private sector representatives.

The World Health Organization (WHO) extranet maintains a list of after-action reviews which have been planned and/or conducted, the extranet shows no data for after reviews made by Egypt [1]. The United Nations (UN) mentioned that they worked on a Country Preparedness and Response Plan (CPRP) for Egypt. They mentioned that one of the plan goals is to identify key gaps in Egypt's preparedness and response capacity. However, this plan is developed in support of the Government of Egypt and not developed by the government itself [2]. Moreover, the only mentioning of the private sector in this plan is in an initiative done by the private sector to support Egypt's response plan efforts [2]. Moreover, the WHO stated

that Egypt has conducted a national-level biological threat-focused exercise from 23 Sep 2019 to 27 Sep 2019. However, there was no mentioning of any role for the private sector in the exercise [3].

A review of WHO's Egypt profile, WHO's Global Health Observatory, and the Ministry of Health and Population's websites didn't provide any further evidence [4,5,6]. Egypt's Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research (5th February 2021) [7].

[1] World Health Organization. "After Action Reviews - Egypt". [<https://extranet.who.int/sph/after-action-review?region=All&country=278>]. Accessed 5 February 2021.

[2] United Nations Office on Drugs and Crime. July 2020. "Egypt Covid-19 Response and Recovery Interventions of the United Nations in Egypt".

[[https://www.unodc.org/documents/middleeastandnorthafrica//2020/COVID19/COVID\\_19\\_Egypt\\_Final.pdf](https://www.unodc.org/documents/middleeastandnorthafrica//2020/COVID19/COVID_19_Egypt_Final.pdf)]. Accessed 5 February 2021.

[3] World Health Organization. Health Security and Emergency Preparedness (SPH) Portal. "Simulation Exercise". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 1 February 2021.

[4] World Health Organization Regional Office for the East Mediterranean. "Country Profile - Egypt". [<http://www.emro.who.int/countries/egy/index.html>]. Accessed 5 February 2021.

[5] World Health Organization Global Health Observatory. "Country Profile - Egypt". [<https://www.who.int/data/gho/data/countries/country-details/GHO/egypt?countryProfileId=769a6347-35ca-4f43-8bf7-54ff8d1c951f>]. Accessed 5 February 2021.

[6] Ministry of Health and Population. [<http://www.mo hp.gov.eg/>]. Last accessed 1 February 2021.

[7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg/>]. Last attempt to access 5 February 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: 0**

There is insufficient evidence that Egypt has an Emergency Operations Center (EOC) in place that covers health emergencies. Egypt has a National Committee for Crisis Management and Disaster Risk Reduction created by the Prime minister's decree number 3185 in 2016, the crisis basically that the committee is responsible for includes all types of crisis as reflected by its composition that includes representatives from all ministries. [1]. A review of online sources including the Ministry of Health and Population and the Ministry of Defense websites has not provided any further evidence [2, 3].

[1] Almasdar. 14 December 2106. "The Prime Minister forms a National Crisis Management Committee". [<https://www.almasdar.com/60610>]. Accessed 8 March 2021.

[2] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 31 January 2021.

[3] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 31 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 insufficient publicly available evidence that Egypt's Emergency Operations Center (EOC) conducts/is required to conduct a drill at least once a year.

According to the World Health Organization (WHO), the WHO's Regional Emergency Operations Center is located in Cairo, Egypt [1]. The WHO reports that a simulation exercise was conducted in December of 2018 to determine national capacities to respond to a potential outbreak of influenza with pandemic potential [1]. A review of online sources did not provide any further information or clarification on the operating protocol of the Egyptian EOC. Given that the EOC is a WHO regional EOC, it is likely that it is required to conduct a drill at least once a year, however, this cannot be confirmed. A review of online sources including the Ministry of Health and Population and the Ministry of Defense websites did not provide any further evidence [2, 3].

[1] World Health Organization Regional Office for the Eastern Mediterranean. 5 December 2018. "Simulation exercise puts global pandemic readiness to the test". [<http://www.emro.who.int/eha/news/simulation-exercise-global-pandemic-readiness.html>]. Accessed 31 January 2021.

[3] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 31 January 2021.

[4] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 31 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 within the last year Egypt's Emergency Operations Center (EOC) has conducted a coordinated emergency response exercise activated within 120 minutes of the identification of the public health emergency.

The World Health Organization (WHO)'s Regional EOC is located in Cairo, Egypt [1]. The WHO reports that a simulation exercise was conducted in December of 2018 to determine national capacities to respond to a potential outbreak of influenza with pandemic potential, however, no details of response activation timings were provided [1].

A review of online sources did not provide any information regarding the plans, procedures, or standard operating procedures of the EOC. A review of the Ministry of Health and Population and Ministry of Defense websites did not provide any further evidence [2, 3].

[1] World Health Organization Regional Office for the Eastern Mediterranean. 5 December 2018. "Simulation exercise puts global pandemic readiness to the test". [<http://www.emro.who.int/eha/news/simulation-exercise-global-pandemic-readiness.html>]. Accessed 31 January 2021.

[2] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 31 January 2021.

[3] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 31 January 2021.

## 3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

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

#### 3.4.1a

Does the country meet one of the following criteria?

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

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

**Current Year Score: 0**

There is insufficient publicly available evidence that the Egyptian public health authorities and national security authorities have carried out an exercise to respond to a potential deliberate biological event.

A review of online sources including the Ministry of Health and Population (MoHP) and the Ministry of Defense websites has not indicated that such an exercise has taken place [1, 2]. The World Health Organization (WHO)'s 2017 Annual Report for Egypt does however mention that The MoHP and the Ministry of Civil Aviation, in collaboration with the WHO conducted the first full-scale public health emergency simulation exercise at Borg Al-Arab international airport on 4 December 2017, however, there is no evidence that the exercise was specific to responding to a deliberate biological event [3].

There is also insufficient publicly available evidence that standard operating procedures and guidelines between the public health and security authorities to respond to a potential deliberate biological attack are in place. According to the WHO's Health Profile for Egypt, published in 2015, preparedness and response plans are coordinated and implemented through an "all-hazards approach" undertaken at the national level and mediated through a crisis management center in the MoHP's cabinet. However, the report also notes the need to upgrade the MoHP's all-hazards approach plan in collaboration with the crisis management center [4]. The plan does however state that functional command and control mechanisms are in place to coordinate and manage outbreaks, however, it is unclear whether security authorities are included in this.

The plan also states that there is a dedicated and trained rapid response team at both the governorate and district level to promptly respond to investigate and manage outbreaks and events, however, it notes that the response teams need ongoing capacity-building and support [4]. The report does not mention security.

The WHO's 2017 Annual Report for Egypt further adds that the WHO country office in Egypt, in collaboration with the MoHP conducted the first emergency response preparedness workshop for all hazards in 2017, which included representatives from the MoHP, the Civil Defense, and representatives from Interior Affairs. The workshop observed presentations on all hazards risk assessment and response, suggesting existing MOUs may not be fully comprehensive [3]. The MoHP has a section of the website containing strategy and planning documents, however, no further evidence was yielded from it [5].

[1] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 31 January 2021.

[2] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/Default.aspx>]. Accessed 31 January 2021.

[3] World Health Organization Regional Office for the Eastern Mediterranean. 2018. "Egypt: Annual Report 2017".

[[http://applications.emro.who.int/docs/EMROPUB\\_2018\\_EN\\_20396.pdf?ua=1](http://applications.emro.who.int/docs/EMROPUB_2018_EN_20396.pdf?ua=1)]. Accessed 31 January 2021.

[4] World Health Organization Regional Office for the Eastern Mediterranean. 2016. "Egypt: Health Profile 2015".

[[http://applications.emro.who.int/dsaf/EMROPUB\\_2016\\_EN\\_19264.pdf?ua=1](http://applications.emro.who.int/dsaf/EMROPUB_2016_EN_19264.pdf?ua=1)]. Accessed 31 January 2021.

[5] Ministry of Health and Population. Strategic Planning Department.

[<http://www.mohip.gov.eg/SectorServices.aspx?Deptcode=55&&SectorCode=3>]. Accessed 31 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: 1**

There is evidence that Egypt's strategy for national public health responses outlines how messages will reach populations and sectors with different communications.

A United Nations Children's Fund (UNICEF) report published in 2010 notes that Egypt's 2007 Integrated National Plan for Avian and Human Influenza was formulated in consultation with the concerned sectors and the international community as a multilayered multiplatform plan that uses more than one means of communication to reach the targeted groups of the population. Implementation of different communication approaches at the targeted levels and/or groups of the population was done against a background of a continuing public media campaign, house to house home visits by the Raedat Reefiyat (community health workers) who were trained to implement the avian influenza community-based education program and an intensive awareness-raising program in primary schools [1].

The Ministry of Health and Population's (MoHP) latest publicly available version of the National Plan for Combatting Avian Influenza (for the years 2014-2016), contains a section on communications strategy and media outreach. The plan does give some consideration to communication outreach to the most vulnerable groups in society and has a section on challenges that may be faced in reaching out to these groups and suggestions of how to overcome them (e.g. adequate use of diverse media materials such as visual, multimedia, internet platforms) [2].

A World Bank report published in 2014, notes that in Egypt, in addition to a mass media public campaign, one of the main elements of the national avian influenza strategy is a community-based education program through community health workers, which reached out to more than 4.8 million families in rural areas of the most-affected and at-risk governorates in Egypt [3].

According to the World Health Organization (WHO)'s 2017 Annual Report for Egypt, the WHO in collaboration with the Egyptian Red Cross has been engaging with Syrian Refugee communities for increasing awareness on community-based disaster risk reduction, which entailed disseminating knowledge regarding diseases, prevention strategies, and home-care [4]. However, a publication by the Egyptian National Council for Disability Affairs in 2015/2016 evaluates Egypt's adherence to Article 11 of the UN Convention on the Rights of Persons with Disabilities (CRPD). Question 2.D. evaluates that country's ability to provide appropriate and accessible forms of communication including different languages, display of text, Braille, and the use of accessible information and communication technology during the management of disaster risk reduction,

humanitarian responses, and risk management situations. Egypt's response was 'We cannot be certain of the availability of such aids and assistive technology all the time, noting that it could have been met while engaging persons with disabilities - as assistive tools - during the initiatives, programs, national strategies, and plans, but they can be not available when submitting the final product' [5]. This likely suggests that improvements are still needed during communication outreach with vulnerable groups of society. A review of the MoHP website did not provide any additional information [6].

[1] United Nations Children's Fund (UNICEF). 2010. "Evaluation of Avian Influenza Community Education Interventions in Rural Egypt". [<https://www.unicef.org/evaluation/reports#/detail/628/evaluation-of-avian-influenza-community-education-interventions-in-rural-egypt>]. Accessed 31 January 2021.

[2] Ministry of Health and Population. 2014. "Plan to Combat Avian Influenza". [<http://www.mohip.gov.eg/UserFiles/LibraryFiles/605869.pdf>]. Accessed 31 January 2021.

[3] World Bank. 2014. "Global Program for Avian Influenza Control and Human Pandemic Preparedness and Response: Project Accomplishments". [<http://documents.worldbank.org/curated/en/527421468329073537/pdf/940430WP0Box385430B0GPAIOFinal00PUBLIC0.pdf>]. Accessed 31 January 2021.

[4] World Health Organization Regional Office for the Eastern Mediterranean. 2018. "Egypt: Annual Report 2017". [[http://applications.emro.who.int/docs/EMROPUB\\_2018\\_EN\\_20396.pdf?ua=1](http://applications.emro.who.int/docs/EMROPUB_2018_EN_20396.pdf?ua=1)]. Accessed 31 January 2021.

[5] National Council for Disability Affairs. 2015/2016. "Egypt's Response to the Questionnaire on article 11 of CRPD: Situations of Risk & Humanitarian Emergencies". [<https://www.ohchr.org/Documents/Issues/Disability/Article11/Egypt.doc>]. Accessed 31 January 2021.

[6] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 31 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 Egypt has a national public health emergency response plan with a section detailing a risk communications plan specifically intended for use during a public health emergency.

According to a report published by the Food and Agriculture Organization (FAO), the focus of Egypt's public health emergency communication plan is on highly pathogenic avian influenza and foot and mouth disease (FMD) which are the most important zoonotic and communicable diseases in Egypt [1] The plan contains a specific sub-section on risk communication, called 'Communication Plan in Crisis' [1]. For Avian Influenza, Egypt's communication strategy has consisted of public awareness campaigns, media outreach through TV channels, 'house-to-house education, and school programs.

According to the World Health Organization (WHO)'s Pandemic Influenza Preparedness Framework, a well-structured communication plan exists within Egypt's Pandemic Influenza Preparedness Plan, which the WHO believes can serve as a model for a broader preparedness plan for a public health emergency of international concern [2].

A United Nations Children's Fund (UNICEF) report published in 2010 notes that Egypt's 2007 Integrated National Plan for Avian and Human Influenza is a multilayered multiplatform plan that uses more than one means of communication to reach

the targeted groups of the population. Implementation of different communication approaches at the targeted levels and/or groups of the population was done against a background of a continuing public media campaign, house to house home visits by the Raedat Reefiyat (community health workers) who were trained to implement the AI community-based education program and an intensive awareness-raising program in primary schools [3].

The Ministry of Health and Population's (MoHP) latest publicly available version of the National Plan for Combatting Avian Influenza (for the years 2014 - 2016), contains a section on communications strategy and media outreach. However, the plan generally consists of raising community awareness regarding the disease, preparing and disseminating health messages for the prevention of an outbreak, and training healthcare workers rather than a risk communication plan for use during an emergency outbreak [4]. The national plan for foot and mouth disease cannot be located online. A review of the MoHP website did not provide any additional information [5].

- [1] Food and Agriculture Organization of the United Nations (FAO). 2011. "Communication Plan Egypt". [[http://www.fao.org/fileadmin/user\\_upload/remesa/library/Plan%20de%20Communication%20en%20SA%20Egypt%20\\_09%2011%20012.pdf](http://www.fao.org/fileadmin/user_upload/remesa/library/Plan%20de%20Communication%20en%20SA%20Egypt%20_09%2011%20012.pdf)]. Accessed 31 January 2021.
- [2] World Health Organization Regional Office for the Eastern Mediterranean. "Pandemic Influenza Preparedness Framework - Egypt". [<http://www.emro.who.int/fr/surveillance-prevision-et-action/pandemic-influenza/pip-egypt.html>]. Accessed 31 January 2021.
- [3] United Nations Children's Fund (UNICEF). 2010. "Evaluation of Avian Influenza Community Education Interventions in Rural Egypt". [[https://www.unicef.org/evaldatabase/files/Egypt\\_2010-003\\_-\\_Egypt\\_Evaluation-of-AI\\_Summary-Report\\_2010.pdf](https://www.unicef.org/evaldatabase/files/Egypt_2010-003_-_Egypt_Evaluation-of-AI_Summary-Report_2010.pdf)]. Accessed 31 January 2021.
- [4] Ministry of Health and Population. 2014. "Plan to Combat Avian Influenza". [<http://www.moHP.gov.eg/UserFiles/LibraryFiles/605869.pdf>]. Accessed 31 January 2021.
- [5] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 31 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 Egypt's risk communication plan designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency.

The Ministry of Agriculture and Land Reclamation developed a Communication Plan to set " a framework to communication in routine situation and in crisis based on experience from the past situation". The plan has addressed specifically that there is a need to identify spokesperson(s) who will be the official "voice during a crisis, and make sure they are trained accordingly [1]. However, there is no evidence of a specific position that is pre-determined for the spokesperson. A review of the Ministry of Health and Population's website did not provide any additional information [2].

- 1] Food and Agriculture Organization of the United Nations (FAO). 2011. "Communication Plan Egypt". [[http://www.fao.org/fileadmin/user\\_upload/remesa/library/Plan%20de%20Communication%20en%20SA%20Egypt%20\\_09%2011%20012.pdf](http://www.fao.org/fileadmin/user_upload/remesa/library/Plan%20de%20Communication%20en%20SA%20Egypt%20_09%2011%20012.pdf)]. Accessed 31 January 2021.
- [2] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 31 January 2021.

## 3.5.2 Public communication

### 3.5.2a

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

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

**Current Year Score: 1**

There is some evidence that the Egyptian Ministry of Health and Population (MoHP) has actively shared messages via Facebook to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation.

The Facebook page of MoHP has been updating the public on the number of Covid-19 cases on a daily basis, moreover, it has been disseminating the minister's statements since Covid-19 emerged, this includes statements about the updates and dispelling rumors [1]. Moreover, the Facebook page doesn't only display Covid news, but it has been utilized in displaying all the MoHP's work, campaigns and statements [1]. For example, MoHP shared a post about the effect of breast-feeding on breast cancer, which is an example of a non-promotional material for non-emergency purposes [2]. The Ministry's website has also been updating the public about Covid-19 cases through a webpage on the website titled: "Corona News" [3].

[1] Ministry of Health and Population. "Facebook page". [<https://www.facebook.com/egypt.mohp>]. Accessed 5 February 2021.

[2] Ministry of Health and Population. "Facebook page - photos". [<https://www.facebook.com/egypt.mohp/photos/a.122315979319023/330265468524072/>]. Accessed 8 March 2021.

[3] Ministry of Health and Population. [<http://www.mohp.gov.eg/>]. Accessed 1 February 2021.

### 3.5.2b

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

No = 1, Yes = 0

**Current Year Score: 0**

There is evidence that a Ministry of Health and Population (MoHP) official has shared misinformation in the last two years. Dr. Alaa Eid, Head of Preventive Medicine Sector at the MoHP released a statement on Jan 28th 2020 saying that Covid-19, god willing, will not enter Egypt due to government efforts and expertise [1]. In less than a month, MoHP announced the first Covid-19 case [2].

[1] AlMasry AlYom. 28 January 2020. "Ministry of Health: The Corona virus will not enter Egypt, God willing". [<https://www.almasryalyoum.com/news/details/1466104>]. Accessed 5 February 2021.

[2] SkyNews Arabia. 15 February 2020. "The first case of Corona in Egypt... When did it come? Where did he stay?". [[t.ly/1swE](https://t.ly/1swE)]. Accessed 5 February 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: 57.28

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: 94.97

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: 16.0

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: 15.0

2019

Gallup; Economist Impact calculation

## 3.7 TRADE AND TRAVEL RESTRICTIONS

### 3.7.1 Trade restrictions

#### 3.7.1a

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

Yes = 0, No = 1

**Current Year Score: 0**

There is evidence that Egypt has issued a restriction, without international/bilateral support, on the export/import of medical goods due to an infectious disease outbreak in the past year.

Egypt has prohibited the export of protective masks and alcohol is prohibited due to the Covid-19 crisis [1]. Moreover, Egypt has an agency responsible for the supervision of imports and exports called the General Organization for Export and Import Control (GOEIC). On their news section, they display news about any good that has a restriction imposed on them. A review of their news section didn't provide any evidence for further restrictions on medical goods in the past year [2]. A review of the news section of the Ministry of Health and Population and a review of the Egyptian's government official dissemination platform: "State Information Service" didn't provide any further evidence [3,4]. The Ministry of Agriculture and Land Reclamation and the Ministry of Foreign affairs websites were inaccessible at the time of the research (February 6th, 2021) [5,6]. A review of Egyptian news platforms didn't provide further evidence [7,8].

[1] AlSharq AlAwsat. March 18 2020. "The export of protective masks and alcohol is prohibited due to Corona". [t.ly/wydO]. Accessed 8 March 2021.

[2] General Organisation for Export and Import Control (GOEIC). 1 June 2019 - 6 February 2021. "News". [https://www.goeic.gov.eg/en/news/default/index/m/6-43]. Accessed February 6 2021.

[3] Ministry of Health and Population. "News". [http://www.mohe.gov.eg/News.aspx]. Accessed 6 February 2021.

[4] State Information Service. [https://www.sis.gov.eg/News/Search?lang=en-us]. Accessed 6 February 2021.

[5] Ministry of Agriculture and Land Reclamation. [http://www.agr-egypt.gov.eg/]. Last attempt to access 6 February 2021.

[6] Ministry of Foreign Affairs. [http://www.mfa.gov.eg]. Last attempt to access 6 February 2021.

[7] AlMasry AlYom. [https://www.almasryalyom.com/news/search]. Accessed 5 February 2021.

[8] Al Shorouk. [t.ly/KkYx]. Accessed 5 February 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 Egypt has issued a restriction, without international/bilateral support, on the export of non-medical goods due to an infectious disease outbreak.

The Ministry of Trade and Industry (MTI) has issued two restrictions, one on exports and another on imports, due to the

outbreak of Covid-19. The first one was on the export of legumes for three months, MTI justified that the decision was to "ensure the provision of citizens' needs of all commodities, particularly the basic ones". The second was on the import of Ceramics and porcelain for three months as well, MTI said that the decree aimed to "keep the productive rates of the Egyptian industry from any probable repercussion resulting from the outbreak of the virus" [2].

A review of the news section of the Ministry of Health and Population didn't provide any further evidence [3]. The Ministry of Agriculture and Land Reclamation and the Ministry of Foreign affairs websites were inaccessible at the time of the research (February 6th, 2021) [4,5]. A review of the Egyptian news platform didn't provide further evidence [6,7].

[1] General Organisation for Export and Import Control (GOEIC). 23 December 2020. "Minister of Trade and Industry issued a decision to stop importing ceramics and porcelain for a period of 3 months".

<https://www.goeic.gov.eg/en/news/default/view/id/654>. Accessed 6 February 2021.

[2] State Information Service. 29 March 2020. "Export of legumes suspended for 3 months".

[\[https://www.sis.gov.eg/Story/145270/Export-of-legumes-suspended-for-3-months?lang=en-us\]](https://www.sis.gov.eg/Story/145270/Export-of-legumes-suspended-for-3-months?lang=en-us). Accessed 6 February 2021.

[3] Ministry of Health and Population. "News". [\[http://www.mohip.gov.eg/News.aspx\]](http://www.mohip.gov.eg/News.aspx). Accessed 6 February 2021.

[4] Ministry of Agriculture and Land Reclamation. [\[http://www.agr-egypt.gov.eg/\]](http://www.agr-egypt.gov.eg/). Last attempt to access 6 February 2021.

[5] Ministry of Foreign Affairs. [\[http://www.mfa.gov.eg/\]](http://www.mfa.gov.eg/). Last attempt to access 6 February 2021.

[6] AlMasry AlYom. [\[https://www.almasryalyoum.com/news/search\]](https://www.almasryalyoum.com/news/search). Accessed 5 February 2021.

[7] Al Shorouk. [\[t.ly/KkYx\]](https://t.ly/KkYx). Accessed 5 February 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 Egypt implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. Egypt has banned travelers from Qatar after the outbreak of Covid-19 as a reaction to the Qatari ban on Egyptian travelers for the same reason [1].

Moreover, Egypt has stopped all international flights on 19th March 2020 before it resumed them again on 1st July 2020 [2]. A review of the websites of the Ministry of Health and Population and the Ministry of Civil Aviation doesn't yield further evidence [3,4]. The Ministry of Foreign affairs website was inaccessible at the time of the research (February 6th, 2021) [5].

[1] SkyNews Arabia. 19 May 2020. "Egypt extends the suspension of international flights until further notice". [\[t.ly/qq2l\]](https://t.ly/qq2l). Accessed 6 February 2021.

[2] State Information Service. 1 July 2020. "EgyptAir resumes international flights today".

[\[https://www.sis.gov.eg/Story/148886/EgyptAir-resumes-international-flights-today?lang=en-us\]](https://www.sis.gov.eg/Story/148886/EgyptAir-resumes-international-flights-today?lang=en-us). Accessed 6 February 2021.

[3] Ministry of Health and Population. "News". [\[http://www.mohip.gov.eg/News.aspx\]](http://www.mohip.gov.eg/News.aspx). Accessed 6 February 2021.

[4] Ministry of Civil Aviation. "News". [\[http://www.civilaviation.gov.eg/news/30\]](http://www.civilaviation.gov.eg/news/30). Accessed 6 February 2021.

[5] Ministry of Foreign Affairs. [\[http://www.mfa.gov.eg/\]](http://www.mfa.gov.eg/). Last attempt to access 6 February 2021.

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

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

#### 4.1.1 Available human resources for the broader healthcare system

##### 4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 45.21

2018

WHO; national sources

##### 4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 192.62

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 insufficient publicly available evidence of a health workforce strategy that Egypt has in place to identify fields where there is an insufficient workforce and strategies to address these shortcomings.

The Ministry of Health and Population (MoHP) has proposed in 2019 a new matching system for fresh graduate medical students to help MoHP match their needs and gaps [1]. However, MoHP didn't make a strategy or a plan that outlines the shortcomings and addresses them publicly available. A review of the websites of MoHP, the Ministry of Labor Force, and the Ministry of Higher Education and Scientific Research didn't yield further evidence [2,3,4].

[1] Ministry of Health and Population. 19 May 2020. "Facebook page".

[<https://www.facebook.com/egypt.mohp/posts/170310097852944>]. Accessed 6 February 2021.

[2] Ministry of Health and Population. [<http://www.mohp.gov.eg/>]. Accessed 6 February 2021.

[3] Ministry of Labor Force. [<http://www.manpower.gov.eg/>]. Accessed 6 February 2021.

[4] Ministry of Higher Education and Scientific Research. [<http://portal.mohe.gov.eg/ar-eg/Pages/Home.aspx>]. Accessed 6 February 2021.

## 4.1.2 Facilities capacity

### 4.1.2a

**Hospital beds per 100,000 people**

Input number

**Current Year Score: 143**

2017

WHO/World Bank; national sources

### 4.1.2b

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that Egypt 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.

Amid the Covid-19 outbreak, the Ministry of Health and Population has transformed a number of hospitals nationwide to be designated for the isolation of Covid-19 patients [1]. However, there is no evidence that these hospitals will still provide isolation services post Covid-19. A review of three of the biggest private hospitals in Egypt (Cleopatra, Dar Al-Fouad and Al-Salam) and the Ministry of Health and Population websites didn't provide further evidence [2,3,4, 5].

[1] Akhbar Alyom. 15 November 2020. "Full Map | We publish places of Corona isolation hospitals in all governorates". [[t.ly/8FKt](http://t.ly/8FKt)]. Accessed February 6 2021.

[2] Cleopatra hospitals. [<http://www.cleopatrahospitals.com/en/home/>]. Accessed 8 March 2021.

[3] Dar Al-Fouad hospital. [[http://www.daralfouad.org/\\_dar-al-fouad-hospital-egypt](http://www.daralfouad.org/_dar-al-fouad-hospital-egypt)]. Accessed 8 March 2021.

[4] Al-Salam hospital. "Services". [<https://www.assih.com/en/services-1>]. Accessed 8 March 2021.

[5] Ministry of Health and Population. [<http://www.mohp.gov.eg/>]. Accessed 6 February 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: 1**

There is evidence that Egypt has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years. However, there is no 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.

Amid the Covid-19 outbreak, the Ministry of Health and Population has transformed a number of hospitals nationwide to be designated for the isolation of Covid-19 patients [1]. Additionally, the government prepared some state-owned facilities such as university buildings, youth centers and other state-owned facilities to be isolation centers for Covid-19 patients. [2]

Moreover, military-owned enterprises have ramped up the production of sterilization cabins and negative-pressure isolation rooms for the country's battle against Covid-19. The Arab-British Dynamics Company (ABD), which belongs to Egypt's military-run Arab Organization for Industrialization (AOI), started the initial production of sterilization cabins to prevent Covid-19 spread and of portable isolation rooms for treating coronavirus patients. The ABD chairman Mohsen Abdel-Rahman noted that ""We can produce from 2,000 to 3,000 isolation rooms per month." [3]

However, officials from the Ministry of Health and Population have announced that this increase in isolation capacity was not sufficient to face the surge in covid cases which prompted the ministry to look for other solutions such as creating quarantine and isolation wards for low-infecting patients at hotels and hostels. [4]

[1] Akhbar Alyom. 15 November 2020. "Full Map | We publish places of Corona isolation hospitals in all governorates". [t.ly/8FKt] Accessed February 6 2021.

[2] Egypt Today. April 2020. "Egypt prepares state-owned facilities to be isolation centers for Covid-19 patients". [https://www.egypttoday.com/Article/1/84929/Egypt-prepares-state-owned-facilities-to-be-isolation-centers-for] Accessed 20 May 2021.

[3] Global Times. May 2020. "Feature: Egypt's military plant produces sterilization cabins, isolation rooms for combating Covid-19". [https://www.globaltimes.cn/content/1187875.shtml] Accessed 20 May 2021.

[4] Enterprise. May 2020. "Covid-19 isolation hospitals at full capacity, prompting search for other alternatives". [https://enterprise.press/stories/2020/05/07/covid-19-isolation-hospitals-at-full-capacity-prompting-search-for-other-alternatives-15605/]. Accessed 20 May 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: 0**

There is insufficient public evidence that Egypt has a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory needs and medical supplies.

The Government of Egypt has a Government Contracts Portal website for issuing tenders, although there is not sufficient evidence that this can be used for the procurement of laboratory needs and medical supplies in general, as well as procurement for the needs of the Ministry of Health and Population (MoHP) and the Ministry of Agriculture [1, 2]. A review of the websites of the MoHP has not yielded any evidence that such a procurement system is in place [3].

According to the WHO's 2017 Annual Report for Egypt, the 'WHO supported the procurement of urgently needed antiretroviral therapy and lab kits to the MoHP to address a supply shortage at the end of 2017'. The report adds that throughout 2017, the WHO supported the 'procurement of needed lab equipment and supplies, to support updating the national epidemic/pandemic preparedness and response plan and standard operating procedures. The WHO also reports that it supported the work of the regional and national polio laboratories, including assisting in the procurement of the annually-required equipment and tools' [4]. This suggests that a national procurement system is not yet in place or not well functioning.[4]

Moreover, Egypt has created an agency designated to procure all the medical supplies that the government needs named the "Unified Procurement Agency" [5]. The official website of the Ministry of Agriculture and Land Reclamation and the Central Health Laboratories are not working (Last access February 7th, 2021) so no further evidence could be found [6, 7].

[1] Government Contracts Portal. [<https://etenders.gov.eg/>]. Accessed 2 February 2021.

[2] Government Contracts Portal. "Contract: Laboratory". [<https://etenders.gov.eg/Tender/DoSearch>]. Accessed 7 February 2021.

[3] Ministry of Health and Population. [<http://www.mohp.gov.eg/>] Accessed 24 January 2021.

[4] World Health Organization Regional Office for the Eastern Mediterranean. 2018. "Egypt: Annual Report 2017". [[http://applications.emro.who.int/docs/EMROPUB\\_2018\\_EN\\_20396.pdf?ua=1](http://applications.emro.who.int/docs/EMROPUB_2018_EN_20396.pdf?ua=1)]. Accessed 7 February 2021.

[5] Manshurat. "Law No. 151 year 2019". [<https://manshurat.org/node/61255>]. Accessed 6 February 2021.

[6] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg/>]. Last attempt to access 7 February 2021.

[7] Central Health Laboratories. [<http://www.healthlabs.net/Default.aspx>]. Last attempt to access 7 February 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 publicly available evidence that Egypt has a stockpile of medical supplies (e.g. medical countermeasures (MCM), medicines, vaccines, medical equipment, Personal Protective Equipment (PPE)) for national use during a public health emergency.

The Ministry of Health and Population (MoHP)'s spokesperson has stated in May 2020 that Egypt has availability of sufficient stocks of medical and preventive supplies in all hospitals. He also added that MoHP has instructed all hospitals to save a big stockpile of medical supplies to be ready for Covid-19 impacts [1]. The president of the Medical Supplies Division at the Cairo Chamber of Commerce has emphasized that Egypt has a huge stockpile of face masks and sanitizers [2]. A review of the websites of the Ministry of Health and Population as well as the Ministry of Defense didn't provide further evidence of actual stockpiles being maintained [3,4]. Egypt's Ministry of Interior website was inaccessible at the time of the research [5].

- [1] Al Watan. 25 May 2020. "The Minister of Health directed to increase the hospitals' stock of medical supplies". [https://www.elwatannews.com/news/details/4792046]. Accessed 6 February 2021.
- [2] Almal. 10 October 2020. "Medical Supplies": Face covers and disinfectants are available and we have stock". [t.ly/GtTv]. Accessed 6 February 2021.
- [3] Ministry of Health and Population. [http://www.mohp.gov.eg/]. Accessed 24 January 2021.
- [4] Ministry of Defense. [http://www.mod.gov.eg/ModWebSite/]. Accessed 31 January 2021.
- [5] Ministry of Interior page on the State Information Service. [https://www.sis.gov.eg/Story/68081/Ministry-of-Interior?lang=en-us]. Accessed 8 March 2021.

#### 4.2.2b

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

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

**Current Year Score: 0**

There is no publicly available evidence that Egypt has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. No evidence could be found on the official website of the Ministry of Health and Population, Ministry of Defense, or national laboratory system of Egypt [1, 2, 3]. There was also no evidence in the World Health Organization report conducted in 2017 [4].

- [1] Ministry of Health and Population. [http://www.mohp.gov.eg/Default.aspx]. Last accessed 2 February 2021.
- [2] Ministry of Defense [https://www.mod.gov.eg/ModWebSite/]. Last accessed 2 February 2021.
- [3] National Research Center [https://www.nrc.sci.eg/]. Last accessed 2 February 2021.
- [4] World Health Organization Regional Office for the Eastern Mediterranean. 2018. "Egypt: Annual Report 2017". [https://applications.emro.who.int/docs/EMROPUB\_2018\_EN\_20396.pdf?ua=1]. Last accessed 2 February 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 evidence that Egypt conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency.

The Ministry of Health and Population (MoHP)'s spokesperson stated, in May 2020, that Egypt has availability of sufficient stocks of medical and preventive supplies in all hospitals. He also added that the MoHP has instructed all hospitals to save a large stockpile of medical supplies to be ready for Covid-19 impacts [1]. Moreover, the president of the Medical Supplies Division at the Cairo Chamber of Commerce has emphasized that Egypt has a huge stockpile of face masks and sanitizers [2]. Egypt has created an agency designated to procure all the medical supplies that the government needs, called the "Unified Procurement Agency" [3]. However, there is no evidence that there is an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency.

- [1] Al Watan. 25 May 2020. "The Minister of Health directed to increase the hospitals' stock of medical supplies". [https://www.elwatannews.com/news/details/4792046]. Accessed 16 May 2021.

[2] Almal. 10 October 2020. "Medical Supplies": Face covers and disinfectants are available and we have stock" 10th October 2020. [t.ly/GtTv]. Accessed 16 May 2021.

[3] Manshurat. 2019. "Law No. 151 / 2019". [https://manshurat.org/node/61255]. Accessed 16 May 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 publicly available evidence neither of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies for national use during a public health emergency nor a plan/mechanism to procure medical supplies for national use during a public health emergency. No evidence could be found in the official website of the Ministry of Health and Population, the World Health Organization report from 2017, the national laboratory system of Egypt, or the official website of the Ministry of Defense. [1,2,3,4]

[1] Ministry of Health and Population. [http://www.mohip.gov.eg/Default.aspx]. Last accessed 2 February 2021.

[2] World Health Organization Regional Office for the East Mediterranean. 2018. "Egypt: Annual Report 2017". [https://applications.emro.who.int/docs/EMROPUB\_2018\_EN\_20396.pdf?ua=1]. Last accessed 2 February 2021

[3] National Research Center. [https://www.nrc.sci.eg/] Last accessed 2 February 2021.

[4] Ministry of Defense. [https://www.mod.gov.eg/ModWebSite/] last accessed 2 February 2021.

#### 4.2.3b

Does the country meet one of the following criteria?

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

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

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

**Current Year Score: 0**

There is no publicly available evidence neither of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies for national use during a public health emergency nor a plan/mechanism to procure laboratory supplies for national use during a public health emergency. No evidence could be found on the official website of the Ministry of Health and Population, the World Health Organization report from 2017, the national laboratory system of Egypt, or the official website of the Ministry of Defense [1,2,3,4]

[1] Ministry of Health and Population. [http://www.mohip.gov.eg/Default.aspx]. Last accessed 2 February 2021.

[2] World Health Organization Regional Office for the East Mediterranean. 2018. "Egypt: Annual Report 2017". [https://applications.emro.who.int/docs/EMROPUB\_2018\_EN\_20396.pdf?ua=1]. Last accessed 2 February 2021.

[3] National Research Center. [<https://www.nrc.sci.eg/>]. Last accessed 2 February 2021.

[4] Ministry of Defense. [<https://www.mod.gov.eg/ModWebSite/>]. Last accessed 2 February 2021

## 4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

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

#### 4.3.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient public evidence that Egypt has a plan in place for dispensing medical countermeasures for national use during a public health emergency. A review of the Egyptian Drug Authority's website, including the Drug Shortages Department, as well as the Ministry of Health and Population and the Ministry of Defense websites did not provide any evidence that such a plan or guidelines is in place [1, 2, 3, 4]. The Egyptian Drug Authority contains a Crisis & Emergency Management Department, which may include additional information, however access to the Department's webpage was restricted [5]. The World Health Organization (WHO)'s Annual Report for Egypt for 2017 provides an indication that maintaining a supply of medical countermeasures and critical medications may be an issue faced by Egypt, and provides evidence that much of the procurement for medical countermeasures has been done by the WHO due to supply shortages in Egypt [6]. A review of online sources did not provide any further evidence.

[1] Egyptian Drug Authority. [<http://www.eda.mohp.gov.eg/Default.aspx>]. Accessed 6 February 2021.

[2] Egyptian Drug Authority. "Drug Shortages Department". [<http://www.eda.mohp.gov.eg/Articles.aspx?id=96>]. Accessed 6 February 2021.

[3] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 6 February 2021.

[4] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 6 February 2021.

[5] Egyptian Drug Authority. "Crisis & Emergency Management". [<http://www.eda.mohp.gov.eg/EmergencyLogin.aspx>]. Accessed 6 February 2021.

[6] World Health Organization Regional Office for the East Mediterranean. 2018. "Egypt Annual Report". [[http://applications.emro.who.int/docs/EMROPUB\\_2018\\_EN\\_20396.pdf?ua=1](http://applications.emro.who.int/docs/EMROPUB_2018_EN_20396.pdf?ua=1)]. Accessed 6 February 2021.

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

#### 4.3.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient publicly available evidence that Egypt has a public plan in place to receive health personnel from other countries to respond to a public health emergency.

There is some evidence that Egypt may be part of such a plan, however, there is insufficient evidence to confirm this. For

example, according to the African Union's First Progress Report of the Chairperson of the Commission on the Africa Center for Disease Control (Africa CDC), published in July 2018, the Africa CDC works to support member states to respond to disease outbreaks. Examples include addressing Ebola in the Democratic Republic of the Congo (DRC) in 2017; Cholera in the DRC; and Acute Watery Diarrhea in Ethiopia [1]. The Africa CDC's Emergency Preparedness and Response framework, part of the CDC's annual report published in 2017, states the objectives of supporting the development of surge capacity at national, regional, and continental levels that integrates the capabilities of National Public Health Institutes and Regional Collaborating Centers, however, beyond this there is no indication of a formal plan in place [2].

Egypt is also part of the World Health Organization (WHO)'s Global Outbreak Alert and Response Network (GOARN), which has formal agreements in place on deployment and receiving criteria and procedures during public health emergencies [3]. Egypt is also a member of the Eastern Mediterranean Public Health Network (EPHNET), which engages in rapid response training (RRT) to fill the human resource gap and to enable member states to build their capacity in rapid assessment and response to public health events and seeks to utilize skilled human resources in the EMR (Eastern Mediterranean Region) by developing a roster of well-trained RRTs at national and sub-national levels from Field Epidemiology Training Program (FETP) fellows and public health officials [4]. A review of the Ministry of Health and Population and the Ministry of Defense websites did not provide any further evidence [5, 6].

- [1] African Union. July 2018. "Meeting of the Permanent Representatives' Committee 29 January 2018 Addis Ababa: First Progress Report of the Chairperson of the Commission on the Africa Center for Disease Control". [[https://au.int/sites/default/files/documents/34074-doc-auc.report.africa.cdc\\_.prc\\_.29.03.pdf](https://au.int/sites/default/files/documents/34074-doc-auc.report.africa.cdc_.prc_.29.03.pdf)]. Accessed 6 February 2021.
- [2] Africa Center for Disease Control and Prevention. 2017. "Africa Centers for Disease Control and Prevention- Annual Report". [<https://africacdc.org/download/africa-cdc-annual-report-2017/f>]. Accessed 6 February 2021.
- [3] Global Outbreak Alert and Response Network. [<https://extranet.who.int/goarn/>]. Accessed 6 February 2021.
- [4] Eastern Mediterranean Public Health Network (EMPHNET). "Rapid Response Training". [[http://emphnet.net/?page\\_id=3710](http://emphnet.net/?page_id=3710)]. Accessed 6 February 2021.
- [5] Ministry of Health and Population. [<http://www.mohp.gov.eg/Default.aspx>]. Accessed 6 February 2021.
- [6] Ministry of Defense. [<http://www.mod.gov.eg/ModWebSite/>]. Accessed 6 February 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: 3**

2020

World Policy Analysis Center

#### 4.4.1b

**Access to skilled birth attendants (% of population)**

Input number

**Current Year Score: 91.5**

2014

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

#### **4.4.1c**

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

Input number

**Current Year Score: 368.79**

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 insufficient evidence that the Egyptian 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. The Egyptian government has emphasized that healthcare workers will be prioritized in receiving the vaccine [1]. The Minister of Health and Population stated that protecting healthcare workers is a priority, however, nothing specific was mentioned on the implications of this [2]. Other initiatives that were designed to appreciate healthcare workers include monetary incentives and a note of gratitude on the country's coins [3]. A review of the Ministry of Health and Population website did not provide further evidence [4].

[1] Al-Ahram. 23 December 2020. "Minister of Health: Medical personnel and the most vulnerable to infection with Corona have priority in obtaining the vaccine". [<http://gate.ahram.org.eg/News/2548211.aspx>]. Accessed 6 February 2021.

[2] Almal News. 3 May 2020. "Minister of Health for the medical staff: You dazzled us and taught us the will and patriotism in every sense of the word". [t.ly/wrfl]. Accessed 6 February 2021.

[3] AlWatan. 6 February 2021. "A reward, balance and a coin... How did the state support doctors in the Corona pandemic?". [https://www.elwatannews.com/news/details/5284054]. Accessed 6 February 2021.

[4] Ministry of Health and Population. [http://www.moHP.gov.eg/Default.aspx]. Accessed 6 February 2021.

## 4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

### 4.5.1 Communication with healthcare workers

#### 4.5.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence that Egypt has a system in place for public health officials and healthcare workers to communicate during a public health emergency.

A review of the Ministry of Health and Population's (MoHP) plan for combatting avian influenza for the years 2014 to 2016 did not provide any evidence [1].

The MoHP's National Tuberculosis Control Program published the "Tuberculosis Control Guidelines" in 2017, which states that the engagement of communities, civil society organizations, and public and private care providers is an important pillar adopted by the Egyptian TB control program since the TB Strategy was developed, however, no further details are provided [2].

Egypt's National Strategy for Crisis/Disaster Management and Disaster Risk Reduction (DRR), published in 2010, notes that the Higher Ministerial Committee for Crisis/Disaster Management and DRR is comprised of various members, including the MoHP, heads of institutions, experts, representatives of the Egyptian Red Crescent and the private sector [3]. It also states that NGOs and civil society organizations such as the Red Crescent play an effective role during a crisis or disaster, in collaboration with different government bodies, by assisting afflicted civilians, providing emergency medical treatment, and shelter camps, however, there is no evidence of specific mechanisms or a formal system being in place [3].

The World Health Organization's Health System Profile for Egypt, published in 2006, notes that "The organizational structure of the MoHP headquarters is complex including various sectors, departments, and units vertically organized with little communication and interaction across boundaries. Organizational roles and responsibilities are sometimes redundant and lack clarity" [4].

The Japan International Cooperation Agency's (JICA) 2017 report on Health Cooperation Planning in Egypt found that the ambulatory hospital referral system did not function well (for referrals to private and public hospitals), further suggesting that effective communication may not yet be in place [5]. No further details on specific mechanisms for engagement are provided. A review of the MoHP website, including the Strategic Planning Sector's webpage did not provide any further evidence [6, 7].

- [1] Ministry of Health and Population. 2014. "Ministry of Health and Population Plan to Combat Avian Influenza". [http://www.moHP.gov.eg/UserFiles/LibraryFiles/605869.pdf]. Accessed 27 January 2021.
- [2] Ministry of Health and Population. 2017. "National Tuberculosis Control Program - Tuberculosis Control Guidelines". [http://www.moHP.gov.eg/UserFiles/LibraryFiles/651017.pdf]. Accessed 27 January 2021.
- [3] Egyptian Cabinet Information and Decision Support Center. 2010. "National Strategy For Crisis/ Disaster Management and Disaster Risk Reduction". [https://www.preventionweb.net/files/13353\_nationlstrategyforcrisisdisasterman.pdf]. Accessed 27 January 2021.
- [4] World Health Organization. 2006. "Health System Profile - Egypt". [http://apps.who.int/medicinedocs/documents/s17293e/s17293e.pdf]. Accessed 27 January 2021.
- [5] Japan International Cooperation Agency (JICA). 2017. "Health Sector Cooperation Planning Survey in Arab Republic of Egypt - Final Report". [http://open\_jicareport.jica.go.jp/pdf/12285300.pdf]. Accessed 27 January 2021.
- [6] Ministry of Health and Population. [http://www.moHP.gov.eg/Default.aspx]. Accessed 27 January 2021.
- [7] Ministry of Health and Population. "Strategic Planning Sector". [http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=55&&SectorCode=3]. Accessed 27 January 2021.

#### 4.5.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that Egypt has a system in place for public health officials and healthcare workers to communicate during a public health emergency, thus, there is also no evidence of such a plan that involves both the public and the private sector.

A review of the Ministry of Health and Population's (MoHP) plan for combatting avian influenza for the years 2014 to 2016 has not provided any evidence [1].

The MoHP's National Tuberculosis Control Program published the "Tuberculosis Control Guidelines" in 2017, which states that the engagement of communities, civil society organizations, and public and private care providers is an important pillar that was adopted by the Egyptian TB control program since the TB Strategy was developed, however, no further details are provided [2].

Egypt's National Strategy for Crisis/ Disaster Management and Disaster Risk Reduction (DDR), published in 2010, notes that the Higher Ministerial Committee for Crisis/ Disaster Management and DDR is comprised of various members including the MoHP, heads of institutions, experts, representatives of the Egyptian Red Crescent and the private sector [3]. It also states that NGOs and civil society organizations such as the Red Crescent play an effective role during a crisis or disaster, in collaboration with the different government bodies, by assisting afflicted civilians, providing emergency medical treatment, and shelter camps, however, there is no evidence of specific mechanisms or a formal system being in place [3].

The WHO's Health System Profile for Egypt published in 2006 notes that "The organizational structure of the MoHP headquarters is complex including various sectors, departments, and units vertically organized with little communication and interaction across boundaries. Organizational roles and responsibilities are sometimes redundant and lack clarity" [4].

The Japan International Cooperation Agency's (JICA) 2017 report on Health Cooperation Planning in Egypt found that the ambulatory hospital referral system was not well functioning (for referrals to private and public hospitals), further suggesting

that effective communication may not yet be in place [5]. No further details on specific mechanisms for engagement are provided. A review of the MoHP website, including the Strategic Planning Sector's webpage has not provided any further evidence [6, 7].

- [1] Ministry of Health and Population. 2014. "Plan to Combat Avian Influenza". [http://www.mohp.gov.eg/UserFiles/LibraryFiles/605869.pdf]. Accessed 27 January 2021.
- [2] Ministry of Health and Population. 2017. "National Tuberculosis Control Program - Tuberculosis Control Guidelines". [http://www.mohp.gov.eg/UserFiles/LibraryFiles/651017.pdf]. Accessed 27 January 2021.
- [3] Egyptian Cabinet Information and Decision Support Center. 2010. "National Strategy For Crisis/ Disaster Management and Disaster Risk Reduction". [https://www.preventionweb.net/files/13353\_nationlstrategyforcrisisdisasterman.pdf]. Accessed 27 January 2021.
- [4] World Health Organization. 2006. "Health System Profile - Egypt". [http://apps.who.int/medicinedocs/documents/s17293e/s17293e.pdf]. Accessed 27 January 2021.
- [5] Japan International Cooperation Agency (JICA). 2017. "Health Sector Cooperation Planning Survey in Arab Republic of Egypt - Final Report". [http://open\_jicareport.jica.go.jp/pdf/12285300.pdf]. Accessed 27 January 2021.
- [6] Ministry of Health and Population. [http://www.mohp.gov.eg/Default.aspx]. Accessed 27 January 2021.
- [7] Ministry of Health and Population. "Strategic Planning Sector". [http://www.mohp.gov.eg/SectorServices.aspx?Deptcode=55&&SectorCode=3]. Accessed 27 January 2021.

## 4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

### 4.6.1 Healthcare associated infection (HCAI) prevention and control programs

#### 4.6.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that the national public health system is monitoring and tracking the number of healthcare-associated infections (HCAI) that take place in healthcare facilities.

The Ministry of Health and Population (MoHP) has a General Directorate of Infection Control, which lists establishing a system to monitor HCAI among its key functions [1]. However, there is no evidence this has taken place to date and a review of the MoHP website did not provide any indication of such monitoring being in place [2].

The Directorate of Infection Control also published a "National Guide to Infection Control", however, the document was inaccessible at time of research [3]. The Central Health Laboratories Administration reports that the MoHP has a National Infection Control Program in place, which entails improving the quality of health services provided, however, no further information is provided regarding monitoring of HCAI [4].

The Central Health Laboratories Administration also published guidelines on preventing HCAI, however, there is no mention of tracking infections that take place in healthcare facilities [4]. The Central Health Laboratories Administration website contains a link to a publication titled "Book of Combatting Infections in Hospitals", however, the link was not working [5, 6].

A study published in the American Journal of Infection Control in 2016 found significant rates of HCAI in hospital ICUs and recommended introducing a HCAI surveillance program as a priority for Egyptian hospitals [7]. Another academic study published in the Alexandria Journal of Pediatrics in 2017 found an incidence rate of 12.8% in pediatric ICUs [8]. A review of online sources did not provide any further evidence.

- [1] Ministry of Health and Population. "Infection Control".  
[<http://www.mohip.gov.eg/SectorServices.aspx?Deptcode=41&&SectorCode=6>]. Accessed 26 January 2021.
- [2] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 26 January 2021.
- [3] Ministry of Health and Population. "National Guide to Infection Control".  
[<http://www.mohip.gov.eg/UserFiles/Userfiles/41/fda0d369-aaec-4292-ac0e-a3e3cfa056d2.rar>]. Accessed 26 January 2021.
- [4] Central Health Laboratories. "Infection Control".  
[<http://www.healthlabs.net/Index.aspx?uc=../UI/ActivitesLinks/InfectionControl>]. Accessed 26 January 2021.
- [5] Central Health Laboratories. "Scientific Publications".  
[<http://www.healthlabs.net/Default.aspx?uc=../UI/ScientificEditions/PreviewEditions>]. Accessed 26 January 2021.
- [6] Central Health Laboratories. "Book of Infection Control in Hospitals".  
[[http://www.healthlabs.net/Files/infection\\_control.pdf](http://www.healthlabs.net/Files/infection_control.pdf)]. Accessed 26 January 2021.
- [7] Talaat M, et al. November 2016. "National surveillance of health care-associated infections in Egypt: Developing a sustainable program in a resource-limited country". American Journal of Infection Control 1;44  
[11] :1296-1301. [<https://pubmed.ncbi.nlm.nih.gov/27339791/>]. Accessed 26 January 2021.
- [8] Moustafa AA, Raouf MM, El-Dawy MS. 2017. "Bacterial healthcare-associated infection rates among children admitted to Pediatric Intensive Care Unit of a Tertiary Care Hospital, Egypt". Alexandria Journal of Pediatrics 30:100-7.  
[<http://www.ajp.eg.net/article.asp?issn=1687-9945;year=2017;volume=30;issue=3;spage=100;epage=107;aulast=Moustafa>]. Accessed 26 January 2021.

## 4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

### 4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

#### 4.7.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Egypt has requirements for an ethical review to be conducted by either an ethics committee (REC) or via Institutional Review Board approval before beginning a clinical trial.

Ministerial Decree 95 of 2005 prohibits the conducting of clinical trials without the approval of an ethics committee [1]. Moreover, a newer law issued in December 2020 entitled "Law on Regulating Clinical Medical Research" emphasized the requirement of approval of the clinical trial protocol and approval of the Supreme Council for the Review of Medical and Clinical Research Ethics for clinical trials that involve new medicines or new use for existing medicines [2]. The Ministry of Health and Population (MoHP) has a Central Administration for Health Research and Development with several guidelines on conducting clinical studies. The MoHP also published Research Ethics Committee Guidelines in 2016, which contain detailed guidelines on the process of submitting documents for REC approval (with different guidelines for Masters/Ph.D. students,

NGOs, and public sector workers), the review process, and general rules [3,4].

- [1] Ministry of Health and Population. 2005. "Ministerial Decree Number 95 of 2005". [http://www.mohip.gov.eg/UserFiles/Userfiles/24/b41a48dd-935b-466d-9b4a-4bc236f8ca20.pdf]. Accessed 7 February 2021.
- [2] AlMasry AlYom. 27 December 2020. "The Official Gazette publishes the Law on Regulating Clinical Medical Research (full text)". [https://www.almasryalyoum.com/news/details/2199524]. Accessed 8 March 2020.
- [3] Ministry of Health and Population. 2016. "Research Ethics Committee Guidelines (English)". [http://www.mohip.gov.eg/UserFiles/Userfiles/24/6a883c9f-c131-412b-9072-49756f36a024.pdf]. Accessed 7 February 2021.
- [4] Ministry of Health and Population. 2016. "Research Ethics Committee Guidelines (Arabic)". [http://www.mohip.gov.eg/UserFiles/Userfiles/24/f2e5e27a-a357-42dd-a0ba-ae29ca3c73a6.pdf]. Accessed 7 February 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 insufficient evidence that Egypt has an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics. The Egyptian parliament, government and President have been in negotiations over a law that organizes clinical trials, it was recently approved on December 23rd 2020, however, the law doesn't include an expedited process for approving clinical trials for unregistered MCM to treat ongoing epidemics and it is left to the drug authority and the Supreme Council for the Review of Medical and Clinical Research Ethics to decide on a case-by-case basis [1]. During the pandemic, Egypt approved the clinical trials of a Japanese drug to treat Covid-19 named Avigan, stating that the approval was consistent with the World Health Organization (WHO) clinical trials protocol, however, there is no evidence that the process was expedited [2]. A review of the websites of the Ministry of Health and Population, Egyptian Drug Authority and Ministry of Higher Education and Scientific Research provided no further evidence [3,4,5].

- [1] AlMasry AlYom. 27 December 2020. "The Official Gazette publishes the Law on Regulating Clinical Medical Research (full text)" [https://www.almasryalyoum.com/news/details/2199524]. Accessed 8 March 2020.
- [2] AlAraby. 18 April 2020. "Egypt: Clinical trials of a Japanese drug on Corona patients, despite the objections". [t.ly/UOJD]. Accessed 7 February 2021.
- [3] Ministry of Health and Population. [http://www.mohip.gov.eg/Default.aspx]. Accessed 7 February 2021.
- [4] Egyptian Drug Authority. [http://www.eda.mohip.gov.eg/]. Accessed 7 February 2021.
- [5] Ministry of Higher Education and Scientific Research. [http://portal.moheer.gov.eg/ar-eg/Pages/default.aspx]. Accessed 7 February 2021.

### 4.7.2 Regulatory process for approving medical countermeasures

#### 4.7.2a

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is public evidence to suggest that Egypt has a government agency responsible for approving new medical countermeasures for humans. The Egyptian Drug Authority (EDA) contains the Central Administration for Pharmaceutical

Affairs (CAPA), a regulatory body that carries out a range of assessment and monitoring activities for human and veterinary medicines, food supplements, insecticides, medical devices and cosmetics to ensure they are of an acceptable standard with the aim of ensuring that the community has access to safe, effective, affordable, and secure products [1]. CAPAs key functions include registration of the aforementioned products, licensing of products, inspection and control function, and licensing of imports and exports [1]. The EDA also contains a Registration Department, which is responsible for the assessment of all pharmaceutical products for human use including food supplements, insecticides and medical devices and providing registration licenses to ensure the quality and safety of products [2]. The EDA also has a Crisis & Emergency Management section on its website, however access is restricted [3]. Furthermore, the Egyptian President recently established the Egyptian Unified Procurement Authority by a presidential decree in 2019, which is designated to procure all the medical supplies that the government needs. A review of the agency's news did not provide further evidence [4]. A review of Ministerial Decrees posted on the EDA website did not provide any further evidence with respect to medical countermeasures [5]. A review of online sources including the MoHP website did not provide any further evidence [6].

[1] Egyptian Drug Authority. "Central Administration of Pharmaceutical Affairs".

[<http://www.eda.mohip.gov.eg/Articles.aspx?id=5>]. Accessed 7 February 2021.

[2] Egyptian Drug Authority. "Registration Department". [<http://www.eda.mohip.gov.eg/Articles.aspx?id=32>]. Accessed 7 February 2021.

[3] Egyptian Drug Authority. "Crisis & Emergency Management". [<http://www.eda.mohip.gov.eg/EmergencyLogin.aspx>]. Accessed 7 February 2021.

[4] Manshurat. "Law No. 151 year 2019". [<https://manshurat.org/node/61255>]. Accessed 8 March 2021.

[5] Egyptian Drug Authority. "Ministerial Decrees". [<http://www.eda.mohip.gov.eg/Articles.aspx?id=26>]. Accessed 7 February 2021.

[6] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 7 February 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 of an expedited process for approving medical countermeasures (MCM) for human use in Egypt. In 2020, the Egyptian Drug Authority established a fast track for approving MCM. The fast track is supposed to help in achieving continuous follow-up of all developments issued by global health authorities and to support the drug industry under the current circumstances resulting from the Covid-19 outbreak [1,2]. However, there is insufficient evidence that this fast track will continue to operate after Covid. A review of the websites of the Ministry of Health and Population and Ministry of Higher Education and Scientific Research did not provide further evidence [3,4].

[1] Masrawy. 17 December 2020. "A new procedure from the Drug Authority regarding drug company registration". [[t.ly/mezF](https://t.ly/mezF)]. Accessed 7 February 2021.

[2] State Information Service. 28 July 2020. "EDA: Facilitation of the registration and inspection procedures for Drug Authority laboratories". [[t.ly/Nhho](https://t.ly/Nhho)]. Accessed 7 February 2021.

[3] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 30 January 2021.

[4] Ministry of Higher Education and Scientific Research. [<http://portal.mohe.gov.eg/ar-eg/Pages/default.aspx>]. Accessed 30 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: 0

There is insufficient evidence that pandemics are integrated into the national risk reduction strategy and that there is a standalone national disaster risk reduction strategy specifically for pandemics.

Egypt's National Strategy for Disaster Risk Reduction 2030, published in 2017, specifically mentions diseases and pandemics as a form of natural disaster, however, no further details are provided in the strategy specific to pandemics [1].

The Ministry of Health and Population's (MoHP) Central Administration of Strategic Planning is mandated to develop health plans for the short, medium and long term to improve health services, however, no specific mention of pandemics or risk reduction strategies related to pandemics was available on the MoHP website [2, 3].

The MoHP publishes disease-specific plans, such as the National Plan to Combat Avian Influenza for the years 2014 to 2016 [4]. Avian Influenza continues to be a serious concern in Egypt according to reports published by the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization [5, 6]. The MoHP also published a plan of action for the prevention, treatment, and care of viral hepatitis for the years 2014 to 2018, as Egypt has one of the highest rates of hepatitis globally, and it is estimated that around 10% of the population is infected with the virus [7].

[1] Cabinet of Egypt Information and Decision Support Center. 2017. "National Strategy for Disaster Risk Reduction 2030 - Summary for Dissemination". [[https://www.preventionweb.net/files/57333\\_egyptiannationalstrategyfordrrengli.pdf](https://www.preventionweb.net/files/57333_egyptiannationalstrategyfordrrengli.pdf)].

Accessed 6 February 2021.

[2] Ministry of Health and Population. "Central Administration of Strategic Planning".

[<http://www.moHP.gov.eg/SectorServices.aspx?Deptcode=56&&SectorCode=3>]. Accessed 6 February 2021.

[3] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 6 February 2021.

[4] Ministry of Health and Population. 2014. "Plan to Combat Avian Influenza".

[<http://www.moHP.gov.eg/UserFiles/LibraryFiles/605869.pdf>]. Accessed 24 January 2021.

[5] Food and Agriculture Organization of the United Nations (FAO). 2011. "Communication Plan Egypt".

[[http://www.fao.org/fileadmin/user\\_upload/remesa/library/Plan%20de%20Communication%20en%20SA%20Egypt%20\\_09%2011%20012.pdf](http://www.fao.org/fileadmin/user_upload/remesa/library/Plan%20de%20Communication%20en%20SA%20Egypt%20_09%2011%20012.pdf)]. Accessed 6 February 2021.

[6] World Health Organization. "Pandemic Influenza - Egypt". [<http://www.emro.who.int/egy/programmes/influenza.html>].

Accessed 6 February 2021.

[7] Ministry of Health and Population Regional Office for the Eastern Mediterranean. 2014. "Plan of Action for the Prevention, Care & Treatment of Viral Hepatitis, Egypt 2014-2018".

[[http://www.emro.who.int/images/stories/Hepatitis\\_action\\_plan.pdf?ua=1](http://www.emro.who.int/images/stories/Hepatitis_action_plan.pdf?ua=1)]. Accessed 6 February 2021.

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

### 5.2.1 Cross-border agreements

#### 5.2.1a

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

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

**Current Year Score: 2**

Egypt has cross-border agreements in place with regard to public health emergencies and there is no evidence of gaps in implementation.

Egypt is a member of the African Union's Africa Center for Disease Control and Prevention (Africa CDC), which seeks to improve the capacity of member states in the surveillance, emergency response, and prevention of infectious diseases. The Africa CDC serves as a cooperative platform for Member States to share knowledge, exchange lessons learned, build capacity, and provide technical assistance to each other. Africa CDC's strategic objectives include supporting member states during health emergencies; promoting partnerships and collaboration amongst member states to address emerging and endemic diseases and public health emergencies; and harmonizing disease control, prevention policies, and the surveillance systems of member states amongst other objectives [1].

The Africa CDC's annual report published in 2017 had a Surveillance and Disease Intelligence section that lists several strategic objectives, including facilitating and strengthening Regional Coordinating Centers (RCC) in promoting inter-country and regional collaboration on surveillance, shared data use, and engagement with laboratory networks [2]. The Information Systems section of the same annual report lists the objective of designing and implementing a "continental data-sharing platform for member states" to enable the secure transmission of relevant data and reports, enable data queries and provide dashboard reporting to monitor priority objectives and outbreak responses [2].

The Emergency Preparedness and Response framework, part of the same annual report published in 2017, states the objectives of establishing multi-hazard and multi-sectoral preparedness and response plans for public health emergencies at

national, regional, and continental level; and supporting the development of surge capacity at national, regional, and continental levels that integrate capabilities of National Public Health Institutes (NPHIs) and Regional Collaborating Centers (RCCs) [4].

According to the African Union's First Progress Report of the Chairperson of the Commission on the Africa CDC, published in July 2018, the Africa CDC has begun producing weekly reports that summarize public health events detected through media and informal public sources. In 2017, over 30 such reports were prepared by the Africa CDC epidemiologists, which provided early signals of possible disease outbreaks that may negatively affect general public health and the wellbeing of African citizens. The report also notes that the Africa CDC works to support member states respond to disease outbreaks. Additionally, mechanisms are also in place to facilitate public health information sharing, for example, the Africa CDC launched a platform to facilitate weekly discussions on regional public health issues between member states, which have been successful in allowing for informal notifications of outbreak events taking place in neighboring states [3].

Egypt is also a member of the Organization of Islamic Cooperation (OIC), an international organization comprised of 57 states, which adopted the "OIC Strategic Health Program of Action (SHPA) 2014-2023" with the aim of strengthening and enhancing collaboration in various health areas, including the prevention and control of diseases and pandemics and emergency health responses and interventions [4,5].

Additionally, as a member of the Arab League, in 2010, Egypt committed to the "The Arab Strategy for Disaster Risk Reduction 2020", which includes disease outbreaks and pandemic influenza [6]. However, neither the details nor functionality of these agreements can be determined.

[1] Africa Center for Disease Control and Prevention. "About the Africa Centers for Disease Control and Prevention (Africa CDC)". [<http://www.africacdc.org/about/about-us>]. Accessed 6 February 2021.

[2] Africa Center for Disease Control and Prevention. 2017. "Africa Centers for Disease Control and Prevention- Annual Report". [<https://africacdc.org/download/africa-cdc-annual-report-2017/>]. Accessed 6 February 2021.

[3] African Union. July 2018. "Meeting of the Permanent Representatives' Committee 29 January 2018 Addis Ababa: First Progress Report of the Chairperson of the Commission on the Africa Center for Disease Control". [[https://au.int/sites/default/files/documents/34074-doc-auc.report.africa.cdc\\_.prc\\_.29.03.pdf](https://au.int/sites/default/files/documents/34074-doc-auc.report.africa.cdc_.prc_.29.03.pdf)]. Accessed 6 February 2021.

[4] World Data. "OIC Member States". [<https://www.worlddata.info/alliances/oic-organization-of-islamic-cooperation.php>]. Accessed 6 February 2021.

[5] Organization of Islamic Cooperation. 2013. "OIC Strategic Health Program of Action 2014-2023 (OIC-SHPA)". [<http://www.sesric.org/files/article/480.pdf>]. Accessed 6 February 2021.

[6] Council of Arab Ministers Responsible for the Environment. 2010. "The Arab Strategy for Disaster Risk Reduction 2020". [[https://www.unisdr.org/files/18903\\_17934asdrfinalenglishjanuary20111.pdf](https://www.unisdr.org/files/18903_17934asdrfinalenglishjanuary20111.pdf)]. Accessed 6 February 2021.

### 5.2.1b

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

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

**Current Year Score: 0**

There is insufficient publicly available evidence that Egypt has cross-border agreements, protocols or MOUs with neighboring countries with regard to animal health emergencies.

A review of the strategic objectives of the African Union's Africa Center for Disease Control and Prevention (Africa CDC),

which Egypt is a member, does not specifically mention animal health [1, 2, 3, 4]. Similarly, neither the Organization for Islamic Cooperation's "OIC Strategic Health Program of Action (SHPA) 2014-2023", or "The Arab Strategy for Disaster Risk Reduction 2020" cover animal health specifically [5, 6]. The General Authority for Veterinary Services has a section on the website on International Cooperation and lists International Cooperation with EU, however no details are provided [7]. A review of the Ministry of Health and Population website did not provide any further evidence [8]. The Ministry of Agriculture and Land Reclamation's website was inaccessible at the time of the research [9].

[1] Africa Center for Disease Control and Prevention. "About the Africa Centers for Disease Control and Prevention (Africa CDC)". [<http://www.africacdc.org/about/about-us>]. Accessed 6 February 2021.

[2] Africa Center for Disease Control and Prevention. 2017. "Africa Centers for Disease Control and Prevention- Annual Report". [<https://africacdc.org/download/africa-cdc-annual-report-2017/>]. Accessed 6 February 2021.

[3] Organization of Islamic Cooperation. 2013. "OIC Strategic Health Program of Action 2014-2023 (OIC-SHPA)". [<http://www.sesric.org/files/article/480.pdf>]. Accessed 6 February 2021.

[4] Council of Arab Ministers Responsible for the Environment. 2010. "The Arab Strategy for Disaster Risk Reduction 2020". [[https://www.unisdr.org/files/18903\\_17934asdrfinalenglishjanuary20111.pdf](https://www.unisdr.org/files/18903_17934asdrfinalenglishjanuary20111.pdf)]. Accessed 6 February 2021.

[5] General Authority for Veterinary Services. "International Cooperation". [<http://www.govs.gov.eg/FrontEnd/ar/Cooperation.aspx>]. Accessed 28 January 2021.

[6] Ministry of Health and Population. [<http://www.moHP.gov.eg/Default.aspx>]. Accessed 6 February 2021.

[7] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 6 February 2021.

## 5.3 INTERNATIONAL COMMITMENTS

### 5.3.1 Participation in international agreements

#### 5.3.1a

**Does the country 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: 1**

2021

Biological Weapons Convention

#### 5.3.1b

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

Yes = 1, No = 0

**Current Year Score: 0**

2021

Biological Weapons Convention

### 5.3.1c

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

Yes = 1, No = 0

Current Year Score: 1

2021

Biological Weapons Convention

### 5.3.1d

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

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

Current Year Score: 2

2021

Biological Weapons Convention

## 5.3.2 Voluntary memberships

### 5.3.2a

Does the country meet at least 2 of the following criteria?

- Membership in Global Health Security Agenda (GHSA)
- Membership in the Alliance for Country Assessments for Global Health Security and IHR Implementation (JEE Alliance)
- Membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP)
- Membership in the Australia Group (AG)
- Membership in the Proliferation Security Initiative (PSI)

Needs to meet at least two of the criteria to be scored a 1 on this measure. , Yes for five = 1 , Yes for four = 1 , Yes for three = 1 , Yes for two = 1 , Yes for one = 0 , No for all = 0

Current Year Score: 0

2021

Global Health Security Agenda; JE Alliance; Global Partnership; Australia Group; PSI

## 5.4 JOINT EXTERNAL EVALUATION (JEE) AND PERFORMANCE OF VETERINARY SERVICES PATHWAY (PVS)

### 5.4.1 Completion and publication of a Joint External Evaluation (JEE) assessment and gap analysis

#### 5.4.1a

Has the country completed a Joint External Evaluation (JEE) or precursor external evaluation (e.g., GHSA pilot external assessment) and published a full public report in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

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

#### 5.4.1b

Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?

Yes = 1, No = 0

Current Year Score: 0

2021

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

### 5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

#### 5.4.2a

Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

#### 5.4.2b

Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5 FINANCING

### 5.5.1 National financing for epidemic preparedness

#### 5.5.1a

Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that Egypt has allocated national funds to improve capacity to address epidemic threats within the past three years. Egypt has made unprecedented expansions to healthcare's share of the budget [1]. However, there is no evidence that this increase was allocated to address epidemic threats [1]. Egypt has allocated USD 6.3 billion to support the country in response to Covid-19 [2], however, there is no evidence that part of the budget was allocated for future threats. Furthermore, Egypt's budget for the past three financial years didn't address epidemic threats [3]. A review of the Ministry of Health and Population website did not yield any further information [4]. The Ministry of Agriculture and Land Reclamation website was inaccessible at the time of the research (6th February 2021) [5].

[1] AlMasry AlYom. 30 March 2020. "Minister of Finance: The health sector budget is witnessing the largest increase in its history". [<https://www.almasryalyoum.com/news/details/1671341>]. Accessed 6 February 2021

[2] United Nations Children's Fund (UNICEF). "Simplified guide for spending the general budget for the year 20/21". [<https://www.unicef.org/egypt/media/5936/file/Preliminary%20Document%20AR.pdf>]. Accessed 6 February 2021.

[3] Egypt's budget. [<http://www.budget.gov.eg/Budget20142015/Budget/2ca0bea2-0bc8-453f-adb7-cb1de74ce781>]. Accessed 6 February 2021.

[4] Ministry of Health and Population. [<http://www.mo hp.gov.eg/Default.aspx>]. Accessed 6 February 2021.

[5] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 6 February 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

### 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: 0

There is insufficient evidence that Egypt has a publicly identified special emergency public financing mechanism and funds that the country can access in the face of a public health emergency.

In 2014, the Egyptian President initiated public funding account called the "Long Live Egypt Fund (LLEF)"[1]. One of the main focuses of the LLEF is disaster and crisis response programs [2]. LLEF helped during the Covid crisis by providing medical equipment to health facilities, financially supporting poor families to overcome the impact of the pandemic[3] and recently crowd funding to expand Egypt's Covid-19 vaccine coverage[4]. But there is no explicit evidence that this fund is applicable for public health emergencies.

[1] Long Live Egypt Fund. "About us". [<https://tahyamisrfund.org/about-us/>]. Accessed 6 February 2021.

[2] Long Live Egypt Fund. "Disaster and crisis response program". [<https://tahyamisrfund.org/programs/disaster-and-crisis-program/>]. Accessed 6 February 2021.

[3] AlWatan. 29 December 2020. "A Year of Challenges and Achievements... The Long Live Egypt Fund announces good harvest in 2020". [<https://www.elwatannews.com/news/details/5179898>]. Accessed 6 February 2021.

[4] Youm7. 12 January 2021. "Long Live Egypt Fund allocates account No. 037037 for contributions to provide the Corona vaccine for those who are unable". [[t.ly/Mcgo](https://t.ly/Mcgo)]. Accessed 6 February 2021.

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

### 5.5.4a

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

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

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

**Current Year Score: 0**

There is insufficient evidence that senior leaders in Egypt have made a public commitment to support other countries capacity to address epidemic threats by expanding financing or support in the past three years and insufficient evidence that Egypt has made a public commitment to improve domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity.

A review of the websites of the Ministry of Health and Population and the World Health Organization's Egypt profile did not provide further evidence [1,2]. A review of the State Information Service and news portals did not provide further evidence [3,4]. The Ministry of Foreign Affairs' website was inaccessible at the time of the research [5].

[1] Ministry of Health and Population. "News". [<http://www.moHP.gov.eg/News.aspx>]. Accessed 6 February 2021.

[2] World Health Organization Regional Office for the Eastern Mediterranean. "Egypt profile". [<http://www.emro.who.int/countries/egy/index.html>]. Accessed 8 March 2021.

[3] State Information Service. [<https://www.sis.gov.eg/News/Search?>]. Accessed 8 March 2021.

[4] Akhbarak News Portal.

[[https://akhbarak.net/search?filter%5Bsearch\\_in%5D=1&page=3&search\\_input=%D8%AF%D8%B9%D9%85+%D8%B7%D8%A8%D9%8A](https://akhbarak.net/search?filter%5Bsearch_in%5D=1&page=3&search_input=%D8%AF%D8%B9%D9%85+%D8%B7%D8%A8%D9%8A)]. Accessed 8 March 2021.

[5] Ministry of Foreign Affairs. [<http://www.mfa.gov.eg>]. Last attempt to access was on 6 February 2021.

### 5.5.4b

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

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

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

**Current Year Score: 1**

There is evidence that Egypt has invested funds from donors to improve the country's domestic capacity to address epidemic threats, although there is insufficient evidence that it has provided other countries with financing or technical support to improve capacity to address epidemic threats.

According to the Georgetown Infectious Disease Atlas (GIDA) Global Health Security Tracker, Egypt has received US\$512.85 million for global health security funding from international donors. The top five categories that these funds were allocated towards were: Immunization, Real-time Surveillance, workforce development Biosafety and Biosecurity and Zoonotic disease [1].

According to the Ministry of Health and Population, Egypt has provided Lebanon with medical supplies and equipment in January 2021 to support Lebanon in facing the Covid-19 outbreak [2]. There is also evidence that Egypt has started treating Hepatitis C patients in 14 African countries as a part of a presidential initiative to treat 1 million Africans from Hepatitis C [3]. However, these seem to be more of a response effort and there is no evidence that they improve capacity to address epidemic threats.

[1] Global Health Security Funding Tracker. [<https://tracking.ghscosting.org/#/data>]. Accessed 8 March 2021.

[2] State Information Service. 28 January 2021. "Health Ministry: 3 aid planes arrive in Beirut to back Lebanon in face of Covid 19". [<https://www.sis.gov.eg/Story/154002/Health-Ministry-3-aid-planes-arrive-in-Beirut-to-back-Lebanon-in-face-of-Covid-19?lang=en-us>]. Accessed 6 February 2021.

[3] United Nations High Commissioner for Refugees (UNHCR). 17 April 2019. "UNHCR, Ministry of Health agree to strengthen cooperation". [<https://www.unhcr.org/eg/12775-unhcr-ministry-of-health-agree-to-strengthen-cooperation.html>]. Accessed 6 February 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 insufficient publicly available evidence to indicate a public commitment by the Egyptian government to share genetic data, epidemiological data, clinical specimens, and/or isolated specimens with international organizations and/or other countries that goes beyond influenza.

In May 2016, Egypt became a member of the World Health Organization (WHO)'s Global Antimicrobial Resistance Surveillance System (GLASS). According to the GLASS country profile for Egypt on the WHO website, as of 2018, 39 surveillance sites at Egyptian hospitals have been conducting surveillance and Antibiotic Susceptibility Testing on a number of

pathogens and providing this data to GLASS [1]. A review of the Ministry of Health and Population's website did not yield any further information [2]. The Ministry of Agriculture and Land Reclamation website was inaccessible at the time of the research (6th February 2021) [3].

[1] World Health Organization. 2017-2018. "Global Antimicrobial Resistance Surveillance System (GLASS) Report, Early Implementation". [<http://apps.who.int/iris/bitstream/handle/10665/279656/9789241515061-eng.pdf?sequence=1&isAllowed=y>]. Accessed 6 February 2021.

[2] Ministry of Health and Population. [<http://www.mohip.gov.eg/Default.aspx>]. Accessed 6 February 2021.

[3] Ministry of Agriculture and Land Reclamation. [<http://www.agr-egypt.gov.eg>]. Last attempt to access 6 February 2021.

### 5.6.1b

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

Yes = 0 , No = 1

**Current Year Score: 1**

There is no publicly available evidence that Egypt has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) Framework in the past two years. Egypt's country profile on the World Health Organization (WHO) website and recent news announcements do not indicate that Egypt has not shared samples, nor does Egypt's page on WHO PIP framework website [1, 2]. A review of local and international media outlets didn't yield further evidence.

[1] World Health Organization. "Country profile - Egypt". [<https://www.who.int/countries/egy/en/>]. Accessed 6 February 2021.

[2] World Health Organization Regional Office for the Eastern Mediterranean. "Pandemic Influenza Preparedness Framework: Egypt". [<http://www.emro.who.int/surveillance-forecasting-response/pandemic-influenza/pip-egypt.html>]. Accessed 6 February 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 publicly available evidence that Egypt has not shared pandemic pathogen samples, including Covid-19 samples, during an outbreak in the past two years. A review of online media sources and the World Health Organization (WHO) website has not yielded any information on non-sharing of samples. [1]. There is evidence that Egypt might have shared Covid-19 samples, the US National Library of Medicine published a study to Access the Egyptian Covid-19 Whole Genome by NGS and Compare it to the International Worldwide Database [2]. Moreover, according to a report published by the WHO in 2017, the WHO Emerging and Dangerous Pathogens Laboratory Network (EDPLN) located in Cairo, Egypt, "is part of a Global Outbreak Alert and Response Network (GOARN) and is made up of global and regional Emerging and Dangerous Pathogens Laboratory Networks of high security diagnostic laboratories able and willing to collaborate and share their knowledge, biological materials and experimental research results in a real-time framework to detect, diagnose and control novel disease threats" [3].

[1] World Health Organization. [<http://who.int>]. Accessed 6 February 2021.

[2] US National Library of Medicine - Clinical Trials. 20 April 2020. "To Access the Egyptian Covid-19 Whole Genome by NGS and Compare to the International Worldwide Database (Strain)". [<https://clinicaltrials.gov/ct2/show/NCT04346043>]. Accessed 6 February 2021.

[3] World Health Organization Regional Office for the Eastern Mediterranean. 2017. "Summary report on the Regional consultative meeting on the Emerging and Dangerous Pathogens Laboratory Network (EDPLN) - Cairo, Egypt 22-23 August 2017". [[http://applications.emro.who.int/docs/IC\\_meet\\_rep\\_2018\\_EN\\_20272.pdf?ua=1](http://applications.emro.who.int/docs/IC_meet_rep_2018_EN_20272.pdf?ua=1)]. Accessed 6 February 2021.

## Category 6: Overall risk environment and vulnerability to biological threats

### 6.1 POLITICAL AND SECURITY RISK

#### 6.1.1 Government effectiveness

##### 6.1.1a

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

Input number

Current Year Score: 3

2020

Economist Intelligence

##### 6.1.1b

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

Input number

Current Year Score: 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: 0**

2020

Economist Intelligence

**6.1.1e**

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

Input number

**Current Year Score: 33**

2020

Transparency International

**6.1.1f**

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

Input number

**Current Year Score: 2**

2020

Economist Intelligence

**6.1.1g**

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

Input number

**Current Year Score: 0**

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: 1**

2021

Economist Intelligence

## 6.1.3 Risk of social unrest

### 6.1.3a

**What is the risk of disruptive social unrest?**

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

**Current Year Score: 2**

2021

Economist Intelligence

## 6.1.4 Illicit activities by non-state actors

### 6.1.4a

**How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?**

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

**Current Year Score: 2**

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: 1

2021

Economist Intelligence

## 6.1.7 International tensions

### 6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 2

2021

Economist Intelligence

## 6.2 SOCIO-ECONOMIC RESILIENCE

### 6.2.1 Literacy

#### 6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

Current Year Score: 71.2

2017

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: 0.55

2018

United Nations Development Programme (UNDP); The Economist Intelligence Unit

### 6.2.3 Social inclusion

#### 6.2.3a

Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

Input number

Current Year Score: 0.6

2017

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**

There is evidence that the share of employment in the informal sector in Egypt is above 50%. The International Labor Organization (ILO) reported in 2018 that 63.3% of employment in Egypt is in the non-formal sector [1].

[1] International Labor Organization (ILO). 2018. "Women and men in the informal economy: A statistical picture (Third edition)". [[https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms\\_626831.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf)]. Accessed 31 January 2021.

**6.2.3c**

**Coverage of social insurance programs (% of population)**

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

**Current Year Score: 2**

2016, or latest available

World Bank; Economist Impact calculations

**6.2.4 Public confidence in government**

**6.2.4a**

**Level of confidence in public institutions**

Input number

**Current Year Score: 1**

2021

Economist Intelligence Democracy Index

**6.2.5 Local media and reporting**

**6.2.5a**

**Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?**

Input number

**Current Year Score: 0**

2021

Economist Intelligence Democracy Index

**6.2.6 Inequality**

**6.2.6a**

Gini coefficient

Scored 0-1, where 0=best

**Current Year Score: 0.32**

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: 2**

2021

Economist Intelligence

### 6.3.2 Adequacy of airports

#### 6.3.2a

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

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

**Current Year Score: 3**

2021

Economist Intelligence

### 6.3.3 Adequacy of power network

#### 6.3.3a

**What is the risk that power shortages could be disruptive?**

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

**Current Year Score: 4**

2021

Economist Intelligence

## 6.4 ENVIRONMENTAL RISKS

### 6.4.1 Urbanization

#### 6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 42.73

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: -0.02

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: 1

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: 71.83

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: 733.8**

2019

WHO

**6.5.1c**

**Population ages 65 and above (% of total population)**

Input number

**Current Year Score: 5.28**

2019

World Bank

**6.5.1d**

**Prevalence of current tobacco use (% of adults)**

Input number

**Current Year Score: 21.4**

2018

World Bank

**6.5.1e**

**Prevalence of obesity among adults**

Input number

**Current Year Score: 32**

2016

WHO

## 6.5.2 Access to potable water and sanitation

### 6.5.2a

Percentage of homes with access to at least basic water infrastructure

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

### 6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 94.19

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: 176.44

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: 2

2018

Wellcome Trust Global Monitor 2018

**6.5.4b**

**Trust medical and health advice from medical workers**

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018