

# Iran

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

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

### 1.1 ANTIMICROBIAL RESISTANCE (AMR)

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

##### 1.1.1a

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

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

**Current Year Score: 2**

Iran has a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens.

Known as the National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR), it was published by the Ministry of Health and Medical Education in December 2016 and runs for the 2016 - 2021 period. It was designed to be in line with the five strategic objectives of the "Global Action Plan on Antimicrobial Resistance" published by the World Health Organization (WHO) in 2015. [1] The IRIAMR integrates surveillance through its Objective 2, which mandates the strengthening of surveillance systems in health care centers and medical institutions, in inpatient and outpatient service centers, and in veterinary medicine, agroindustry and aquaculture.

The IRIAMR's surveillance scheme is operated by the Center for Communicable Diseases Control of the Department for Health Affairs, at the Ministry of Health and Medical Education. Within Objective 2, the IRIAMR mandates the design and enforcement of laws and procedures to facilitate mandatory reporting of infectious diseases, such as by strengthening and integrating the data-collection and electronic reporting system for the relevant diagnoses and analyses conducted by all public and private medical centers in the country. Detection is a key part of Objective 3 of the plan, which aims to fight AMR via control and prevention programs in the three areas of public health, veterinary medicine and food production. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education, Center for Communicable Diseases Control. December 2016. "National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR) 2016 - 2021". [<http://extwprlegs1.fao.org/docs/pdf/IRA182611Eng.pdf>]; [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed November 2020

##### 1.1.1b

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

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

**Current Year Score: 2**

Iran has a national laboratory/laboratory system which tests for all priority AMR pathogens. Evidence from various academic studies on the AMR situation in Iran taken together shows that all the 7 +1 priority pathogens are tested for in Iran, namely: E. coli, K. pneumonia, S. aureus, S. pneumoniae, Salmonella spp., Shigella spp, N. gonorrhoeae and Mycobacterium tuberculosis. [1, 2, 3] Surveillance on most of these is conducted through the collection of invasive isolates. [1] In regard to

these key pathogens, Iran's national plan for AMR, the National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR), notes as follows: "In general, [in Iran] the resistance of *Escherichia coli* to third generation cephalosporin is 41%, the resistance of *Escherichia coli* to fluoroquinolones is 54%, the resistance of *Klebsiella pneumoniae* to third-generation cephalosporins is 48%, the resistant [sic] of *Klebsiella pneumoniae* to carbapenems is 54%, the resistance of *Staphylococcus aureus* to methicillin is 53%, the resistance of *Streptococcus pneumoniae* to penicillin is 33.9%, the resistance of nontyphoidal salmonella (NTS) to fluoroquinolones is 6.3%, and the resistance of shigella species to fluoroquinolone is 2.7%." [4]

[1] MR ABED ZAHEDI BIALVAEI, HOSSEIN SAMADI KAFIL, MOHAMMAD AHANGAR REZAEI, MOHAMMAD RAHBAR AND MOHAMMAD ASGHARZADEH. May 2018. "THE ANTIMICROBIAL RESISTANCE SITUATION IN IRAN: THE NATIONAL INITIATIVE AND R&D TO FACE AMR". AMR Control) 2018. Global Health Dynamics. [<http://resistancecontrol.info/wp-content/uploads/2018/08/20-23-iran.pdf>] Accessed November 2020

[2] Mohadese Mozafari, Parissa Farnia, Mona Afraei, Zahra Derakhshani-Nezhad, Mohammad Reza Masjedi, and Ali Akbar Velayati. "Molecular diversity of *Mycobacterium tuberculosis* strains indifferent [sic] provinces of Iran". December 2013. Iranian Journal of Microbiology. 2013 Dec; 5

[4] : 366-373. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4385162/>] Accessed November 2020

[3] Mahmoud Nateghi Rostami, Batool Hossein Rashidi, Azam Habibi, Razieh Nazari, and Masoumeh Dolati, June 2017. "Genital infections and reproductive complications associated with *Trichomonas vaginalis*, *Neisseria gonorrhoeae*, and *Streptococcus agalactiae* in women of Qom, central Iran". International Journal of Reproductive Biomedicine. 2017 Jun; 15

[6] : 357-366. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5605857/>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education, Center for Communicable Diseases Control. December 2016. "National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR) 2016 - 2021". [<http://extwprlegs1.fao.org/docs/pdf/IRA182611Eng.pdf>]; [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed November 2020

### 1.1.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that there is yet a dedicated government entity in place in Iran that conducts detection or surveillance activities (e.g. in soil, waterways, etc.) for antimicrobial residues or AMR organisms.

Strategy 2.5 of Iran's national AMR action plan (the IRIAMR), which aims to implement an integrated health care system for humans, animals, and the environment (i.e., food production), does mandate the conducting of research on monitoring antimicrobial resistance and antimicrobial residues in aquatic and terrestrial environments. However, the plan does not elaborate on the methods of such research, such as the taking of soil samples from the field, nor identify a central body in charge of the effort. The IRIAMR does, however, state that it has a reference food and drug control laboratory that receives "samples," as well as over 50 support laboratories in universities and more than 200 partner and accredited food and drug control laboratories in the country under its supervision, to take part in the national antimicrobial resistance surveillance system. [1]

Iran's environmental agency provides suggestive but insufficient evidence that it conducts detection or surveillance activities (e.g. in soil, waterways, etc.) for antimicrobial residues or AMR organisms. Iran's Revised National Biodiversity Strategies and Action Plan (NBSAP2) 2016-2030 published by the Department of Environment has 15 points, point 7 of which mandates

"Management of climatic changes and confronting bio-environmental threats such as desert reclamation, removal of dust especially aerosols, drought and microbe transmitters, radioactive substances, foresight development and realising newly recognised environmental phenomena and managing them." The plan otherwise gives no indication that surveillance of antimicrobial residues or AMR organisms is conducted. [2] Finally, the Ministry of Agricultural Jihad provides no evidence that it conducts such microbial surveillance. [3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education, Center for Communicable Diseases Control. December 2016. "National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR) 2016 - 2021". [<http://extwprlegs1.fao.org/docs/pdf/IRA182611Eng.pdf>]; [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed November 2020

[2] Islamic Republic of Iran. Department of Environment. "Revised National Biodiversity Strategies and Action Plan (NBSAP2) 2016-2030." [<https://www.cbd.int/doc/world/ir/ir-nbsap-v2-en.pdf>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Agricultural Jihad. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

## 1.1.2 Antimicrobial control

### 1.1.2a

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

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

**Current Year Score: 1**

In Iran, national regulations require prescriptions for antibiotic use for humans, but there is evidence of gaps in enforcement.

Iranian law (Law on Governmental Punishments for Health and Medical Affairs, Chapter 2, Part 1, Article 18) states that the sale of medical drugs without a prescription is considered a crime; punishments for violations include monetary fines and written warnings. [1] Iran's Food and Drug Administration (FDA), part of the Ministry of Health, publishes an Iran Drugs List, most recently in 2018, that clearly stipulates how individual medicines may be dispensed, such as over-the-counter or in-hospital only. [2] However, there is evidence of gaps in enforcement of the law.

For example, a scholarly article published in 2009 in the Journal of Biological Sciences indicates that in Iran "...antibiotics can be obtained from pharmacies without the requirement of a prescription even though antibiotics are prescription-only-medicine." [3] Moreover, In spite of the existence of a National Committee for the Rational Prescribing and Use of Drugs (affiliated with Iran's FDA), the government itself admits that antibiotic use is extremely high in Iran; the IRIAMR, the 2016 national action plan on AMR, has noted that a review of prescriptions recorded in pharmacies and insurance organizations showed that more than 50% of patients in 2015 received antibiotics, suggesting that illegal use of such medicines is rampant. [3]

In addition, numerous articles in the Iranian press, including some recent ones, attest to the continuing sale of antibiotics over the counter, in violation of the law, such as of topical antibiotics for cosmetic skin treatment. [4]

[1] Islamic Republic of Iran. Ministry of Justice. Tazirat Organization. 1990. "Law on Governmental Punishments for Health and Medical Affairs (قانون تعزیرات حکومتی امور بهداشتی و درمانی)." [<https://www.tazirat.gov.ir/Upload/Modules/Contents/asset0/bahdasht96.pdf>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Food and Drug Administration of Iran. 2018. "Official Iran Drug List (فهرست رسمی دارویی کشور)." [<https://www.fda.gov.ir/en>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education, Center for Communicable Diseases Control. December 2016. "National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR) 2016 - 2021".

[<http://extwprlegs1.fao.org/docs/pdf/IRA182611Eng.pdf>]; [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed November 2020

[4] Fanous News. December 18 2019. "It is illegal to sell medicine without a prescription / Beauty consultants in pharmacies are not doctors or dermatologists (فروش دارو بدون نسخه غیرقانونی است/ مشاوران زیبایی در داروخانه ها پزشک یا متخصص پوست نیستند)". [<http://www.fanousnews.com/fa/news/251819>] Accessed November 2020

### 1.1.2b

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

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

**Current Year Score: 0**

There is insufficient evidence indicating that Iran has national legislation or regulations in place requiring prescriptions for antibiotic use for animals. A scan of laws and regulations published on the website of the Iran Veterinary Organization does not turn up evidence of legislation that specifically requires prescriptions for veterinary antibiotics. [1] In addition, the Ministry of Agricultural Jihad provides no evidence that it has such a legislative requirement or regulation. [2]

However, the Iranian press has published many articles indicating that in veterinary medicine the purchase and sale of antibiotics without a prescription is illegal, yet widespread. For example, a January 2019 article in the local Iranian press quoted the head of the Veterinary Department of the Province of East Azerbaijan as saying that the sale of over-the-counter medicines in veterinary pharmacies was prohibited. According to the article, the provincial veterinary authorities actively monitor the activities of veterinary pharmacies and had uncovered 53 cases of violations within the previous nine months. [3] But such information does not point to a specific law on the subject.

Finally, Objective 4.2 of the IRIAMR, Iran's national AMR plan, aims to "ensure prudent use of antibiotics and antimicrobials in the fields of veterinary medicine, livestock production, poultry farming, and aquaculture," and to that end the country's Veterinary Organisation monitors the maximum residue limit (MRL) for drugs, hormones, toxins, and heavy metals in raw animal materials, and collects data on the use of antibiotics in veterinary medicine. The IRIAMR does not specifically indicate that the use of antibiotics without a prescription is banned or not. [4]

[1] Islamic Republic of Iran. Iran Veterinary Organisation (IVO). Approved rules and regulations (قوانین و آیین نامه های مصوب).

[<https://www.ivo.ir/index.jsp?pageid=2159>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Agricultural Jihad. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[3] Tabriz-e Bidar. January 15 2019 (25 Dey 1397). "Farmers are reluctant to buy and consume drugs without consulting a veterinarian / Selling medicines without prescription in veterinary pharmacies is prohibited. (دامداران از خرید و مصرف بی رویه دارو). (بدون مشورت با دامپزشکی خودداری نمایند/فروش دارو بدون نسخه در داروخانه های دامپزشکی ممنوع است ،

[<https://tabrizebidar.ir/news/1073653>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education, Center for Communicable Diseases Control. December 2016. "National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR) 2016 - 2021".

[<http://extwprlegs1.fao.org/docs/pdf/IRA182611Eng.pdf>]; [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed November 2020

## 1.2 ZOO NOTIC DISEASE

### 1.2.1 National planning for zoonotic diseases/pathogens

#### 1.2.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has a national policy on zoonotic disease. It is administered by the Office for Health and Management of Animal Diseases at the Ministry of Agricultural Jihad, in cooperation with the Ministry of Health and other applicable government agencies. The Office engages in a number of activities regarding what it terms "joint animal-human diseases," such as collaboration with the Ministry on protection and control, conducting epidemiologic analysis and identification of points of origin and resulting dispersion patterns, monitoring the status of facilities for animal-based food production such as pastures, stables, farms and slaughter-houses with regard to potential for generating zoonoses, and compiling data and information on animal and joint animal-human diseases for relaying to international specialized agencies, e.g. the OIE, FAO and WHO. [1]

Further evidence of a national policy on zoonotic disease is provided by the Iran Veterinary Organisation (IVO), an affiliate of the Ministry of Agricultural Jihad. The IVO has published a series of guidelines in regard to the management of zoonoses, such as for avian influenza, salmonella, and a host of livestock-related diseases such as Brucellosis, bovine tuberculosis, orbivirus, Ehrlichia and tularaemia. [1, 2] A review of the IVO's National Livestock Brucellosis Control Program reveals that it directly addresses the issues of surveillance and control. [3]

[1] Islamic Republic of Iran. Ministry of Agricultural Jihad. "Health and Management of Animal Diseases".

[<https://maj.ir/Index.aspx?page=form&lang=2&sub=0&temname=NewEnMain&PageID=12663>] Accessed November 2020

[2] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "Instructions and circulars of the country's veterinary organization (دستورالعمل ها و بخشنامه های سازمان دامپزشکی کشور)." [<https://ivo.ir/index.jsp?fkeyid=&siteid=1&pageid=2158>]

Accessed November 2020

[3] Islamic Republic of Iran. Iran Veterinary Organization (IVO). National Livestock Brucellosis Control Program (برنامه ی ملی کنترل بروسلوز دامی).

[<https://ivo.ir/uploads/%D9%83%D8%AA%D8%A7%D8%A8%20%D8%A8%D8%B1%D9%88%D8%B3%D9%84%D9%88%D8%B2.pdf>] Accessed November 2020

#### 1.2.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that Iran has national policy documents on zoonotic disease that identify pathways for transmission of these diseases from animals to humans. The zoonotic disease policy is administered by the Office for Health and Management of Animal Diseases at the Ministry of Agricultural Jihad, in cooperation with the Ministry of Health and other applicable government agencies. The Office engages in a number of activities regarding what it terms "joint animal-human diseases," such as collaboration with the Ministry on protection and control, conducting epidemiologic analysis and identification of points of origin and resulting dispersion patterns, monitoring the status of facilities for animal-based food

production such as pastures, stables, farms and slaughter-houses with regard to potential for generating zoonoses, and compiling data and information on animal and joint animal-human diseases for relaying to international specialized agencies, e.g. the OIE, FAO and WHO. [1]

The Iran Veterinary Organisation (IVO), an affiliate of the Ministry of Agricultural Jihad, has published a series of guidelines in regard to the management of zoonoses, such as for avian influenza, salmonella, and a host of livestock-related diseases such as Brucellosis, bovine tuberculosis, orbivirus, Ehrlichia and tularaemia. [1, 2] A review of the IVO's National Livestock Brucellosis Control Program reveals that it directly addresses the issue of transmission pathways. For example, under this plan the IVO undertakes such measures as: surveillance of individual livestock facilities, including registration of individual animals with ear-tagging and/or tattoos; diagnosis of disease through the testing of samples, including the milk ring test (MRT) for antibodies in milk and the Rose Bengal plate agglutination test for Brucella antibodies using blood serum; inoculation of livestock and enforcement of hygienic principles and legal regulations such as pasteurization of milk and other dairy products; identification and removal of infected livestock; and disinfection of affected facilities, with repeated follow-up testing of infection every quarter-year. These policies apply chiefly to industrial livestock facilities; the IVO also has a separate strategy to address brucellosis in livestock held by the country's nomadic, tribal and rural populations; policies include testing, vaccination and eradication of infected animals in disease hotspots, with compensation stipulated for material losses. Concomitantly, surveillance and prophylactic measures are undertaken in human populations, including testing for diseases such as Malta fever and bovine spongiform encephalopathy (BSE). [3]

[1] Islamic Republic of Iran. Ministry of Agricultural Jihad. "Health and Management of Animal Diseases".

[<https://maj.ir/Index.aspx?page=form&lang=2&sub=0&tempname=NewEnMain&PageID=12663>] Accessed November 2020

[2] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "Instructions and circulars of the country's veterinary organization (دستورالعمل ها و بخشنامه های سازمان دامپزشکی کشور)." [<https://ivo.ir/index.jsp?fkeyid=&siteid=1&pageid=2158>] Accessed November 2020

[3] Islamic Republic of Iran. Iran Veterinary Organization (IVO). National Livestock Brucellosis Control Program (برنامه ی ملی کنترل بروسلوز دامی).

[<https://ivo.ir/uploads/%D9%83%D8%AA%D8%A7%D8%A8%20%D8%A8%D8%B1%D9%88%D8%B3%D9%84%D9%88%D8%B2.pdf>] Accessed November and December 2020

### 1.2.1c

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has national legislation, plans and for the surveillance and control of multiple zoonotic pathogens of public health concern. The policy is administered by the Office for Health and Management of Animal Diseases at the Ministry of Agricultural Jihad, in cooperation with the Ministry of Health and other applicable government agencies. The Office engages in a number of activities regarding what it terms "joint animal-human diseases," such as collaboration with the Ministry on protection and control, conducting epidemiologic analysis and identification of points of origin and resulting dispersion patterns, monitoring the status of facilities for animal-based food production such as pastures, stables, farms and slaughter-houses with regard to potential for generating zoonoses, and compiling data and information on animal and joint animal-human diseases for relaying to international specialized agencies, e.g. the OIE, FAO and WHO. [1]

The Iran Veterinary Organisation (IVO), an affiliate of the Ministry of Agricultural Jihad, has published a series of policy papers and guidelines in this regard, such as for avian influenza, salmonella, and a host of livestock-related zoonoses such as



Brucellosis, bovine tuberculosis, orbivirus, Ehrlichia and tularaemia. [2] A review of the manuals published on Brucellosis and bovine tuberculosis reveals that they directly address the issues of surveillance and control. [3, 4] In addition, the IVO clearly indicates that it has national plans to prioritize combating three specific zoonotic diseases: super-acute avian influenza, salmonella, and Newcastle disease. All these three national plans involve surveillance and control, with primary application to the country's poultry industry. [5] If they exist, stand-alone policy documents published by the IVO on these three priority national plans are not readily available via the Internet. [5]

- [1] Islamic Republic of Iran. Ministry of Agricultural Jihad. ""Health and Management of Animal Diseases"". [https://maj.ir/Index.aspx?page\_=form&lang=2&sub=0&tempname=NewEnMain&PageID=12663] Accessed November 2020
- [2] Islamic Republic of Iran. Iran Veterinary Organization (IVO). ""Instructions and circulars of the country's veterinary organization (دستورالعمل ها و بخشنامه های سازمان دامپزشکی کشور)"". [https://ivo.ir/index.jsp?fkeyid=&siteid=1&pageid=2158] Accessed November 2020
- [3] Islamic Republic of Iran. Iran Veterinary Organization (IVO). National Livestock Brucellosis Control Program (برنامه ی ملی کنترل بروسلوز دامی). [https://ivo.ir/uploads/%D9%83%D8%AA%D8%A7%D8%A8%20%D8%A8%D8%B1%D9%88%D8%B3%D9%84%D9%88%D8%B2.pdf] Accessed November 2020
- [4] Islamic Republic of Iran. Iran Veterinary Organization (IVO). National Bovine Tuberculosis Control Program (برنامه ی ملی کنترل سل گاوی). [https://ivo.ir/uploads/%D9%83%D8%AA%D8%A7%D8%A8%20%D8%B3%D9%84.pdf] Accessed November 2020
- [5] Islamic Republic of Iran. Iran Veterinary Organization (IVO). ""Veterinary Organization of the country and strategic priorities of animal hygiene and food health (سازمان دامپزشکی کشور و اولویت های راهبردی بهداشت دام و سلامت مواد غذایی)"". [https://ivo.ir/index.jsp?siteid=1&fkeyid=&siteid=1&pageid=1788&newsview=246690] Accessed November 2020

### 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**

Although Iran has a government department involved with zoonotic disease, it is not dedicated to the subject and it does not function across ministries. This entity is the Office for Health and Management of Animal Diseases at the Ministry of Agricultural Jihad, which cooperates with the Ministry of Health and other applicable government agencies. The Office engages in epidemiological surveillance, research, protection and control activities on both animal diseases and what it terms "joint animal-human diseases." [1] As most of the Office's work on zoonoses is in regard to the country's food-production industry, it collaborates with the Iran Veterinary Organisation (IVO), an affiliate of the Ministry of Agricultural Jihad and the key government entity in Iran in charge of veterinary policy. [2] Neither of these entities indicate that they have jurisdictional authority over other government agencies on zoonoses, or provide evidence of cross-department functioning beyond references to simple collaboration on this subject. [1, 2]

- [1] Islamic Republic of Iran. Ministry of Agricultural Jihad. "Health and Management of Animal Diseases". [https://maj.ir/Index.aspx?page\_=form&lang=2&sub=0&tempname=NewEnMain&PageID=12663] Accessed November 2020
- [2] Islamic Republic of Iran. Iran Veterinary Organisation (IVO). Website. [https://www.ivo.ir/] Accessed November 2020

## 1.2.2 Surveillance systems for zoonotic diseases/pathogens

### 1.2.2a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has a national mechanism, known as GIS-VET, for owners of livestock to conduct and report on disease surveillance to a central government agency.

The Iran Veterinary Organization (IVO), which administers animal health policy in the country, offers veterinary support services for operators such as livestock owners. Among these services is confirmation of medical diagnoses by reference laboratories, and supervision and enforcement of health and safety standards on production, transportation, maintenance and supply of livestock. Operators may convey information to the IVO electronically, via SMS, e-mail, telephone or online form submissions. [1]

The IVO runs an online monitoring and surveillance system portal, called GIS-VET, for the use of livestock owners and the like. The use of the portal is restricted to registered users. [2] The two overarching laws in Iran with regard to livestock disease surveillance are the National Law of the Veterinary Organization and the National Law of the Comprehensive Animal Husbandry System. Both laws imply that livestock surveillance by owners and operators is necessary, because they oblige such individuals to implement the sanitary orders, production permitting requirements, and quarantines of the IVO and stipulate penalties for such individuals in the event of an outbreak of animal disease. [3, 4]

[1] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "Objectives and tasks of the organization (اهداف و وظایف سازمان)." [https://1512.ivo.ir/index.jsp?fkeyid=&siteid=57&pageid=8488] Accessed November 2020

[2] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "IRAN GIS-VET (monitoring and surveillance system)". [https://gis.ivo.ir/Vaccine\_PagesSite/Login.aspx] Accessed November 2020

[3] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "National Law of the Veterinary Organization (قانون سازمان دامپزشکی کشور)." [http://int.ivo.ir/index.jsp?siteid=1&fkeyid=&siteid=1&pageid=2161&rid=2517] Accessed November 2020

[4] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "National Law of the Comprehensive Animal Husbandry System (قانون نظام جامع دامپروری کشور)." [http://int.ivo.ir/index.jsp?siteid=1&fkeyid=&siteid=1&pageid=2161&rid=2493] Accessed November 2020

### 1.2.2b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that in Iran there are laws or guidelines that safeguard the confidentiality of information generated through surveillance activities for animals (for owners).

The Iran Veterinary Organization (IVO), which administers animal health policy in the country, offers veterinary support services for operators such as livestock owners. Among these services is confirmation of medical diagnoses by reference laboratories, and supervision and enforcement of health and safety standards on production, transportation, maintenance

and supply of livestock. Operators may convey information to the IVO electronically, via SMS, e-mail, telephone or online form submissions. The forms used for the submission process do not reference the confidentiality of the information thus submitted. [1] Similarly, while access to GIS-VET, IVO's online platform for livestock monitoring and surveillance, is restricted to authorised users, that fact is not proof that the personal information of users is kept confidential. [2]

The two overarching laws in Iran with regard to livestock disease surveillance are the National Law of the Veterinary Organization and the National Law of the Comprehensive Animal Husbandry System. Both laws imply that livestock surveillance by owners and operators is necessary, because they oblige such individuals to implement the sanitary orders, production permitting requirements, and quarantines of the IVO and stipulate penalties for such individuals in the event of an outbreak of animal disease. Neither of the laws, however, mentions the issue of the confidentiality of information. [3, 4] Finally, neither the health nor agriculture ministries indicate the existence of relevant confidentiality laws. [5, 6]

[1] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "Objectives and tasks of the organization (اهداف و وظایف سازمان)." [https://1512.ivo.ir/index.jsp?fkeyid=&siteid=57&pageid=8488] Accessed November 2020

[2] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "IRAN GIS-VET (monitoring and surveillance system)." [https://gis.ivo.ir/Vaccine\_PagesSite/Login.aspx] Accessed November 2020

[3] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "National Law of the Veterinary Organization (قانون سازمان دامپزشکی کشور)." [http://int.ivo.ir/index.jsp?siteid=1&fkeyid=&siteid=1&pageid=2161&rid=2517] Accessed November 2020

[4] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "National Law of the Comprehensive Animal Husbandry System (قانون نظام جامع دامپروری کشور)." [http://int.ivo.ir/index.jsp?siteid=1&fkeyid=&siteid=1&pageid=2161&rid=2493] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Agricultural Jihad. Website. [https://maj.ir/index.aspx?lang=2&sub=0] Accessed November 2020

### 1.2.2c

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran conducts surveillance of zoonotic disease in wildlife (e.g. wild animals, insects, other disease vectors, etc.) as a matter of course. The Wildlife Surveillance Authority at Iran's Department of Environment states its remit as investigation and identification of common diseases between humans, livestock and wildlife (i.e., zoonoses) and providing solutions for their control and treatment. To this end, the Authority's duties include taking samples (i.e., tissue) from animals and plants to look for disease, studying disease spread patterns, conducting periodic censuses of wild animals, monitoring the operations of wildlife conservation centers, such as breeding centers and zoos, supervising businesses engaged in selling wild animals and reporting any violations to appropriate law enforcement authorities. [1]

[1] Islamic Republic of Iran. Department of Environment. Wildlife Surveillance Authority.

[https://cb.doe.ir/portal/home/?193177/%D8%A7%D8%AF%D8%A7%D8%B1%D9%87-%D9%86%D8%B8%D8%A7%D8%B1%D8%AA-%D8%A8%D8%B1-%D8%A7%D9%85%D9%88%D8%B1-%D8%AD%D8%8C%D8%A7%D8%AA-%D9%88%D8%AD%D8%B4] Accessed November and December 2020

### 1.2.3 International reporting of animal disease outbreaks

#### 1.2.3a

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

Yes = 1 , No = 0

Current Year Score: 0

2019

OIE WAHIS database

### 1.2.4 Animal health workforce

#### 1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: 14.09

2017

OIE WAHIS database

#### 1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: 9.53

2017

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

Available evidence does not indicate that Iran has formal, systematised mechanisms for working with the private sector in controlling or responding to zoonoses. The Ministry of Health and Medical Education does not indicate the existence of such a mechanism, [1] nor does the Office for Health and Management of Animal Diseases at the Ministry of Agricultural Jihad. [2]

Nevertheless, some cooperation with the private sector on zoonoses response is inevitable, due to the involvement of

private individuals and businesses in the nation's agricultural and food industries. For example, the Iran Veterinary Organisation (IVO), an affiliate of the agriculture ministry and the administrator of veterinary policy in the country, clearly indicates that one of its six missions is to improve the competitiveness of its veterinary services "based on global standards and with the help of new knowledge and technologies and the maximum participation of the private and cooperative sector." [3]

However, Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) are chiefly concerned with issues of human health, and provide little information on liaison with the private sector or on any sort of involvement in directly addressing zoonoses. [4, 5]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Agricultural Jihad. "Health and Management of Animal Diseases". [<https://maj.ir/Index.aspx?page=form&lang=2&sub=0&tempname=NewEnMain&PageID=12663>] Accessed November 2020

[3] Islamic Republic of Iran. Iran Veterinary Organization (IVO). "About the organisation (آشنایی با سازمان)". [<http://int.ivo.ir/index.jsp?fkeyid=&siteid=1&pageid=145>] Accessed November 2020

[4] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran". [[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)". [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

## 1.3 BIOSECURITY

### 1.3.1 Whole-of- government biosecurity systems

#### 1.3.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran maintains a public record, updated within the past 5 years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities. The websites of the country's health, agriculture and defense ministries do not indicate the existence of such facilities. [1, 2, 3,] Similarly, Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) provide no confirmation of having a policy on the storage of such materials. [4, 5]

However, a study of biosafety and biosecurity published in 2009 by the U.S. Department of Defense stated that Iran has BSL-3/4 laboratories "for diagnostic, public health purposes." [6]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties.

The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [7]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address the storage of especially dangerous pathogens or toxins. [8]

- [1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020
- [2] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020
- [3] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020
- [4] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran". [[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020
- [5] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)". [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020
- [6] U.S. Department of Defense. Defense Science Board (DSB). May 2009. "Department of Defense Biological Safety and Security Program". [<https://books.google.com/books?id=KV6gaGBcslC&pg=PA23&lpg=PA23&dq=biosafety+laboratories+Iran&source=bl&ots=4390ulOy3n&sig=ACfU3U0cZA61GuYOp5JHkFUzZcUNK7Z1nQ&hl=en&sa=X&ved=2ahUKewjV8IOZ1JjgAhWRFzQIHWOzDTM4FBD0ATAAegQIAhAB#v=onepage&q=biosafety%20laboratories%20Iraniran&f=false>] Accessed November 2020
- [7] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [<https://bwc-ecbm.unog.ch/state/iran-islamic-republic>] Accessed December 2020
- [8] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>] Accessed November 2020

### 1.3.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran has regulations related to biosecurity as opposed to biosafety, 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.

Iran's National Biosafety Framework was laid down in 2004 and is administered by the Department of Environment, a governmental body under the supervision of the president. The governing document of the framework, published in October 2004, covers physical containment of dangerous biological substances in detail, classifying the containment process into three levels. However, these provisions relate to biosafety as opposed to biosecurity. For example, as per the document, "the fundamental objective of physical containment is to prevent undue exposure of the laboratory worker, the community or the environment to regulated material and as such, is achieved primarily through the adoption of proper laboratory procedures

and containment equipment." [1] Similarly, the Iran National Biosafety Law, which came into force in 2009, aims at "...preventing the adverse effects of this technology on biological diversity." It is primarily concerned with the effects of release of living modified organisms (LMOs) into the environment and does not directly discuss biosecurity issues. [2] The BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address the storage of especially dangerous pathogens or toxins. [3]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [9]

Finally, the key Iranian government entities likely responsible for addressing biosecurity issues do not reveal any published regulation, law or policy document specifically dedicated to the subject. These entities are the health, agriculture and defense ministries, as well as Iran's proxies for a national reference laboratory and national public health institute; the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences. [4, 5, 6, 7, 8]

[1] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."

[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[2] Biosafety Clearing House. "Biosafety Law of Islamic Republic of Iran."

[<http://bch.cbd.int/database/attachment/?id=20241>] Accessed November 2020

[3] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database."

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>]

Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>]

Accessed November 2020

[7] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".

[[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[8] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (&#1583;&#1585;&#1576;&#1575;&#1585;&#1607;&#1605;&#1572;&#1587;&#1587;&#1607;)." [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

[9] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of).

[<https://bwc-ecbm.unog.ch/state/iran-islamic-republic>] Accessed December 2020

### 1.3.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran has an established agency responsible for the enforcement of biosecurity, as opposed to biosafety, legislation and regulations.



While the Persian language distinguishes between the concepts of biosafety and biosecurity, in terms of policymaking, there is not a strongly discernible difference in how the two terms are used in Iran. The agency in charge of biosafety is the National Biosafety Council, established as a policymaking, coordinating and approving body by the National Biosafety Law of August 2009. [1] It is a multidepartmental council chaired by Iran's First Deputy President, and consists of the ministers of science, health, agriculture, the director general of the Department of Environment, and other outside experts chosen by the aforementioned and other relevant authorities. [2]

A review of the websites of the key Iranian government entities likely responsible for addressing biosecurity issues does not reveal any published regulation, law or policy document specifically dedicated to the subject. These entities are the health, agriculture and defense ministries, as well as Iran's proxies for a national reference laboratory and national public health institute; the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences. [3, 4, 5, 6, 7]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [9]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that mandate the setup of a dedicated agency for biosecurity as opposed to biosafety. [8]

[1] Biosafety Clearing House. "Biosafety Law of Islamic Republic of Iran."

[<http://bch.cbd.int/database/attachment/?id=20241>] Accessed November 2020

[2] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."

[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>]

Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>]

Accessed November 2020

[6] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".

[[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[7] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. Undated. "About the Institute (درباره مؤسسه)." [<https://nih.tums.ac.ir/Item/557>] Accessed

November 2020

[8] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database."

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>] Accessed November 2020

[9] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of).

[<https://bwc-ecbm.unog.ch/state/iran-islamic-republic>] Accessed December 2020



### 1.3.1d

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities.

None of the key government entities hypothetically responsible for such activities provide no direct evidence of the existence of such facilities; these entities are the health, agriculture and defense ministries and Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences. [1, 2, 3, 4, 5] However, a study of biosafety and biosecurity published in 2009 by the U.S. Department of Defense stated that Iran has BSL-3/4 laboratories "for diagnostic, public health purposes." [6]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [7]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address the storage or consolidation of inventories of especially dangerous pathogens or toxins. [8]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020

[4] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran". [[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)". [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

[6] U.S. Department of Defense. Defense Science Board (DSB). May 2009. "Department of Defense Biological Safety and Security Program". [<https://books.google.com/books?id=KV6gaGBCsIC&pg=PA23&lpg=PA23&dq=biosafety+laboratories+Iran&source=bl&ots=4390uOy3n&sig=ACfU3U0cZA61GuYOp5JHkFUzZcUNK7Z1nQ&hl=en&sa=X&ved=2ahUKEwjV8IOZ1JjgAhWRFzQlHWozDTM4FBD0ATAAegQIAhAB#v=onepage&q=biosafety%20laboratories%20Iraniran&f=false>] Accessed November 2020

[7] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [<https://bwc-ecbm.unog.ch/state/iran-islamic-republic>] Accessed December 2020

[8] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>] Accessed November

2020

### 1.3.1e

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

Yes = 1, No = 0

Current Year Score: 1

Public evidence indicates that Iran has the in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for anthrax, which would preclude culturing a live pathogen. However, there does not exist evidence of PCR testing for Ebola.

A scholarly article published in the Iranian Red Crescent Medical Journal in November 2013 describes testing for bacillus anthracis and other pathogens using multiplex Polymerase Chain Reaction (PCR). Testing was conducted at the Baqiyatallah University of Medical Sciences in Tehran, using standard strains purchased from the Reference Laboratory of the Ministry of Health and the Pasteur Institute in Tehran. [1]

By contrast, a scan of Iranian websites relevant to epidemiological testing, such as that of the Iranian Society of Virology, the health, agriculture and defense ministries, as well as Iran's proxies for a national reference laboratory and national public health institute; the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences, provides no evidence on whether PCR testing for Ebola virus is conducted in Iran. [2, 3, 4, 5, 6, 7]

[1] Nargess Safari Foroshani, Ali Karami and Fatemeh Pourali. 2013. "Simultaneous and Rapid Detection of Salmonella typhi, Bacillus anthracis, and Yersinia pestis by Using Multiplex Polymerase Chain Reaction (PCR)." Iranian Red Crescent Medical Journal: November 5, 2013, 15

[11] ; e9208. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3971784/] Accessed November 2020

[2] Iranian Society of Virology. October 25 2014. "What you need to know about Ebola ابولا باید بدانید" [http://www.isv.org.ir/news/55-ebola] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [https://maj.ir/index.aspx?lang=2&sub=0] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [http://www.defanews.ir/] Accessed November 2020

[6] Pasteur Institute of Iran. 2020. Website. [http://en.pasteur.ac.ir/] Accessed November 2020

[7] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. 2020. Website. [https://nih.tums.ac.ir/] Accessed November 2020

### 1.3.2 Biosecurity training and practices

#### 1.3.2a

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

Yes = 1, No = 0

### Current Year Score: 0

Available evidence does not indicate that Iran requires biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential.

While the Persian language distinguishes between the concepts of biosafety and biosecurity, in terms of policymaking in Iran there is not a strongly discernible difference in how the two terms are used. In legislation, the use of the former term predominates. In that regard, the governing document of Iran's National Biosafety Framework, published by the Department of Environment in 2004, in Part Six mandates training of personnel working in facilities housing especially dangerous pathogens. However, the document does not stipulate specific training methods. [1]

Other key entities involved in biosafety and biosecurity in Iran, namely, the health, agriculture and defense ministries and Iran's two key proxies for a national laboratory and national public health institute, do not provide evidence of having set up procedures or standards for the training of such personnel. [2, 3, 4, 5, 6]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [7]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address standardized biosecurity training for personnel handling especially dangerous pathogens and/or similar materials. [8]

[1] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."

[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>]

Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>]

Accessed November 2020

[5] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".

[[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)." [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

[7] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of).

[<https://bwc-ecbm.unog.ch/state/iran-islamic-republic>] Accessed December 2020

[8] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database."

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>] Accessed November 2020

### 1.3.3 Personnel vetting: regulating access to sensitive locations

#### 1.3.3a

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

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

**Current Year Score: 0**

Available evidence does not indicate that regulations or licensing conditions in Iran 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.

While the Persian language distinguishes between the concepts of biosafety and biosecurity, in terms of policymaking in Iran there is not a strongly discernible difference in how the two terms are used. In legislation, the use of the former term predominates. In that regard, the governing document of Iran's National Biosafety Framework, published by the Department of Environment in 2004, suggests that personnel working in facilities housing especially dangerous pathogens be qualified to undertake the work. The fields of qualification listed are: experience and expertise; training and instruction; health; and other. However, the document does not provide detail on the screening process or on whether it should be undertaken before or after relevant personnel are hired. [1]

Other key entities involved in biosafety and biosecurity in Iran, namely, the health, agriculture and defense ministries and Iran's two key proxies for a national laboratory and national public health institute, do not provide evidence of having set up procedures or standards for the screening of such personnel. [2, 3, 4, 5, 6]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [7]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address screening protocols for personnel handling especially dangerous pathogens and/or similar materials. [8]

[1] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."

[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020

[5] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran". [[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National

Institute of Health Research. "About the Institute (درباره مؤسسه)." [https://nih.tums.ac.ir/Item/557] Accessed November 2020

[7] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [https://bwc-ecbm.unog.ch/state/iran-islamic-republic] Accessed December 2020

[8] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database." [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/] Accessed November 2020

### 1.3.4 Transportation security

#### 1.3.4a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has publicly available information on national regulations on the safe and secure transport of infectious substances (Categories A and B). A procedural guide issued in 2018 by the Ministry of Health and Medical Education stipulates the conditions for cross-border transport of Category A and B substances. For instance, it stipulates the methods for the three-layer packing of Category A substances, and the proper package labeling for genetically modified organisms in this category. The guide also mentions International Air Transport Association (IATA) transport guidelines, though without clearly mandating adherence to them. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2018. "National Guidelines for the Cross-Border Transport of Biomedical Samples for Research Purposes (دستورالعمل ملي انتقال فرامرزي نمونههاي زيستپزشكي با هدف پژوهشي)." [https://ethics.research.ac.ir/docs/ethics\_material\_transfer.pdf] Accessed November 2020

### 1.3.5 Cross-border transfer and end-user screening

#### 1.3.5a

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

Yes = 1 , No = 0

**Current Year Score: 0**

Although Iran has a national regulation in place to oversee the cross-border transfer of especially dangerous pathogens, toxins and pathogens with pandemic potential, end-user screening is not mentioned. This regulation is the "National Guidelines for the Cross-Border Transport of Biomedical Samples for Research Purposes, last published by the Ministry of Health and Medical Education in 2018. The document stipulates the conditions for cross-border transport of Category A and B substances, in which context it also mentions International Air Transport Association (IATA) transport guidelines, though without clearly mandating adherence to them. Permissioning of the sender is discussed in detail but screening of the end-user is not. [1]

Otherwise, no evidence is available of such an overarching regulation having been published by other key government bodies relevant to the issue, including the Ministries of Agricultural Jihad, Defence, and Industry, Mines and Trade. [2, 3, 4]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [5]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address the transport of especially dangerous pathogens or toxins, other than the regulation cited here. [6]

- [1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2018. "National Guidelines for the Cross-Border Transport of Biomedical Samples for Research Purposes (دستورالعمل ملي انتقال فرامرزي نمونههاي زيستپزشكي با هدف پژوهشي)". [https://ethics.research.ac.ir/docs/ethics\_material\_transfer.pdf] Accessed November 2020
- [2] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [https://maj.ir/index.aspx?lang=2&sub=0] Accessed December 2020
- [3] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [http://www.defanews.ir/] Accessed December 2020
- [4] Islamic Republic of Iran. Ministry of Industry, Mines and Trade. Trade Promotion Organization of Iran. 2019. Laws & Regulations "Export - Import Regulations 2019." [http://eng.tpo.ir/index.aspx?siteid=5&fkeyid=&siteid=5&pageid=25738]
- [5] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [https://bwc-ecbm.unog.ch/state/iran-islamic-republic] Accessed December 2020
- [6] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database." [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/] Accessed December 2020

## 1.4 BIOSAFETY

### 1.4.1 Whole-of-government biosafety systems

#### 1.4.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that Iran has national biosafety legislation and/or regulations in place. The main regulation in this regard is the National Biosafety Framework, which was laid down in 2004 and is administered by the Department of Environment, a governmental body under the supervision of the president. The governing document of the framework, published in October 2004, covers physical containment of dangerous biological substances in detail, classifying the containment process into three levels. [1] As per the document, "the fundamental objective of physical containment is to prevent undue exposure of the laboratory worker, the community or the environment to regulated material and as such, is achieved primarily through the adoption of proper laboratory procedures and containment equipment." [1]

Another key law is the Iran National Biosafety Law, which came into force in 2009, aiming at "...preventing the adverse effects of this technology on biological diversity." It adopts the Cartagena Protocol on Biosafety, and establishes a multi-agency National Biosafety Council. However, it primarily focuses on the production, release, transport, export, import, sale and purchase, application and use of living modified organisms (LMOs). [2] With respect to fulfilling the terms of the

Protocol, three entities serve as the Competent National Authority for biosafety in Iran: the Ministry of Agricultural Jihad ; the Food & Drug Administration of the Ministry of Health and Medical Education; and the Department of Environment, which is the designated executive body for the National Biosafety Framework (developed under the UNEP-GEF Biosafety Project). [1, 3]

[1] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."

[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[2] Biosafety Clearing House. "Biosafety Law of Islamic Republic of Iran."

[<http://bch.cbd.int/database/attachment/?id=20241>] Accessed November 2020

[3] Biosafety Clearing House. "Country Profile: Iran". [<https://bch.cbd.int/about/countryprofile.shtml?country=ir>] Accessed November 2020

### 1.4.1b

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has an established agency responsible for the enforcement of biosafety legislation and regulations. This agency is the National Biosafety Council, established as a policymaking, coordinating and approving body by the National Biosafety Law of 2009. It is a multidepartmental council chaired by Iran's First Deputy President, and consists of the ministers of science, health, agriculture, the director general of the Environmental Protection Organization (Department of Environment), and other outside experts chosen by the aforementioned and other relevant authorities. [1, 2, 3]

The foundation for this 2009 law was set in 2004 with the establishment of Iran's National Biosafety Framework, which laid down a structure for the prevention of accidents that involve the release of harmful biological substances, and protection of workers handling these dangerous substances. [2] With respect to fulfilling the terms of the Cartagena Protocol, signed by Iran in 2001, three entities serve as the Competent National Authority for biosafety in Iran: the Ministry of Agricultural Jihad; the Department of Environment; and the Food & Drug Administration of the Ministry of Health and Medical Education. [1, 3]

[1] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."

[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[2] Biosafety Clearing House. "Biosafety Law of Islamic Republic of Iran."

[<http://bch.cbd.int/database/attachment/?id=20241>] Accessed November 2020

[3] Biosafety Clearing House. "Country Profile: Iran". [<https://bch.cbd.int/about/countryprofile.shtml?country=ir>] Accessed November 2020

## 1.4.2 Biosafety training and practices

### 1.4.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**



Available evidence suggests but does not specifically indicate that Iran requires biosafety training, using a standardized, required approach, for personnel working in facilities housing or working with especially dangerous pathogens (EDPs), toxins, or biological materials with pandemic potential.

Iran's National Biosafety Framework (adopted in 2004 and developed under the UNEP-GEF Biosafety Project) in Part Six sets down a protocol for the training of personnel dealing with living modified organisms (LMOs) and other microorganisms such as Level-1 (lowest-danger) pathogens. The training protocol establishes the requirement for so-called Institutional Biosafety Committees (IBCs) in all public or private facilities and organisations either engaged, or intending to engage, "in research, production, process, import, export, transfer, propagation, or release of Living Modified Organisms..." [1] These committees report to Ministerial Biosafety Committees (MBCs), which in turn are responsible to the National Biosafety Committee, ultimately in charge of the legal and operational oversight of biosafety controls in Iran.

While the text of the Framework mentions the general procedures to adopt in facilities with biosafety levels 2 and 3, it does not specifically lay down a training protocol for personnel working or exposed to EDPs and other materials with pandemic potential. It does, however, state in regard to Level-3 labs; "A biosafety manual must be prepared and made available in the laboratory. Staff must be familiarized with the specific hazards of work with these factors and study and commit to memory necessary instructions and methods." [1]

A scan of the websites of the key Iranian government entities likely responsible for addressing biosafety issues does not reveal any procedures or standards for conducting biosafety training. These entities are the health, agriculture and defense ministries, as well as Iran's proxies for a national reference laboratory and national public health institute; the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences. [2, 3 4, 5, 6]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [7]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that require standardized biosafety training for personnel handling especially dangerous pathogens and/or similar materials. [8]

[1] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."  
[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>]  
Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>]  
Accessed November 2020

[5] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".  
[[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)." [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

[7] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of).  
[<https://bwc-ecbm.unog.ch/state/iran-islamic-republic>] Accessed December 2020



[8] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database."  
[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>] Accessed November 2020

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

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

#### 1.5.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not directly indicate that Iran 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.

Iran since 1973 is a Signatory and State Party to the Biological Weapons Convention (BWC), the prohibitions of which do not explicitly cover research activities such as Dual-Use Research of Concern (DURC). [1] Moreover, while the role that the BWC might play in addressing DURC has been discussed by States Parties, such discussion appears to have stalled in recent years. [2] This may be due to the resistance of certain States Members to adopting any provisions that would encourage the encroachment of the BWC on their independent capacity and freedom to conduct research. Indeed, Iran has from time to time made statements, most recently in November 2016, implicitly asserting its rights to conduct such research without interference from foreign parties. [3]

Neither the Ministry of Health and Medical Education, nor the Ministry of Agricultural Jihad, nor the Ministry of Defense offers any public indication of an official policy or opinion on DURC. [4, 5, 6] Similarly, Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) provide no confirmation of having a policy on this subject. [7, 8] It is possible that Iranian legislation and regulations simply have not yet caught up with the technological research being conducted by government entities such as the Strategic Center for Converging Technologies, which is clearly conducting research on biological technology, among other fields. [9]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [10]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address DURC. [11]

[1] Arms Control Association. November 2020. "Biological Weapons Convention Signatories and States-Parties."  
[<https://www.armscontrol.org/factsheets/bwcsig>] Accessed November 2020

[2] Piers D Millett, Ph.D., 17 January 2017. "Gaps in the International Governance of Dual-Use Research of Concern". The

National Academies Press. [[https://www.nap.edu/resource/24761/Millett\\_Paper\\_011717.pdf](https://www.nap.edu/resource/24761/Millett_Paper_011717.pdf)] Accessed November 2020

[3] Permanent Mission of the Islamic Republic of Iran to the UN – Geneva. 8 November 2016. "Statement by H. E. Mr. Mohsen Naziri Asl Ambassador Extraordinary and Plenipotentiary and Permanent Representative of the Islamic Republic of Iran".

[[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/DC18CDE81F2E37ADC125806D0036E705/\\$file/Statement+by+H.+E.+Mr.+Mohsen+Naziri+8th+RecCon+of+BWC-+++Final-as+delivered+to+ISU.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/DC18CDE81F2E37ADC125806D0036E705/$file/Statement+by+H.+E.+Mr.+Mohsen+Naziri+8th+RecCon+of+BWC-+++Final-as+delivered+to+ISU.pdf)] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020

[7] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".

[[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[8] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)". [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

[9] Islamic Republic of Iran. Office of the Presidency. Strategic Center for Converging Technologies (NBIC). 2020. Website. [<http://nbic.isti.ir/>] Accessed November 2020

[10] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [<https://bwc-ecbm.unog.ch/state/iran-islamic-republic>] Accessed December 2020

[11] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database."

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>] Accessed November 2020

### 1.5.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran has legislation and/or regulations requiring oversight of dual use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential. As a Signatory and State Party to the Biological Weapons Convention (BWC), Iran has officially expressed its objection, most recently in November 2016, to the possibility that as this agreement evolves it might encroach on States Parties' independent capacity and freedom to conduct research. [1, 2, 3]

Neither the Ministry of Health and Medical Education, nor the Ministry of Agricultural Jihad, nor the Ministry of Defense offers any public indication of an official policy or opinion on Dual-Use Research of Concern (DURC). [4, 5, 6] Similarly, Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) provide no confirmation of having a policy on this subject. [7, 8] It is possible that Iranian legislation and regulations simply have not yet caught up with the technological research being conducted by government entities such as the Strategic Center for Converging Technologies, which is clearly conducting research on biological technology, among other fields. [9]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures

(CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [10]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address DURC. [11]

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- [2] Piers D Millett, Ph.D., 17 January 2017. "Gaps in the International Governance of Dual-Use Research of Concern". The National Academies Press. [https://www.nap.edu/resource/24761/Millett\_Paper\_011717.pdf] Accessed November 2020
- [3] Permanent Mission of the Islamic Republic of Iran to the UN – Geneva. 8 November 2016. "Statement by H. E. Mr. Mohsen Naziri Asl Ambassador Extraordinary and Plenipotentiary and Permanent Representative of the Islamic Republic of Iran ". [https://www.unog.ch/80256EDD006B8954/(httpAssets)/DC18CDE81F2E37ADC125806D0036E705/\$file/Statement+by+H.+E.+Mr.+Mohsen+Naziri+8th+RecCon+of+BWC-+++Final-as+delivered+to+ISU.pdf] Accessed November 2020
- [4] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [http://www.behdasht.gov.ir/] Accessed November 2020
- [5] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [https://maj.ir/index.aspx?lang=2&sub=0] Accessed November 2020
- [6] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [http://www.defanews.ir/] Accessed November 2020
- [7] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran". [http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf] Accessed November 2020
- [8] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)." [https://nih.tums.ac.ir/Item/557] Accessed November 2020
- [9] Islamic Republic of Iran. Office of the Presidency. Strategic Center for Converging Technologies (NBIC). 2020. Website. [http://nbic.isti.ir/] Accessed November 2020
- [10] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [https://bwc-ecbm.unog.ch/state/iran-islamic-republic] Accessed December 2020
- [11] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database." [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/] Accessed November 2020

### 1.5.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that there is in Iran an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual use research. As a Signatory and State Party to the Biological Weapons Convention (BWC), Iran has officially expressed its objection, most recently in November 2016, to the possibility that as this agreement evolves it might encroach on States Parties' independent capacity and freedom to conduct research. [1, 2, 3]

Neither the Ministry of Health and Medical Education, nor the Ministry of Agricultural Jihad, nor the Ministry of Defense offers any public indication of an official policy or opinion on Dual-Use Research of Concern (DURC). [4, 5, 6] Similarly, Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) provide no confirmation of having a policy on this subject. [7, 8] It is possible that Iranian legislation and regulations simply have not yet caught up with the technological research being conducted by government entities such as the Strategic Center for Converging Technologies, which is clearly conducting research on biological technology, among other fields. [9]

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- [2] Piers D Millett, Ph.D., 17 January 2017. "Gaps in the International Governance of Dual-Use Research of Concern". The National Academies Press. [https://www.nap.edu/resource/24761/Millett\_Paper\_011717.pdf] Accessed November 2020
- [3] Permanent Mission of the Islamic Republic of Iran to the UN – Geneva. 8 November 2016. "Statement by H. E. Mr. Mohsen Naziri Asl Ambassador Extraordinary and Plenipotentiary and Permanent Representative of the Islamic Republic of Iran ". [https://www.unog.ch/80256EDD006B8954/(httpAssets)/DC18CDE81F2E37ADC125806D0036E705/\$file/Statement+by+H.+E.+Mr.+Mohsen+Naziri+8th+RecCon+of+BWC-+++Final-as+delivered+to+ISU.pdf] Accessed November 2020
- [4] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [http://www.behdasht.gov.ir/] Accessed November 2020
- [5] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [https://maj.ir/index.aspx?lang=2&sub=0] Accessed November 2020
- [6] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [http://www.defanews.ir/] Accessed November 2020
- [7] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran". [http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf] Accessed November 2020
- [8] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)." [https://nih.tums.ac.ir/Item/557] Accessed November 2020
- [9] Islamic Republic of Iran. Office of the Presidency. Strategic Center for Converging Technologies (NBIC). 2020. Website. [http://nbic.isti.ir/] Accessed November 2020
- [10] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [https://bwc-ecbm.unog.ch/state/iran-islamic-republic] Accessed December 2020
- [11] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database." [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/] Accessed November 2020

## 1.5.2 Screening guidance for providers of genetic material

### 1.5.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

In Iran, although the national policy on biosafety requires the screening of synthesized DNA before it is sold, it is unclear if such screening encompasses a requirement that the code passes through a screener/code reader which looks for dangerous sequences before sale is authorized. The governing text of Iran's National Biosafety Framework (NBF) stipulates stringent risk-management measures for so-called "genetic manipulation work", particularly such work as undertaken in facilities categorised as being in Risk Categories 2 and 3. These measures include inspection, reporting for authorisation, and containment. Appendix 7 of the NBF states; "As a standard practice, genetically manipulated organisms from laboratory work must be field tested before planned commercial application or planned release into the environment." [1]

Neither the Ministry of Health and Medical Education, nor the Ministry of Agricultural Jihad, nor the Ministry of Defense offers any public indication of an official policy or opinion on the pre-sale screening of synthesized DNA. [2, 3, 4] Similarly, Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) provide no confirmation of having a policy on this subject. [5, 6] It is possible that Iranian legislation and regulations simply have not yet caught up with the technological research being conducted by government entities such as the Strategic Center for Converging Technologies, which is clearly conducting research on synthetic DNA. [7]

As a state party to the Biological Weapons Convention, Iran is required to submit annual reports on its biological research activities to the United Nations Office at Geneva (UNOG) to confirm its compliance with six Confidence-Building Measures (CBM) aiming at improving international cooperation and preventing suspicion arising between Convention states parties. The resulting CBM reports are uploaded to an online UNOG portal, but Iran is one of a majority of states parties which restrict public access to their data. [8]

Finally, the BWC Legislation Database of the Verification Research, Training and Information Centre (VERTIC) provides no evidence of Iranian laws on biological safety and security that address the pre-sale screening of synthesized DNA. [9]

[1] Islamic Republic of Iran. Department of Environment. 2004. "National Biosafety Framework."  
[<http://bch.cbd.int/database/record.shtml?documentid=113011>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>]  
Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>]  
Accessed November 2020

[5] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".  
[[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)." [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

[7] Islamic Republic of Iran. Office of the Presidency. Strategic Center for Converging Technologies (NBIC). 2020. Website.  
[<http://nbic.isti.ir/>] Accessed November 2020

[8] United Nations Office at Geneva. BWC Electronic Confidence Building Measures Portal. Iran (Islamic Republic of). [https://bwc-ecbm.unog.ch/state/iran-islamic-republic] Accessed December 2020  
[9] Verification Research, Training and Information Centre (VERTIC). 2020. "BWC Legislation Database." [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/] Accessed November 2020

## 1.6 IMMUNIZATION

### 1.6.1 Vaccination rates

#### 1.6.1a

**Immunization rate (measles/MCV2)**

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

**Current Year Score: 2**

2019

World Health Organization

#### 1.6.1b

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

Yes = 1, No = 0

**Current Year Score: 1**

2020

OIE WAHIS database

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

## 2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

### 2.1.1 Laboratory testing for detection of priority diseases

#### 2.1.1a

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

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

## Current Year Score: 2

Iran's national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests. The testing capacities are as follows:

Virus culture for poliovirus (polio): The World Health Organization indicates that Iran has a WHO-accredited national laboratory, part of the Eastern Mediterranean Region Polio Laboratory Network, that performs virus isolation of polioviruses from faecal samples through intratypic differentiation. [1]

Serology for HIV: According to the latest AIDS Progress Report of the Ministry of Health and Medical Education, in 2015, Iran had 1017 health care facilities able to perform HIV testing and counselling, using rapid antibody screening and/ or enzyme-linked immunosorbent assay (ELISA) testing. [2]

Microscopy for mycobacterium tuberculosis (tuberculosis/TB); According to a 2018 academic article on mycobacterium tuberculosis diagnosis, "In developing countries like Iran, diagnosis of TB is usually dependent on microscopic tests because in such countries, culturing and drug-sensitivity test facilities are practically inaccessible. According to 2013 WHO report 70% of pulmonary TB cases in Iran are identified by microscopic smear tests." [3] Another academic article published in 2017 on tuberculosis in Iran adds; "In Iran, tuberculosis surveillance is based on the conventional methods that have limited practical values. These methods consist of colony characteristics, growth temperature, and biochemical tests. These methods are widely used to identify mycobacteria isolates although they are labour-intensive and time-consuming and may sometimes remain inconclusive." [4]

Rapid diagnostic testing for plasmodium spp. (malaria): A 2017 Iranian academic article on the monitoring of plasmodium spp. in southern Iran indicates that Polymerase Chain Reaction (PCR) testing of blood smear samples is a method used in Iran to diagnose this disease. The testing facility cited in the article is the Centre for Disease Control laboratory at the Shiraz University of Medical Sciences. [5] An earlier, 2015 Iranian academic article on the use of nested PCR and rapid diagnostic tests (RDTs) to test for malaria in southeastern Iran suggests that the latter form of testing, using kits supplied from foreign sources, is not widespread or otherwise institutionalized in the country, stating; "There is no information about the evaluation of RDT kits in malaria-endemic areas of Iran." [6]

Bacterial culture for Salmonella enteritidis serotype Typhi (typhoid): A 2016 Iranian academic article on the detection of Salmonella spp. in southern Iran noted the use of the BACTEC 9240 Automated Blood Culture System from blood samples taken in the city of Shiraz. "Detection of subspecies, biogrouping, and antimicrobial susceptibility testing by the disc diffusion and agar dilution methods were performed." The testing facility cited in the article is the Professor Alborzi Clinical Microbiology Research Center at the Shiraz University of Medical Sciences. [7] In Iran, uniplex and multiplex PCR testing is also done to detect Salmonella enterica (Serovars Typhi, Enteritidis, Infantis, and Typhimurium). [8]

Polymerase chain reaction (PCR) testing for Influenza virus (flu): A 2018 Iranian academic article on the development of Multiplex Reverse Transcription-Polymerase Chain Reaction (RT-PCR) testing for the simultaneous detection of Influenza A, B and adenoviruses described this technique as used by Mehrad Hospital in Tehran, using clinical diagnostic material provided by the hospital itself. [9]

[1] World Health Organization (WHO). Regional Office for the Eastern Mediterranean (EMRO). "Polio Eradication Initiative: The Eastern Mediterranean Region Polio Laboratory Network (EPLN)." <http://www.emro.who.int/polio/strategy-surveillance/polio-laboratory-network.html>] Accessed November 2020

[2] Ministry of Health and Medical Education, National AIDS Committee Secretariat. March 2015. "Islamic Republic of Iran AIDS Progress Report" [[http://www.unaids.org/sites/default/files/country/documents/IRN\\_narrative\\_report\\_2015.pdf](http://www.unaids.org/sites/default/files/country/documents/IRN_narrative_report_2015.pdf)]



Accessed November 2020

[3] Davood Azadi, Tahereh Motalebirad, Kazem Ghaffari and Hasan Shojaei. "Mycobacteriosis and Tuberculosis: Laboratory Diagnosis". Open Microbiology Journal. 2018; 12: 41-58. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5897959/>]

Accessed November 2020

[4] Abed Zahedi Bialvaei, Mohammad Asgharzadeh, Mohammad Aghazadeh, Manoucheh Nourazarian and Hossein Samadi Kafil. "Challenges of Tuberculosis in Iran". Jundishapur Journal of Microbiology. 2017 March; 10

[3] :e37866. [<https://cdn.neoscriber.org/cdn/dl/ca9f4fe8-59b1-11e7-9ce8-c36dfb12bec7>] Accessed November 2020

[5] Mohsen Kalantari, Zahra Soltani, Mostafa Ebrahimi, Masoud Yousefi, Masoumeh Amin, Ayda Shafiei and Kourosh Azizia. 2017. "Monitoring of Plasmodium infection in humans and potential vectors of malaria in a newly emerged focus in southern Iran". Pathogens and Global Health. 2017 Feb; 111[1] : 49-55. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5375612/>]

Accessed November 2020

[6] Ehtesham, R., Fazaeli, A., Raeisi, A., Keshavarz, H., & Heidari, A. 2015. "Detection of mixed-species infections of Plasmodium falciparum and Plasmodium vivax by nested PCR and rapid diagnostic tests in southeastern Iran." The American journal of tropical medicine and hygiene, 93[1] , 181-185. doi:10.4269/ajtmh.14-0650.

[<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4497893/>] Accessed November 2020

[7] Mojtaba Anvarinejad, Gholam Reza Pouladfar, Bahman Pourabbas, Maneli Amin Shahidi, Noroddin Rafaatpour, Mohammad Ali Dehyadegari, Pejman Abbasi, and Jalal Mardaneh. 2016. "Detection of Salmonella spp. with the BACTEC 9240 Automated Blood Culture System in 2008 - 2014 in Southern Iran (Shiraz): Biogrouping, MIC, and Antimicrobial Susceptibility Profiles of Isolates". Jundishapur Journal of Microbiology; 2016 Apr; 9

[4] : e26505. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4897598/>] Accessed November 2020

[8] Ranjbar R, Mortazavi SM, Mehrabi Tavana A, Sarshar M, Najafi A, Soruri Zanjani R. 2017. "Simultaneous Molecular Detection of Salmonella enterica Serovars Typhi, Enteritidis, Infantis, and Typhimurium." Iran Journal of Public Health; 2017;46: 103-111. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5401918/>] Accessed November 2020

[9] Mohsen Nakhaie, Hoorieh Soleimanjahi, Hamid Reza Mollaie, Seyed Mohamad Ali Arabzadeh. 2018. "Development of Multiplex Reverse Transcription-Polymerase Chain Reaction for Simultaneous Detection of Influenza A, B and Adenoviruses". Iranian Journal of Pathology; 2018; 13[1] : 54-62 Vol.13 No.1 Winter 2018.

[<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5929389/>] Accessed November 2020

### 2.1.1b

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

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

**Current Year Score: 1**

Iran has a national plan and strategy for addressing public health emergencies, which includes considerations for testing for novel pathogens and defining goals for testing. This plan does not directly promote the scaling of testing capacity per se.

The plan in question is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, which was published and implemented in 2015 by the Ministry of Health. As regards testing, the plan's key strategy may be summarised as aiming to achieve the rapid identification of a disease vector, such as an airborne pathogen, in the asymptomatic phase of a disease, prior to a definitive diagnosis that would require evaluation by a specialist laboratory, in order to enter basic information about a potential pathogenic threat into the national syndromic surveillance system as quickly as possible. Positive identification of the pathogen triggers the evaluation and monitoring of its sources and transmission pathways with the objective of mounting rapid response and control measures. To this end, the plan mandates testing via methods codified for

known pathogens. For example, for meningitis, testing methods and diagnostic criteria differ in determining whether cases of pathogenic infection are to be categorized as ambiguous, probable, or definite. An ambiguous case presenting with neck stiffness and sudden-onset high fever would be a candidate for a cerebrospinal fluid (CSF) test, in which event a positive culture showing the presence of antigens in the blood or spinal fluid would result in a definitive diagnosis. [1]

While the plan does not explicitly mandate the scaling of testing capacity, it does discuss in some detail the topics of capacity constraints, expansion and improvement, particularly with regard to the national syndromic surveillance system, and mandates appropriate action, both before and during the outbreak of a public health emergency. For example, the Ministry of Health's designated physical protection units, charged with leading the on-the-ground response to a pathogenic disease outbreak, must have in place plans to expand capacity at their bases of operation before such a public health event occurs. Hospitals must also have preemptive plans in place to expand capacity (including human resources, equipment and physical space) under a Hospital Incident Command System (HICS) structure. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November and December 2020

## 2.1.2 Laboratory quality systems

### 2.1.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

Evidence indicates that the national reference laboratory system in Iran has tried with only partial success to implement the ISO: 15189 standard of accreditation.

While there is little indication that a single national laboratory in Iran serves as a reference facility for the WHO-defined core tests, there does exist a Directorate-General of Health Reference Laboratories at the Ministry of Health, which appears to serve as the administrator and auditor of the country's national reference laboratories. [1, 2, 3] In September 2007 the Directorate completed a national manual of standards based on ISO:15189 and officially announced it as the minimal quality requirements for all medical laboratories in the country. The Directorate applies the standard to audit public and private hospital laboratories. [2] An updated version of the manual was published in December 2017. However, evidence does not indicate that laboratories across Iran have been comprehensively accredited under this standard. A scholarly paper published in 2013 concluded that private labs were closer than public labs to fully implementing the standards, and noted violations of ethical issues (including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc). It is unclear that the situation has improved since then. [2]

A scan of the websites of the other key Iranian government entities likely responsible for addressing laboratory standards does not reveal any relevant publications on the topic. These entities are the agriculture ministry and Iran's proxies for a national reference laboratory and national public health institute; the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences. [5, 6, 7]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. June 25 2017. News. "Selection of the Health Reference Laboratory as the World Health Organization's Fellow Center for the sixth consecutive time (انتخاب آزمایشگاه مرجع)"

"(سلامت بعنوان مرکز همکار سازمان جهانی بهداشت برای ششمین بار متوالی

[https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1-

%D8%A7%D8%AE%D8%AA%D8%B5%D8%A7%D8%B5%DB%8C/%D8%A7%D9%86%D8%AA%D8%AE%D8%A7%D8%A8-

%D8%A2%D8%B2%D9%85%D8%A7%DB%8C%D8%B4%DA%AF%D8%A7%D9%87-%D9%85%D8%B1%D8%AC%D8%B9-

%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%A8%D8%B9%D9%86%D9%88%D8%A7%D9%86-

%D9%85%D8%B1%DA%A9%D8%B2-%D9%87%D9%85%DA%A9%D8%A7%D8%B1-

%D8%B3%D8%A7%D8%B2%D9%85%D8%A7%D9%86-%D8%AC%D9%87%D8%A7%D9%86%DB%8C-

%D8%A8%D9%87%D8%AF%D8%A7%D8%B4%D8%AA-%D8%A8%D8%B1%D8%A7%DB%8C-

%D8%B4%D8%B4%D9%85%DB%8C%D9%86-%D8%A8%D8%A7%D8%B1-

%D9%85%D8%AA%D9%88%D8%A7%D9%84%DB%8C] Accessed November 2020

[2] Soghra ANJARANI, \* Nooshafarin SAFADEL, Parisa DAHIM, Rana AMINI, Saeed MAHDAVI, and Siamak MIRAB SAMIEE.

2013. "Establishment of National Laboratory Standards in Public and Private Hospital Laboratories". Iran Journal of Public Health. 2013; 42[1] : 96–101. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3595627/] Accessed November 2020

[3] Nooshafarin Safadel, Soghra Anjarani, Marjan Farzami, Rana Amini. 2014. "Establishing an Iranian medical laboratory standard based on ISO 15189". Accreditation and Quality Assurance 19

[6] :473-476. November 2014.

[https://www.researchgate.net/publication/290027414\_Establishing\_an\_Iranian\_medical\_laboratory\_standard\_based\_on\_ISO\_15189] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education. December 31 2017. News. " Presenting a draft of a new edition of the guidelines of the standards of the Ministry of Health for the establishment of quality management system in medical laboratories of the country (ارائه پیش نویس ویرایش جدید دستورالعمل های استانداردهای وزارت بهداشت برای استقرار نظام مدیریت) (کیفیت در آزمایشگاه های پزشکی کشور

[https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/%D8%A7%D8%B1%D8%A7%D8%A6%D9%87-

%D9%BE%DB%8C%D8%B4-%D9%86%D9%88%DB%8C%D8%B3-%D9%88%DB%8C%D8%B1%D8%A7%DB%8C%D8%B4-

%D8%AC%D8%AF%DB%8C%D8%AF-

%D8%AF%D8%B3%D8%AA%D9%88%D8%B1%D8%A7%D9%84%D8%B9%D9%85%D9%84-%D9%87%D8%A7%DB%8C-

%D8%A7%D8%B3%D8%AA%D8%A7%D9%86%D8%AF%D8%A7%D8%B1%D8%AF%D9%87%D8%A7%DB%8C-

%D9%88%D8%B2%D8%A7%D8%B1%D8%AA-%D8%A8%D9%87%D8%AF%D8%A7%D8%B4%D8%AA-

%D8%A8%D8%B1%D8%A7%DB%8C-%D8%A7%D8%B3%D8%AA%D9%82%D8%B1%D8%A7%D8%B1-

%D9%86%D8%B8%D8%A7%D9%85-%D9%85%D8%AF%DB%8C%D8%B1%DB%8C%D8%AA-

%DA%A9%DB%8C%D9%81%DB%8C%D8%AA-%D8%AF%D8%B1-

%D8%A2%D8%B2%D9%85%D8%A7%DB%8C%D8%B4%DA%AF%D8%A7%D9%87-%D9%87%D8%A7%DB%8C-

%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C-%DA%A9%D8%B4%D9%88%D8%B1] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Agricultural Jihad. Website. [https://maj.ir/index.aspx?lang=2&sub=0] Accessed November 2020

[6] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".

[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf] Accessed April 2019

[6] Tehran University of Medical Sciences. National Institute of Health Research. Website.

[http://nihr.tums.ac.ir/?AspxAutoDetectCookieSupport=1] Accessed November 2020

[7] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)". [https://nih.tums.ac.ir/Item/557] Accessed November 2020

## 2.1.2b

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

Yes = 1 , No = 0

### Current Year Score: 1

Iran's national reference laboratory system is subject to external quality assurance (EQA) review. According to the World Health Organization (WHO), a comprehensive EQA system exists in Iran and has used by the nation's reference laboratories for around 20 years. [1] The Iranian EQA system is administered by the Iranian Association of Clinical Laboratory Doctors (IACLD), an independent group that collaborates closely with the aforementioned Directorate-General of Health Reference Laboratories at the Ministry of Health. [2]

[1] World Health Organization (WHO). Regional Office for the Eastern Mediterranean. "Islamic Republic of Iran: Developing a quality management system for accreditation of reference health laboratories."

[<http://www.emro.who.int/irn/programmes/accreditationrh.html>] Accessed November 2020

[2] Iranian Association of Clinical Laboratory Doctors (IACLD). EQAP Portal. 2020. "Comprehensive External Quality Assessment System (سامانه جامع برنامه ارزیابی کیفیت خارجی)." [<http://eqap.iaclid.com/>] Accessed November 2020

## 2.2 LABORATORY SUPPLY CHAINS

### 2.2.1 Specimen referral and transport system

#### 2.2.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran has a national specimen transport system, covering 80% of the country or otherwise. None of the key government entities that would likely be in charge of such a national system--the health, agriculture and trade & industry ministries and proxies for a national laboratory and national public health institute--indicate that they operate one. [1, 2, 3, 4, 5]

Iran has protocols for the transport of biomedical samples for research purposes, but these are developed by private-sector companies working in the health research fields, rather than by the government. Moreover, there is no definitive indication that such privately-produced guides are applied nationwide. For example, NextLab, an Iranian laboratory-software development firm, has published on its website a detailed guide on how to send samples and receive test results from reference laboratories, such as for the use of NextLab's partners and clients. But evidence is lacking that this guide reflects the use of a national specimen transport system. [6]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>] Accessed November and December 2020

[2] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [<https://maj.ir/index.aspx?lang=2&sub=0>] Accessed December 2020

[3] Pasteur Institute of Iran. 2020. Website. [<http://en.pasteur.ac.ir/>] Accessed December 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. 2020. Website. [<https://nih.tums.ac.ir/>] Accessed December 2020

[5] Islamic Republic of Iran. Ministry of Industry, Mines and Trade. Trade Promotion Organization of Iran. 2020. Website. [<http://eng.tpo.ir/>] Accessed December 2020

[6] NextLab Iran. "Instructions on how to send samples and receive test results from reference laboratories (دستورالعمل نحوه ارسال نمونه و دریافت نتایج آزمایش از آزمایشگاه های ارجاع)." [<http://demo.nextlab.ir/Documents/Instructions/2A9E767A-2D57-495D->

BE8B-3F2933F0BC50.aspx] Accessed November and December 2020

## 2.2.2 Laboratory cooperation and coordination

### 2.2.2a

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

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

**Current Year Score: 0**

Available evidence does not indicate that in Iran there is 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. Iran's overarching plan on public health crises is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, which was published and implemented in 2015 by the Ministry of Health. The plan mandates testing for disease vectors via codified methods but does not explicitly mandate the scaling of testing capacity. Public health and related reference laboratories are instructed to augment their ability to respond to a public health crisis by such means as providing mobile facilities in affected areas and sending samples for testing to more qualified laboratories up the chain of public health agencies (including to international laboratories if necessary) in case their own capacities for such testing are inadequate. But the plan stipulates no specific system for ramping up the testing capacity of labs during a public health crisis. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)."

[<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020

## 2.3 REAL-TIME SURVEILLANCE AND REPORTING

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

#### 2.3.1a

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

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

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

**Current Year Score: 1**

There is evidence that Iran conducts ongoing event-based surveillance and analysis for infectious disease, though it is unclear if such activity is conducted on a daily basis.

Firstly, although Iran's communicable disease surveillance system normally engages in indicator-based surveillance through the national healthcare and medical lab system, it also encourages event-based surveillance. For example, event-based surveillance is also a keystone policy in the Ministry of Health and Medical Education's guide on environmental health procedures during emergencies and disasters, published in 2011, as well as in its National Health Disaster and Emergency Response Operations Plan, published in 2015. For example, the latter plan states that one of the key responsibilities of the communicable disease surveillance system's provincial rapid-response teams is to respond to rumors about local events adverse to health. [5, 6]

In addition, Iran has a well-developed national emergency and disaster-management system, which is directed by two entities, the National Disaster Management Organization (NDMO) under the Ministry of the Interior, and the National Passive Defense Organization (NPDO) under the Supreme Leader. According to a scholarly article published in 2012 on Iran's disaster health management system; "Both NDMO and NPDO have a Health & Medical Services Taskforce (HMST) and Disaster & Emergency Management Center (DEMC) at the Ministry of Health & Medical Education (MOH&ME), which is the leading agency for both taskforces....Each...has its own Emergency Operations Center (EOC) collaborating with other organizations responding to disasters." [2]

Evidence indicates that the NDMO's activities are reactive rather than proactive in nature. [3] By contrast, the NPDO's mandate is more in line with proactive, ongoing event-based surveillance, and it operates seven different headquarters, each addressing a different type of threat, including biological, chemical, radiological and cyber threats. The Biological Headquarters runs a Disease Observation and Monitoring Platform, accessed through the FAHAM online data portal and restricted to authorized users. [4] This platform appears to be a fairly recent innovation, with actual data on observation being collected and entered by the NPDO's regional branches.

[1] Ghobad Moradi, MD, PhD; Heshmatollah Asadi, PhD; Mohammad-Mehdi Gouya, MD; Mahmood Nabavi, MD; Abbas Norouzinejad, MSc; Mohammad Karimi, MSc; Amjad Mohamadi-Bolbanabad, PhD. 2019. "The Communicable Diseases Surveillance System in Iran: Challenges and Opportunities." Archives of Iranian Medicine. July 2019;22

[7] :361-368. [ <http://www.aimjournal.ir/PDF/aim-3828>] Accessed November 2020

[2] Ali Ardalan, Mohammad Hossein Rajaei, Gholamreza Masoumi, Ali Azin, Vahid Zonoobi, Mohammad Sarvar, Khorshid Vaskoei Eshkevari, Elham Ahmadnezhad, Gelareh Jafari. July 16 2012. "2012-2025 Roadmap of I.R.Iran's Disaster Health Management". ABSTRACT. PLOS.[<http://currents.plos.org/disasters/index.html%3Fp=1899.html>] Accessed November 2020

[3] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[4] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Disease Observation and Monitoring Platform (سامانه رصد و پایش بیماری). [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)". [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)". [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020

### 2.3.1b

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

Yes = 1 , No = 0

**Current Year Score: 1**

According to the World Health Organization (WHO), Iran has reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years. As the WHO states; "On 9 May 2019, the Global Polio Laboratory Network (GPLN) notified WHO of the detection of wild poliovirus type 1 (WPV1) from an environmental sewage sample collected on 20 April 2019 in Konarak district, Sistan-Baluchistan province, Islamic Republic of Iran. The virus was detected in an environmental sample only, and to date, no associated cases of paralysis have been detected. The subsequent scheduled sewage sample collected from the same site on 4 May 2019 (2 weeks after the positive sample) tested negative for

poliovirus." [1]

[1] World Health Organization (WHO). Emergencies preparedness, response. May 24 2019. "Wild poliovirus type 1 - Islamic Republic of Iran." [https://www.who.int/csr/don/24-may-2019-wild-polio-virus-islamic-republic-of-iran/en/] Accessed November 2020

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

### 2.3.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

Iran's government operates an electronic reporting surveillance system at the national level, but evidence indicates that some inputs are still conducted manually at the sub-national level. Scholarly research on Iran's communicable disease surveillance system has found that, while the organizational structure of the system is sound, using as it does the infrastructure of the national health system to establish a presence in all areas of the country, in practice it has faced many challenges in implementation. Key among these challenges is the relative lack of cooperation in reporting by healthcare workers in the field (particularly by those in private-sector facilities) and the weakness of legislative and regulatory guidance on the reporting of communicable diseases. [1]

For example, research has shown that many private doctors in Iran have been reluctant to use the public-sector reporting system and there is no law to force them to use it. Moreover, at sub-national levels there is often a lack of internet-based platforms (both hardware and software) to report disease information electronically. Such data-entry systems as exist often face problems such as continuous changes in design, lack of compatibility between the systems, lack of reporting criteria and standards, lack of access to some systems by healthcare personnel and poor training in their use. Field research conducted in Iranian healthcare centers in 2012 found that information systems used for primary health care were manual in all the studied centers, and the rate of computer use for collecting and processing data was only 25%. However, this percentage has almost certainly risen since then. [1]

In addition, the health ministry has for several years been developing a national system of electronic health records for patients, known by its Persian acronym SEPAS; in February 2018 the ministry reported that it had established SEPAS in conjunction with the national health insurance and social security organizations. [2] In July 2019 the local press quoted the head of the Statistics and Information Technology Center of the Ministry of Health as saying that it had deployed SEPAS in all public health centers in the country and was working on extending it to private sector health facilities that are parties to the national health insurance system. [3]

[1] Ghobad Moradi, MD, PhD; Heshmatollah Asadi, PhD; Mohammad-Mehdi Gouya, MD; Mahmood Nabavi, MD; Abbas Norouzzinejad, MSc; Mohammad Karimi, MSc; Amjad Mohamadi-Bolbanabad, PhD. 2019. "The Communicable Diseases Surveillance System in Iran: Challenges and Opportunities." Archives of Iranian Medicine. July 2019;22

[7] :361-368. [ http://www.aimjournal.ir/PDF/aim-3828] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education). February 4 2018. "Establishment of Iranian electronic health record system (SEPAS) استقرار سامانه پرونده الکترونیکی سلامت ایرانیان (سیاس)." [https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1-%D8%A7%D8%AE%D8%AA%D8%B5%D8%A7%D8%B5%DB%8C/%D8%A7%D8%B3%D8%AA%D9%82%D8%B1%D8%A7%D8%B1%D8%B3%D8%A7%D9%85%D8%A7%D9%86%D9%87-%D9%BE%D8%B1%D9%88%D9%86%D8%AF%D9%87-



%D8%A7%D9%84%DA%A9%D8%AA%D8%B1%D9%88%D9%86%DB%8C%DA%A9%DB%8C-  
%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%A7%DB%8C%D8%B1%D8%A7%D9%86%DB%8C%D8%A7%D9%86-  
(%D8%B3%D9%BE%D8%A7%D8%B3)-] Accessed November 2020  
[3] Iranian Students' News Agency (ISNA). July 1 2019. "How to implement electronic health records in hospitals, pharmacies and clinics (نحوه اجرای پرونده الکترونیک سلامت در بیمارستانها، داروخانهها و مطبها)." [https://www.isna.ir/news/98040904614/%D9%86%D8%AD%D9%88%D9%87-%D8%A7%D8%AC%D8%B1%D8%A7%DB%8C-%D9%BE%D8%B1%D9%88%D9%86%D8%AF%D9%87-%D8%A7%D9%84%DA%A9%D8%AA%D8%B1%D9%88%D9%86%DB%8C%DA%A9-%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%AF%D8%B1-%D8%A8%DB%8C%D9%85%D8%A7%D8%B1%D8%B3%D8%AA%D8%A7%D9%86-%D9%87%D8%A7-%D8%AF%D8%A7%D8%B1%D9%88%D8%AE%D8%A7%D9%86%D9%87-%D9%87%D8%A7] Accessed November 2020

### 2.3.2b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran's electronic reporting surveillance system collects ongoing or real-time laboratory data, without the need for manual updates. The website of the Ministry of Health and Medical Education (MOHME) provides no indication of the use of such a system. There exists a Directorate-General of Health Reference Laboratories at the MOHME, but there is little information on its duties or capacity to conduct such surveillance. [1]

The MOHME does oversee an electronic reporting surveillance system at the national level, with some inputs still conducted manually by health facilities at the sub-national level. Scholarly research on Iran's communicable disease surveillance system has found that, while the organizational structure of the system is sound, using as it does the infrastructure of the national health system (and laboratory network) to establish a presence in all areas of the country, in practice it has faced many challenges in implementation. Key among these challenges is the relative lack of cooperation in reporting by healthcare workers in the field (particularly by those in private-sector facilities) and the weakness of legislative and regulatory guidance on the reporting of communicable diseases. [2]

Finally, Iran's two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) give little indication that public health laboratory data are collected completely by electronic means, without the need for manual entry at the sub-national level. [3, 4]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[2] Ghobad Moradi, MD, PhD; Heshmatollah Asadi, PhD; Mohammad-Mehdi Gouya, MD; Mahmood Nabavi, MD; Abbas Norouzinejad, MSc; Mohammad Karimi, MSc; Amjad Mohamadi-Bolbanabad, PhD. 2019. "The Communicable Diseases Surveillance System in Iran: Challenges and Opportunities." Archives of Iranian Medicine. July 2019;22

[7] :361-368. [http://www.aimjournal.ir/PDF/aim-3828] Accessed November 2020

[3] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".

[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)." [https://nih.tums.ac.ir/Item/557] Accessed November 2020

## 2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

### 2.4.1 Coverage and use of electronic health records

#### 2.4.1a

##### Are electronic health records commonly in use?

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

**Current Year Score: 2**

Available evidence indicates that electronic health records (EHRs) are commonly in use in Iran, covering between 70% and 80% of the population as of mid-2017, according to latest data from the local press.

The creation of such a system was mandated in the Fifth Five-Year Economic Development Plan, which ended in 2016. According to the Iranian press, local EHRs began to be created for all patients at state-run hospitals in 2015, and as of mid-2017 they were in use for 70% of Iran's population, with 550 state hospitals using non-integrated EHR systems. The system had not yet been made mandatory for Iran's 350 private hospitals, only 40% of which used their own EHR systems at that time. [1] By July 2017, the Financial Tribune reported that coverage had reached 80% of Iran's population. [2]

The creation and management of Iran's EHR system is the remit of the Statistics and Technology Information Office at the Ministry of Health and Medical Education. Three electronic information systems have been developed, known as Shams, SINASA and SEPAS; they collect data on the healthcare system itself, on clinical care, and on patients' electronic health records, respectively. These systems do not directly relate to disease outbreak surveillance and are only for the use of authorized personnel. [3]

At any rate, in July 2019 the local press reported that the health ministry had deployed the SEPAS EHR system in all public health centers in the country and was working on extending it to private sector health facilities that are parties to the national health insurance system. [4]

[1] Financial Tribune. April 29 2017. "E-Health Records Cover 70% of Population."

[<https://financialtribune.com/articles/people/63311/e-health-records-cover-70-of-population>] Accessed November 2020

[2] Financial Tribune. July 12 2017. "Electronic Health Records."

[<https://financialtribune.com/articles/people/68236/electronic-health-records>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. Statistics and Information Technology Office. 2020. Website. [<http://it.behdasht.gov.ir/>] Accessed November 2020

[4] Iranian Students' News Agency (ISNA). July 1 2019. "How to implement electronic health records in hospitals, pharmacies and clinics (نحوه اجرای پرونده الکترونیک سلامت در بیمارستان‌ها، داروخانه‌ها و مطب‌ها)." [https://www.isna.ir/news/98040904614/%D9%86%D8%AD%D9%88%D9%87-%D8%A7%D8%AC%D8%B1%D8%A7%DB%8C-%D9%BE%D8%B1%D9%88%D9%86%D8%AF%D9%87-%D8%A7%D9%84%DA%A9%D8%AA%D8%B1%D9%88%D9%86%DB%8C%DA%A9-%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%AF%D8%B1-%D8%A8%DB%8C%D9%85%D8%A7%D8%B1%D8%B3%D8%AA%D8%A7%D9%86-%D9%87%D8%A7-%D8%AF%D8%A7%D8%B1%D9%88%D8%AE%D8%A7%D9%86%D9%87-%D9%87%D8%A7] Accessed November 2020

[https://www.isna.ir/news/98040904614/%D9%86%D8%AD%D9%88%D9%87-%D8%A7%D8%AC%D8%B1%D8%A7%DB%8C-%D9%BE%D8%B1%D9%88%D9%86%D8%AF%D9%87-%D8%A7%D9%84%DA%A9%D8%AA%D8%B1%D9%88%D9%86%DB%8C%DA%A9-%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%AF%D8%B1-%D8%A8%DB%8C%D9%85%D8%A7%D8%B1%D8%B3%D8%AA%D8%A7%D9%86-%D9%87%D8%A7-%D8%AF%D8%A7%D8%B1%D9%88%D8%AE%D8%A7%D9%86%D9%87-%D9%87%D8%A7] Accessed November 2020



%D8%A8%DB%8C%D9%85%D8%A7%D8%B1%D8%B3%D8%AA%D8%A7%D9%86-%D9%87%D8%A7-  
%D8%AF%D8%A7%D8%B1%D9%88%D8%AE%D8%A7%D9%86%D9%87-%D9%87%D8%A7] Accessed November 2020

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

### 2.4.2a

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

Yes = 1 , No = 0

Current Year Score: 0

Available evidence does not indicate that in Iran there are established mechanisms at the relevant ministries responsible for animal, human and wildlife surveillance to share data (such as through mosquito surveillance, brucellosis surveillance, etc.). The websites of the key government entities, namely the Department of Environment, the Ministry of Health and Medical Education, and the Ministry of Agricultural Jihad, as well as Iran's proxies for a national reference laboratory and national public health institute--the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences--do not indicate the existence of a joint committee or working group or similar entity set up to facilitate the sharing of data on this topic. [1, 2, 3, 4, 5]

[1] Islamic Republic of Iran. Department of Environment. Website. [<https://www.doe.ir/portal/home/>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Agricultural Jihad. Undated. "Health and Management of Animal Diseases". [[https://maj.ir/Index.aspx?page\\_=form&lang=2&sub=0&tempname=NewEnMain&PageID=12663](https://maj.ir/Index.aspx?page_=form&lang=2&sub=0&tempname=NewEnMain&PageID=12663)] Accessed November 2020

[4] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran".

[[http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN\[1\].pdf](http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf)] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. Undated. "About the Institute (درباره مؤسسه)". [<https://nih.tums.ac.ir/Item/557>] Accessed November 2020

## 2.4.3 Transparency of surveillance data

### 2.4.3a

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

Yes = 1 , No = 0

Current Year Score: 0

Available evidence does not indicate that Iran makes de-identified health surveillance data on disease outbreaks publicly available via reports (or other format) on government websites. The main website of the Ministry of Health and Medical Education does not provide such data, and the specialized website of the Ministry's Statistics and Technology Information Office--its main site for statistical information--is not readily accessible. [1]

During the current COVID-19 coronavirus outbreak, the health ministry's COVID-19 news webpage provides only a minimum

of statistical information on the disease, updated intermittently between other news articles, and in textual form. [2]

Similarly, the website of the Statistical Center of Iran provides only a minimal amount of data on health issues, with no data available on diseases. [3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. "Coronavirus news (اخبار کرونا ویروس)." [<https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1-%DA%A9%D8%B1%D9%88%D9%86%D8%A7-%D9%88%DB%8C%D8%B1%D9%88%D8%B3>] Accessed November 2020

[3] Islamic Republic of Iran. Statistical Center of Iran. Healthcare. Statistical Data and Information. [<https://www.amar.org.ir/%D8%A2%D9%85%D8%A7%D8%B1%D9%87%D8%A7%DB%8C-%D9%85%D9%88%D8%B6%D9%88%D8%B9%DB%8C/%D8%A8%D9%87%D8%AF%D8%A7%D8%B4%D8%AA#5633823->] Accessed November 2020 Other sources: Islamic Republic of Iran. Statistical Center of Iran. 2020. "National Statistical Yearbook - 1397 (سالنامه آماری کشور - ۱۳۹۷)." [[https://amar.org.ir/Portals/0/Files/fulltext/1397/N\\_Salnameh\\_97.pdf](https://amar.org.ir/Portals/0/Files/fulltext/1397/N_Salnameh_97.pdf)] Accessed November 2020

### 2.4.3b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not show that Iran makes de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar). Moreover, the specialized website of the Ministry's Statistics and Technology Information Office--its main site for statistical information--is not readily accessible. During the current outbreak, the health ministry provides news and prophylactic guidelines on the disease but only a minimum of statistical data on it, updated intermittently and in textual form. [1]

Similarly, the website of the Statistical Center of Iran provides only a minimal amount of data on health issues. [2]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[2] Islamic Republic of Iran. Statistical Center of Iran. Healthcare. Statistical Data and Information. [<https://www.amar.org.ir/%D8%A2%D9%85%D8%A7%D8%B1%D9%87%D8%A7%DB%8C-%D9%85%D9%88%D8%B6%D9%88%D8%B9%DB%8C/%D8%A8%D9%87%D8%AF%D8%A7%D8%B4%D8%AA#5633823->] Accessed November 2020

## 2.4.4 Ethical considerations during surveillance

### 2.4.4a

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

Yes = 1 , No = 0

### Current Year Score: 1

Iran has regulations that offer limited safeguards of the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities.

It should first be noted that Iran has no readily identifiable comprehensive system for the collection and reporting of data arising from surveillance of disease outbreaks. Instead, the Ministry of Health and Medical Education through its Statistics and Technology Information Office runs three separate electronic information systems, called Shams, SINASA and SEPAS, which collect data on the healthcare system, on clinical care and on patients' electronic health records, respectively--for the use of authorized personnel. [1]

As far as legal protections are concerned, Iran's Computer Crimes Law of 2009 does not specifically mention disease data. The Electronic Commerce Law of 2004 in Article 60 does regulate the storing, processing, or distributing of "data messages" of medical or health records, but in accordance with Article 79 of this Law, which merely encourages the future development of appropriate enforcing legislation. [2]

Article 648 of the Penal Code of Iran deems the disclosure of patients' secrets by medical personnel as an offence when such disclosure is not authorized by law, thus signifying that the confidentiality principle is not absolute in Iranian law. [3] Furthermore, according to a 2014 scholarly study on the deficiencies of health information laws in Iran, "...there is not even one law on disclosure of healthcare information that could result in the incorporation of external and internal health information disclosure policies into healthcare organizations." [4]

It should be noted that in July 2018 Iran unveiled a new draft law on the protection and confidentiality of personal data, intended as comprehensive legislation to replace the miscellany of current laws on the subject. [5] Evidence from the Iranian press indicates that as of end-2020 the draft was still wending its way through Parliament and had yet to be adopted as law. [6]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education). February 4 2018. "Establishment of Iranian electronic health record system (SEPAS) استقرار سامانه پرونده الکترونیک سلامت ایرانیان)

(سپاس). "[https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1-%D8%A7%D8%AE%D8%AA%D8%B5%D8%A7%D8%B5%DB%8C/%D8%A7%D8%B3%D8%AA%D9%82%D8%B1%D8%A7%D8%B1%D8%B3%D8%A7%D9%85%D8%A7%D9%86%D9%87-%D9%BE%D8%B1%D9%88%D9%86%D8%AF%D9%87-%D8%A7%D9%84%DA%A9%D8%AA%D8%B1%D9%88%D9%86%DB%8C%DA%A9%DB%8C-%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%A7%DB%8C%D8%B1%D8%A7%D9%86%DB%8C%D8%A7%D9%86-(%D8%B3%D9%BE%D8%A7%D8%B3)-] Accessed November 2020

[2] UNCTAD. Cyberlaw Tracker: Country Detail. 2020. "Cyberlaw Tracker: The case of Iran (Islamic Republic of)." <https://unctad.org/page/cyberlaw-tracker-country-detail?country=ir> Accessed November 2020

[3] Alireza Milanifar, Bagher Larijani, Parvaneh Paykarzadeh, Golanna Ashtari, and Mohammad Mehdi Akhondi. "Breaching confidentiality: medical mandatory reporting laws in Iran". Journal of Medical Ethics and History of Medicine. 2014; 7: 13. [https://europepmc.org/articles/pmc4263389] Accessed November 2020

[4] Hamid Moghaddasi, PhD; Azamol-sadat Hosseini, PhD; Samad Sajjadi, PhD; and Maryam Nikookalam, MSc. 2014. "Reasons for Deficiencies in Health Information Laws in Iran". Perspectives in Health Information Management (Spring, April 2014). [http://library.ahima.org/doc?oid=300574#.XJBSPNQrKt8] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Communications and Information Technology. July 2018. "The 'Protection and confidentiality of personal data' bill is unveiled (رونامای شد) «صیانت و حفاظت از داده‌های شخصی»".

[https://www.ict.gov.ir/fa/newsagency/21691/%D9%84%D8%A7%DB%8C%D8%AD%D9%87-%D8%B5%DB%8C%D8%A7%D9%86%D8%AA-%D9%88-%D8%AD%D9%81%D8%A7%D8%B8%D8%AA-%D8%A7%D8%B2-

%D8%AF%D8%A7%D8%AF%D9%87-%D9%87%D8%A7%DB%8C-%D8%B4%D8%AE%D8%B5%DB%8C-%D8%B1%D9%88%D9%86%D9%85%D8%A7%DB%8C%DB%8C-%D8%B4%D8%AF] Accessed December 2020

[6] Sanayeh Press. August 26 2020. "Personal data protection bill goes to parliament / Absence of law in cyberspace (لایحه صیانت و حفاظت از داده‌های شخصی به مجلس می‌رود/ بی‌قانونی در فضای مجازی)." [https://sanayepress.com/1399/06/05/%D8%A8%DB%8C%E2%80%8C%D9%82%D8%A7%D9%86%D9%88%D9%86%DB%8C-%D8%AF%D8%B1-%D9%81%D8%B6%D8%A7%DB%8C-%D9%85%D8%AC%D8%A7%D8%B2%DB%8C/] Accessed December 2020

#### 2.4.4b

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

Yes = 1 , No = 0

Current Year Score: 0

The Iranian laws relevant to safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, do not include mention of protections from cyber attacks (e.g., ransomware).

Article 648 of the Islamic Penal Code of Iran deems the disclosure of patients' secrets by medical personnel as an offence when such disclosure is not authorized by law. [1] However, it deals only with unauthorized disclosure by professionals and does not mention attacks by third parties. [2] Iran's Computer Crimes Law of 2009 penalizes the general misuse of data, such as through unauthorized access, unauthorized listening, and computer espionage but does not specifically address the protection of personal data such as medical records. The Electronic Commerce Law of 2004 in Article 60 does regulate the storing, processing, or distributing of "data messages" of medical or health records, but in accordance with Article 79 of this Law, which merely encourages the future development of appropriate enforcing legislation. [3]

It should be noted that in July 2018 Iran unveiled a new draft law on the protection and confidentiality of personal data, intended as comprehensive legislation to replace the miscellany of current laws on the subject. However, although it mentions the issue of security, the text of the current draft makes no specific provision regarding cyberattacks or similar offenses by third parties. [4]

[1] Alireza Milanifar, Bagher Larijani, Parvaneh Paykarzadeh, Golanna Ashtari, and Mohammad Mehdi Akhondi. "Breaching confidentiality: medical mandatory reporting laws in Iran". Journal of Medical Ethics and History of Medicine. 2014; 7: 13. [https://europepmc.org/articles/pmc4263389] Accessed November 2020

[2] Dadgaran Law Firm. Undated. "Review of the Different Dimensions of the Crime of Disclosure of Professional Secrets (بررسی ابعاد مختلف جرم افشای اسرار حرفه‌ای)." [http://www.dadgaran.com/585/index.htm] Accessed November 2020

[3] UNCTAD. Cyberlaw Tracker: Country Detail. 2020. "Cyberlaw Tracker: The case of Iran (Islamic Republic of)." https://unctad.org/page/cyberlaw-tracker-country-detail?country=ir] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Communications and Information Technology. July 2018. "The 'Protection and confidentiality of personal data' bill is unveiled (لایحه «صیانت و حفاظت از داده‌های شخصی» رونمایی شد)." [https://www.ict.gov.ir/fa/newsagency/21691/%D9%84%D8%A7%DB%8C%D8%AD%D9%87-%D8%B5%DB%8C%D8%A7%D9%86%D8%AA-%D9%88-%D8%AD%D9%81%D8%A7%D8%B8%D8%AA-%D8%A7%D8%B2-%D8%AF%D8%A7%D8%AF%D9%87-%D9%87%D8%A7%DB%8C-%D8%B4%D8%AE%D8%B5%DB%8C-%D8%B1%D9%88%D9%86%D9%85%D8%A7%DB%8C%DB%8C-%D8%B4%D8%AF] Accessed November 2020



## 2.4.5 International data sharing

### 2.4.5a

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

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

**Current Year Score: 0**

Available evidence does not indicate that Iran's government has made a commitment via public statements, legislation, and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region for one or more diseases.

The website of the Ministry of Health and Medical Education (MOHME) provides no indication of having made such a commitment. The MOHME's National Health Disaster and Emergency Response Operations Plan of 2015 makes a vague provision for sending surveillance samples to regional and/or international laboratories if analogous domestic (i.e. public health university) and national facilities within Iran prove incapable of analyzing them; however, this is not evidence of a regulatory stipulation to share samples with foreign labs as a matter of course. [1]

There exists a Directorate-General of Health Reference Laboratories at the MOHME, but there is little information on its duties or capacities, or on the ministry's or other government entities' ability to conduct such surveillance and share the resulting data with foreign parties. [2] For example, there is little evidence for such a commitment being made by the National Institute of Health Research at Tehran University of Medical Sciences, Iran's proxy for a public health research institute. [3]

Finally, the WHO's webpages for Iran provide little evidence of the country specifically committing to share surveillance data during a public health emergency. [4, 5]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. "About the Institute (درباره مؤسسه)." [https://nih.tums.ac.ir/Item/557] Accessed November 2020

[4] World Health Organization (WHO). "Islamic Republic of Iran". <http://www.emro.who.int/countries/irn/index.html> Accessed November 2020

[5] Reza HabibiSaravi, Hesam Seyedin, Alimohammad Mosadegh Rad and Mohammad Mehdi Gouya. October 17 2017. "Communicable diseases management in disasters: an analysis of improvement measures since 2005, Islamic Republic of Iran." World Health Organization (WHO). Regional Office for the Eastern Mediterranean (EMRO). [http://www.emro.who.int/emhj-volume-25-2019/volume-25-issue-4/communicable-diseases-management-in-disasters-an-analysis-of-improvement-measures-since-2005-islamic-republic-of-iran.html] Accessed November 2020

## 2.5 CASE-BASED INVESTIGATION

### 2.5.1 Case investigation and contact tracing

#### 2.5.1a

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

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

**Current Year Score: 0**

Available evidence does not indicate that Iran has 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 an active or future public health emergency. Iran's key planning document on preparing for and responding to public health crises, the National Health Disaster and Emergency Response Operations Plan of 2015, makes no provision for such methods as contact tracing. [1]

Evidence does suggest that Iran's response to adopt contact tracing as a means of combating the ongoing COVID-19 coronavirus outbreak has been of an ad hoc character, with efforts to monitor and contain the disease led by the Ministry of Health. In August 2020 the ministry announced that it would shortly adopt a so-called "smart tracking" policy, noting the success of the effort would be highly reliant on the compliance of the general public. [2]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. August 10 2020. "Intelligent tracking of people afflicted with Corona to be implemented from next week (اجرای شدن ردیابی هوشمند افراد مبتلا به کرونا از هفته آینده)." [https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/-%D8%A7%D8%AC%D8%B1%D8%A7%D8%B8C%D8%B4%D8%AF%D9%86-%D8%B1%D8%AF%D8%B8C%D8%A7%D8%A8%D8%B8C-%D9%87%D9%88%D8%B4%D9%85%D9%86%D8%AF-%D8%A7%D9%81%D8%B1%D8%A7%D8%AF-%D9%85%D8%A8%D8%AA%D9%84%D8%A7-%D8%A8%D9%87-%DA%A9%D8%B1%D9%88%D9%86%D8%A7-%D8%A7%D8%B2-%D9%87%D9%81%D8%AA%D9%87-%D8%A2%D8%B8C%D9%86%D8%AF%D9%87] Accessed November 2020

#### 2.5.1b

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

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

**Current Year Score: 0**

Available evidence does not indicate that Iran provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention. Iran's healthcare system is not yet in a fiscal or statutory position to provide such services.

A deciding factor in a country's ability to provide such wraparound services is the existence of a well-funded universal healthcare system, which can offer them as part of a package of statutory benefits. While Iran is moving towards a universal healthcare system, it has not yet reached that level. [1] A national Health Transformation Plan was launched in 2014 aiming to establish a true universal healthcare system, but implementation has been stymied by a lack of financial sustainability. As a result, the reimbursement process is beset by delays and inefficiencies, which necessarily limits the scope, cost-effectiveness and provision of services contained in the statutory benefits package. Current funding focuses on ensuring coverage for primary healthcare; recently, intensive care and mental health services were added to the statutory benefits package. Available evidence from scholarly studies and from the Health Insurance Organization of Iran does not show that home and hospice (i.e., long-term) care is included in the current package. [1, 2, 3]

In October 2020 the Iranian press reported that home-care services for patients would be provided through the national health insurance system. Currently, this is still a proposal that has yet to be approved by the Supreme Council of Insurance. [4]

Another deciding factor for the provision of wraparound services is the existence of an unemployment benefits system. While Iran's system provides temporary financial support to unemployed workers in the event of involuntary redundancy, the degree of health care insurance coverage an unemployed individual would receive under the current statutory benefits package still would not be sufficient for the combined types of support to constitute wraparound services. [5]

Finally, neither Iran's health ministry nor its two key proxies for a national laboratory and national public health institute (the Pasteur Institute of Iran and the National Institute of Health Research at Tehran University of Medical Sciences) provide evidence that they support a wraparound-services policy, with respect to self-isolation or otherwise. [6, 7, 8]

[1] UHC2030. June 20 2018. "Iran Joins UHC2030." [https://www.uhc2030.org/blog-news-events/uhc2030-news/iran-joins-uhc2030-483050/] Accessed November 2020

[2] Haniye Sadat Sajadi, Elham Ehsani-Chimeh and Reza Majdzadeh. 2019. "Universal health coverage in Iran: Where we stand and how we can move forward." Medical Journal of the Islamic Republic of Iran. 2019; 33: 9. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6504945/] Accessed November 2020

[3] Islamic Republic of Iran. Health Insurance Organization of Iran. 2020. Website. [https://ihio.gov.ir/] Accessed November 2020

[4] Iran's Metropolitan News Agency (IMNA). October 14 2020. "Providing home care services for patients through health insurance (ارائه خدمات مراقبت در منزل برای بیماران توسط بیمه سلامت)." [https://www.imna.ir/news/449835/%D8%A7%D8%B1%D8%A7%D8%A6%D9%87-%D8%AE%D8%AF%D9%85%D8%A7%D8%AA-%D9%85%D8%B1%D8%A7%D9%82%D8%A8%D8%AA-%D8%AF%D8%B1-%D9%85%D9%86%D8%B2%D9%84-%D8%A8%D8%B1%D8%A7%DB%8C-%D8%A8%DB%8C%D9%85%D8%A7%D8%B1%D8%A7%D9%86-%D8%AA%D9%88%D8%B3%D8%B7-%D8%A8%DB%8C%D9%85%D9%87-%D8%B3%D9%84%D8%A7%D9%85%D8%AA] Accessed November 2020

[5] International Labour Organization (ILO). 2020. NATLEX Database of national labour, social security and related human rights legislation. Iran (Islamic Republic of). "Unemployment Insurance Law 1369/6/26 (September 1990)." [http://www.ilo.org/dyn/natlex/docs/ELECTRONIC/72341/93649/F421080543/IRN72341.pdf] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed December 2020

[7] Pasteur Institute of Iran. Undated. "Missions & Strategic plan for Pasteur Institute of Iran". [http://en.pasteur.ac.ir/userfiles/file/MISSIN/pasteur%20Strategic%20Plan-EN[1].pdf] Accessed December 2020

[8] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National

Institute of Health Research. "About the Institute (درباره مؤسسه)." [https://nih.tums.ac.ir/Item/557] Accessed December 2020

### 2.5.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran makes de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar).

The main website of the Ministry of Health and Medical Education does not provide such data, and the specialized website of the Ministry's Statistics and Technology Information Office--its main site for statistical information--is not readily accessible. [1] During the COVID-19 outbreak, the health ministry's COVID-19 news webpage provides only a minimum of statistical information on the disease, updated intermittently between other news articles, and in textual form. [1] In July 2020 the ministry set up a dedicated website for information on the disease (<http://corona.behdasht.gov.ir>) but it is not easily accessible and was set up to provide clinical instructions and guidelines, educational content and up-to-date research rather than disease incidence data updated in real time. [2]

Similarly, the website of the Statistical Center of Iran provides only a minimal amount of data on health issues, with no data available on diseases. [3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. "Coronavirus news (اخبار کرونا ویروس)." [https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/%D8%B3%D8%A7%DB%8C%D8%AA-%22-%DA%A9%D8%B1%D9%88%D9%86%D8%A7%22-%D8%B1%D8%A7%D9%87-%D8%A7%D9%86%D8%AF%D8%A7%D8%B2%DB%8C-%D8%B4%D8%AF] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. July 31 2020. "Site on Corona has been launched (سایت کرونا "راه اندازی شد" [https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/%D8%B3%D8%A7%DB%8C%D8%AA-%22-%DA%A9%D8%B1%D9%88%D9%86%D8%A7%22-%D8%B1%D8%A7%D9%87-%D8%A7%D9%86%D8%AF%D8%A7%D8%B2%DB%8C-%D8%B4%D8%AF] Accessed November 2020

[3] Islamic Republic of Iran. Statistical Center of Iran. Healthcare. Statistical Data and Information. [https://www.amar.org.ir/%D8%A2%D9%85%D8%A7%D8%B1%D9%87%D8%A7%DB%8C-%D9%85%D9%88%D8%B6%D9%88%D8%B9%DB%8C/%D8%A8%D9%87%D8%AF%D8%A7%D8%B4%D8%AA#5633823-] Accessed November 2020

## 2.5.2 Point of entry management

### 2.5.2a

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

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

**Current Year Score: 0**

Available evidence does not point to the existence of a specific joint plan or cooperative agreement between the public health system and border control authorities in Iran to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active or future public health emergency. Evidence points to other forms of cooperation, as follows:

Since at least 2007, Iran's Ministry of Health has overseen official border healthcare surveillance posts at the country's rail, road, air and sea border entry points. These posts operate in compliance with international health regulations and according to formalized protocols, which include measures for the surveillance and detection of new and recurrent diseases and the containment, including quarantine, of affected travelers. [1] According to an article published by the Islamic Republic News Agency in August 2018, at that time the ministry operated 1,100 of these posts across the country. Many such posts are set up to address the considerable traffic of Islamic religious pilgrims annually crossing Iran's borders. [2]

Many international travelers enter and exit Iran by air, and the ministry staffs border healthcare surveillance posts at the country's many airports. In early 2020 health protocols were revised to include enhanced disinfection and social-distancing mandates and imposed at all key air transport facilities in the country, in response to the COVID-19 outbreak on the national territory. As a result, all incoming passengers pass through disinfection points and are examined by the aforementioned healthcare staff. Infection-positive travelers are subject to quarantine. [3]

Aside from the border healthcare surveillance posts, other cooperation exists between the healthcare and border-control authorities. For example, over 2020 the local press has reported on the ongoing cooperation between Iran's main police force and border-control authority, the Disciplinary Force of the Islamic Republic of Iran (known in Iran as the NAJA) and the Ministry of Health on health-related issues, most prominently with regard to the COVID-19 coronavirus outbreak. However, there is no mention made of such cooperation existing routinely, such as through a formal agreement, before the outbreak of the current pandemic, much less formal cooperation on monitoring the health of international travelers. [4]

[1] Urmia University of Medical Sciences. Undated. "Dimensions of Border Healthcare Surveillance (ابعاد مراقبت بهداشتی مرزی)." [https://phc.umsu.ac.ir/uploads/behdasht-marzi.pdf] Accessed December 2020

[2] Islamic Republic News Agency (ISNA). August 19 2018. "1100 healthcare surveillance bases are active in the country (1100 پایگاه مراقبت بهداشتی در مرزهای کشور فعال است)." [https://www.irna.ir/news/83005306/1100-%D9%BE%D8%A7%DB%8C%DA%AF%D8%A7%D9%87-%D9%85%D8%B1%D8%A7%D9%82%D8%A8%D8%AA-%D8%A8%D9%87%D8%AF%D8%A7%D8%B4%D8%AA%DB%8C-%D8%AF%D8%B1-%D9%85%D8%B1%D8%B2%D9%87%D8%A7%DB%8C-%D9%83%D8%B4%D9%88%D8%B1-%D9%81%D8%B9%D8%A7%D9%84-%D8%A7%D8%B3%D8%AA] Accessed December 2020

[3] Donya-e-Eqtasad. May 1 2020. "Aviation Authority: All air travelers must complete a health self-declaration form (سازمان هواپیمایی: تمامی مسافران هوایی باید برگه خوداظهاری سلامت را تکمیل کنند)." [https://donya-e-eqtasad.com/%D8%A8%D8%AE%D8%B4-%D8%B3%D8%A7%DB%8C%D8%AA-%D8%AE%D9%88%D8%A7%D9%86-62/3650595-%D8%B3%D8%A7%D8%B2%D9%85%D8%A7%D9%86-%D9%87%D9%88%D8%A7%D9%BE%DB%8C%D9%85%D8%A7%DB%8C%DB%8C-%D8%AA%D9%85%D8%A7%D9%85%DB%8C-%D9%85%D8%B3%D8%A7%D9%81%D8%B1%D8%A7%D9%86-%D9%87%D9%88%D8%A7%DB%8C%DB%8C-%D8%A8%D8%A7%DB%8C%D8%AF-%D8%A8%D8%B1%DA%AF%D9%87-%D8%AE%D9%88%D8%AF%D8%A7%D8%B8%D9%87%D8%A7%D8%B1%DB%8C-%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%B1%D8%A7-%D8%AA%DA%A9%D9%85%DB%8C%D9%84-%DA%A9%D9%86%D9%86%D8%AF] Accessed November and December 2020

[4] Islamic Republic News Agency (ISNA). October 19 2020. "Commander Ashtari stressed the NAJA's continued readiness to cooperate with the Ministry of Health (سردار اشتری بر تداوم آمادگی ناجا برای همکاری با وزارت بهداشت تاکید کرد)." [https://www.irna.ir/news/84079380/] Accessed November 2020 Other sources: Islamic Republic of Iran. Disciplinary Force of the Islamic Republic of Iran (NAJA). Border Guard Command. Website. [http://www.marzbani.police.ir/] Accessed November 2020

## 2.6 EPIDEMIOLOGY WORKFORCE

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

#### 2.6.1a

Does the country meet one of the following criteria?

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

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

**Current Year Score: 1**

Iran offers at least one field epidemiology training program (FETP) in-country. There is no clear evidence, such as from the health ministry, that resources are provided by the government to send Iranian citizens to another country to participate in applied epidemiology training programs such as FETP. [1]

The School of Public Health of Tehran University of Medical Science (TUMS) has offered a FETP, held at its main Tehran campus and at its Bandarabbass Research Center, and conducted by faculty members of both TUMS and three German institutes, namely the Bernhard Nocht Institute for Tropical Medicine, the University Clinics Hamburg-Eppendorf, and the University of Applied Sciences, Hamburg. The program consists of three weeks of training--two weeks in the classroom and one week in the field--and is available for both foreign students and Iranian nationals; in the most recent course, held in November 2018, scholarships were made available to five participants. [2]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[2] Tehran University of Medical Sciences. National Institute of Health Research. "International Training Program on Field Epidemiology". [http://gsia.tums.ac.ir/en/page/18675/International-Training-Program-on-Field-Epidemiolo] Accessed November 2020

#### 2.6.1b

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran's available field epidemiology training programs are explicitly inclusive of animal health professionals.

Iran offers at least one field epidemiology training program (FETP) in-country. The School of Public Health of Tehran University of Medical Science (TUMS) has offered a FETP, held at its main Tehran campus and at its Bandarabbass Research Center, and conducted by faculty members of both TUMS and three German institutes, namely the Bernhard Nocht Institute for Tropical Medicine, the University Clinics Hamburg-Eppendorf, and the University of Applied Sciences, Hamburg. The program consists of three weeks of training--two weeks in the classroom and one week in the field--and is available for both foreign students and Iranian nationals; in the most recent course, held in November 2018, scholarships were made available to five participants. [1] To be eligible for the TUMS FETP program, a candidate needs to have at least two years of work experience, preferably engaged in infectious diseases with an academic degree or proficiency in Public Health, Veterinary/Human Medicine, Epidemiology, Microbiology, Biology, or equivalent life science disciplines. [1]

However, there is little to no evidence, such as from the health ministry, of the Iranian government sponsoring or funding nationals to train abroad in such programs. [2]

[1] Tehran University of Medical Sciences. National Institute of Health Research. "International Training Program on Field Epidemiology". [<http://gsia.tums.ac.ir/en/page/18675/International-Training-Program-on-Field-Epidemiology>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

## 2.6.2 Epidemiology workforce capacity

### 2.6.2a

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

Yes = 1, No = 0

Current Year Score: 0

2020

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

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

### 3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

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

##### 3.1.1a

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



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

**Current Year Score: 2**

Iran has an overarching, publicly available, national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential. The plan in question is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, which was published and implemented in 2015 by the Ministry of Health. The 688-page text of the plan discusses the principles, methods and objectives of mounting of a response to the outbreak of a public health emergency, in the stages before, during and after the event. In this regard, the plan discusses how to deal with any type of communicable or non-communicable disease that may emerge in such an event. Topics discussed in the plan include: staged response planning; response mechanisms such as pre-hospital emergency interventions; hospital preparation and capacity-building; pharmaceutical/medical intervention; and tasks and duties of the national syndromic surveillance system. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

### 3.1.1b

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

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

**Current Year Score: 0**

Iran has an overarching national plan and strategy in place for addressing public health emergencies, but it has not been updated in the last 3 years. The plan in question is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, which was published and implemented in 2015 by the Ministry of Health. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

### 3.1.1c

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

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

**Current Year Score: 1**

Iran's overarching plan national plan and strategy for addressing public health emergencies does include considerations for pediatric and/or other vulnerable populations. The plan in question is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, which was published and implemented in 2015 by the Ministry of Health. Specifically with regard to addressing psychological health issues during public health emergencies, the plan mandates special interventions for so-called "special groups" (گروههای خاص); these interventions and groups include: so-called "psychosocial" interventions such as counseling for individuals with chronic physical and/or mental conditions, addicts, children, the elderly, women, schoolteachers and students; and the securing of foster mothers for children who have lost their (natural) mothers. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

### 3.1.1d

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

Yes = 1, No = 0

**Current Year Score: 0**

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

## 3.1.2 Private sector involvement in response planning

### 3.1.2a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence that Iran has a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response.

Iran's public health emergency response plans, published by the Ministry of Health and Medical Education (MOHME), do not have a specific mechanism(s) for engaging with the private sector. Two guides on environmental health in disasters and emergencies, published in 2011 and dealing with procedures and management, respectively, stipulate the involvement of a number of different stakeholders, ranging from university specialists to volunteers, without specifically describing a role for those from the private sector. [1, 2] The third document, Iran's National Health Disaster and Emergency Response Operations Plan, was published in 2015 and does envision a role for private-sector stakeholders during an outbreak, such as in supplying transport and laboratory services, but does not elaborate on a mechanism for doing so. [3]

Finally, neither the MOHME overall nor Iran's two emergency-management entities--the National Disaster Management Organization (NDMO) and the National Passive Defense Organization (NPDO)--indicate that they maintain a policy for such liaison with the private sector. [4, 5, 6]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [http://health.nkums.ac.ir/Category/10097] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020



%D9%86%D8%A7%D8%B4%DB%8C-%D8%A7%D8%B2-%DA%A9%D9%88%D9%88%DB%8C%D8%AF-19] Accessed November 2020

## 3.2 EXERCISING RESPONSE PLANS

### 3.2.1 Activating response plans

#### 3.2.1a

Does the country meet one of the following criteria?

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak in the past year?
- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

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

**Current Year Score: 0**

There is insufficient evidence that Iran has activated its national emergency response plan for an infectious disease outbreak in the past year.

The National Health Disaster and Emergency Response Operations Plan, published by the Ministry of Health in 2015, provides a strategic basis for coordinated preemptive and response measures by national and provincial healthcare and other authorities in the face of a public health crisis. [1] Application of the plan's framework can be seen in the actions of various provincial health authorities to the ongoing COVID-19 coronavirus pandemic; for example, in February 2020 the University of Medical Sciences and Health Services of Zahedan, the capital of Sistan and Baluchestan Province, held a coronavirus training session, in which the disaster response and emergency program of the health network of Khash County was reviewed. [2] Another example is the "maneuver" or field exercise on coronavirus prevention, conducted the following month by the municipal authorities of Khomeini Shahr city in Isfahan province. [3] However, there is no evidence that a national emergency response plan for covid-19 was activated.

There is no readily available evidence that Iran has completed a national-level biological threat-focused exercise with the WHO or otherwise during this time period. The World Health Organization (WHO) does not record Iran as having completed a such an exercise. [4]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

[2] Zahedan University of Medical Sciences and Health Services. February 9 2020. "Holding a new coronavirus training session and reviewing the disaster response and emergency program of the Khash health network (زاري جلسه آموزشي كورونا ويروس جديد) (و بازنگري در برنامه پاسخ در بلايا و فوريتهاي شبكه بهداشت و درمان شهرستان خاش)" [http://zaums.ac.ir/25870.News] Accessed November 2020

[3] IRIB News Agency. March 2 2020. "Undertaking a coronavirus prevention field exercise (اجراي مانور پيشگيري از ويروس كرونا)" [https://www.tribnews.ir/fa/news/2662891/%D8%A7%D8%AC%D8%B1%D8%A7%DB%8C-%D9%85%D8%A7%D9%86%D9%88%D8%B1-%D9%BE%DB%8C%D8%B4%DA%AF%DB%8C%D8%B1%DB%8C-%D8%A7%D8%B2-%D9%88%DB%8C%D8%B1%D9%88%D8%B3-%DA%A9%D8%B1%D9%88%D9%86%D8%A7] Accessed November 2020

[4] World Health Organization (WHO). Strategic Partnership for International Health Regulations (2005) and Health Security (SPH). 2020. "Simulation exercise activities." [https://extranet.who.int/sph/simulation-exercise] Accessed November 2020

### 3.2.1b

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

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

**Current Year Score: 0**

Available evidence does not indicate that Iran has in the past year 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. However, in 2018 Iran conducted an after action review (AAR) with the World Health Organization (WHO) on August 18 and 19 2018. The WHO does not provide a copy of the AAR report, nor does it mention the purpose of the AAR. Similarly, any plan developed by Iran to improve response capabilities as a result of the AAR process is not readily available, if it exists. [1]

Neither Iran's health ministry nor its two disaster-management organizations (the NDMO and NPDO) provide the WHO report or a relevant plan on their websites, or mention any other AAR conducted in the past year. [2, 3, 4]

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

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[3] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [https://ndmo.ir/Portal/Home/] Accessed November 2020

[4] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [http://www.umsha.ac.ir/includes/plink.aspx?linkid=73] Accessed November 2020

## 3.2.2 Private sector engagement in exercises

### 3.2.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that Iran has in the past year undergone a national-level biological threat-focused exercise that has included private sector representatives. Iran conducted an after action review (AAR) with the World Health Organization (WHO) on August 18 and 19 2018. The WHO does not provide a copy of the AAR report, nor does it mention the purpose of the AAR. [1] The WHO lists no simulation exercises conducted with Iran,[2] and its Iran country page lists no such activities engaged in with the country. [3]

Neither Iran's health ministry nor its two disaster-management organizations (the NDMO and NPDO) provide the 2018 AAR

report on their websites, or mention any other national-level biological threat-focused exercise conducted in the past year that has included private sector representatives. [4, 5, 6]

- [1] World Health Organization (WHO). Strategic Partnership for International Health Regulations (2005) and Health Security (SPH). 2020. "After Action Review." [<https://extranet.who.int/sph/after-action-review>] Accessed November 2020
- [2] World Health Organization (WHO). Strategic Partnership for International Health Regulations (2005) and Health Security (SPH). 2020. "Simulation Exercise." [<https://extranet.who.int/sph/simulation-exercise>] Accessed December 2020
- [3] World Health Organization (WHO). Iran (Islamic Republic of). Webpage. [<https://www.who.int/countries/irn/>] Accessed December 2020
- [4] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020
- [5] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020
- [6] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

## 3.3 EMERGENCY RESPONSE OPERATION

### 3.3.1 Emergency response operation

#### 3.3.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has in place at least one national-level Emergency Operations Center (EOC) and many sub-national ones. With specific regard to public health emergencies, the main EOC is the Crisis Operations Management Center of the Ministry of Health and Medical Education. [1] The National Health Disaster and Emergency Response Operations Plan of 2015 mandates the Ministry of Health's EOC through its regional command units to instruct and coordinate with Iran's dozens of health-specific EOCs, operating out of the nation's public health universities (see below), to monitor public health conditions in their respective areas. During public health emergencies, these university-based EOCs are to run sub-EOCs at the provincial level which in turn are instructed to set up Incident Command Posts (ICP) in affected regions. [2]

Iran also has two general emergency operations centers (EOCs) at the two key organizations responsible for disaster management in Iran: the National Disaster Management Organization (NDMO) under the Ministry of Interior; and the National Passive Defense Organization (NPDO) under the Supreme Leader. "Both the NDMO and NPDO have a Health & Medical Services Taskforce (HMST) and Disaster & Emergency Management Center (DEMC) at the Ministry of Health & Medical Education (MOH&ME), which is the leading agency for both taskforces. MOH&ME consists of 49 Universities of Medical Sciences & Health Services (UMSHS) that are responsible for both higher education and health care delivery in designated geographical areas. Each UMSHS has its own Emergency Operations Center (EOC) collaborating with other organizations responding to disasters." [3]

One example of these university-based EOCs is the EOC of Qazvin University of Medical Sciences (QUMS), which acts as the EOC for Qazvin Province. It operates 24 hours a day. [4]

- [1] Islamic Republic of Iran. Ministry of Health and Medical Education. "Crisis Operations Management Center of the Ministry of Health and Medical Education (مرکز هدایت عملیات بحران وزارت بهداشت درمان و آموزش پزشکی)." [https://vch.iums.ac.ir/uploads/hedaiat\_bohran.pdf] Accessed November 2020
- [2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020
- [3] Ali Ardalan, Mohammad Hossein Rajaei, Gholamreza Masoumi, Ali Azin, Vahid Zonoobi, Mohammad Sarvar, Khorshid Vaskoei Eshkevari, Elham Ahmadnezhad, Gelareh Jafari. 16 July 2012. "2012-2025 Roadmap of I.R.Iran's Disaster Health Management". ABSTRACT. PLOS.[http://currents.plos.org/disasters/index.html%3Fp=1899.html] Accessed November 2020
- [4] Qazvin University of Medical Sciences (QUMS). 2017. "Sub-portal of the province's Medical Emergency and Accident Management Center (زیرپورتال مرکز مدیریت حوادث و فوریت های پزشکی استان)." [http://ems.qums.ac.ir/Portal/home/?163685/%D9%85%D8%B1%DA%A9%D8%B2-EOC] Accessed November 2020

### 3.3.1b

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran's health-oriented Emergency Operations Centers (EOCs) are required to conduct a drill for a public health emergency at least once per year.

Iran's National Health Disaster and Emergency Response Operations Plan of 2015 directs the dozens of EOCs based at public health universities throughout the country to establish emergency operations programs (EOPs) that, among other tasks, mandate the training of operations teams. The plan also states that such EOPs be reviewed at least once a year on the basis of the exercises conducted and lessons learned in the interim. The mandated exercises are conducted as a roundtable, as an operation specific to one function area, or as a broad-based operation involving more than one function area. All directors and clinical health personnel of the EOCs are mandated to participate in at least one roundtable "maneuver", or exercise, twice a year in June and January plus one operational maneuver (limited or extensive) once a year in October. Each university-based EOC together with the provincial EOCs subject to it must have specialized support teams trained and educated in several different function areas, including in accommodation and supply of operational teams in the field, provision of transportation, communications, electric power and other utilities, and purchase and tracking of said supplies, services and equipment. [1] In the public domain, details are typically sparse on the "maneuvers," or exercises, that these EOCs conduct. [2] Iran has an overarching health-oriented EOC, the Crisis Operations Management Center of the Ministry of Health and Medical Education, which likely plays only an administrative role in relation to the "maneuvers" executed by the EOCs at the provincial health universities. [3]

Finally, it should be noted that there are general EOCs at the two key organizations responsible for disaster management in Iran: the National Disaster Management Organization (NDMO) under the Ministry of Interior; and the National Passive Defense Organization (NPDO) under the Supreme Leader. Both entities have health and medical services taskforces that liaise with the Ministry of Health & Medical Education. [4] However, neither the NDMO and NPDO provide detail on the frequency or nature of any drills that they might conduct with regard to health disasters. [5, 6]

- [1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020



- [2] Isfahan University of Medical Sciences. "Maneuvers (مانور ها)." [<http://ems.mui.ac.ir/taxonomy/term/387/all>] Accessed November 2020
- [3] Islamic Republic of Iran. Ministry of Health and Medical Education. "Crisis Operations Management Center of the Ministry of Health and Medical Education (مرکز هدایت عملیات بحران وزارت بهداشت درمان و آموزش پزشکی)." [[https://vch.iums.ac.ir/uploads/hedaiat\\_bohran.pdf](https://vch.iums.ac.ir/uploads/hedaiat_bohran.pdf)] Accessed November 2020
- [4] Ali Ardalan, Mohammad Hossein Rajaei, Gholamreza Masoumi, Ali Azin, Vahid Zonoobi, Mohammad Sarvar, Khorshid Vaskoei Eshkevari, Elham Ahmadnezhad, Gelareh Jafari. 16 July 2012. "2012-2025 Roadmap of I.R.Iran's Disaster Health Management". ABSTRACT. PLOS.[<http://currents.plos.org/disasters/index.html%3Fp=1899.html>] Accessed November 2020
- [5] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020
- [6] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

### 3.3.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

Publicly available evidence does not show that Iran's Emergency Operations Centers (EOCs) have 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.

Iran's health-oriented Emergency Operations Centers (EOCs) are required to conduct a drill for a public health emergency at least once per year. Iran's National Health Disaster and Emergency Response Operations Plan of 2015 directs the dozens of EOCs based at public health universities throughout the country to establish emergency operations programs (EOPs) that, among other tasks, mandate the training of operations teams. The plan also states that such EOPs be reviewed at least once a year on the basis of the exercises conducted and lessons learned in the interim. The mandated exercises are conducted as a roundtable, as an operation specific to one function area, or as a broad-based operation involving more than one function area. All directors and clinical health personnel of the EOCs are mandated to participate in at least one roundtable "maneuver", or exercise, twice a year in June and January plus one operational maneuver (limited or extensive) once a year in October. Each university-based EOC together with the provincial EOCs subject to it must have specialized support teams trained and educated in several different function areas, including in accommodation and supply of operational teams in the field, provision of transportation, communications, electric power and other utilities, and purchase and tracking of said supplies, services and equipment. [1] Details in the public domain are typically sparse on the "maneuvers," or exercises, that these EOCs conduct, and no evidence suggests that these exercises involve a coordinated emergency response to be activated within 120 minutes of news of a public health emergency/scenario. [2] While Iran has an overarching health-oriented EOC, the Crisis Operations Management Center of the Ministry of Health and Medical Education, it likely plays only an administrative role in relation to the "maneuvers" executed by the EOCs at the provincial health universities. [3]

Finally, it should be noted that there are general EOCs at the two key organizations responsible for disaster management in Iran: the National Disaster Management Organization (NDMO) under the Ministry of Interior; and the National Passive Defense Organization (NPDO) under the Supreme Leader. Both entities have health and medical services taskforces that liaise with the Ministry of Health & Medical Education. [4] However, neither the NDMO and NPDO provide detail on the

frequency or nature of any drills that they might conduct with regard to health disasters. [5, 6]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

[2] Isfahan University of Medical Sciences. "Maneuvers (مانور ها)." [http://ems.mui.ac.ir/taxonomy/term/387/all] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. "Crisis Operations Management Center of the Ministry of Health and Medical Education (مرکز هدایت عملیات بحران وزارت بهداشت درمان و آموزش پزشکی)." [https://vch.iums.ac.ir/uploads/hedaiat\_bohran.pdf] Accessed November 2020

[4] Ali Ardalan, Mohammad Hossein Rajaei, Gholamreza Masoumi, Ali Azin, Vahid Zonoobi, Mohammad Sarvar, Khorshid Vaskoei Eshkevari, Elham Ahmadnezhad, Gelareh Jafari. 16 July 2012. "2012-2025 Roadmap of I.R.Iran's Disaster Health Management". ABSTRACT. PLOS.[http://currents.plos.org/disasters/index.html%3Fp=1899.html] Accessed November 2020

[5] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [https://ndmo.ir/Portal/Home/] Accessed November 2020

[6] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [http://www.umsha.ac.ir/includes/plink.aspx?linkid=73] Accessed November 2020

Accessed November 2020

Accessed November 2020

## 3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

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

#### 3.4.1a

Does the country meet one of the following criteria?

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

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

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

Current Year Score: 0

Although the Iranian press provides evidence that the public health and national security authorities in Iran at some level address the issue of bioterrorism, there is less evidence that they have carried out an exercise to respond to such an event.

[1] Similarly, if the public health and security authorities have issued any procedures or guidelines on responding to a potential deliberate biological event such as a bioterrorism attack, these are not readily available. Neither the Ministry of Health and Medical Education nor the two disaster-management entities--the National Disaster Management Organization (NDMO) and the National Passive Defense Organization (NPDO)--provide evidence that they have conducted such activities or published related documents for the attention of the general public. [2, 3, 4]

[1] Iranian Students' News Agency (ISNA). 3 January 2016. "Bioterrorism services of the Ministry of Health / Nuclear emergency preparedness in 2 provinces (خدمات بیوتروریسم وزارت بهداشت/ آمادگی اورژانس هسته‌ای در 2 استان)." [https://www.isna.ir/news/94101306619/] Accessed November and December 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

Accessed November 2020

[3] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[4] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

## 3.5 RISK COMMUNICATIONS

### 3.5.1 Public communication

#### 3.5.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Iran's main strategy document used to guide the national response to a public health emergency does not specifically outline how messages will reach populations and sectors with different communications needs.

The plan in question is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, published and implemented in 2015 by the Ministry of Health. As regards special groups that might have different communications needs, the plan identifies children, the needy, injured survivors (hospitalized or outpatient) and individuals affected with post-traumatic stress syndrome (PTSD), such as relief workers; for these groups it mandates psychological counseling. However, the plan does not specifically include these groups, or other defined groups, in its more general discussion of risk communication strategies to be adopted before and during the outbreak of a public health emergency. [1]

No further evidence is found via the two main emergency management agencies--the National Disaster Management Organization (NDMO) and the National Passive Defense Organization (NPDO)--of a policy on risk communication for populations with different communications needs. [2, 3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020

[2] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[3] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

### 3.5.1 Risk communication planning

#### 3.5.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran's national public health emergency response plan details a risk communication policy that is specifically intended for use during such an emergency. The plan in question is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, which was published and implemented in 2015 by the Ministry of Health. It devotes much discussion to communication strategies and lays out in detail how healthcare stakeholders must communicate during a public health emergency. It is chiefly concerned with ensuring accurate, timely and efficient communication between the various public-sector entities involved in mounting a response to such an event; these entities include the local incident command posts (ICPs) in affected areas, the associated emergency operations centers (EOCs), the provincial authorities, laboratories and medical universities, and the national ministry of health. [1]

No further evidence is found from the two main emergency management agencies--the National Disaster Management Organization (NDMO) and the National Passive Defense Organization (NPDO)--of a codified strategy on risk communication during health emergencies. [2, 3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

[2] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [https://ndmo.ir/Portal/Home/] Accessed November 2020

[3] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [http://www.umsha.ac.ir/includes/plink.aspx?linkid=73] Accessed November 2020

### 3.5.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

Iran's national public health emergency response plan does not designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. The plan in question is the I.R. Iran National Health Disaster and Emergency Response Operations Plan, published and implemented in 2015 by the Ministry of Health. It devotes much discussion to communication strategies and lays out in detail how healthcare stakeholders must communicate during a public health emergency. However, the plan does not appoint a specific position or agency to be the primary source of information for the public during such an event. The plan refers to mass media organizations as playing a major role in disseminating information in all stages of a health crisis but does not specifically mandate them to do so. [1]

No further evidence is found via the two main emergency management agencies--the National Disaster Management Organization (NDMO) and the National Passive Defense Organization (NPDO)--of a policy on risk communication during outbreaks of communicable diseases. [2, 3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

[2] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [https://ndmo.ir/Portal/Home/]

Accessed November 2020

[3] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website.

[<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

## 3.5.2 Public communication

### 3.5.2a

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

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

**Current Year Score: 2**

During the past year, Iran's 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.

Iran's key national public health agencies use media platforms to inform the public about health emergencies. Foremost among these entities is the Ministry of Health, which communicates with the public via its website through such means as detailed informational bulletins published daily, infographic charts on currently prevalent diseases and health conditions, and health-related news updates. The ministry's site also has hyperlinks to its accounts on popular homegrown Iranian social-media platforms and messaging apps such as Soroush, Baleh, and Gap. Its page on Gap currently focuses on high blood pressure, and provides periodic updates on the condition in both textual and video format. During 2020, the ministry has prioritized the sharing of information on the COVID-19 coronavirus pandemic, which has severely affected the Iranian population. It has added a dedicated COVID-19 "module" to its website, complete with daily news updates, advisories and guidance, such as its "Every Home a Health Post" program of home healthcare provision, including telemedicine and "electronic nursing." [1]

Other agencies, such as the ministry's affiliate, the National Institute of Health Research at the Tehran University of Medical Sciences (TUMS), provide dedicated news sections on their websites, but these tend to convey information on general public health policy rather than diseases. However, even the TUMS website now provides a daily newsfeed on the COVID-19 pandemic, due to its severity. [2]

Because the Iranian government heavily controls the population's access to social media and the Internet in general, the presence of such entities as the health ministry on online platforms hosted abroad is highly limited, particularly since the government has intermittently banned many of the most popular foreign platforms such as Facebook and Twitter. For example, the government's own platform on Twitter, @Iran\_GOV, was opened only in January 2019 and has a mere 6,079 followers. [3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. "Coronavirus news (اخبار کرونا ویروس)." [<https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1-%DA%A9%D8%B1%D9%88%D9%86%D8%A7-%D9%88%DB%8C%D8%B1%D9%88%D8%B3>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. 2020. Website.[<https://nih.tums.ac.ir/>] Accessed November 2020

[3] Twitter. 2020. "The official Twitter account for the Government of Islamic Republic of Iran."

[[https://twitter.com/Iran\\_GOV?ref\\_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor](https://twitter.com/Iran_GOV?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor)] Accessed November 2020

### 3.5.2b

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

No = 1, Yes = 0

**Current Year Score: 0**

Available evidence indicates that senior leaders in Iran have shared misinformation or disinformation on infectious diseases in the past two years.

A public statement on the COVID-19 coronavirus pandemic, made by Supreme Leader Ayatollah Ali Khamenei in March 2020 on the occasion of the Persian New Year and the Islamic holiday of Eid al-Fitr may constitute mis- or disinformation. The Ayatollah stated that Iran would not accept humanitarian aid offered by the United States during the pandemic because the US itself has been accused of creating the virus. He added that any medicines sent by the US for humanitarian reasons during the pandemic might worsen the virus's impact in Iran. [1]

Otherwise, a review of the Internet news feeds of Iran's key national public health agencies--the Ministry of Health and its affiliate, the National Institute of Health Research at the Tehran University of Medical Sciences--shows no evidence of the sharing of misinformation or disinformation by senior officials there regarding infectious diseases.[2, 3]

[1] The Independent. Persian Edition. March 22, 2020. "Leader of the Islamic Republic: The United States is accused of producing corona (رهبر جمهوری اسلامی: آمریکا متهم به تولید کرونا است)."

[<https://www.independentpersian.com/node/47846/%D8%B1%D9%87%D8%A8%D8%B1-%D8%AC%D9%85%D9%87%D9%88%D8%B1%DB%8C-%D8%A7%D8%B3%D9%84%D8%A7%D9%85%DB%8C-%D8%A2%D9%85%D8%B1%DB%8C%DA%A9%D8%A7-%D9%85%D8%AA%D9%87%D9%85-%D8%A8%D9%87-%D8%AA%D9%88%D9%84%DB%8C%D8%AF-%DA%A9%D8%B1%D9%88%D9%86%D8%A7-%D8%A7%D8%B3%D8%AA>]

Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [<https://behdasht.gov.ir/>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education and Tehran University of Medical Sciences. National Institute of Health Research. [<https://nih.tums.ac.ir/>] Accessed November 2020

## 3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

### 3.6.1 Internet users

#### 3.6.1a

**Percentage of households with Internet**

Input number

**Current Year Score: 70.0**

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: 142.39

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: 14.0

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: 5.0

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

In the past year, Iran has 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.

In April 2020, in response to the COVID-19 coronavirus outbreak, the government of Iran decided to start banning the export of certain medical supplies, at least through the month of September. Under this regime, which evidence suggests has continued through November, the government's Trade Development Organization periodically issues updated lists of such goods banned from export. Criteria for listing are continuously revised, based upon ongoing analysis of supply and demand parameters and regulations concerning domestic production-to-export ratios. For example, the list of banned goods has included three-layered masks, although the export of N-95 masks is permitted; export of ventilators is allowed unless the health ministry declares a shortage of them. [1]

[1] Donya-e Eqtesad. June 2 2020. "Export bans on medical equipment (ممنوعه های صادراتی تجهیزات پزشکی)." [https://donya-e-  
eqtesad.com/%D8%A8%D8%AE%D8%B4-%D8%A8%D8%A7%D8%B2%D8%B1%DA%AF%D8%A7%D9%86%DB%8C-4/3659783-  
%D9%85%D9%85%D9%86%D9%88%D8%B9%D9%87-%D9%87%D8%A7%DB%8C-  
%D8%B5%D8%A7%D8%AF%D8%B1%D8%A7%D8%AA%DB%8C-  
%D8%AA%D8%AC%D9%87%DB%8C%D8%B2%D8%A7%D8%AA-%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C] Accessed  
November 2020

#### 3.7.1b

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

Yes = 0 , No = 1

#### Current Year Score: 1

Available evidence does not indicate that in the past year Iran has 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.

Iran occasionally bans the export of agricultural products, often in an attempt to protect the domestic market prices of such goods. However, there is no evidence that such bans have been adopted recently as a direct result of an infectious disease outbreak. For example, in July 2020 the government prohibited the export of eggs in order to prevent scarcity of the product in local markets. The export ban was due to the adverse effect of the COVID-19 coronavirus outbreak on the prices and availability of many consumer food items in the country; the virus did not cause the ban for epidemiological reasons. [1]

Otherwise, neither Iran's health, agriculture, foreign affairs ministries nor the Iran Veterinary Organisation describe issuing a restriction on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak over the past year. [2, 3, 4, 5]

[1] Islamic Republic News Agency. July 6 2020. "Egg exports are banned (صادرات تخم مرغ ممنوع شد)." [https://www.irna.ir/news/83846080/%D8%B5%D8%A7%D8%AF%D8%B1%D8%A7%D8%AA-%D8%AA%D8%AE%D9%85-  
%D9%85%D8%B1%D8%BA-%D9%85%D9%85%D9%86%D9%88%D8%B9-%D8%B4%D8%AF] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Agricultural Jihad. 2020. Website. [https://maj.ir/index.aspx?lang=2&sub=0] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Foreign Affairs. 2020. Website. [https://en.mfa.ir/] Accessed November 2020

[5] Islamic Republic of Iran. Iran Veterinary Organisation (IVO). 2020. Website. [https://www.ivo.ir/] Accessed November 2020  
Other sources: Young Journalists' Club of Iran (YJCI). July 20 2019. "Ban on the export of live cattle (ممنوعیت صادرات دام زنده)." [https://www.yjc.ir/fa/news/7007005/%D9%85%D9%85%D9%86%D9%88%D8%B9%DB%8C%D8%AA-%D8%B5%D8%A7%D8%AF%D8%B1%D8%A7%D8%AA-%D8%AF%D8%A7%D9%85-%D8%B2%D9%86%D8%AF%D9%87} Accessed November 2020

## 3.7.2 Travel restrictions

### 3.7.2a

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

Yes = 0 , No = 1

**Current Year Score: 0**

There is evidence that in the past year Iran has implemented a ban without international/bilateral support on travelers arriving from a specific country or countries due to an infectious disease outbreak. As a Member State of the Eastern Mediterranean Region of the World Health Organization (WHO), Iran has complied with WHO recommendations in setting its own policy on the entry of international travelers, applied in response to the COVID-19 coronavirus pandemic.

During the COVID-19 crisis, Iran has not issued a blanket ban on the entry of foreign travelers, as it already has a very strict visa policy which limits the numbers of such visitors at any given time. Under this strict visa policy, individuals may travel to Iran if their countries of origin issue visas to Iranian citizens. However, in February 2020, soon after the health ministry's confirmation of the presence of the virus in the country, the Iranian government banned the entry of two categories of visitors: tour groups from all countries and individuals from mainland China, thought to be the country of origin of the virus. [1, 2] In August, the government banned the entry of visitors without a medical certificate showing that they had received a negative result on a molecular PCR test for the coronavirus within 96 hours of their arrival in Iran. [3]

No additional, separate evidence of a ban imposed by Iran on international travelers within the past year, prior to the COVID-19 outbreak, is available from the websites of the health and foreign affairs ministries or border control police. [4, 5, 6]

[1] Tasnim News Agency. February 28 2020. "Iran Announces Travel Ban on Chinese Citizens amid Coronavirus Outbreak." [https://www.tasnimnews.com/en/news/2020/02/28/2212936/iran-announces-travel-ban-on-chinese-citizens-amid-coronavirus-outbreak] Accessed November 2020

[2] Hamshahri Online. July 19 2020. "Continuation of the ban on foreign groups entering Iran (ادامه ممنوعیت ورود گروه‌های خارجی) (به ایران)." [https://www.hamshahrionline.ir/news/532366/%D8%A7%D8%AF%D8%A7%D9%85%D9%87-%D9%85%D9%85%D9%86%D9%88%D8%B9%DB%8C%D8%AA-%D9%88%D8%B1%D9%88%D8%AF-%DA%AF%D8%B1%D9%88%D9%87-%D9%87%D8%A7%DB%8C-%D8%AE%D8%A7%D8%B1%D8%AC%DB%8C-%D8%A8%D9%87-%D8%A7%DB%8C%D8%B1%D8%A7%D9%86] Accessed November 2020

[3] Salam-e Nou. September 29 2020. "Tourists are not allowed to enter Iran (ورود توریست به ایران ممنوع است)." [https://www.salameno.com/news/55178096/%D9%88%D8%B1%D9%88%D8%AF-%D8%AA%D9%88%D8%B1%DB%8C%D8%B3%D8%AA-%D8%A8%D9%87-%D8%A7%DB%8C%D8%B1%D8%A7%D9%86-%D9%85%D9%85%D9%86%D9%88%D8%B9-%D8%A7%D8%B3%D8%AA] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Foreign Affairs. Website. [https://en.mfa.ir/] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed November 2020

[6] Islamic Republic of Iran. Disciplinary Force of the Islamic Republic of Iran (NAJA). Border Guard Command. Website. [http://www.marzbani.police.ir/] Accessed November 2020

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

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

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

##### 4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 158.44

2018

WHO; national sources

##### 4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 262.86

2017

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

Iran has a public workforce strategy in place to identify fields where there is an insufficient workforce and strategies to address these shortcomings, but it is unclear if it has been updated in the past five years.

This strategy is part of the national Health System Development Plan, better known abroad as the Health Transformation

Plan (HTP). The plan was rolled out in 2014 and focuses on establishing a system of universal health care throughout the country, and part of the plan is devoted to raising the numbers of physicians and specialists in underserved areas such as rural regions. To reduce out-of-pocket costs for healthcare arising from outpatient visits in the private sector, another part of the plan aims to raise fees for visiting physicians in public-sector facilities to attract them to work in such facilities. Much less is said in the plan about increasing the numbers of other types of healthcare workers. [1]

Otherwise, neither the Ministry of Health and Medical Education nor the Ministry of Cooperatives, Labour, and Social Welfare provide public evidence of the existence of a comprehensive, dedicated policy to address employment gaps in the nation's healthcare sector. [2, 3]

Articles published in the local Iranian press over the past few years present contradictory views on the health workforce staffing situation; some articles quote leading health officials as stating that there is no shortage of key medical personnel such as doctors and nurses, even in the face of the extraordinary demands placed on the national healthcare system by the COVID-19 coronavirus outbreak in early 2020. [4]

[1] Shahid Beheshti University of Medical Sciences. Health System Development Plan. 2020. Website.

[http://tahavol.sbm.ac.ir/] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2020. Website. [http://behdasht.gov.ir/] Accessed November 2020

[3] Ministry of Cooperatives, Labour, and Social Welfare. 2020. Website. [https://www.mcls.gov.ir/en/home] Accessed November 2020

[4] Farda-ye Kerman. March 2 2020. "Director of Kerman University of Medical Sciences' Diseases Department: We do not have a shortage of doctors and nurses. Protecting personnel is our priority (مدیر گروه مبارزه با بیماری‌های علوم پزشکی کرمان: کمبود پزشک و پرستار نداریم حفاظت از پرسنل در اولویت ماست)." [https://fardayekerman.ir/news/19148] Accessed November 2020

## 4.1.2 Facilities capacity

### 4.1.2a

**Hospital beds per 100,000 people**

Input number

**Current Year Score: 156**

2017

WHO/World Bank; national sources

### 4.1.2b

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

Yes = 1, No = 0

**Current Year Score: 1**

Evidence indicates that there are at least some facilities in Iran that have the capacity to isolate patients with highly contagious diseases in a biocontainment patient care unit and/or patient isolation facility. For example, some hospitals in Iran have isolation rooms, such the patient isolation rooms in the emergency department of the Kasra Hospital in Tehran. [1]

Another isolation chamber was set up in April 2020, in the hospital of the Azad University of Mashhad. Intended primarily for the use of patients afflicted with the COVID-19 coronavirus, the temperature- and pressure-controlled facility was designed and built in the Department of Medical Engineering of the Mashhad University of Medical Sciences. [2]

A research article published in January 2021 on the performance of Iran's health system in light of the COVID-19 strategic preparedness and response plan of the World Health Organization awarded Iran a middle-range score in the category of infection prevention and control, confirming that the government's policy met such minimum requirements as a functional triage system and isolation rooms. [3]

Otherwise, there is little publicly available information from official Iranian sources on the number or capacity of similar facilities elsewhere in the country. For example, the Ministry of Health and Medical Education gives no public indication of having a general policy to provide or support patient isolation or biocontainment facilities. [4] A guide to the treatment and management of coronavirus patients in hospitals published by the Shahid Beheshti University of Medical Sciences (undated, probably 2020) stipulates the use of isolation rooms, indicating that at least some hospitals in Iran have the ability to design, build and use such facilities. [5]

[1] Kasra Hospital. Undated. "Emergency department (بخش اورژانس)." [https://www.kasrahospital.ir/unitdetails.aspx?q=3] Accessed November 2020

[2] Farhikhtegan Daily. April 15 2020. "Construction of an isolated chamber for corona patients in the Azad University of Mashhad (ساخت محفظه ایزوله بیماران کرونایی در دانشگاه آزاد واحد مشهد)." [http://farhikhtegandaily.com/news/39517/%D8%B3%D8%A7%D8%AE%D8%AA-%D9%85%D8%AD%D9%81%D8%B8%D9%87-%D8%A7%DB%8C%D8%B2%D9%88%D9%84%D9%87-%D8%A8%DB%8C%D9%85%D8%A7%D8%B1%D8%A7%D9%86-%DA%A9%D8%B1%D9%88%D9%86%D8%A7%DB%8C%DB%8C--%D8%AF%D8%B1-%D8%AF%D8%A7%D9%86%D8%B4%DA%AF%D8%A7%D9%87-%D8%A2%D8%B2%D8%A7%D8%AF-%D9%88%D8%A7%D8%AD%D8%AF-%D9%85%D8%B4%D9%87%D8%AF/] Accessed November 2020

[3] MAHBOUBEH KHATON GHANBARI, MASOUD BEHZADIFAR, AHAD BAKHTIARI, MEYSAM BEHZADIFAR, SAMAD AZARI, HASAN ABOLGHASEM GORJI, SAEED SHAHABI, MARIANO MARTINI, NICOLA LUIGI BRAGAZZI. January 4 2020. "Assessing Iran's health system according to the COVID-19 strategic preparedness and response plan of the World Health Organization: health policy and historical implications." J Prev Med Hyg. 2020 Dec; 61

[4] : E508–E519. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7888405/] Accessed May 2021

[4] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [http://www.behdasht.gov.ir/] Accessed November 2020 and May 2021

[5] Shahid Beheshti University of Medical Sciences. Undated, probably 2020. "Methodology of treatment and management of coronavirus in hospital patients (شیوه نامه برخورد و مدیریت کرونا ویروس در مراجعین بیمارستانی)." [http://health.sbm.ac.ir/uploads/%D8%B4%DB%8C%D9%88%D9%87\_%D9%86%D8%A7%D9%85%D9%87\_%D8%A8%D8%B1%D8%AE%D9%88%D8%B1%D8%AF\_%D9%88\_%D9%85%D8%AF%DB%8C%D8%B1%DB%8C%D8%AA\_%DA%A9%D8%B1%D9%88%D9%86%D8%A7\_%D9%88%DB%8C%D8%B1%D9%88%D8%B3\_%D8%AF%D8%B1\_%D9%85%D8%B1%D8%A7%D8%AC%D8%B9%DB%8C%D9%86\_%D8%A8%DB%8C%D9%85%D8%A7%D8%B1%D8%B3%D8%AA%D8%A7%D9%86%DB%8C.pdf]

Accessed May 2021

#### 4.1.2c

Does the country meet one of the following criteria?

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

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence indicating that Iran has demonstrated capacity, or a plan, to expand isolation capacity in response to an infectious disease outbreak in the past two years.

According to a research article published in January 2021 on the performance of Iran's health system in light of the COVID-19 strategic preparedness and response plan of the World Health Organization, during the pandemic, Iran has scored best in the category of national laboratories, followed by surveillance, rapid response teams and case investigations. Risk communication and community engagement also received a high score, followed by infection prevention and control and by country-level coordination, planning and monitoring. The categories of response receiving the lowest scores were operational support and logistics; case management; and points of entry. Iran's policies of response have included non-pharmacological interventions (NPIs) such as physical/social distancing, self-isolation, quarantine and lockdowns. However, this research study found that the state of rapid health assessment/isolation facilities at points of entry was unclear. [1]

In awarding a middle-range score to the category of infection prevention and control, the study confirmed that the government's policy met such minimum requirements as a functional triage system and isolation rooms. [1] By contrast, the Ministry of Health and Medical Education provides no indication that it has developed a stand-alone policy plan to expand such isolation capacity in response to the Covid-19 emergency. [2]

[1] MAHBOUBEH KHATON GHANBARI, MASOUD BEHZADIFAR, AHAD BAKHTIARI, MEYSAM BEHZADIFAR, SAMAD AZARI, HASAN ABOLGHADEM GORJI, SAEED SHAHABI, MARIANO MARTINI, NICOLA LUIGI BRAGAZZI. January 4 2020. "Assessing Iran's health system according to the COVID-19 strategic preparedness and response plan of the World Health Organization: health policy and historical implications." J Prev Med Hyg. 2020 Dec; 61

[4] : E508–E519. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7888405/>] Accessed May 2021

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020 and 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: 1**

There is publicly available evidence suggesting that Iran has a national procurement protocol in place which can be utilized by the Ministry of Health but not the Ministry of Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs.

Procurement is regulated by the National Medical Device Directorate of Iran (IMED), a division of the Ministry of Health and Medical Education of Iran. IMED's mandate is broad, and includes: monitoring the production, provision, consumption, quality and safety of medical, dental and laboratory equipment and supplies; supervising and issuing licenses to manufacturers, exporters, importers, distributors and guilds; and regulating the market of goods and services to prevent shortages and create a competitive environment among suppliers to increase product diversity, improve quality, and reduce prices. [1] IMED operates twelve offices and groups; one of these is the Office of Laboratory Supplies and Products. Among the many functions of this office is to supply diagnostic laboratory equipment and products to the country's lab facilities-- however, its mandate focuses on imported supplies of such products, and it also monitors the import of these by private companies and the resulting competitive environment. [1]

Actual procurement is undertaken by an affiliated organization, the national Medical Procurement Organization (MPO), part of the Iranian Red Crescent Society (IRCS). The MPO procures both pharmaceuticals and medical devices, including lab equipment. Evidence indicates that its procurement strategy involves issuing public tenders as well as sourcing from its own affiliated and subsidiary manufacturing, distribution and marketing companies. Among these companies is the Helal Iran Medical Devices Company, which supplies single-use medical devices (such as syringes) and pharmaceutical products required by Iran's hospitals and IRCS's medical centers. It appears from the evidence that the MPO avoids conflict-of-interest issues by issuing public tenders for supplies or infrastructure that it cannot obtain through its own network of companies. Evidence also suggests that the MPO can supply other public-sector entities including the Ministry of Agricultural Jihad. [2]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). Office of Laboratory Supplies and Products. [<http://imed.ir/Default.aspx?PageName=lab>] Accessed November and December 2020

[2] Red Crescent Society of the Islamic Republic of Iran. Medical Procurement Organization (MPO). [<http://www.mpo-helal.org/en/home>] Accessed November and December 2020

## 4.2.2 Stockpiling for emergencies

### 4.2.2a

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

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

**Current Year Score: 0**

There is insufficient evidence that Iran maintains a stockpile of medical supplies (e.g. equipment, PPE) and medical countermeasures (MCM) (i.e. vaccines, therapeutics and diagnostics) for national use during a public health emergency.

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education, with support from other government entities such as the National Disaster Management Organization (NDMO) of the Ministry of Interior and, increasingly, the National Passive Defense Organization (NPDO) under the control of the Supreme Leader. [1, 2] Evidence indicates that the Ministry of Defense has only a tangential relevance to the subject. [3]

As shown in its canon of policy documents on management and response operations during health emergencies and disasters, the Ministry of Health mandates the procurement and stockpiling of medical and related supplies, ranging from countermeasures to equipment, for such events. [6, 7, 8] Two key agencies are involved in procurement of such supplies: the health ministry's National Medical Device Directorate of I.R. Iran (IMED) and the Medical Procurement Organization (MPO) of the Iranian Red Crescent Society. [4, 5] However, there is no evidence from any of the aforementioned entities that they



have a set policy to maintain stockpiles of such medical supplies in reserve for national use during a public health emergency, or contract with vendors to procure them during such times. [1, 2, 3, 4, 5]

In January 2020 the health minister announced that Iran had enough raw materials for drug production and would maintain stocks of medicines and medical equipment to last for 7-8 months. The announcement was made in the aftermath of a series of devastating floods that inundated much of the country in the recent past--in March and April of 2019 and again in January 2020. [9] In August 2020 the IMED announced that they had amassed sufficient strategic medical reserves--identified as drugs, raw materials and medical equipment--for 100 days, in order to ease the fight against the COVID-19 coronavirus. [10] Nevertheless, these announcements are not sufficient evidence that Iran has had a law or a standard practice to maintain a stockpile of such materials for emergencies before the onset of such crises.

- 1] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November and December 2020
- [2] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November and December 2020
- [3] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November and December 2020
- [4] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). Website. [<http://imed.ir/>] Accessed November and December 2020
- [5] Red Crescent Society of the Islamic Republic of Iran. Medical Procurement Organization (MPO). [<http://www.mpo-helal.org/en/home>] Accessed November and December 2020
- [6] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [<http://health.nkums.ac.ir/Category/10097>] Accessed November and December 2020
- [7] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [<https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf>] Accessed November and December 2020
- [8] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November and December 2020
- [9] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). January 27 2020. "Raw materials are available for drug production in the country / For the next 7 to 8 months, we will stock drugs and medical equipment throughout the country and the remotest pharmacies (مواد اولیه برای تولید دارو در کشور)." (موجود است / برای 7 تا 8 ماه آینده دارو و تجهیزات پزشکی در سراسر کشور و دورترین داروخانه ها ذخیره داریم)." [<http://imed.ir/Default.aspx?PageName=News&ID=4431>] Accessed November and December 2020
- [10] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). July 28 2020. "Strategic medical reserves are supplied for up to 100 days / Checking the status of order registration, allocation and supply of currency required for medicine, raw materials and medical equipment / For some required medical goods and equipment, as much as is needed has been stocked, thanks to God. There is no room for major worries and concerns (ذخایر استراتژیک پزشکی تا ۱۰۰ روز تامین است/ بررسی وضعیت ثبت سفارش، تخصیص و تامین ارز مورد نیاز برای دارو، مواد اولیه و تجهیزات پزشکی/ در مورد برخی کالاها و تجهیزات پزشکی مورد نیاز به اندازه نیاز موجودی انبار فراهم شده است و به لطف خدا، جای نگرانی و دغدغه ندارد (عمده ای وجود ندارد)." [<http://imed.ir/Default.aspx?PageName=News&ID=4709&language=1>] Accessed November and December 2020

#### 4.2.2b

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

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

**Current Year Score: 0**

There is insufficient evidence that Iran maintains a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency.

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education, with support from other government entities such as the National Disaster Management Organization (NDMO) of the Ministry of Interior and, increasingly, the National Passive Defense Organization (NPDO) under the control of the Supreme Leader. [1, 2] Evidence indicates that the Ministry of Defense has only a tangential relevance to the subject. [3]

As shown in its canon of policy documents on management and response operations during health emergencies and disasters, the Ministry of Health mandates the procurement and stockpiling of medical and related supplies, ranging from countermeasures to equipment, for such events. [6, 7, 8] Two key agencies are involved in procurement of such supplies: the health ministry's National Medical Device Directorate of I.R. Iran (IMED) and the Medical Procurement Organization (MPO) of the Iranian Red Crescent Society. [4, 5]

However, there is no evidence from any of the aforementioned entities that they have a set policy to maintain stockpiles of such medical supplies for national use during a public health emergency, or contract with vendors to procure them during such times. [1, 2, 3, 4, 5]

In January 2020 the health minister announced that Iran had enough raw materials for drug production and would maintain stocks of medicines and medical equipment to last for 7-8 months. The announcement was made in the aftermath of a series of devastating floods that inundated much of the country in the recent past--in March and April of 2019 and again in January 2020. [9] In August 2020 the IMED announced that they had amassed sufficient strategic medical reserves--identified as drugs, raw materials and medical equipment--for 100 days, in order to ease the fight against the COVID-19 coronavirus. [10] Nevertheless, these announcements are not sufficient evidence that Iran has had a law or a standard practice to maintain a stockpile of such materials for emergencies before such crises.

[1] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[2] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). Website. [<http://imed.ir/>] Accessed November 2020

[5] Red Crescent Society of the Islamic Republic of Iran. Medical Procurement Organization (MPO). [<http://www.mpo-helal.org/en/home>] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020

[7] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management

in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)."

[https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf] Accessed November 2020

[8] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)."

[http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

[9] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). January 27 2020. "Raw materials are available for drug production in the country / For the next 7 to 8 months, we will stock drugs and medical equipment throughout the country and the remotest pharmacies (مواد اولیه برای تولید دارو در کشور)."

[http://imed.ir/Default.aspx?PageName=News&ID=4431] Accessed November 2020

[10] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). July 28 2020. "Strategic medical reserves are supplied for up to 100 days / Checking the status of order registration, allocation and supply of currency required for medicine, raw materials and medical equipment / For some required medical goods and equipment, as much as is needed has been stocked, thanks to God. There is no room for major worries and concerns (ذخایر استراتژیک پزشکی تا ۱۰۰ روز تامین است/ بررسی وضعیت ثبت سفارش، تخصیص و تامین ارز مورد نیاز برای دارو، مواد اولیه و تجهیزات پزشکی/ در مورد برخی کالاها و تجهیزات پزشکی مورد نیاز به اندازه نیاز موجودی انبار فراهم شده است و به لطف خدا، جای نگرانی و دغدغه عمده ای وجود ندارد)."

#### 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 Iran conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency.

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education, with support from other government entities such as the National Disaster Management Organization (NDMO) of the Ministry of Interior and, increasingly, the National Passive Defense Organization (NPDO) under the control of the Supreme Leader. [1, 2] Evidence indicates that the Ministry of Defense has only a tangential relevance to the subject. [3]

As shown in its canon of policy documents on management and response operations during health emergencies and disasters, the Ministry of Health mandates the procurement and stockpiling of medical and related supplies, ranging from countermeasures to equipment, for such events. [6, 7, 8] Two key agencies are involved in procurement of such supplies: the health ministry's National Medical Device Directorate of I.R. Iran (IMED) and the Medical Procurement Organization (MPO) of the Iranian Red Crescent Society. [4, 5] However, there is no evidence from any of the aforementioned entities that they have a set policy to annually audit, monitor or otherwise review stockpiles of such medical supplies in reserve for national use during a public health emergency, or contract with vendors to procure them during such times. [1, 2, 3, 4, 5]

In January 2020 the health minister announced that Iran had enough raw materials for drug production and would maintain stocks of medicines and medical equipment to last for 7-8 months. The announcement was made in the aftermath of a series of devastating floods that inundated much of the country in the recent past--in March and April of 2019 and again in January 2020. [9] In August 2020 the IMED announced that they had amassed sufficient strategic medical reserves--identified as drugs, raw materials and medical equipment--for 100 days, in order to ease the fight against the COVID-19 coronavirus. [10] Nevertheless, these announcements are not sufficient evidence that Iran has had a law or a standard practice to review its

stockpile of such materials for emergencies before the onset of such crises.

- [1] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020 and May 2021
- [2] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020 and May 2021
- [3] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020 and May 2021
- [4] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). Website. [<http://imed.ir/>] Accessed November 2020 and May 2021
- [5] Red Crescent Society of the Islamic Republic of Iran. Medical Procurement Organization (MPO). [<http://www.mpo-helal.org/en/home>] Accessed November 2020 and May 2021
- [6] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020
- [7] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [<https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf>] Accessed November 2020
- [8] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020
- [9] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). January 27 2020. "Raw materials are available for drug production in the country / For the next 7 to 8 months, we will stock drugs and medical equipment throughout the country and the remotest pharmacies (مواد اولیه برای تولید دارو در کشور)." [<http://imed.ir/Default.aspx?PageName=News&ID=4431>] Accessed November 2020
- [10] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). July 28 2020. "Strategic medical reserves are supplied for up to 100 days / Checking the status of order registration, allocation and supply of currency required for medicine, raw materials and medical equipment / For some required medical goods and equipment, as much as is needed has been stocked, thanks to God. There is no room for major worries and concerns (ذخایر استراتژیک پزشکی تا ۱۰۰ روز تامین است/ بررسی وضعیت ثبت سفارش، تخصیص و تامین ارز مورد نیاز برای دارو، مواد اولیه و تجهیزات پزشکی/ در مورد برخی کالاها و تجهیزات پزشکی مورد نیاز به اندازه نیاز موجودی انبار فراهم شده است و به لطف خدا، جای نگرانی و دغدغه (عمده ای وجود ندارد)." [<http://imed.ir/Default.aspx?PageName=News&ID=4709&language=1>] Accessed November 2020

## 4.2.3 Manufacturing and procurement for emergencies

### 4.2.3a

Does the country meet one of the following criteria?

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

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

Current Year Score: 0

There is insufficient evidence that Iran has a plan or agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency nor of a mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency.

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education, with support from other government entities such as the National Disaster Management Organization (NDMO) of the Ministry of Interior and, increasingly, the National Passive Defense Organization (NPDO) under the control of the Supreme Leader. [1, 2]

Two key agencies are involved in procurement of such supplies: the health ministry's National Medical Device Directorate of I.R. Iran (IMED) and the Medical Procurement Organization (MPO) of the Iranian Red Crescent Society. [3, 4] The MPO's affiliated and subsidiary pharmaceutical and medical-device manufacturing subsidiary companies, such as Helal Iran Medical Devices Company, supply single-use medical devices (such as syringes) and pharmaceutical products required by Iran's hospitals and IRCS's medical centers. The MPO also has distribution and marketing firms. [3] Evidence indicates that the Ministry of Defense has only a tangential relevance to the subject. [5]

As shown in its canon of policy documents on management and response operations during health emergencies and disasters the Ministry of Health mandates the procurement and stockpiling of medical and related supplies, ranging from countermeasures to equipment, for such events. To this end, in these key documents, stakeholders of the public health system are mandated to liaise with suppliers. Such stakeholders are also instructed to engage in predictive assessments of their supply requirements. [6, 7, 8] However, neither these policy documents nor the aforementioned public entities provide evidence of any policies to leverage domestic manufacturing capacity to produce such supplies.

That said, among these entities IMED and MPO have standing policies on procurement that take parameters such as supply, demand and domestic production capacity into account. [3, 4] In addition, with regard to manufacturing, Iran has a general import-substitution policy, complete with statutory requirements that favour the sourcing of many products domestically; this policy might obviate the need for specific agreements to increase the capacity of domestic industries during periods of crisis. There is evidence of one regulation in particular, permitting alternative procurement strategies--for medical supplies only--during exceptional circumstances that cause shortages of such supplies. This regulation is embodied in a decree passed by the Cabinet in October 2018 that allows the import of 35 different categories of medical products--including suction tubes and catheters, ventilators and portable radiography machines--to compensate for production and supply shortfalls during such circumstances. [11]

In January 2020 the health minister announced that Iran had enough raw materials for drug production and would maintain stocks of medicines and medical equipment to last for 7-8 months. The announcement was made in the aftermath of a series of devastating floods that inundated much of the country in the recent past--in March and April of 2019 and again in January 2020. [9] In August 2020 the IMED announced that they had amassed sufficient strategic medical reserves--identified as drugs, raw materials and medical equipment--for 100 days, in order to ease the fight against the COVID-19 coronavirus. [10] These announcements are at least circumstantial sufficient evidence that Iran has a mechanism in place to procure medical supplies needed during health emergencies.

[1] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[2] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). Website. [<http://imed.ir/>] Accessed November 2020

- [4] Red Crescent Society of the Islamic Republic of Iran. Medical Procurement Organization (MPO). [<http://www.mpo-helal.org/en/home>] Accessed November 2020
- [5] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020
- [6] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)". [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020
- [7] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)". [<https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf>] Accessed November 2020
- [8] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)". [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020
- [9] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). January 27 2020. "Raw materials are available for drug production in the country / For the next 7 to 8 months, we will stock drugs and medical equipment throughout the country and the remotest pharmacies (مواد اولیه برای تولید دارو در کشور موجود است / برای 7 تا 8 ماه آینده دارو و تجهیزات پزشکی در سراسر کشور و دورترین داروخانه ها ذخیره داریم)". [<http://imed.ir/Default.aspx?PageName=News&ID=4431>] Accessed November 2020
- [10] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). July 28 2020. "Strategic medical reserves are supplied for up to 100 days / Checking the status of order registration, allocation and supply of currency required for medicine, raw materials and medical equipment / For some required medical goods and equipment, as much as is needed has been stocked, thanks to God. There is no room for major worries and concerns (ذخایر استراتژیک پزشکی تا ۱۰۰ روز تامین است/ بررسی وضعیت ثبت سفارش، تخصیص و تامین ارز مورد نیاز برای دارو، مواد اولیه و تجهیزات پزشکی/ در مورد برخی کالاها و تجهیزات پزشکی مورد نیاز به اندازه نیاز موجودی انبار فراهم شده است و به لطف خدا، جای نگرانی و دغدغه عمده ای وجود ندارد)". [<http://imed.ir/Default.aspx?PageName=News&ID=4709&language=1>] Accessed November 2020
- [11] Islamic Republic of Iran. Presidency of the Islamic Republic. Office of the Cabinet. October 3 2018. "With the approval of the Cabinet; the import of 35 items of medical equipment and supplies is allowed (با تصویب هیئت وزیران؛ واردات ۳۵ قلم تجهیزات و ملزومات پزشکی مجاز شد)". [<http://cabinetoffice.ir/fa/news/3882/%D9%88%D8%A7%D8%B1%D8%AF%D8%A7%D8%AA-35-%D9%82%D9%84%D9%85-%D8%AA%D8%AC%D9%87%DB%8C%D8%B2%D8%A7%D8%AA-%D9%88-%D9%85%D9%84%D8%B2%D9%88%D9%85%D8%A7%D8%AA-%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C-%D9%85%D8%AC%D8%A7%D8%B2-%D8%B4%D8%AF>] Accessed December 2020 Text of decree: [[http://media.cabinetoffice.ir/uploads/org/news/1397/7/29/18848\\_614.pdf](http://media.cabinetoffice.ir/uploads/org/news/1397/7/29/18848_614.pdf)]

#### 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**

Available evidence does not indicate that Iran has a specific plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency. Similarly, there is little evidence of a plan/agreement to leverage domestic manufacturing capacity to produce such supplies.



Iran's government runs a strict import-substitution regime to protect and fortify its domestic industries from foreign competition and economic sanctions. There is evidence of one regulation in particular, permitting alternative procurement strategies--for medical supplies only--during exceptional circumstances that cause shortages of such supplies. This regulation is embodied in a decree passed by the Cabinet in October 2018 that allows the import of 35 different categories of medical products--including suction tubes and catheters, ventilators and portable radiography machines--to compensate for production and supply shortfalls during such circumstances. However, these 35 categories do not include laboratory supplies. [11]

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education, with support from other government entities such as the National Disaster Management Organization (NDMO) of the Ministry of Interior and, increasingly, the National Passive Defense Organization (NPDO) under the control of the Supreme Leader. [1, 2]

Two key agencies are involved in procurement of related supplies: the health ministry's National Medical Device Directorate of I.R. Iran (IMED) as regulator, and the Medical Procurement Organization (MPO) of the Iranian Red Crescent Society as procurer. IMED operates twelve offices and groups; one of these is the Office of Laboratory Supplies and Products, which, among its other roles, oversees the supply of diagnostic laboratory equipment and products to the country's lab facilities. [3] The MPO procures pharmaceuticals and medical equipment through public tenders as well as via direct sourcing from its affiliated or subsidiary manufacturing, distribution and marketing companies. The MPO clearly states that its procurement mandate covers "...pharmaceuticals and baby food, all kinds of relief, medical, hospital, laboratory and rehabilitation supplies and equipment, as well as cosmetic, diagnostic, biological and new technologies and products." [4]

Evidence indicates that the Ministry of Defense has only a tangential relevance to the subject. [5]

As shown in its canon of policy documents on management and response operations during health emergencies and disasters the Ministry of Health mandates the procurement and stockpiling of medical and related supplies, ranging from countermeasures to equipment, for such events. To this end, in these key documents, stakeholders of the public health system are mandated to liaise with suppliers. Such stakeholders are also instructed to engage in predictive assessments of their supply requirements. [6, 7, 8] However, neither these policy documents nor the aforementioned public entities provide evidence of any policies to leverage domestic manufacturing capacity to produce such supplies.

That said, among these entities IMED and MPO have standing policies on procurement that take parameters such as supply, demand and domestic production capacity into account. [3, 4] In addition, with regard to manufacturing, Iran's general import-substitution policy, complete with statutory requirements that favor the sourcing of many products domestically, might obviate the need for specific agreements to increase the capacity of domestic industries during periods of crisis.

In January 2020 the health minister announced that Iran had enough raw materials for drug production and would maintain stocks of medicines and medical equipment to last for 7-8 months. The announcement was made in the aftermath of a series of devastating floods that inundated much of the country in the recent past--in March and April of 2019 and again in January 2020. [9] In August 2020 the IMED announced that they had amassed sufficient strategic medical reserves--identified as drugs, raw materials and medical equipment--for 100 days, in order to ease the fight against the COVID-19 coronavirus. [10]

[1] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[2] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). Website. [<http://imed.ir/>] Accessed November and December 2020



- [4] Red Crescent Society of the Islamic Republic of Iran. Medical Procurement Organization (MPO). [<http://www.mpo-helal.org/en/home>] Accessed November and December 2020
- [5] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020
- [6] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020
- [7] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [<https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf>] Accessed November 2020
- [8] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020
- [9] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). January 27 2020. "Raw materials are available for drug production in the country / For the next 7 to 8 months, we will stock drugs and medical equipment throughout the country and the remotest pharmacies (مواد اولیه برای تولید دارو در کشور موجود است / برای 7 تا 8 ماه آینده دارو و تجهیزات پزشکی در سراسر کشور و دورترین داروخانه ها ذخیره داریم)." [<http://imed.ir/Default.aspx?PageName=News&ID=4431>] Accessed November 2020
- [10] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). July 28 2020. "Strategic medical reserves are supplied for up to 100 days / Checking the status of order registration, allocation and supply of currency required for medicine, raw materials and medical equipment / For some required medical goods and equipment, as much as is needed has been stocked, thanks to God. There is no room for major worries and concerns (ذخایر استراتژیک پزشکی تا ۱۰۰ روز تامین است/ بررسی وضعیت ثبت سفارش، تخصیص و تامین ارز مورد نیاز برای دارو، مواد اولیه و تجهیزات پزشکی/ در مورد برخی کالاها و تجهیزات پزشکی مورد نیاز به اندازه نیاز موجودی انبار فراهم شده است و به لطف خدا، جای نگرانی و دغدغه (عمده ای وجود ندارد)." [<http://imed.ir/Default.aspx?PageName=News&ID=4709&language=1>] Accessed November 2020
- [11] Islamic Republic of Iran. Presidency of the Islamic Republic. Office of the Cabinet. October 3 2018. "With the approval of the Cabinet; the import of 35 items of medical equipment and supplies is allowed (با تصویب هیئت وزیران؛ واردات ۳۵ قلم تجهیزات و ملزومات پزشکی مجاز شد)." [<http://cabinetoffice.ir/fa/news/3882/%D9%88%D8%A7%D8%B1%D8%AF%D8%A7%D8%AA-35-%D9%82%D9%84%D9%85-%D8%AA%D8%AC%D9%87%DB%8C%D8%B2%D8%A7%D8%AA-%D9%88-%D9%85%D9%84%D8%B2%D9%88%D9%85%D8%A7%D8%AA-%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C-%D9%85%D8%AC%D8%A7%D8%B2-%D8%B4%D8%AF>] Accessed December 2020 Text of decree: [[http://media.cabinetoffice.ir/uploads/org/news/1397/7/29/18848\\_614.pdf](http://media.cabinetoffice.ir/uploads/org/news/1397/7/29/18848_614.pdf)]

## 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

Available evidence does not indicate that Iran has a formal a plan in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics).

As shown in its canon of policy documents on management and response operations during health emergencies and disasters the Ministry of Health mandates the procurement and stockpiling of medical and related supplies, ranging from countermeasures to equipment, for such events. However, these documents do not stipulate how such supplies are to be dispensed to the affected populations. [1, 2, 3]

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education and its various departments, such as the National Disaster Management Organization (NDMO) and the National Medical Device Directorate (IMED). [4, 5] An affiliated organization is the national Medical Procurement Organization (MPO), part of the Iranian Red Crescent Society (IRCS). The MPO's affiliated and subsidiary pharmaceutical and medical-device manufacturing subsidiary companies, such as Helal Iran Medical Devices Company, supply single-use medical devices (such as syringes) and pharmaceutical products required by Iran's hospitals and IRCS's medical centers. The MPO also has distribution and marketing firms. [6] Among other, unaffiliated entities, the National Passive Defense Organization (NPDO), under the control of the Supreme Leader, is playing an increasing role in health emergency management issues. [7] Evidence indicates that the Ministry of Defense has only a tangential relevance to the subject. [8]

In any case, none of the aforementioned organizations indicate that they operate a set policy on dispensing MCMs during public health emergencies.

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [<https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بلایا و فوریت ها)." [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020

[4] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education of Iran. National Medical Device Directorate of I.R. Iran (IMED). Website. [<http://imed.ir/>] Accessed November 2020

[6] Red Crescent Society of the Islamic Republic of Iran. Medical Procurement Organization (MPO). [<http://www.mpo-helal.org/en/home>] Accessed November 2020

[7] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

[8] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020

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

#### 4.3.2a

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

Yes = 1 , No = 0

#### Current Year Score: 0

Available evidence does not indicate that Iran has a public plan in place to receive health personnel from other countries to respond to a public health emergency. By contrast, it does have a standing policy of engagement with international organizations such as the World Health Organization (WHO) during such events. [1, 4]

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education, with support from other government entities such as the National Disaster Management Organization (NDMO) of the Ministry of Interior and, increasingly, the National Passive Defense Organization (NPDO) under the control of the Supreme Leader. Both the NDMO and NPDO have a Health & Medical Services Taskforce (HMST) and Disaster and Emergency Management Center (DEMC) at the Ministry of Health and Medical Education (MOHME). By law, the Iranian Red Crescent Society (IRCS) is the main response organization and is in charge of handling international humanitarian assistance efforts. [1]

The MOHME's canon of policy documents on management and response operations during health emergencies and disasters does not stipulate any particular form of cooperation with other countries, [2, 3, 4] and likewise the websites of the NDMO, NPDO, NAJA internal security and border control, and Ministry of Defense provide no evidence that these entities adhere to any public policy for receiving health personnel from other countries during such events. [5, 6, 7, 8]

[1] Ali Ardalan, Mohammad Hossein Rajaei, Gholamreza Masoumi, Ali Azin, Vahid Zonoobi, Mohammad Sarvar, Khorshid Vaskoei Eshkevari, Elham Ahmadnezhad, Gelareh Jafari. 16 July 2012. "2012-2025 Roadmap of I.R.Iran's Disaster Health Management". ABSTRACT. PLOS.[<http://currents.plos.org/disasters/index.html%3Fp=1899.html>] Accessed March 2019

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)". [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)". [<https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)". [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020

[5] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[6] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

[7] Islamic Republic of Iran. Disciplinary Force of the Islamic Republic of Iran (NAJA). Border Guard Command. Website. [<http://www.marzbani.police.ir/>] Accessed November 2020

[8] Islamic Republic of Iran. Ministry of Defense and Armed Forces Logistics. 2020. Website. [<http://www.defanews.ir/>] Accessed November 2020

## 4.4 HEALTHCARE ACCESS

### 4.4.1 Access to healthcare

#### 4.4.1a

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

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

**Current Year Score: 3**

2020

World Policy Analysis Center

#### **4.4.1b**

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

Input number

**Current Year Score: 99**

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: 730.07**

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

Available evidence does not indicate that Iran's government has issued legislation, a policy or a public statement committing to provide prioritized health care services to healthcare workers who become sick as a result of responding to a public health emergency.

Iran's system to manage public health emergencies is led by the Ministry of Health and Medical Education (MOHME), with support from other government entities such as the National Disaster Management Organization (NDMO) of the Ministry of Interior and, increasingly, the National Passive Defense Organization (NPDO) under the control of the Supreme Leader. [1, 2, 3] As shown in its canon of policy documents on management and response operations during public health emergencies and disasters, the MOHME stipulates responsibilities for different professional stakeholders--such as the authorities, health care and emergency-service workers, and university specialists--during such events. But these documents do not specifically describe the treatment of healthcare workers themselves. [4, 5, 6]

A possible exception is found in the latest of these documents, the I.R. Iran National Health Disaster and Emergency Response Operations Plan of 2015. This plan specifies that certain special interventions are to be made for so-called special groups, categories particularly affected by a front-line exposure to a public health emergency. Relief workers comprise one of these special groups, and the plan stipulates that they be treated for psychological trauma if needed. However, the plan does not single out this group for other types of treatment (such as for infection arising from the health emergency), nor clearly define how they should be prioritized for psychological care. [6]

Finally, neither the MOHME overall nor Iran's two emergency-management entities--the National Disaster Management Organization (NDMO) and the National Passive Defense Organization (NPDO)--indicate that they have a general policy to prioritize the treatment of healthcare workers during a public health emergency. [1, 2, 3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://behdasht.gov.ir/>] Accessed November 2020

[2] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[3] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [<http://health.nkums.ac.ir/Category/10097>] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [<https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf>] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [<http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf>] Accessed November 2020

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

### 4.5.1 Communication with healthcare workers

#### 4.5.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has an official system in place for public health officials and healthcare workers to communicate during a public health emergency. This system is shown in its canon of three key policy documents published by the Ministry of Health and Medical Education (MOHME) on management and response operations during public health emergencies and disasters.

All three documents elucidate communication strategies--for several different types of stakeholders,[1, 2, 3] but the most detailed strategy is laid out in the MOHME's guide, published in 2011, on environmental health procedures during emergencies. Chapter 13 of the guide lays down a communications protocol, dividing communication into different color-code categories of priority according to the level of risk (red--highest-risk; orange, yellow, blue, and white--lowest-risk) and stressing the harmonisation of activity between different professional stakeholders--such as the authorities, health care and emergency-service workers, and university specialists--in an emergency. For instance, a high degree of intersectoral communication and cooperation is mandated--including through the provision of wireless communication means to all health care forces including urgent care workers--with responsible parties obligated to be well-acquainted with other relevant operational teams. Event reporting is divided into five categories: immediate (as soon as possible after an outbreak); urgent (within six hours of an outbreak); ordinary (within 24 hours); active (issued without prompting by the authorities); and passive (issued upon the authorities' request). [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [http://health.nkums.ac.ir/Category/10097] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

#### 4.5.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Iran's official system for public health officials and healthcare workers to communicate during a public health emergency does not specifically distinguish between healthcare workers in the public and private sector.

All three of Iran's key policy documents on management and response operations during public health emergencies and disasters (published by the Ministry of Health and Medical Education--MOHME) elucidate communication strategies for several different types of stakeholders,[1, 2, 3] but the most detailed strategy is laid out in the MOHME's guide, published in 2011, on environmental health procedures during emergencies.

Chapter 13 of this guide lays down a communications protocol, dividing communication into different color-code categories of priority according to the level of risk (red--highest-risk; orange, yellow, blue, and white--lowest-risk) and stressing the harmonisation of activity between different professional stakeholders--such as the authorities, health care and emergency-service workers, and university specialists--in an emergency. For instance, a high degree of intersectoral communication and cooperation is mandated--including through the provision of wireless communication means to all health care forces including urgent care workers--with responsible parties obligated to be well-acquainted with other relevant operational teams. Event reporting is divided into five categories: immediate (as soon as possible after an outbreak), urgent (within six hours of an outbreak), ordinary (within 24 hours), active (issued without prompting by the authorities) and passive (issued upon the authorities' request). However, the communication system as laid out in this 2011 guide does not distinguish between private- and public-sector professionals. [1]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Procedures in Emergencies and Disasters (راهنمای عملیات بهداشت محیط در بلایا و شرایط اضطرار)." [http://health.nkums.ac.ir/Category/10097] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2011. "A Guide to Environmental Health Management in Disasters and Emergencies (راهنمای مدیریت بهداشت محیط در بلایا و شرایط اضطرار)." [https://phc.mui.ac.ir/sites/phc.mui.ac.ir/files/mo-balaia.pdf] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November 2020

## 4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

### 4.6.1 Healthcare associated infection (HCAI) prevention and control programs

#### 4.6.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran's national public health system monitors for and tracks the number of healthcare associated infections (HCAI) that take place in healthcare facilities.

Iran's National Action Plan for combating antimicrobial resistance (IRIAMR) 2016 - 2021 addresses HAIs, noting that a formal HCAI surveillance system was set up in 2007 at the Center for Communicable Diseases Control at the Department for Health Affairs of the Ministry of Health and Medical Education. [1]

Several scholarly studies have been published on Iran's national HCAI surveillance system; for example, a 2020 study found



that HCAs are common in the country's intensive care wards, with urinary-tract and device-related infections being the most prevalent types. [2]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education, Center for Communicable Diseases Control. December 2016. "National Action Plan of the Islamic Republic of Iran for combating antimicrobial resistance (IRIAMR) 2016 - 2021". [<http://extwprlegs1.fao.org/docs/pdf/IRA182611Eng.pdf>]; [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed November 2020

[2] N.Izadi, B.Eshrati, K.Etemad, Y.Mehrabi, S.-S.Hashemi-Nazari. 2020. "Rate of the incidence of hospital-acquired infections in Iran based on the data of the national nosocomial infections surveillance." *New Microbes and New Infections*. Volume 38, November 2020, 100768. [<https://www.sciencedirect.com/science/article/pii/S2052297520301207>] Accessed November 2020

## 4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

### 4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

#### 4.7.1a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that Iran has a national requirement for the conducting of ethical reviews before beginning a clinical trial.

According to more than one scholarly study on the subject, Iran's national Food and Drug Administration (FDA) at the Ministry of Health and Medical Education (MOHME) has a dedicated Clinical Trial Center (CTC) responsible for regulation of clinical trials. The remit of the FDA itself is to ensure the efficacy, quality and safety of all types of medicinal products registered for commercial sale in the domestic pharmaceutical market. The CTC operates under the directorate of pharmaceutical and narcotic affairs at the FDA and works closely with a separate entity, the Iranian Registry of Clinical Trials (IRCT), during the process of evaluation and approval of clinical trials. [1, 2] The FDA states that clinical trials in Iran are subject to the oversight of several bodies, including the General Directorate of Drugs and Controlled Substances (Clinical Studies Committee), the National Ethics Committee for Biomedical Research, and the IRCT. However, the FDA does not clarify whether the ethics committee conducts a legally required review process prior to the beginning of clinical trials. [3]

[1] Zahra Karimian. 2020. "The Regulation of Clinical Trials in Iran – Challenges and Limitations." *Clin Res Trials* 6: doi: 10.15761/CRT.1000319 [<https://www.oatext.com/the-regulation-of-clinical-trials-in-iran%E2%80%93challenges-and-limitations.php#gsc.tab=0>] Accessed November 2020

[2] Iranian Registry of Clinical Trials (IRCT). Website. [<https://www.irct.ir/>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. Food and Drug Administration (FDA). "Clinical studies (مطالعات بالینی)." [<https://www.fda.gov.ir/%D8%AF%D8%A7%D8%B1%D9%88/%D9%85%D8%B7%D8%A7%D9%84%D8%B9%D8%A7%D8%AA-%D8%A8%D8%A7%D9%84%DB%8C%D9%86%DB%8C>] Accessed November 2020

#### 4.7.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

Available evidence does not indicate that in Iran there is an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics. Recent scholarly articles on the regulation of clinical trials in Iran do not mention or allude to the existence of such a process, [1] and neither of the two key entities involved in the regulation of clinical trials in Iran--the Clinical Trial Center (CTC) of the Food and Drug Administration (FDA) at the Ministry of Health and Medical Education (MOHME), and the Iranian Registry of Clinical Trials (IRCT) state that they follow such a policy. [1, 2, 3]

[1] Zahra Karimian. 2020. "The Regulation of Clinical Trials in Iran – Challenges and Limitations." Clin Res Trials 6: doi: 10.15761/CRT.1000319 [https://www.oatext.com/the-regulation-of-clinical-trials-in-iran%E2%80%93challenges-and-limitations.php#gsc.tab=0] Accessed November 2020

[2] Iranian Registry of Clinical Trials (IRCT). Website. [https://www.irct.ir/] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. Food and Drug Administration (FDA). "Clinical studies (مطالعات بالینی)." [https://www.fda.gov.ir/%D8%AF%D8%A7%D8%B1%D9%88/%D9%85%D8%B7%D8%A7%D9%84%D8%B9%D8%A7%D8%AA-%D8%A8%D8%A7%D9%84%DB%8C%D9%86%DB%8C] Accessed November 2020

### 4.7.2 Regulatory process for approving medical countermeasures

#### 4.7.2a

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

Yes = 1 , No = 0

**Current Year Score: 1**

Iran has a government agency responsible for approving new medical countermeasures for humans. This is the General Directorate of Medical Equipment and Supplies at the Food and Drug Administration (FDA), part of the Ministry of Health and Medical Education (MOHME). The FDA's remit is to ensure the efficacy, quality and safety of all types of medicinal products registered for commercial sale in the domestic market. [1, 2] These medicinal products encompass official categories such as "pharmaceutical essentials" including vaccines and therapeutics, and "medical equipment," which includes medical devices. [2]

[1] Zahra Karimian. 2020. "The Regulation of Clinical Trials in Iran – Challenges and Limitations." Clin Res Trials 6: doi: 10.15761/CRT.1000319 [https://www.oatext.com/the-regulation-of-clinical-trials-in-iran%E2%80%93challenges-and-limitations.php#gsc.tab=0] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Food and Drug Administration (FDA). General Directorate of Medical Equipment and Supplies.

[https://www.fda.gov.ir/fa/%D8%AA%D8%AC%D9%87%DB%8C%D8%B2%D8%A7%D8%AA-%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C/%D8%A7%D8%AF%D8%A7%D8%B1%D9%87-%DA%A9%D9%84-%D8%AA%D8%AC%D9%87%DB%8C%D8%B2%D8%A7%D8%AA-%D9%88-%D9%85%D9%84%D8%B2%D9%88%D9%85%D8%A7%D8%AA-%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C] Accessed November 2020

#### 4.7.2b

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

Yes = 1, No = 0

Current Year Score: 0

Available evidence does not point to the existence of an expedited process in Iran for approving medical countermeasures for human use during public health emergencies.

Iran's Food and Drug Administration (FDA) at the Ministry of Health and Medical Education (MOHME) is responsible for approving all types of medicinal products registered for commercial sale in the domestic market. These medicinal products encompass official categories such as "pharmaceutical essentials" including vaccines and therapeutics, and "medical equipment," which includes medical devices. [2] However, the FDA's General Directorate of Medical Equipment and Supplies does not indicate that it has a policy to expedite the approval of medical countermeasures during a public health emergency. [2]

[1] Zahra Karimian. 2020. "The Regulation of Clinical Trials in Iran – Challenges and Limitations." Clin Res Trials 6: doi: 10.15761/CRT.1000319 [https://www.oatext.com/the-regulation-of-clinical-trials-in-iran%E2%80%93challenges-and-limitations.php#gsc.tab=0] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. Food and Drug Administration (FDA). General Directorate of Medical Equipment and Supplies.

[https://www.fda.gov.ir/fa/%D8%AA%D8%AC%D9%87%DB%8C%D8%B2%D8%A7%D8%AA-%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C/%D8%A7%D8%AF%D8%A7%D8%B1%D9%87-%DA%A9%D9%84-%D8%AA%D8%AC%D9%87%DB%8C%D8%B2%D8%A7%D8%AA-%D9%88-%D9%85%D9%84%D8%B2%D9%88%D9%85%D8%A7%D8%AA-%D9%BE%D8%B2%D8%B4%DA%A9%DB%8C] Accessed November 2020

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

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

#### 5.1.1 Official IHR reporting

##### 5.1.1a

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

Yes = 1, No = 0

Current Year Score: 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**

Available evidence does not indicate that Iran has an overall risk reduction strategy that addresses epidemics and pandemics. Its national strategy to address these types of disease outbreaks addresses risk reduction, but only with regard to critical events. In 2015 the Ministry of Health and Medical Education published and implemented a strategic plan, the I.R. Iran National Health Disaster and Emergency Response Operations Plan, in which the reduction of risk is promoted as a key component of addressing public health crises. While the plan is applicable to all types of disasters involving public health, it discusses infectious diseases in detail and mandates that the national risk reduction strategy be conceptualized and executed with an appreciation of the potential for such diseases to transform into epidemics and pandemics. However the plan does not specifically mandate the reduction of such risks as part of operating procedure under normal circumstances. For example, the cited plan's mandate for health facilities to have emergency operations plans (EOPs) in place for meeting a contingency does not equal a mandate for risk reduction under normal operating conditions. [1]

Overall, seismically active Iran has a highly developed disaster management and risk reduction (DMRR) policy. The two main organizations responsible for DMRR are the National Disaster Management Organization (NDMO), under the Ministry of Interior (MOI) and the National Passive Defense Organization (NPDO), under the Supreme Leader. [1, 3, 4] Both entities have public health risk-management and response components. However, neither indicate that they have stand-alone plans for addressing crises of an epidemic or pandemic character. [2, 3]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf] Accessed November and December 2020

[2] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [https://ndmo.ir/Portal/Home/] Accessed November and December 2020

[3] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [http://www.umsha.ac.ir/includes/plink.aspx?linkid=73] Accessed November and December 2020

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

### 5.2.1 Cross-border agreements

#### 5.2.1a

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

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

**Current Year Score: 0**

Available evidence does not indicate that Iran has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies.

The country has signed some MOUs on health cooperation with countries such as Indonesia, Kazakhstan and Turkey, involving a variety of subjects, among them health services, pharmaceuticals, medical research, prevention of contagious and non-communicable diseases, and on some aspects of crisis management. [1, 2] However, these MOUs do not comprehensively address cooperation during public health emergencies.

That said, Iran does foster specific cooperation on public health emergencies with international agencies such as the WHO, which together with a delegation of public health experts from China and Germany in March 2020 conducted a technical support mission in Iran on the COVID-19 coronavirus outbreak, collaborating with the country's Ministry of Health and Medical Education. The mission aimed to review Iran's strategy in combating the virus. [3]

The International Committee of the Red Cross has an established cooperative relationship with the Iranian Red Crescent Organization, which by Iranian law has traditionally been the only domestic organization permitted to act in international humanitarian assistance efforts. [4]

Finally, no evidence of specific cross-border agreements on public health emergencies is forthcoming from the websites of the health ministry and the two emergency management agencies, the NDMO and the NPDO. [5, 6, 7]

[1] Tehran Times. 22 December 2018. "Iran, Turkey ink MOU on health, medical care".

[<https://www.tehrantimes.com/news/430958/Iran-Turkey-ink-MOU-on-health-medical-care>] Accessed November 2020

[2] Tehran Times. May 22 2019. "Iran, Indonesia ink MOU to enhance health co-op."

[<https://www.tehrantimes.com/news/436215/Iran-Indonesia-ink-MOU-to-enhance-health-co-op>] Accessed November 2020

[3] World Health Organization (WHO). March 12 2020. WHO and public health experts conclude COVID-19 mission to Islamic Republic of Iran." [<http://www.emro.who.int/irn/iran-news/delegation-of-who-and-public-health-experts-concludes-covid-19-mission-to-iran.html>] Accessed November 2020

[4] Ali Ardalani, Mohammad Hossein Rajaei, Gholamreza Masoumi, Ali Azin, Vahid Zonoobi, Mohammad Sarvar, Khorshid Vaskoei Eshkevari, Elham Ahmadnezhad, Gelareh Jafari. 16 July 2012. "2012-2025 Roadmap of I.R.Iran's Disaster Health Management". ABSTRACT. PLOS.[<http://currents.plos.org/disasters/index.html%3Fp=1899.html>] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[6] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [<https://ndmo.ir/Portal/Home/>] Accessed November 2020

[7] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [<http://www.umsha.ac.ir/includes/plink.aspx?linkid=73>] Accessed November 2020

### **5.2.1b**

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

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

**Current Year Score: 0**

Available evidence indicates that Iran's existing and emerging cross-border agreements with neighbouring countries and regional groups with regard to animal health do not specifically focus on emergencies.

In May 2019, articles in the Iranian press stated that the Iran Veterinary Organization (IVO) would sign a memorandum of understanding (MOU) with its Iraqi counterpart on veterinary issues (Iran and Iraq have considerable cross-border trade in poultry, dairy and livestock products). However, there is no further evidence that the agreement has been signed as of yet. [1]

With the cooperation of the Food and Agriculture Organization of the United Nations (FAO), the IVO is working with the other member states of ECO, the Economic Cooperation Organization (Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan and Uzbekistan), in the field of livestock health and trade, aiming to work jointly for the control of livestock, poultry and aquatic diseases through diagnosis, vaccination programmes and laboratory research. The IVO anticipates that the next step in developing a mechanism for cooperation is for member countries to conclude memorandums of understanding (MOUs) on these topics. [2] IVO has already signed two such agreements, with neighboring Azerbaijan and Armenia, in 2016 and 2017 respectively. [3, 4]

An example of such nascent cooperation was the Quadrilateral Meeting on the control of Transboundary Animal Diseases (TADs), hosted by the IVO and the Ministry of Agricultural Jihad and coordinated by the FAO in Tehran in November 2017. It is anticipated that this meeting will lead to the conclusion of a multilateral Memorandum of Understanding (MoU) between the Veterinary Directorates of Afghanistan, Iran, Pakistan and Tajikistan. [5] However, none of the agreements and accords cited above specifically concern health emergencies.

[1] Mehr News Agency. May 29 2019. "Iran, Iraq to ink MoU to tackle veterinary-related issues."

[<https://en.mehrnews.com/news/145851/Iran-Iraq-to-ink-MoU-to-tackle-veterinary-related-issues>] Accessed November 2020

[2] Azernews. 8 October 2018. "Veterinary cooperation of Iran, ECO members to develop".

[<https://www.azernews.az/region/138765.html>] Accessed November 2020

[3] Food and Agriculture Organization of the United Nations (FAO). February 23 2016. "Cooperation Agreement between the Republic of Azerbaijan and the Islamic Republic of Iran in the field of veterinary and animal health.."

[<http://www.fao.org/faolex/results/details/en/c/LEX-FAOC173804/>] Accessed November 2020

[4] Vestnik Kavkaza. October 5 2017. "Armenia and Iran to expand cooperation in veterinary medicine."

[<https://vestnikkavkaza.net/news/Armenia-and-Iran-to-expand-cooperation-in-veterinary-medicine.html>] Accessed November 2020

[5] Food and Agriculture Organization of the United Nations (FAO). 27 November 2017. "Chief Veterinary Officers from Afghanistan, Iran, Pakistan and Tajikistan meet on Transboundary Animal Diseases".

[<http://www.fao.org/asiapacific/news/detail-events/en/c/1069560/>] Accessed November 2020

## 5.3 INTERNATIONAL COMMITMENTS

### 5.3.1 Participation in international agreements

#### 5.3.1a

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

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

**Current Year Score: 2**

2021

Biological Weapons Convention

### **5.3.1b**

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

Yes = 1 , No = 0

**Current Year Score: 1**

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: 0**

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

2021

## OIE PVS assessments

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

### 5.5.1 National financing for epidemic preparedness

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

Available evidence does not indicate that Iran has allocated national funds specifically to improve capacity to address epidemic threats within the past three years. A review of articles on the national health budget published by the press agency of the Iranian Majlis (Parliament) over this time period reveals that while government committees have discussed allocating more budgetary funds towards infectious disease prevention, the vast majority of funds has been allocated for other subjects, such as the ongoing implementation of the Health Transformation Plan. [1] Similarly, in late 2019 the health ministry reported a 14% increase in the health sector budget for fiscal year 1399 (March 21 2020-March 20 2021), but did not mention that an increase of resources for prevention was achieved. [2]

A review of articles published in the Iranian press in recent years on budget allocations for the Ministry of Agricultural Jihad shows some allocation of financing towards the prevention and control of infectious diseases in animals. However, details are lacking on whether such funding specifically targets epidemic threats. [3]

[1] Islamic Consultative Assembly News Agency (ICANA). 2020. "News by Keyword: Health Budget

"(یست اخبار براساس کلید واژه ی :بودجه سلامت ۶) (۱) [6]

[[https://www.icana.ir/Fa/Tags/34572/%D8%A8%D9%88%D8%AF%D8%AC%D9%87\\_%D8%B3%D9%84%D8%A7%D9%85%D8%AA](https://www.icana.ir/Fa/Tags/34572/%D8%A8%D9%88%D8%AF%D8%AC%D9%87_%D8%B3%D9%84%D8%A7%D9%85%D8%AA)] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health. December 21 2019. "Increase of 14% in the budget of the health sector in the budget bill"

"(افزایش 14 درصدی بودجه حوزه سلامت در لایحه بودجه 99) [13]

[<https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/%D8%A7%D9%81%D8%B2%D8%A7%DB%8C%D8%B4->

14-%D8%AF%D8%B1%D8%B5%D8%AF%DB%8C-%D8%A8%D9%88%D8%AF%D8%AC%D9%87-%D8%AD%D9%88%D8%B2%D9%87-%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%AF%D8%B1-%D9%84%D8%A7%DB%8C%D8%AD%D9%87-%D8%A8%D9%88%D8%AF%D8%AC%D9%87-99] Accessed November 2020  
[3] Islamic Republic News Agency (IRNA). December 25 2018. "Details of the budget bill 98: Next year's Ministry of Agriculture budget was delayed (جزئیات لایحه بودجه 98: بودجه سال آینده وزارت کشاورزی عقب گرد کرد)." [https://www.irna.ir/news/83146921/%D8%A8%D9%88%D8%AF%D8%AC%D9%87-%D8%B3%D8%A7%D9%84-%D8%A2%D9%8A%D9%86%D8%AF%D9%87-%D9%88%D8%B2%D8%A7%D8%B1%D8%AA-%D9%83%D8%B4%D8%A7%D9%88%D8%B1%D8%B2%D9%8A-%D8%B9%D9%82%D8%A8-%DA%AF%D8%B1%D8%AF-%D9%83%D8%B1%D8%AF] Accessed November 2020

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

### 5.5.2a

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

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

Current Year Score: 0

2021

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

### 5.5.2b

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

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

Current Year Score: 0

2021

OIE PVS assessments

## 5.5.3 Financing for emergency response

### 5.5.3a

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

Yes = 1 , No = 0

Current Year Score: 0

Iran has a publicly identified special emergency public financing mechanism which it can access in the face of a public health emergency. However, this mechanism, known as the Public Insurance Fund for Natural Disasters, is not yet operative.

After initially being proposed to the parliament in 2003, the Fund has continued to work its way through various layers of bureaucracy and its mandate and responsibilities have yet to be fleshed out. However, in October 2020 the final draft of the authorizing law was approved and is presently being reviewed by the Guardian Council, the country's key adjudicating body for legislation. [1]

In general, Iran's funding for emergencies is generated and supplied domestically. It is not listed as an eligible country by funders such as the World Bank's Pandemic Financing Facility (PFF) and International Development Association (IDA). [2, 3] Instead, Iran has a well-developed national emergency and disaster-management system, and funding for public health emergencies is allocated through the various government entities charged with specific responsibilities relevant to the subject. Among the most important of these entities are the National Disaster Management Organization (NDMO) under the Ministry of the Interior, and the National Passive Defense Organization (NPDO) under the Supreme Leader. [5, 6, 7] "Both NDMO and NPDO have a Health & Medical Services Taskforce (HMST) and Disaster & Emergency Management Center (DEMC) at the Ministry of Health & Medical Education (MOH&ME), which is the leading agency for both taskforces." [4]

[1] Eqtasad Online. October 18 2020. "The bill to establish a public natural disaster insurance fund was approved (لايحه تأسيس صندوق بیمه همگانی حوادث طبیعی تصویب شد)." [https://www.eghtesadonline.com/%D8%A8%D8%AE%D8%B4-%D8%A7%D9%82%D8%AA%D8%B5%D8%A7%D8%AF-%DA%A9%D9%84%D8%A7%D9%86-3/475022-%D9%84%D8%A7%DB%8C%D8%AD%D9%87-%D8%AA%D8%A3%D8%B3%DB%8C%D8%B3-%D8%B5%D9%86%D8%AF%D9%88%D9%82-%D8%A8%DB%8C%D9%85%D9%87-%D9%87%D9%85%DA%AF%D8%A7%D9%86%DB%8C-%D8%AD%D9%88%D8%A7%D8%AF%D8%AB-%D8%B7%D8%A8%DB%8C%D8%B9%DB%8C-%D8%AA%D8%B5%D9%88%DB%8C%D8%A8-%D8%B4%D8%AF] Accessed November 2020

[2] World Bank. Pandemic Emergency Financing Facility. [http://www.worldbank.org/en/topic/pandemics/brief/pandemic-emergency-financing-facility] Accessed November 2020

[3] World Bank. International Development Association (IDA). "Borrowing Countries". [http://ida.worldbank.org/about/borrowing-countries] Accessed November 2020

[4] Ali Ardalan, Mohammad Hossein Rajaei, Gholamreza Masoumi, Ali Azin, Vahid Zonoobi, Mohammad Sarvar, Khorshid Vaskoei Eshkevari, Elham Ahmadnezhad, Gelareh Jafari. 16 July 2012. "2012-2025 Roadmap of I.R.Iran's Disaster Health Management". ABSTRACT. PLOS.[http://currents.plos.org/disasters/index.html%3Fp=1899.html] Accessed November 2020

[5] Islamic Republic of Iran. Ministry of Health and Medical Education.Website. [http://behdasht.gov.ir/] Accessed November 2020

[6] Islamic Republic of Iran. National Disaster Management Organization (NDMO). Website. [https://ndmo.ir/Portal/Home/] Accessed November 2020

[7] Islamic Republic of Iran. National Passive Defense Organization (NPDO). Website. [http://www.umsha.ac.ir/includes/plink.aspx?linkid=73] Accessed November 2020

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

### 5.5.4a

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

- Support other countries to improve capacity to address epidemic threats by providing financing or support?

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

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

**Current Year Score: 0**

Available evidence does not indicate that senior leaders in Iran have in the past three years made a public commitment either to support other countries to improve their capacity to address epidemic threats by providing financing or support, or to improve Iran's own capacity in this regard. There is, however, evidence of support for emergency relief.

Over 2020, officials of the Iranian government have been cited as announcing Iran's contribution of various forms of emergency medical aid to other countries. For example, in September 2020 Iran's ambassador to Kyrgyzstan announced that it was sending medical equipment such as ventilators to the country to assist it in fighting the outbreak of the COVID-19 coronavirus outbreak on its soil. [1] A similar gesture was announced in July by Iran's ambassador to Iraq, who sent a donation of pharmaceutical and medical supplies to the neighboring country to help it fight the coronavirus. [2]

By contrast, a review of annual allocations from its national budget towards human and veterinary health affairs over the last few years reveals little money going specifically towards fighting epidemics. Budgetary allocations made to the Ministry of Agricultural Jihad shows some directing of financing towards the prevention and control of infectious diseases in animals. [3, 4] However, details are lacking on whether such funding specifically targets epidemic threats. [5]

Similarly, no evidence on commitments to expand domestic capacity to fight epidemic threats is provided via the websites of the health or foreign affairs ministries. [6, 7] Finally, the World Health Organization (WHO) indicates that Iran has received only a very small amount (less than US\$1m) over the 2018-19 period to fight communicable diseases--with no specific allocation being indicated to fight epidemics. [8]

[1] XinhuaNet. September 14 2020. "Iran sends medical aid to Kyrgyzstan to combat COVID-19."

[[http://www.xinhuanet.com/english/2020-09/14/c\\_139365680.htm](http://www.xinhuanet.com/english/2020-09/14/c_139365680.htm)] Accessed November 2020

[2] Tasnim News Agency. July 19 2020. "Iran Sends Medical Aid to Iraq."

[<https://www.tasnimnews.com/en/news/2020/07/19/2309766/iran-sends-medical-aid-to-iraq>] Accessed November 2020

[3] Islamic Consultative Assembly News Agency (ICANA). 2020. "News by Keyword: Health Budget

[6] ( ) ۶ ( یت است اخبار براساس کلید واژه ی :بودجه سلامت )

[[https://www.icana.ir/Fa/Tags/34572/%D8%A8%D9%88%D8%AF%D8%AC%D9%87\\_%D8%B3%D9%84%D8%A7%D9%85%D8%AA](https://www.icana.ir/Fa/Tags/34572/%D8%A8%D9%88%D8%AF%D8%AC%D9%87_%D8%B3%D9%84%D8%A7%D9%85%D8%AA)] Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Health. December 21 2019. "Increase of 14% in the budget of the health sector in the budget bill

[13] 99 (افزایش 14 درصدی بودجه حوزه سلامت در لایحه بودجه 99)

[<https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/%D8%A7%D9%81%D8%B2%D8%A7%DB%8C%D8%B4-14-%D8%AF%D8%B1%D8%B5%D8%AF%DB%8C-%D8%A8%D9%88%D8%AF%D8%AC%D9%87-%D8%AD%D9%88%D8%B2%D9%87-%D8%B3%D9%84%D8%A7%D9%85%D8%AA-%D8%AF%D8%B1-%D9%84%D8%A7%DB%8C%D8%AD%D9%87-%D8%A8%D9%88%D8%AF%D8%AC%D9%87-99>] Accessed November 2020

[5] Islamic Republic News Agency (IRNA). "Details of the budget bill 98: Next year's Ministry of Agriculture budget was delayed (جزئیات لایحه بودجه 98: بودجه سال آینده وزارت کشاورزی عقب گرد کرد)"

[<https://www.irna.ir/news/83146921/%D8%A8%D9%88%D8%AF%D8%AC%D9%87-%D8%B3%D8%A7%D9%84-%D8%A2%D9%8A%D9%86%D8%AF%D9%87-%D9%88%D8%B2%D8%A7%D8%B1%D8%AA-%D9%83%D8%B4%D8%A7%D9%88%D8%B1%D8%B2%D9%8A-%D8%B9%D9%82%D8%A8-%DA%AF%D8%B1%D8%AF-%D9%83%D8%B1%D8%AF>] Accessed November 2020

[6] Islamic Republic of Iran. Ministry of Foreign Affairs. Website. [<https://en.mfa.ir/>] Accessed November 2020

[7] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[8] World Health Organization (WHO). IRAN (ISLAMIC REPUBLIC OF) EASTERN MEDITERRANEAN. Webpage. [<http://open.who.int/2018-19/country/IRN>] Accessed November 2020

#### 5.5.4b

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

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

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

**Current Year Score: 1**

There is evidence that Iran has applied funds received from foreign donors towards improving its own domestic capacity to address epidemic threats within the past three years. There is little to no evidence that it has provided funds or technical support to other countries to improve their capacity to address epidemic threats, within this time frame.

Iran has received funds from multilateral donors to improve capacity. The GIDA Global Health Security Tracker indicates that over the 2014-2020 period USD123.44m was disbursed to Iran and USD177.40m committed to improve core capacity in various health-related fields. Of these totals, USD 1.25m were disbursed for immunization, almost USD 270K were disbursed for real time surveillance, and USD 121K were disbursed for antimicrobial resistance. By contrast, GIDA indicates that over this time period Iran had neither disbursed nor committed any funds to other countries for these purposes. [1]

Similarly, there is little to no evidence from the health and foreign affairs ministries or from the World Health Organization (WHO) that Iran's government has raised funds on its own to support a specific public-policy commitment to address epidemic disease. [2,3, 4]

[1] Georgetown University.Georgetown Infectious Disease Atlas (GIDA) Global Health Security Tracker. 2020. [<https://tracking.ghscosting.org/explore/map>] Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Foreign Affairs. Website. [<https://en.mfa.ir/>] Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [<http://www.behdasht.gov.ir/>] Accessed November 2020

[4] World Health Organization (WHO). IRAN (ISLAMIC REPUBLIC OF) EASTERN MEDITERRANEAN. Webpage. [<http://open.who.int/2018-19/country/IRN>] Accessed November 2020

#### 5.5.4c

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

Yes = 1 , No = 0

**Current Year Score: 0**

2021

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

## 5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

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

#### 5.6.1a

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

Yes = 1, No = 0

Current Year Score: 0

Available evidence does not indicate that Iran has a publicly available plan or policy for sharing genetic data, epidemiological data, clinical specimens, and/or isolated specimens (biological materials) on pandemic pathogens with international organizations and/or other countries that goes beyond influenza.

Iran has a fairly advanced health care system and clinical specimens relating to infectious diseases are readily collected and analysed by professional institutions such as teaching hospitals. Iran's key policy document on public health disasters and emergencies allows for the sending of such specimens to international reference laboratories, [1] and an official cross-border specimen-transport protocol exists. [2] However, there is little evidence of an actual policy in place, such as from the health or agriculture ministries, for sharing specimens--other than influenza--with relevant foreign institutions. [3, 4]

[1] Islamic Republic of Iran. Ministry of Health and Medical Education. 2015. "I.R. Iran National Health Disaster and Emergency Response Operations Plan (برنامه ملی پاسخ نظام سلامت در بالیا و فوریت ها)." [\[http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf\]](http://darman.tums.ac.ir/Content/media/filepool3/2016/1/1509.pdf) Accessed November 2020

[2] Islamic Republic of Iran. Ministry of Health and Medical Education. 2018. "National Guidelines for the Cross-Border Transport of Biomedical Samples for Research Purposes (دستورالعمل ملی انتقال فرامرزی نمونههای زیستپزشکی با هدف پژوهشی)." [\[https://ethics.research.ac.ir/docs/ethics\\_material\\_transfer.pdf\]](https://ethics.research.ac.ir/docs/ethics_material_transfer.pdf) Accessed November 2020

[3] Islamic Republic of Iran. Ministry of Health and Medical Education. Website. [\[http://www.behdasht.gov.ir/\]](http://www.behdasht.gov.ir/) Accessed November 2020

[4] Islamic Republic of Iran. Ministry of Agricultural Jihad. Website. [\[https://maj.ir/index.aspx?lang=2&sub=0\]](https://maj.ir/index.aspx?lang=2&sub=0) Accessed November 2020

#### 5.6.1b

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

Yes = 0, No = 1

Current Year Score: 1

There is no public evidence that Iran has not shared influenza samples in accordance with the PIP framework in the past two years.

That said, according to the World Health Organization (WHO), Iran does not have a publicly available national influenza



preparedness plan, which would stipulate norms for international reporting of data on influenza pandemics. [1] The WHO's Pandemic Influenza Preparedness (PIP) Framework acknowledges the existence of a National Influenza Center (NIC) at Tehran University, classifying this lab as a Global Influenza Surveillance and Response System (GISRS) NIC, but does not mention the sharing of samples by this institution. [2]

Finally, a review of articles in the local and international news media does not reveal any information about Iran withholding influenza samples over the last two years.

[1] World Health Organization (WHO). Strategic Partnership for International Health Regulations (2005) and Health Security (SPH). "National Plans for Pandemic Preparedness and Risk Management". [<https://extranet.who.int/sph/influenza-plan>] Accessed November 2020

[2] World Health Organization (WHO). National Influenza Centres. [[https://www.who.int/influenza/gisrs\\_laboratory/national\\_influenza\\_centres/list/en/index2.html](https://www.who.int/influenza/gisrs_laboratory/national_influenza_centres/list/en/index2.html)] Accessed November 2020

### 5.6.1c

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

Yes = 0 , No = 1

**Current Year Score: 1**

There is no public evidence that Iran has not shared pandemic pathogen samples during an outbreak of a disease other than influenza in the past two years. However, international media sources have alleged that Iran's government has deliberately withheld data on the current COVID-19 pandemic, which has severely affected Iran.

According to the WHO, Iran's last notification of a pathogen-related outbreak was on May 9 2019. As the WHO states; "On 9 May 2019, the Global Polio Laboratory Network (GPLN) notified WHO of the detection of wild poliovirus type 1 (WPV1) from an environmental sewage sample collected on 20 April 2019 in Konarak district, Sistan-Baluchistan province, Islamic Republic of Iran. The virus was detected in an environmental sample only, and to date, no associated cases of paralysis have been detected. The subsequent scheduled sewage sample collected from the same site on 4 May 2019 (2 weeks after the positive sample) tested negative for poliovirus." [1]

Evidence indicates that Iran has shared samples of the COVID-19 pathogen with at least one country, India, during the current pandemic outbreak. In March 2020, the Indian press reported that scientists had been sent by India to take samples from a number of Indian nationals stranded in Iran' the samples were brought back to India to be tested. [2]

However, in August 2020 a number of articles published by international media sources, among them the BBC, reported a leak of official Iranian incidence and mortality data on COVID-19 that suggest a level of infection in the country nearly double and a level of fatalities nearly triple that published by the government up to that time. [3]

[1] World Health Organization (WHO). Emergencies preparedness, response. "Iran." [<https://www.who.int/csr/don/archive/country/irn/en/>] Accessed November 2020

[2] Anuradha Mascarenhas. March 10, 2020. "Covid-19 outbreak: Samples from Indians in Iran sent to NIV." Indian Express. <https://indianexpress.com/article/india/covid-19-samples-from-indians-in-iran-sent-to-niv-6307558/>] Accessed December 2020

[3] BBC News. August 3 2020. "Coronavirus: Iran cover-up of deaths revealed by data leak."

[<https://www.bbc.com/news/world-middle-east-53598965>] Accessed December 2020

## Category 6: Overall risk environment and vulnerability to biological threats

### 6.1 POLITICAL AND SECURITY RISK

#### 6.1.1 Government effectiveness

##### 6.1.1a

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

Input number

Current Year Score: 1

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: 25

2020

Transparency International

### 6.1.1f

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

Input number

Current Year Score: 1

2020

Economist Intelligence

### 6.1.1g

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

Input number

Current Year Score: 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: 0**

2021

Economist Intelligence

### 6.1.4 Illicit activities by non-state actors

#### 6.1.4a

**How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?**

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

**Current Year Score: 1**

2021

Economist Intelligence

#### 6.1.4b

**What is the level of illicit arms flows within the country?**

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

**Current Year Score: 0**

2020

UN Office of Drugs and Crime (UNODC)

#### 6.1.4c

**How high is the risk of organized criminal activity to the government or businesses in the country?**

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

**Current Year Score: 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: 2

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: 0

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: 85.54**

2016

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: 0.51**

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: 0.1**

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: 1**

Evidence indicates that in Iran the share of employment in the informal sector is between 25% and 50%. According to an article published in the Iranian press in 2016, fully one third of the nation's workforce was employed in the informal economy, generating a fifth of economic output. [1]

[1] Financial Tribune. August 21 2016. "Growth in Informal Sector Undermining Economy."

[<https://financialtribune.com/articles/domestic-economy/48138/growth-in-informal-sector-undermining-economy>] Accessed November 2020.

### 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: 0**

2021

Economist Intelligence Democracy Index

## 6.2.5 Local media and reporting

### 6.2.5a

#### Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

Input number

**Current Year Score: 1**

2021

Economist Intelligence Democracy Index

## 6.2.6 Inequality

### 6.2.6a

#### Gini coefficient

Scored 0-1, where 0=best

**Current Year Score: 0.42**

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: 2

2021

Economist Intelligence

### 6.3.3 Adequacy of power network

#### 6.3.3a

What is the risk that power shortages could be disruptive?

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

Current Year Score: 1

2021

Economist Intelligence

## 6.4 ENVIRONMENTAL RISKS

### 6.4.1 Urbanization

#### 6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 75.39

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: 0.19

2008-2018

World Bank; Economist Impact

## 6.4.3 Natural disaster risk

### 6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

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

Current Year Score: 0

2021

Economist Intelligence

## 6.5 PUBLIC HEALTH VULNERABILITIES

### 6.5.1 Access to quality healthcare

#### 6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 76.48

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: 445.7

2019

WHO

### 6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 6.36

2019

World Bank

### 6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 14

2018

World Bank

### 6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 25.8

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: 95.24

2017

UNICEF; Economist Impact

### 6.5.2b

**Percentage of homes with access to at least basic sanitation facilities**

Input number

**Current Year Score: 88.42**

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: 776.79**

2018

WHO Global Health Expenditure database

## 6.5.4 Trust in medical and health advice

### 6.5.4a

**Trust medical and health advice from the government**

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 1**

2018

Wellcome Trust Global Monitor 2018

### 6.5.4b

**Trust medical and health advice from medical workers**

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018