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

<table>
<thead>
<tr>
<th>CATEGORY 1: PREVENTING THE EMERGENCE OR RELEASE OF PATHOGENS WITH POTENTIAL FOR INTERNATIONAL CONCERN</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Antimicrobial resistance (AMR)</td>
<td>4</td>
</tr>
<tr>
<td>1.2 Zoonotic disease</td>
<td>8</td>
</tr>
<tr>
<td>1.3 Biosecurity</td>
<td>14</td>
</tr>
<tr>
<td>1.4 Biosafety</td>
<td>23</td>
</tr>
<tr>
<td>1.5 Dual-use research and culture of responsible science</td>
<td>28</td>
</tr>
<tr>
<td>1.6 Immunization</td>
<td>33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY 2: EARLY DETECTION AND REPORTING FOR EPIDEMICS OF POTENTIAL INTERNATIONAL CONCERN</th>
<th>34</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Laboratory systems strength and quality</td>
<td>34</td>
</tr>
<tr>
<td>2.2 Laboratory supply chains</td>
<td>36</td>
</tr>
<tr>
<td>2.3 Real-time surveillance and reporting</td>
<td>38</td>
</tr>
<tr>
<td>2.4 Surveillance data accessibility and transparency</td>
<td>40</td>
</tr>
<tr>
<td>2.5 Case-based investigation</td>
<td>47</td>
</tr>
<tr>
<td>2.6 Epidemiology workforce</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY 3: RAPID RESPONSE TO AND MITIGATION OF THE SPREAD OF AN EPIDEMIC</th>
<th>52</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Emergency preparedness and response planning</td>
<td>52</td>
</tr>
<tr>
<td>3.2 Exercising response plans</td>
<td>60</td>
</tr>
<tr>
<td>3.3 Emergency response operation</td>
<td>63</td>
</tr>
<tr>
<td>3.4 Linking public health and security authorities</td>
<td>65</td>
</tr>
<tr>
<td>3.5 Risk communications</td>
<td>66</td>
</tr>
<tr>
<td>3.6 Access to communications infrastructure</td>
<td>70</td>
</tr>
</tbody>
</table>
3.7 Trade and travel restrictions

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
4.2 Supply chain for health system and healthcare workers
4.3 Medical countermeasures and personnel deployment
4.4 Healthcare access
4.5 Communications with healthcare workers during a public health emergency
4.6 Infection control practices and availability of equipment
4.7 Capacity to test and approve new medical countermeasures

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
5.2 Cross-border agreements on public health and animal health emergency response
5.3 International commitments
5.4 Joint External Evaluation (JEE) and Performance of Veterinary Services Pathway (PVS)
5.5 Financing
5.6 Commitment to sharing of genetic and biological data and specimens

CATEGORY 6: OVERALL RISK ENVIRONMENT AND VULNERABILITY TO BIOLOGICAL THREATS

6.1 Political and security risk
6.2 Socio-economic resilience
6.3 Infrastructure adequacy
6.4 Environmental risks
6.5 Public health vulnerabilities
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

Armenia has a national AMR plan for the surveillance, detection, and reporting of priority AMR pathogens. Article 25 of the 2015 Strategy for Antimicrobial Resistance Control and Prevention states seven directions for implementation: 1) establishment of a governance system for AMR policy development and implementation; 2) establishment of an epidemiological surveillance system; 3) enhancement of the reporting system for pathogen control at medical institutions; 4) development of a laboratory system for AMR detection; 5) reform of the legislative framework on AMR; 6) continuous training of healthcare professionals and population awareness-raising on AMR; and 7) AMR prevention in the agricultural field. [1] The 2015–2020 action plan for the strategy's implementation, adopted on the same date, lays out actions corresponding to each of the seven directions, indicating responsible agencies, co-agents, implementation dates, expected outcomes, financing, and verifiable criteria. For surveillance, detection, and reporting, those include, inter alia, adoption of at least two guides, to be sent to stakeholders and published on the Ministry of Health website; existence of advisory pharmacology commissions at medical institutions; existence of registration, accounting, and reporting forms; launch of an electronic database; participation in World Health Organization regional meetings; annual written report of the interministerial commission on equipment, technology, and human resources; methodology seminars at medical institutions; and quality assurance at laboratories. [1]


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

Armenia has a national laboratory system that tests for all 7+1 priority AMR pathogens. Article 43 of the 2012-2016 Strategic Plan of the Government of Armenia for Infectious Disease Prevention and Control (adopted 2011) envisaged the
development of a national integrated laboratory system that would provide testing compliant with international health standards. [1] Such a system has been in place since October 2013, and currently has 12 laboratories. [2, 3, 4] The National Center for Disease Control and Prevention of the Ministry of Health of Armenia has released monthly reports on the epidemiological situation in the country, the latest of which (October 2019) lists registered cases for all the priority pathogens. [5, 6] The sixth Central Asian and European Surveillance of Antimicrobial Resistance (CAESAR) report has data on nine pathogens reported in Armenia, of which five (E. coli, K. pneumoniae, Salmonella spp, S. aureus, and S. pneumoniae), are on the WHO priority list. [7]


1.1.1c

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

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that the Government of Armenia conducts environmental detection activities for antimicrobial residues or AMR organisms. The government agency responsible for conducting environmental detection and surveillance activities in Armenia is the Hydrometeorology and Monitoring Center of the Ministry of Environment. [1, 2] There is evidence that regular
detection and surveillance activities are conducted in the air, waterways, soil, and forests. [3] However, the latest quarterly report on such activities (third quarter of 2020) does not refer to or contain statistics on antimicrobial residues and AMR organisms. [4] The 2015 Strategy for Antimicrobial Resistance Control and Prevention and its Action Plan for years 2015-2020 do not have provisions on environmental detection for antimicrobial residues or AMR organisms. [5] The 2017 Joint External Evaluation (JEE) of IHR Core Capacities of the Republic of Armenia states that the AMR detection system in Armenia is functional and guidelines for surveillance are in place, but there is no reference to environmental detection. [6] There is no further evidence on the Ministry of Health website. [7]


1.1.2 Antimicrobial control

1.1.2a

Is there national legislation or regulation in place requiring prescriptions for antibiotic use for humans? 
Yes = 2, Yes, but there is evidence of gaps in enforcement = 1, No = 0

Current Year Score: 2

Armenia has national legislation and regulations requiring prescriptions for antibiotic use for humans, and there is no evidence of gaps in enforcement. Article 16.24 of the Law on Pharmaceuticals (adopted May 2016, last amended June 2020) requires prescriptions for pharmaceuticals that may cause direct or indirect harm to patient health, be abused, lead to dependency, or otherwise illegally used, and those that need further testing. [1] In accordance with article 16.25 of the same law, the list of pharmaceuticals that require prescription is published on the Ministry of Health website, with reference to the
regulatory agency. [1, 2, 3] As of 31 October 2020, around 3,000 pharmaceuticals can be dispensed only with a prescription, among which are such antibiotics as ampicillin, azithromycin, benzylpenicillin, cefotaxime, moxifloxacin, rifampicin, and thiamphenicol. [3] There were gaps in enforcement of the law before November 2017, when the government adopted a decree banning the sale of prescription pharmaceuticals without a valid prescription. [4, 5] In August 2019, a new decree was issued, repealing the November 2017 decree. [6] Although the two documents contain similar provisions on prescription forms, article 25 of the current regulation bans multiple sales of soporifics, medications containing psychotropic (psychoactive) substances, antibiotics, and radioactive pharmaceuticals. In addition, article 26 bans the sale of antibiotic, antimicrobial, and antiviral medical substances produced at pharmacies. [6] Academic research from 2015-2016 suggests that patient knowledge about AMR is high in Armenia, and pharmacies mostly do not dispense antibiotics without a prescription. [7]


1.1.2b

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

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

**Current Year Score:** 2

Armenia has national legislation requiring prescriptions for antibiotic use for animals, and there is no evidence of gaps in enforcement. The Law on Pharmaceuticals (adopted May 2016, last amended June 2020) refers to both human and animal health when defining medication in article 3.1, and in article 16.24 requires prescriptions for pharmaceuticals that may cause direct or indirect harm to patient health, be abused, lead to dependency, or otherwise be illegally used, and those that need further medical testing. [1] In accordance with article 16.25 of the same law, the list of pharmaceuticals that require prescription is published on the Ministry of Health website, with reference to the drug regulatory agency. [1, 2, 3] As of 31 October 2020, around 3,000 pharmaceuticals can be dispensed only with a prescription, among which are such animal antibiotics as amikacin, amoxicillin, clindamycin, enrofloxacin, gentamicin, lincomycin, tobramycin, tylosin, and vancomycin. [3]


1.2 ZOOONOTIC 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

Armenia has a national plan for zoonotic diseases. The Zoonotic Disease Control Plan and its Implementation Measures were approved by the government of Armenia in December 2012. [1] The Control Plan discusses zoonotic diseases as a risk to human health worldwide and provides background and statistics on zoonotic diseases in Armenia. [1] Diseases covered include brucellosis, avian influenza, pasteurellosis, leptospirosis, tuberculosis, anthrax, and rabies. The document serves as a strategy, setting six priorities with respective actions: 1) zoonotic disease policy development and implementation; 2) epidemiological surveillance system, including reporting; 3) response capacity development; 4) development of a laboratory detection system; 5) professional training and development; and 6) research in the field. [1]

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: 1

Armenia has a national plan that includes measures for zoonotic disease spillover risk identification and reduction. The Zoonotic Disease Control Plan and its Implementation Measures were approved by the government of Armenia in December 2012. [1] The document identifies animal agriculture as one of the pathways for transmission, noting that farmers, their family members, shepherds, and veterinarians may come into direct contact with infected animals. Another pathway identified is laboratories where staff do not follow biosecurity and biosafety rules. [1] Risk identification and reduction measures include the adoption of zoonotic disease analysis and evaluation guides, as well as biosafety and biosecurity rules for laboratories, development of sanitary-epidemiological rules and norms, adoption of emergency response procedures and mobilization plans, and development of criteria for animal quarantine, treatment, forced slaughter or extermination during a panzootic. [1]


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

Armenia has national plans and guidelines that account for the surveillance and control of multiple zoonotic pathogens. The national plans for the highly pathogenic avian influenza and brucellosis were approved by the Government of Armenia in January 2006 and December 2013 respectively. [1, 2] Guidelines for anthrax, pasteurellosis, tularemia, leptospirosis, and rabies were adopted by the State Food Safety Service of the Ministry of Agriculture (currently the Food Safety Inspectorate of the Republic of Armenia) between July 2013 and June 2014. [3, 4, 5, 6, 7] All documents are current, having introductory sections on the covered zoonotic disease and entailing provisions for their surveillance and control. The guideline for anthrax states that animal owners, farmers, and community veterinarians should inform the state authority about symptoms of the disease, such as tumors on the animal body, and take preventive measures: recording temperature, quarantining, and taking pathogen samples for laboratory examination. [3] The guideline for pasteurellosis requires that all farms have sanitary checkpoints, with staff supplied with medical equipment; anti-rat measures should be in place in farms, and reclamation works should be carried out in pastures to eliminate swampy and stagnant waters; in communities where cases of the disease have been registered, mandatory vaccination of the herds should be carried out, and all newly-acquired animals should be quarantined for 30 days. [4] The guideline for leptospirosis states that community/farm veterinarians take blood samples from animals (cattle, pigs, and horses) and twice a year submit those to the Republican Center for Veterinary and Phytosanitary Laboratory Services; they are required to informal regional authorities about the epidemiological situation on
their farms. Unregistered import or export of animals, as well as use of open reservoir waters for animal drinking or bathing are banned. In communities with registered cases of the disease, milk should be boiled and use as animal feed; suspected cases should be examined, quarantined, and treated in accordance with the established guidelines. [6]


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

Armenia does not have a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries. According to article 3 of the Law on Veterinary Medicine (adopted 2014, last amended June 2020), the state agency dedicated to zoonotic disease in Armenia is the Food Safety Inspectorate (previously, the State Food Safety Service of the Ministry of Agriculture). [1] After government reorganization in 2018-2019, this agency became separate from the Ministry of Agriculture (which now de facto no longer exists, its functions being carried out by the Ministry of Economy) and operates based on its statute adopted in December 2019. [2, 3] According to article 5.2 of the Law on Food Safety Control (adopted 2014, last amended November 2019), the Inspectorate collaborates with domestic and foreign state authorities, non-governmental organizations, and international organizations in the fields of human and animal food safety, veterinary medicine, and phytosanitary. [4] In cases of zoonotic disease outbreaks and food poisoning, it "organizes and implements measures jointly with the state body for disease prevention and control [i.e., the National Center for Disease Prevention and Control of the Ministry of Health]." [4] There is no evidence that the Inspectorate is staffed, funded, or reports by more than one ministry.


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

Armenia has a national mandatory mechanism for livestock owners to conduct and report disease surveillance to a central government agency. Articles 16–19 of the Law on Veterinary Medicine (adopted 2014, last amended in June 2020) state that animal infectious diseases are subject to mandatory reporting and registration, and that the World Organization for Animal Health should be notified in accordance with its established procedure. [1] The form for registering surveillance results, as required by law, has been adopted by the Food Safety Inspectorate (formerly the State Food Safety Service of the Ministry of Agriculture). [2] The Food Safety Inspectorate has a hotline and a website that livestock owners can use to report disease
surveillance. [3]


1.2.2b

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Armenia has any legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners). Article 16.2 of the Law on Veterinary Medicine (adopted 2014, last amended June 2020) states that natural and legal persons in the field of veterinary medicine are liable for office abuse, including for sharing information that contains state and trade secrets. [1] Article 4 of the Law on Personal Data Protection (adopted 2015, last amended July 2019) states that personal data generated lawfully and with a specific purpose may not be used for other purposes without the consent of the owner. [2]


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

Armenia conducts surveillance of zoonotic disease in wildlife. The 2016 Joint External Evaluation of IHR Core Capacities of Republic of Armenia states that entomological surveillance, monitoring of rodent populations, and surveillance of the bird population are among activities that are routinely performed, using GIS mapping, to assess potential risks of zoonotic events.
The government agency responsible for conducting wildlife surveillance in Armenia is the Inspectorate for Nature Protection and Mineral Resources, but its website and 2019 annual report do not provide any details on surveillance for zoonotic disease. [2, 3, 4, 5]


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: 1

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: 11.83

2019
OIE WAHIS database

1.2.4b
Number of veterinary para-professionals per 100,000 people
Input number

Current Year Score: 8.11
1.2.5 Private sector and zoonotic

1.2.5a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that Armenia’s national plan on zoonotic diseases includes mechanisms for working with the private sector in controlling and responding to zoonoses. Article 19 of the Zoonotic Disease Control Plan, adopted in December 2012, states that the plan aims to strengthen the cooperation between government bodies and other stakeholders in addressing zoonotic diseases in the country. It does not elaborate on these stakeholders [1] It further elaborates that mechanisms should be in place to enable cooperation at regional and community levels. [1] The Implementation Measures of the Control Plan, adopted on the same date, identify such mechanisms of cooperation as joint development of epidemic control guides and reporting, introduction of biosafety guidelines for laboratories, and research on zoonoses. [1] No further evidence was found via the Ministry of Health. [2]


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: 1**

Armenia has 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. The 2016 Mission Report of the WHO Joint External Evaluation in Armenia states that the country "has a good system of biosafety and biosecurity, and the Government regulates storage and transport of pathogens. Annual recording and reporting of particularly dangerous pathogens is performed using the established inventory tool." [1] The National Center for Disease Prevention and Control of the Ministry of Health of Armenia has been updating the record of these facilities annually since...
2017, including details on inventories and inventory management. [2]


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: 1

Armenia has legislation and regulations related to biosecurity that address requirements such as physical containment, operation practices, and failure reporting systems of facilities in which especially dangerous pathogens and toxins are stored or processed. The general requirements for biosecurity, biosafety, chemical, and radiological security at laboratories were adopted by the Armenian government in February 2015. [1] According to articles 4-8 of the decree, facilities are required to document all operations in accordance with internally established procedures, have in place response plans for accidents, incidents, and emergencies, guidelines for personal protective equipment use, a designated person for biosafety, biosecurity, chemical or radiological security (depending on facility), and a five-year personnel training and development plan. [1] Article 9 of the same decree states that facilities should assess dangers, threats, and risks to safety and security, taking measures to address and reduce those. [1] There are requirements for biosecurity lockers, alarm systems, and human resources (police force) for laboratory defense, as stated in articles 20 and 28. [1] An order adopted by the Minister of Health sets the sanitary-hygiene rules and norms at biological, chemical, and radiological laboratories. [2]


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: 1

Armenia has an agency responsible for the enforcement of biosecurity legislation and regulations. The government agency responsible for the enforcement of biosecurity legislation in Armenia is the Health and Labor Inspectorate. [1, 2] The Inspectorate was established after government reorganization in 2018 and operates based on its statute adopted in June 2018. [3] As stated in section 2 of its statute, the aim of the Inspectorate is to ensure enforcement of the legislation in the fields of health and labor, while its objectives include, among others, surveillance over adherence to security norms and rules, risk management in healthcare and medicine, and implementation of preventive measures for public health. [3] A 2020 government decree delineates four fields under the Inspectorate’s surveillance: sanitation, hygiene, and epidemiology; medicines and pharmacology; healthcare services; employee health and safety. [4] Inspection checklists adopted by the same decree reveal that the Inspectorate checks for the protection, control of, and accountability for high-consequence biological agents and toxins, and critical relevant biological materials within laboratories to prevent unauthorized possession, loss, theft, misuse, diversion, or intentional release. [5] Among items subject to inspection are the existence of a biosecurity guideline setting procedures and scopes of staff accountability, requirements for material storage in closed, durable, leak-proof, and labelled containers, restrictions on unauthorized access to storage sites, and material accounting. [5]


1.3.1d
Is there public evidence that shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities?  
Yes = 1, No = 0

Current Year Score: 0

There is insufficient public evidence that Armenia has taken action to consolidate the inventories of especially dangerous pathogens and toxins into a minimum number of facilities. Referring to the whole-of-government national biosecurity and
biosafety system for human, animal, and agricultural facilities, the 2016 Mission Report of the World Health Organization’s Joint External Evaluation in Armenia states that “All high containment specimens are in one place.” [1] A 2014 amendment to a 2005 government decree on reorganizing state non-commercial organizations under the Ministry of Agriculture contains evidence that over a dozen facilities have been consolidated into one, the Republican Center for Animal Medicine and Phyto sanitary Laboratory Services. [2, 3]


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

There is public evidence that Armenia has in-country capacity to conduct polymerase chain reaction (PCR) diagnostic testing for both Anthrax and Ebola, which would preclude culturing a live pathogen. The Code of Conduct of a Patient with Anthrax, adopted in May 2019 by the order of the Minister of Health of Armenia, requires both serology and PCR testing of patients with Anthrax. [1] The Code of Conduct of Patients with Viral Hemorrhagic Fever, adopted at the same time, sets the following general criteria for laboratories, one or several of which may be met: virus antigen detection in the blood through immunoenzymatic assay (ELISA); virus isolation in cell culture; virus genome detection through Reverse Transcriptase PCR; virus antigens detection using the immunohistochemistry (IHC) method. [2] Section 3 of the Order states that the RT PCR method is preferred for diagnostic testing for Ebola, Marburg, Lassa, and Crimea-Congo fevers. [2] Testing for both anthrax and Ebola is conducted by the National Center for Disease Prevention and Control of the Ministry of Health. [3]


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: 1

Armenia requires mandatory standardized biosecurity training for personnel at facilities housing or working with especially dangerous pathogens, toxins, and biological materials with pandemic potential. An order setting the general requirements for personnel engaged in biosecurity, biosafety, and quality processes and procedures at laboratories housing radiological,
chemical, or biological toxins was adopted jointly by the ministers of health and agriculture in June 2014. [1] Article 8 of annex 1 of the order states that the person responsible for biosecurity within the quality assurance system is obliged, inter alia, "to organize biosecurity and biosafety training for laboratory staff and assess their acquired knowledge." [1] Article 10 of annex 3 of the same order elaborates on the training, noting that it needs to cover a) rules for working with especially dangerous pathogens (including technical rules and methods for processing, transportation, and secure storage of biological samples); and b) rules for sample packaging and transportation. The common curriculum for biosecurity and biosafety training for laboratory personnel was adopted in June-July 2014 jointly by the ministers of health, agriculture, environment, and education and science, and the chairman of the nuclear security committee. [2] It is stated in the order that the training should comprise both theoretical sessions, which will cover the principles of biosecurity, biosafety, chemical, and radiological security, as well as practical sessions, including case analyses. Lectures should be combined with presentations and practical exercises. [2] Article 13 of the order lists 16 topics that the theoretical sessions need to cover. Among those are principles of laboratory biosecurity and biosafety, the legislation of the field, risk management, biosecurity guides and standard procedures, emergency response and reporting, and sample management. [2] The National Institute of Health of the Ministry of Health of Armenia has endorsed for publication a biosafety and biosafety training manual for laboratory personnel. [3]
1.3.3 Personnel vetting: regulating access to sensitive locations

1.3.3a
Do regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks?

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

Current Year Score: 0

There is insufficient evidence that Armenia has regulations specifying that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to background and mental fitness checks. Two joint orders of the ministers of health and agriculture, adopted in June 2014, require that laboratory personnel at facilities housing or working with radiological, chemical, and biological pathogens be subject to background checks and skills assessments. [1, 2] Article 10 of the 2014 Decree on Adopting the Guideline for Human Resource Practices at Laboratories states that job descriptions of all laboratory workers should include five components, as follows: background knowledge, responsibilities, rights, accountability, and capabilities and skills. [1] A sample code of conduct, enclosed in the same decree, states that for each position, requirements for education, training, skills, and experience are developed. [1] Article 3 of the 2014 Decree on Adopting the Requirements for and Responsibility Sets of Personnel Engaged in Biosecurity, Biosafety, and Quality Processes and Procedures at the Laboratory System adds to the requirements set in the first decree the following: employee progress, job performance and awareness appraisal, records of associated incidents and accidents, absences, and results of regular medical testing, and vaccinations. [2] The decrees require medical testing for both permanent and temporary personnel, but do not elaborate on what these include. [1, 2] There is no evidence of any further requirements on the websites of the Ministry of Health or the National Center for Disease Prevention and Control websites. [3, 4]

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**

Armenia has a national regulation on the safe and secure transport of infectious substances, specifically including categories A and B. The Order the Minister of Health on Adopting the Sanitary-Hygienic Requirements for Hazardous Cargo Transportation was adopted in June 2014. [1] The regulation includes general requirements for working with and storage of infectious substances, specific provisions on transportation planning, personnel training, sample labeling, packaging, accounting, cargo marking, documentation, transportation, emergency response, and delivery (substance Groups 1-4), as well as specific requirements for packaging category A and B substances. [1] The order also has an annex listing category A substances, referring to the UN codes. [1]


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?**
Armenia has legislation and regulations to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins, and pathogens with pandemic potential. Articles 15 and 16 of the Law of Armenia on Road Transportation of Hazardous Cargo and Containers (adopted February 2012, last amended July 2020) state that cross-border transportation of hazardous cargo is subject to provisions of international treaties to which Armenia is a signatory, including the European Agreement concerning on Work of Crews of Vehicles Engaged in International Road Transport. [1] Articles 13 and 15 of the same law state that the transporter has the right to “receive compensation for damage caused by the shipper or the end-user” and that the “responsibility for oversight over cargo loading and unloading lay with the representative of the shipper or the end-user, who accompanies the cargo.” [1] Articles 32 and 46 of the order of the minister of health on transportation of hazardous substances specify such requirements for cross-border transfer as proof that the shipping company has an international permit or certificate, and compliance with transport guides of the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA). [2] Requirements for end-user screening, as stated in articles 68-73 of the same order, include detailed documentation providing natural and legal names of the end-user, residence place (location), and a phone number.


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

Armenia has national biosafety legislation and regulations. The Government Decree on Adopting the General Requirements for Laboratory Biosecurity, Biosafety, Chemical, and Radiological Security System was adopted in February 2015. [1] The decree defines biosafety and states that laboratories need to have biosafety plans and guides, designate a person for biosafety, develop five-year plans for personnel development, and hold trainings on biosafety rules. [1] An order was adopted jointly by the ministers of health and agriculture in June 2014 titled, Joint Order of the Minister of Health of the Republic of Armenia and Minister of Agriculture of the Republic of Armenia on Adopting the Requirements for and Responsibility Sets of Personnel Engaged in Biosecurity, Biosafety, and Quality Processes and Procedures at the Laboratory...
System, of 12 and 18 June 2014, No. 35-N and 147-N&#39;. This order sets the requirements for personnel engaged in biosafety processes and procedures at biological, chemical, and radiological laboratories. [2] Annex 2 of the order specifies the profile of a person responsible for laboratory biosafety, outlining responsibilities, rights, and obligations. [2]


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

Armenia has an agency responsible for the enforcement of biosafety legislation and regulations. The government agency responsible for the enforcement of biosafety legislation in Armenia is the Health and Labor Inspectorate. [1, 2] The Inspectorate was established after government reorganization in 2018 and operates based on its statute adopted in June 2018. [3] As stated in section 2 of its statute, the aim of the Inspectorate is to ensure enforcement of the legislation in the fields of health and labor, while its objectives include, among others, surveillance over adherence to security norms and rules, risk management in healthcare and medicine, and implementation of preventive measures for public health. [3] A 2020 government decree delineates four fields under the Inspectorate’s surveillance: sanitation, hygiene, and epidemiology; medicines and pharmacology; healthcare services; employee health and safety. [4] Inspection checklists adopted by the same decree reveal that the Inspectorate checks for the prevention of workplace accidents that involve the release of harmful biological substances. [5] Among the items subject to inspection are mandatory initial and regular medical examination of laboratory staff, as well as use of personal protective equipment: gloves, goggles, masks, waterproof overalls and shoes.


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
Armenia requires mandatory standardized biosafety training for personnel at facilities housing or working with especially dangerous pathogens, toxins, and biological materials with pandemic potential. An order setting the general requirements for personnel engaged in biosecurity, biosafety, and quality processes and procedures at laboratories housing radiological, chemical, or biological toxins was adopted jointly by the ministers of health and agriculture of Armenia in June 2014. [1] Article 8 of annex 1 of the order states that the person responsible for biosecurity within the quality assurance system is obliged, inter alia, "to organize biosecurity and biosafety training for laboratory staff and assess their acquired knowledge." [1] Article 10 of annex 3 of the same order further elaborates on the training, noting that it needs to cover a) rules for working with especially dangerous pathogens (including technical rules and methods for processing, transportation, and secure storage of biological samples); and b) rules for sample packaging and transportation. [1] The curriculum for biosecurity and biosafety training for laboratory personnel was adopted in June-July 2014 jointly by the ministers of health, agriculture, environment, education and science, and the chairman of the Nuclear Security Committee. [2] It is stated in the order that the training should comprise both theoretical sessions, which will cover the principles of biosecurity, biosafety, chemical, and radiological security, as well as practical sessions, including case analyses. Lectures should be combined with presentations and practical exercises. [2] Article 13 of the decree lists 16 topics that need to be covered during theoretical sessions, among which are the principles of laboratory biosecurity and biosafety, the legislation of the field, risk management, emergency response and reporting, and sample management. [2] The National Institute of Health of the Ministry of Health has endorsed publication a biosecurity and biosafety training manual for laboratory personnel. [3] Furthermore, the World Health Organization’s Joint External Evaluation (JEE) of Armenia, conducted in August 2016, mentions a training system for Ministry of Health personnel with the European Union and CH2M HILL, a global engineering consultancy service.


1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

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

1.5.1a

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Armenia has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, and pathogens with pandemic potential. In line with the UN Security Council Resolution 1540 (2004) and international non-proliferation treaties, including the Treaty on the Non-Proliferation of Nuclear Weapons, in 2009–2011 Armenia revised its national legislation on dual-use research and established a task force for its implementation. [1, 2, 3] Government permits are required for the export of dual-use goods and transfer of dual-use research findings, issued on the basis of review of an application, end-user license, technical description of the exported good or transferred research, the contract, and a statement on dual-use or expert assessment. [4] However, the website of the state authority in the field, the Ministry of Economy of Armenia, does not contain further evidence on assessments conducted to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, and pathogens with pandemic potential. [5] There is similarly no evidence of such an assessment on the websites of the Ministry of Health, the National Center for Disease Prevention and Control or the Ministry of Defense. [6, 7, 8]
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: 1

Armenia has legislation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and other dual-use research. The Law of Armenia on Assessments (adopted May 2000, last amended June 2020) lists dual-use research among activities that are subject to assessment, stating that assessments may aim at "determining the validity of data provided by the organization and/or revealing the true nature of its activities." [1] The Law on Oversight over Export of Dual-use Goods, Their Transit through the Territory of Armenia, and Transfer of Dual-use Information and Research Findings (adopted April 2010, last amended July 2016) states that assessments of exported dual-use goods and delivered information and research findings are conducted in accordance with the Law on Assessments and international agreements verified by Armenia. [2]


1.5.1c
Is there an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?
Yes = 1, No = 0
Current Year Score: 0

There is insufficient evidence that Armenia has a state body responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and other dual-use research. The state body responsible for oversight of transfer of dual-use goods and research findings, as recognized by a government decree from 1 July 2010 (amended 2 February 2017), is the Ministry of Economy of Armenia. [1, 2] The Ministry issues permits for the export of dual-use goods and transfer of dual-use intangible assets (information, research outputs, and computer software) and suspends or terminates those if conditions are violated. [2] However, there is no evidence that it is responsible for oversight of research with especially dangerous pathogens, toxins, and pathogens with pandemic potential, or other dual-use research. [1, 2] There
is no further evidence on a responsible agency on the government or Ministry of Health websites. [3, 4]

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: 1

Armenia has legislation and regulations requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold. Article 16 of the Law on Pharmaceuticals (adopted May 2016, last amended June 2020) states that registration, re-registration, and/or certificate renewal of pharmaceuticals are repealed if one of the following conditions is met: a) threats to security, efficacy, and quality compliance have been found, which cannot be reconciled with human health; b) foreign and international organizations or regulatory agencies have informed of credible negative results; c) the results of three screenings for quality assurance following registration have been negative; and d)
post-registration security control has revealed extremely harmful side effects (death, threats to life or harm leading to hospitalization, incapacity, or physical disability). [1] The law applies to all medications registered in the country, including recombinant DNA (human insulin, hepatitis B vaccine, and hepatitis B surface antigen). [2] The requirement for screening through a code reader is stated also in a 2019 government decree on pharmaceutical production quality assurance, licensing, and examination. [3]


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
2020

OIE WAHIS database

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

2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

2.1.1 Laboratory testing for detection of priority diseases

2.1.1a

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

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

Current Year Score: 1

Armenia's national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests, but the tests are not named. The 2016 mission report of the WHO Joint External Evaluation in Armenia states that all of the 10 core tests can be performed in the country, and the national laboratory network is capable of continuous capacity development. [1] The Ministry of Health website has a section on international health regulations and a page on the national laboratory network, but the latter does not contain evidence on the four country-specific tests. [2] There is no evidence on the four country-specific at the website of the National Center for Disease Control and Prevention of the Ministry of Health either, although information on measures implemented for compliance with international health regulations, as well as the laboratory system, is available. [3, 4]

2.1.1b

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

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

Current Year Score: 0

There is no evidence that Armenia has a national plan for conducting testing during a public health emergencies that includes considerations for testing for novel pathogens, scaling capacity, and goals for testing. The National Action Plan for Emergencies (adopted June 2016, last amended July 2020) includes considerations for public health emergencies arising from biological, radiological, and chemical threats, stating actions that responsible ministries and agencies (including the Health and Labor Inspectorate, the State Revenue Committee, the Food Safety Inspectorate, the Ministry of Emergency Situations, the National Security Service, the Police, the Civil Aviation Committee, and the Nuclear Safety Committee) should undertake to prevent and control those. [1] Article 9.1 of the decree states that the Health and Labor Inspectorate takes preventive and restrictive measures, including patient examination, quarantine, hospitalization, and testing. [1] The document does not, however, detail testing measures or mention provisions on novel pathogen testing and scaling capacity, and it does not define goals for testing. There is no further relevant evidence on the websites of the Ministry of Health, the National Center for Disease Prevention and Control or the Ministry of Economy. [2, 3, 4]


2.1.2 Laboratory quality systems

2.1.2a

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

Yes = 1, No = 0

Current Year Score: 1

Armenia has an accredited national laboratory that serves as a reference facility. The reference facility operating under the National Center for Disease Prevention and Control of the Ministry of Health of Armenia has both local and international accreditations, including AST ISO/IEC 17025-2005 and ISO 27001. Its laboratories undergo external quality assurance by the World Health Organization, as well as internationally recognized reference facilities from the Russian Federation, the United Kingdom, and Bulgaria. [1]
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

Armenia has a national laboratory serving as a reference facility which is subject to external quality assurance review. The World Health Organization’s 2016 Joint External Evaluation for Armenia states that Armenia “has significantly reformed the laboratory services, developing legislation to support the laboratory system, as well as introducing a comprehensive laboratory network, quality management system, and external quality assurance (EQA) scheme.” [1] The Ministry of Health National Center for Disease Prevention and Control website states that laboratories of the national reference facility are subject to external quality assurance review by the World Health Organization and internationally recognized reference facilities from several countries, including the Russian Federation, the United Kingdom, and Bulgaria. [2]


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: 1

Armenia has a nationwide specimen transport system. The 2016 Joint External Evaluation of IHR Core Capacities of Republic of Armenia gives a score of 4 for the specimen referral and transport system in Armenia, stating that "systems for specimen referral and transport (funded by the government) are in place and able to reach almost all parts of the country." [1] The report specifies that referral and transport of samples are standardized, with procedures as defined by the Ministry of Health, and 96% of the population has access to free-of-charge advance diagnostics, including the ten core tests. The Ministry of Health regulation is in place since June 2014, setting requirements for specimen referral, transportation, and delivery, both local and international. [2]


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

Armenia does not have national plans to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale up testing during an outbreak. The National Strategic Plan on the Establishment of the Universal Laboratory Network (adopted May 2013) includes considerations for private, academic, and non-specialized (veterinary and food safety) laboratories, stating that information on their supplementary capacities during emergencies should be included in the national registry along with existing diagnostic and testing capacities. [1] Article 9.1 of the National Action Plan for Emergencies (adopted June 2016, last amended July 2020) states that the Health and Labor Inspectorate takes preventive and restrictive measures to control public health emergencies due to biological, radiological, and chemical threats, such as quarantine, hospitalization, and rapid testing of patients. [2] The National Center for Disease Prevention and Control of the Ministry of Health has a webpage on the universal laboratory network, stating that the network acts as a mechanism for ensuring coordination and cooperation among all laboratories working with biological, chemical, and radiological pathogens in the country, irrespective of ownership and specialization. [3] However, there is no evidence on the websites of the Ministry of Health, the National Center for Disease Prevention and Control, and the Ministry of Economy of a single plan that would rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale up testing during an outbreak. [4, 5, 6]

2.3 REAL-TIME SURVEILLANCE AND REPORTING

2.3.1 Indicator and event-based surveillance and reporting systems

2.3.1a Is there evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease?

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

Current Year Score: 0

There is insufficient evidence that Armenia conducts ongoing event-based surveillance and analysis for infectious diseases. The 2016 mission report of the World Health Organization's Joint External Evaluation (JEE) in Armenia states that both indicator-based and event-based surveillance systems are in place to detect public health threats. The JEE further states that the National Center for Disease Prevention and Control (NCDC) at the Ministry of Health and "most other public relations departments conduct daily active media, social media and Internet monitoring and reporting on events and rumours that may need a communication or operative response." [1] However, there is no publicly available evidence of ongoing event-based surveillance on the websites of the NCDC, the Ministry of Health, or the Ministry of Economy. [2, 3, 4]


2.3.1b Is there publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years?

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Armenia has reported a potential public health emergency of international concern (PHEIC) to the World Health Organization (WHO) within the last two years. The WHO's disease outbreak news pages and its country page for Armenia do not contain evidence that Armenia reported a PHEIC to the WHO in 2018, 2019 or 2020. [1, 2, 3, 4] There is no evidence of reporting a PHEIC on the websites of the Ministry of Health of Armenia or the National Center for Disease Prevention and Control. [5, 6] The first case of infection with SARS-CoV-2, the novel coronavirus in Armenia was registered on 1 March 2020, a month after the disease outbreak was declared a PHEIC by the World Health Organization. [7, 8]
2.3.2 Interoperable, interconnected, electronic real-time reporting systems

2.3.2a
Does the government operate an electronic reporting surveillance system at both the national and the sub-national level?
Yes = 1, No = 0

Current Year Score: 1

Armenia’s government operates an electronic reporting surveillance system at both the national and sub-national levels. An order of the minister of health (adopted December 2010) sets the sanitary and hygiene norms of "real-time" electronic surveillance of infectious diseases, applying to all medical institutions in the country. [1] Article 18 of Annex 1 of the decree states that analyses are conducted at national and sub-national (regional and community) levels. At the national level, analyses are conducted by the National Center for Disease Prevention and Control of the Ministry of Health. [1] Annexes 2 and 3 of the decree contain lists of diseases that are subject to emergency reporting to the Ministry of Health and regional offices of the inspectorate for hygiene and epidemiology. [1] The decree states that notifications on infectious diseases may be transmitted electronically, by phone, or by fax, but data are stored in the electronic database. [1]


2.3.2b
Does the electronic reporting surveillance system collect ongoing or real-time laboratory data?
Yes = 1, No = 0
Armenia’s electronic reporting surveillance system collects ongoing and real-time laboratory data. Article 3 of the order of the minister of health on real-time electronic epidemiological surveillance of infectious diseases (adopted December 2010) states that medical institutions provide on-going and emergency reports to the regional and central offices of the Ministry of Health inspectorate for hygiene and epidemiology. [1] Article 19 of the same decree states that electronic data at national and sub-national levels are analyzed on monthly, quarterly, semi-annual, and annual bases. [1]


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

Electronic health records are commonly in use in Armenia. All citizens of Armenia have electronic health records in the United Information System of Electronic Healthcare in Armenia (ARMED) launched in September 2017, which they can access using their personal ID and a PIN code. [1] According to the 2018 annual report of the system operator, 471 institutions, including diagnostic and medical centers, primary healthcare facilities (polyclinics), and dental clinics, had joined the system in 2017-2018, constituting more than half of the country’s total. [2] According to the same report, 576 healthcare professionals were trained to use the system in 2018, of which 43 passed the train-the-trainers program. [2] During an interview in late August 2020, the head of the e-health department of the National Institute of Health (NIH) said that 485 medical institutions and pharmacies were in the system. [3] The NIH Health and Healthcare statistical yearbook 2020 suggests that there are 125 healthcare facilities in Armenia, half of which are polyclinics. [4] Lists published at the ARMED website suggest that as of December 2020, 79 medical centers, 36 hospitals, and 49 polyclinics are in the system. [5, 6, 7]

2.4.1b

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

*Yes = 1, No = 0*

**Current Year Score: 1**

The national public health system in Armenia has access to electronic health records of individuals in the country. The main provider of public healthcare in Armenia is the National Center for Disease Prevention and Control of the Ministry of Health. [1, 2] The enforcement function over activities with public health implications is vested in the Health and Labor Inspectorate, while research in the field is carried out by the National Health Institute. [1, 3, 4] Since the launch of the e-healthcare information (ARMED) system in September 2017, all citizens of Armenia (a population of 2.9 million) have electronic health records containing information on their primary healthcare facility and the corresponding physician. Physicians can access patients’ health records and use those for diagnostic and treatment purposes. [5] Articles 7-8 of the Law of Armenia on Public Healthcare (adopted March 1996, last amended July 2020) state that the authorized bodies of the national public health system have access to healthcare databases, including the electronic health records of citizens maintained in the electronic system. [6]


2.4.1c

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

*Yes = 1, No = 0*

**Current Year Score: 1**

There are data standards to ensure electronic health records in Armenia are comparable. Section 4 of the government decree on approving the plan for unified e-healthcare system in Armenia (adopted October 2012) states that to ensure effectiveness, efficiency, and quality of the system, data should be standardized. Standardization should be implemented
from the moment of data acquisition, including medical terms, details on the treatment process and its results, as well as other relevant information. Among suggested standards are UMLS, SNOMED, and ICD-10 (for medical terminology), CDA second edition (forms), and HL7 (information exchange). [1] To promote health information coding, Armenia joined SNOMED International in 2019. [2] The World Health Organization’s Joint External Evaluation 2016 mission report states that a standardized notification format, harmonized according to ICD-10 codes, is used for real-time surveillance. [3]


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: 1

There is evidence of established mechanisms at Armenia’s ministries responsible for animal, human, and wildlife surveillance to share data. The Joint External Evaluation of IHR Core Capacities of the Republic of Armenia states that multisectoral coordination is in place to respond to potential and real PHEICs in Armenia, and information exchange mechanisms exist among the network of different sectors at the national level. [1] These mechanisms were established by a 2013 joint decree of the ministers of health, emergency situations, environment, and agriculture, on Adopting the Standard Procedure Ensuring Mechanisms of Cooperation and Defining Processes. [2] The electronic health information system in place in Armenia since September 2017 is called ARMED, which is a unified platform providing data exchange between all relevant ministries. [3]

2.4.3 Transparency of surveillance data

2.4.3a Does the country make de-identified health surveillance data on infectious diseases publicly available via reports (or other format) on government websites (such as the Ministry of Health, Ministry of Agriculture, or similar)?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Armenia makes de-identified health surveillance data on disease outbreaks publicly available via weekly reports on government websites. De-identified health surveillance data on disease outbreaks are published as monthly reports on the National Center for Disease Prevention and Control (NCDC) website. [1] The reports have two parts – the situation in the reported month and in the past six months – each with the following four sections: 1) infectious diseases (among those intestinal diseases, tuberculosis, microbial zoonoses, hepatites, HIV, and influenza); 2) nosocomial diseases; 3) other reportable diseases (measles, atypical pneumonia, MERS-CoV2, Marburg, Ebola, Lyme, and Q fever, among others); and 4) diseases subject to aggregated accounting (acute respiratory diseases, anginae, dermally transmitted diseases, papilloma, and sexually transmitted diseases). Disaggregated data (by gender, age, and residence) are provided along with individual and aggregate data. [1] The latest available report (October 2019) provides data on 143 diseases but there is no more recent report. [2] De-identified data on the COVID-19 cases are published as an interactive map, updated hourly. [3] There is no further evidence on the Ministry of Health website. [4]

2.4.3b

Does the country make de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar)?
Yes = 1 , No = 0

Current Year Score: 1

Armenia makes de-identified COVID-19 surveillance data, including the daily case count and mortality rate, available via daily reports and other formats on government websites. The National Center for Disease Prevention and Control website has a dedicated page for the COVID-19 pandemic, including six subpages: data, population awareness-raising, travel restrictions, frequently asked questions, press releases, and technical documents. [1] The data page contains statistics on the number of confirmed cases, the number of recovered patients, those still in treatment, the number of conducted tests, and deaths. Both aggregate (total since January 2020) and daily (updated every morning, at 11 am) data are available. [2] The Ministry of Health website provides daily reports on these statistics. [3] De-identified COVID-19 data (self-isolated patients, updated hourly) are published as an interactive map on the national e-healthcare system website. [4]


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

Armenia has legislation that safeguards the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. Article 2 of the Law on Public Healthcare (adopted March 1996, last amended July 2020) defines the concept of "medical secret" as data revealed during healthcare provision and pertaining to a patient's diagnosis and treatment received. [1] Article 11 of the same law elaborates on the medical secret and the requirements for its management, stating that de-identified healthcare data are not a medical secret, while individuals in possession of data that are a medical secret are obliged not to share those, except for cases specified by law. [1] Article 8.1 of the same law states that identifiable data of the e-healthcare system are confidential and secure. [1] The Law on Personal Data Protection (adopted May 2015, last amended July 2019) lists health data among personal data, stating that personal data obtained lawfully for a specific purpose may not be used for other purposes without the consent of the owner, while the transfer of such data to third parties is authorized only when required by law and provided that a satisfactory level of protection is ensured. [2]
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: 1

Armenia has legislation safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, that mentions protection from cyber-attacks. As a signatory state to the Convention on Cybercrime of the Council of Europe (the Budapest Convention, ratified in October 2006), Armenia has amended its national legislation to comply with international standards in cybercrime detection and punishment. [1] Articles 251-257 of the Criminal Code (adopted April 2003, last amended October 2020) are devoted to cybercrimes, setting punishments for unauthorized access to information systems, alteration of information, sabotage, illegal acquisition of information, design and use of illegal means for infiltration, design, use, and transmission of malware, and violation of information system or network terms of use. [2] Article 145 of the same code pertains to the transmission of medical secret, stating that unauthorized transmission of data containing medical secret is punished either by a fine equal to 200-500 times the minimum wage, deprivation of the right to hold offices for 2-4 years, or confinement for one to two months. [2] The Law on Personal Data Protection (adopted May 2015, last amended July 2019) has several provisions on cybersecurity, with Article 21 stating that in case of data leakages from the electronic system, the data processor is obliged to make a public announcement, at the same time informing the police of Armenia and the state authority for personal data protection. [3] Article 19 of the same law states that legal persons may apply for and receive a status of "protected" for their information systems from the personal data protection agency. [3] This law defines de-identifiable personal information as "information on personal life, family life, physical, physiological, mental, social condition of a person or other similar information." [3]

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: 2

The Armenian government has made a commitment via cooperative agreements to share surveillance data during a public health emergency with other countries in the region for more than one disease. The 2016 Joint External Evaluation of IHR Core Capacities of the Republic of Armenia states that Armenia has bilateral agreements with around 25 countries, facilitating IHR implementation for the management of public health emergencies. [1] These countries are listed on the Ministry of Health website, and links are provided to cooperation agreements. [2] The National Center for Disease Prevention and Control (NCDC) website provides links to cooperation agreements signed between the Ministry of Health of Armenia and ministries of health of three countries: Belarus, Syria, and Russia. [3] Most agreements on the Ministry of Health and NCDC websites include clauses on data sharing for multiple infectious and non-infectious diseases. [2, 3]


2.5 CASE-BASED INVESTIGATION

2.5.1 Case investigation and contact tracing

2.5.1a

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

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

Current Year Score: 0

There is insufficient evidence of a national system to provide support at the sub-national level to conduct contact tracing in the event of a public health emergency in Armenia. The national laboratory system in Armenia is three-tiered, entailing local, regional, and state levels. [1] Article 26 of the 2013 plan of the establishment of this system states that the aim of policy development and implementation for the laboratory network establishment is to ensure that staff are trained, metrics are standardized, and continuity of operations is ensured during public health emergencies, but it does not mention contact tracing during public health emergencies. [2] The Law on Public Sanitary and Epidemic Safety (adopted 1992, last amended September 2020) states that contacts of (confirmed or suspected) infected people should be traced, and contact persons should be hospitalized as necessary, but it does not outline a national system to provide support at the sub-national level to...
expand contact tracing in the event of a public health emergency. [3] There is no further relevant evidence on the websites of the Ministry of Health, the National Center for Disease Prevention and Control, and the Health and Labor Inspectorate. [4, 5, 6]


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: 2

There is evidence that Armenia provides nationwide wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, including economic support and medical attention. Article 20.7 of the Law on Public Sanitary and Epidemic Safety (adopted November 1992, last amended September 2020) states that self-isolated individuals are entitled to medical support. [1] Article 187.1 of the Labor Code (adopted November 2004, last amended September 2020) states that employees who do not visit the workplace during natural disasters, technological accidents, pandemics and other emergencies, while there are prevention and mitigation measures in place, are entitled to a paycheck equal to at least their worked hours or work results. [2] The provisions of the Law and the Labor Code apply to the entire country, as Armenia is a unitary state.


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: 1

Armenia makes de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports and another format on government websites. As a part of the COVID-19 tracing efforts, an interactive map of self-isolated patients is published on the ARMED website, de-identified and updated hourly. [1] In the early months of the disease spread, the Ministry of Health daily reports included data on the percentage of new cases that could be traced back to previously identified cases. [2]


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: 2

There is a joint plan between the public health system and border control authorities in Armenia to identify suspected and potential cases in international travelers and trace and quarantine their contacts in future and active public health emergencies. The Plan for Introducing International Health Regulations at the State Border Passes and Emergency Response, was adopted by a government decree in June 2012 (last amended July 2020). [1] The plan lays out actions that state authorities, including the Ministry of Health, the Health and Labor Inspectorate, the State Revenue Committee with its Customs Service, the Food Safety Inspectorate, the Ministry of Emergency Situations, the National Security Service, the Civil Aviation Committee, and the Nuclear Safety Committee, should take to address public health risks due to biological, chemical, and radiological threats. [1] According to articles 9.1, 10, 14, and 15 of the decree, the Health and Labor Inspectorate, the Customs Service, the Police, and the Civil Aviation Committee cooperate in identifying suspected and potential cases in international travelers and tracing and quarantining their contacts in the event of a public health emergency. [1]

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

An applied epidemiology training program is available in Armenia, and the government provides resources to send its citizens to another country to participate in training programs. The 2016 mission report of the WHO Joint External Evaluation states that Armenia has made significant efforts to ensure human resource capacity development for the implementation of IHR. [1] The same report contains evidence that Armenian epidemiologists are trained on the two-year South Caucasus FELTP and graduate the nine modules of the EU MediPIET. [1] At the national level, evidence of field epidemiology training programs is available on the Ministry of Health, the National Center for Disease Prevention and Control, and the National Institute of Health websites. [2, 3, 4, 5] The TEPHINET website contains evidence of Armenia’s participation in the South Caucasus FELTP program, currently hosted by the National Center for Disease Control and Public Health of Georgia. [6] The European Union’s MediPIET website also contains evidence of Armenia’s membership. [7] There is evidence that the government allocates resources for the training programs. [8]

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

In Armenia there are available field epidemiology training programs explicitly inclusive of animal health professionals, and is there a specific animal health field epidemiology training program. The 2016 Joint External Evaluation mission report states that training programs in Armenia cover all concerned sectors, and veterinarians regularly participate in the South Caucasus FELTP and MediPIET. [1] Training at the national level is organized by the Food Safety Inspectorate, in conjunction with the Armenian National Agrarian University. [2] The TEPHINET website page on the South Caucasus FELTP states that since 2009, epidemiologists, clinicians, laboratory technicians, and veterinarians from Georgia, Azerbaijan, Armenia, and recently Ukraine have been trained in a two-year residency program in interventional epidemiology. [3] The MediPIET website page on activities states that fifteen fellows with different backgrounds (public health officials, medical doctors, nurses, and veterinarians) from 11 countries have enrolled in the third cohort of fellows launched in May 2019. Two fellows are from Armenia. [4]


2.6.2 Epidemiology workforce capacity

2.6.2a

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

Yes = 1, No = 0

Current Year Score: 1

2020

Completed JEE assessments; Economist Impact analyst qualitative assessment based on official national sources, which vary by country
Category 3: Rapid response to and mitigation of the spread of an epidemic

3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

3.1.1 National public health emergency preparedness and response plan

3.1.1a

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

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

Current Year Score: 2

Armenia has an overarching national public health emergency response plan that addresses planning for multiple communicable diseases with epidemic or pandemic potential. The Strategic Plan for Communicable Disease Prevention and Control, adopted by a government decree in December 2011 and is currently valid. The Strategic Plan for Communicable Disease Prevention and Control is an overarching plan addressing planning for multiple communicable diseases, both those that are widespread across the world (HIV/AIDS, tuberculosis, hepatitis, measles, and malaria) and novel diseases (atypical pneumonia, avian and swine influenzae, hemorrhagic fevers). [1] The plan has 15 sections, starting with an introduction where an overview of the problem of communicable diseases worldwide and relevant World Health Organization statistics are provided. In the second section, the problem of communicable diseases in Armenia and national statistics are provided, and it is noted that while malaria has been eradicated, tuberculosis, hepatitis, and AIDS/HIV remain major concerns. The third and fourth sections outline the purpose and objectives of the plan, while sections 5-15 elaborate on the 11 objectives, as set out in section four: sectoral policy development and implementation; streamlining of the epidemiological surveillance system, including reporting; development of a supporting information system for epidemiological surveillance; development of an integrated epidemiological surveillance system; communicable disease response capacity development; diagnostic laboratory system development; healthcare worker training and development; emergency response capacity development; research in the field; development of clinical (hospital) epidemiology for communicable diseases; and prevention capacity development at state borders. [1] Armenia also has a Standard Operating Procedure for Rapid Response under Biological and Chemical Threats (adopted by a joint ministerial decree in September 2015), which includes sections on national rapid response team formation, its work plan, and functions during public health emergencies. [2]

[1] GHS INDEX
GLOBAL HEALTH SECURITY INDEX

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

Armenia’s overarching national public health emergency response plan for communicable diseases with epidemic or pandemic potential has not been updated within the last three years. The Strategic Plan for Communicable Disease Prevention and Control and its Implementation Measures were adopted by a government decree in December 2011, intended for the years 2012-2016. The decree has not been amended since adoption, but remains in force. [1] The Ministry of Health and NCDC websites do not contain evidence of a newer overarching response plan, although they do indicate that in May 2014 the government adopted a plan for control over communicable disease transmitters (mosquitoes, midges, fleas, louses, and ticks) and its implementation measures for 2014-2018. [2, 3] The Standard Operating Procedure for Rapid Response under Biological and Chemical Threats was adopted in September 2015 and has not been updated since. [4]


3.1.1c
If an overarching plan is in place, does it include considerations for pediatric and/or other vulnerable populations?
Yes = 1, No /no plan in place= 0
Current Year Score: 0

There is insufficient evidence that Armenia's overarching response plan for communicable diseases with epidemic or pandemic potential includes considerations for vulnerable populations. The Strategic Plan for Communicable Disease Prevention and Control, adopted by a government decree in December 2011, states that the disease prevention and control system for HIV/AIDS should be assessed and streamlined to meet the needs of adolescents, but does not otherwise make any
references to children or other vulnerable groups. [1] There is no further relevant evidence on the websites of of the Ministry of Health and the National Center for Disease Prevention and Control. [2, 3]


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 insufficient evidence that Armenia has specific mechanisms for engaging with the private sector to assist with outbreak emergency preparedness and response. The Strategic Plan for Communicable Disease Prevention and Control and its Implementation Measures, adopted in 2011, state that private sector engagement in outbreak emergency preparedness and response will be assessed by the Ministry of Health, but it does not mention specific mechanisms. [1] The Standard Operating Procedure on Emergency Response under Biological and Chemical Threats, adopted in 2015, includes mechanisms for cooperation only between public authorities; it does not have provisions on private sector engagement. [2] The websites of the Ministry of Health, the National Center for Disease Prevention and Control (NCDC) and the Ministry of Emergency Situations do not contain any evidence of mechanisms for engaging with the private sector in outbreak preparedness or response. [3, 4, 5] However, the NCDC website contains evidence of cooperation with non-governmental organizations, including Armenian organizations (Armenian Association of Pediatricians, Armenian Public Health Association) and local branches of international organizations (World Vision Armenia, Save the Children, Oxfam). [6]

3.1.3 Non-pharmaceutical interventions planning

3.1.3a Does the country have a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic?

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

Current Year Score: 2

Armenia has a policy and guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic, and these are in place for more than one disease. The Law on Public Sanitary and Epidemic Safety (adopted November 1992, last amended September 2020) includes provisions on four specific types of non-pharmaceutical interventions (NPIs) during an epidemic or pandemic: quarantine, observation, self-isolation, and isolation, with specific criteria for when those are implemented. [1] Other general NPIs mentioned in the law include travel restrictions, medical examinations, contact tracing, disinfection, and mandatory use of personal protective equipment (PPE). [1] The law applies to both infectious and non-infectious diseases, as well as poisonings. [1] Guidelines for observation and PPE use have been adopted by ministerial orders in September 2020. These apply to COVID-19, as well as other infectious diseases that may cause an epidemic or a pandemic. [2, 3]


3.2 EXERCISING RESPONSE PLANS

3.2.1 Activating response plans

3.2.1a

Does the country meet one of the following criteria?

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

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

Current Year Score: 1

There is evidence that Armenia has activated its national emergency response plan for an infectious disease outbreak but no evidence it completed a national-level biological threat-focused exercise in the past year.

On 16 March 2020, Armenia declared a state of emergency due to the COVID-19 pandemic. [1] Legislatively based on the Constitution of Armenia (adopted December 2015, last amended June 2020) and the Law on the Legal Regime of the State of Emergency (adopted March 2012, last amended April 2020), the declared state of emergency entailed bans on operations of businesses and organizations in most industries, closure of secondary and higher educational institutions, restrictions on international and domestic travel, and a ban on public gatherings. [1, 2, 3] Most of the restrictions on business operations were lifted in mid-May, but the state of emergency was prolonged five times, until 11 September 2020, due to the rapid increase of cases. [1] Currently, a state of quarantine is in place and is due to last until 11 July 2021. [4] Legislatively established in the Constitution and the Law on Population Protection during Emergencies, the state of quarantine entails requirements for a negative PCR test result upon entry to the territory of Armenia, self-isolation and observation of COVID-19 patients, restrictions on visits to prisons, institutions of long-term care, and military bases, as well as mandatory personal protective equipment use. [4, 5] There is no clear evidence that Armenia’s response to COVID-19 has been based on the 2011 Strategic Plan for Communicable Disease Prevention and Control or the 2015 Standard Operating Procedure for Rapid Response under Biological and Chemical Threats, including on the websites of the Ministry of Health and the Ministry of Emergency Situations. [6, 7]

Biological threat-focused exercises are conducted by the Ministry of Emergency Situations, and there is evidence that such exercises were conducted in 2019, but not in 2020. [8] In November 2018, Armenia participated in a functional simulation exercise called JADE (Joint Assessment and Detection of Events) organized by the WHO Regional Office for Europe. [7] The exercise simulated an outbreak of unknown origin, with the 27 participating national focal points being expected to practice...
elements of emergency risk communication, notification, and information exchange with the WHO Regional Contact Point, as well as demonstrate the ability to work across relevant sectors. [9] There is no evidence on a national-level biological threat-focused exercise conducted in Armenia in the past year on the WHO SPH Simulation Exercise portal. [10]


3.2.1b

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

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

Current Year Score: 0

There is insufficient evidence that Armenia has identified a list of gaps and best practices in emergency response and developed a plan to improve response capabilities in the past year. Neither the World Health Organization’s SPH webpage nor its country and regional pages contain evidence that after-action reviews have been conducted or are planned in Armenia. [1, 2, 3] However, news releases on the Ministry of Emergency Situations website (March and October 2019)
suggest that with support from the United States of America (US) and the World Bank, the Ministry identifies gaps and best practices in emergency response, and that a plan is in place to improve response capabilities. [4, 5] In particular, during the March 2019 meeting with the US European Command, the counterparts exchanged views on a medium-term (3- to 5-year) plan that would help to develop Armenia’s chemical, biological, radiological, and nuclear threat response and control capabilities. [4] There is no further evidence of an emergency response plan on the Ministry of Emergency Situations website. [6] The ministry’s 2019 annual report does state that biological threat-focused exercises were conducted in 2019, but it does not mention the dates or names of the exercises, or provide any other details. [7]


3.2.2 Private sector engagement in exercises

3.2.2a

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

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that Armenia in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives. The Ministry of Emergency Situations annual report on biological, chemical, and radiological emergency response capacity development includes evidence that biological threat-focused exercises were conducted in 2019 with participants from state authorities, including the ministries of Emergency Situations and Health, as well as the police, but there is no evidence that private sector representatives have been involved. [1] In November 2018, Armenia participated in a functional simulation exercise called JADE (Joint Assessment and Detection of Events) held by the WHO Regional Office for Europe. [2, 3] The exercise simulated an outbreak of unknown origin, with the 27 participants (national focal points) being expected to practice elements of emergency risk communication, notification, and information exchange with the WHO Regional Contact Point. [3] The JADE report does not have evidence of inclusion of private sector representatives. [3] There is no evidence on a national-level biological threat-focused exercise conducted in Armenia on the WHO SPH Simulation Exercise portal. [4]

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

Armenia has an emergency operations center (EOC) that covers health issues. The World Health Organization's 2016 Joint External Evaluation of Armenia gives a score of 5 to Armenia's EOC operating procedures and plans, stating that the EOC has the capacity to function 24 hours a day, seven days a week with designated personnel, and that triggers to activate the EOC are available. [1] The EOC is a structural unit under the Rescue Service of the Ministry of Emergency Situations. [2] The EOC's statute (adopted November 2016) states that it “participates in risk assessment, planning, and decision-making processes for natural and technological disasters, emergencies of social and biological nature, and accidents.” [3] The EOC has four divisions: a 911 call center, an operations shift unit, an information and statistics unit, and a monitoring and forecasting unit, as well as regional offices in the capital city and all ten regions of Armenia. [2]


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

The Emergency Operations Center (EOC) of Armenia is required to conduct a drill for a public health emergency scenario at least once per year, and there is evidence that such drills are conducted. Referring to preparedness as a strong point in Armenia's implementation of IHR (2005), the 2016 WHO JEE mission report states that "Tests are conducted several times a year, including an annual nation-wide test involving the full spectrum of public institutions, at all levels." [1] Article 25 of the
Code of Conduct of the Rescue Service, adopted in December 2016 and last amended in January 2020, states that commanders are required to conduct training and drills to increase the preparedness of their units, as well as their awareness of individual and group responsibilities. Article 33 specifies that drills at the center levels (including the Emergency Operations Center as a subdivision of the Rescue Service) are conducted at least twice per year, while article 34 specifies that drills at the squadron levels are conducted quarterly. The Code refers to biological, chemical, and radiological emergencies, as well as natural disasters and technological accidents. [2] The latest annual reports published by the Ministry of Emergency Situations, covering 2019, attests that drills were conducted in that year, and covered response to a biological threat. [3]


3.3.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There no public evidence that the Emergency Operations Center (EOC) of Armenia has conducted a coordinated emergency response within 120 minutes of the identification of a public health emergency within the last year. The 2016 Joint External Evaluation mission report gives a score of 5 for emergency operations center operating procedures and plans of Armenia, stating that "the EOC has the capacity to function 24 hours a day, seven days a week with designated personnel." The report also states that the country has a high-level capability to activate emergency response operations, including the EOC, within the required timeframe of two hours. [1] Press releases on the Ministry of Emergency Situations website suggest that when the state of emergency due to the COVID-19 pandemic was declared on 16 March 2020, the Rescue Service was brought to high alertness and conducted emergency response operations 24 hours a day, coordinated with other state authorities, particularly the Ministry of Health, but there is no evidence that the COVID-19 response was initiated within 120 minutes of identifying a threat. [2, 3, 4] There is no further evidence of a coordinated emergency response at the Ministry of Emergency Situations website. [5]

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: 1

There is evidence that Armenian public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event, and there are standard operating procedures and agreements for the two authorities to respond to such an event. The 2016 World Health Organization Joint External Evaluation report on Armenia states that Armenia has "a great capacity to link public health and law enforcement, including for the investigation of alleged deliberate use events. This is addressed in the public health emergency preparedness and response plan of the country [...]. Drills are conducted on an annual basis and the national plan is reviewed accordingly." [1] The report further elaborates that formal agreements, protocols, and standard operating procedures for a coordinated multisectoral response to emergencies, including public health emergencies, are in place. [1] In accordance with the Law on National Security Authorities (adopted December 2001, last amended March 2018), the National Security Service of Armenia conducts regular exercises to detect, prevent, and thwart terrorist attacks in the biological sphere and objects of vital importance. [2, 3] The main legal basis for cooperation with public health authorities, which includes reference to terrorist attacks, is the law on the Legal Regime of State of Emergency, adopted in March 2012, last amended in April 2020. [4]


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

The risk communication regulation used to guide national public health response in Armenia does not outline how messages will reach populations and sectors with different communications needs. Article 36 of the Protocol Decree on Communications During Public Health Emergencies (adopted April 2012) states that communication materials and messages are adjusted to audiences' needs by a working group at the Ministry of Health. [1] Article 41 of the same decree states that mechanisms should be in place to inform populations of areas with limited media reach. However, the decree does not further elaborate on how messages will reach populations and sectors with different communications needs. [1] The 2016 JEE mission report states that public risk communication in Armenia is transmitted through a mix of channels, including information, education and communication (IEC) materials distributed in schools, television, radio, web, social media, and newspapers. [2] According to the same report, there is a national list of community members with telephone numbers in certain hard-to-reach areas, who can be contacted for disseminating information; local versions of the national communication plan are developed in partnership with local stakeholders, and visual public communication materials are tested among target audiences before publication. [2] Although the Armenian language is native to over 95% of the population and understood by virtually all, three languages are used on the Ministry of Emergency Situations' website. [2] There is no further relevant information on the websites of the Ministry of Health and the Ministry of Emergency Situations. [3, 4]

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

Armenia has in place, in the national public health emergency response plan, other legislation, and regulations, a section detailing a risk communication plan that is specifically intended for use during a public health emergency. The World Health Organization’s 2016 Joint External Evaluation mission report states that Armenia has decrees on risk communications and a regulated system of risk communications, with responsible focal points at national, regional, and local levels. [1] The main regulation on risk communications during public health emergencies, the Protocol Decree on Approving the Guideline and the Action Plan for Public (Specific Group) Awareness-Raising, Medical-Sanitary Knowledge Dissemination, and Healthy Lifestyle Campaign during Epidemics (Pandemics), Chemical and Radiological Emergencies, as well as in Non-Emergency Times, was adopted in April 2012. [2] Articles 33-41 of the decree lay out communications objectives and channels of the Ministry of Emergency Situations, the Ministry of Health, working groups in other ministries, hotlines, and spokespeople. [2] Other provisions related to risk communication are contained in section 4 of the Emergency Response Plan (adopted June 2012, last amended July 2020, addresses multiple public health emergencies arising from biological, chemical, and radiological threats), article 3 of the Law on the Legal Regime of State of Emergency (adopted March 2012, last amended April 2020, covers multiple threats and emergencies, including epidemics), and articles 12-13 of the Law on Population Defense during Emergencies (adopted December 1998, last amended September 2020, covers multiple emergencies). [3, 4, 5]

3.5.1c

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

Yes = 1, No = 0

Current Year Score: 1

The risk communication regulation used to guide national public health response in Armenia designates a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. Article 38 of the government protocol decree on communications during public health emergencies (adopted April 2012) states that "during epidemics, pandemics, and emergencies due to chemical and radiological threats, spokespersons are elected (depending on the nature of the emergency) to ensure that information is disseminated from one source and disinformation is refuted." It does not designate a specific position within the government to serve as the primary spokesperson. [1] The World Health Organization's 2016 Joint External Evaluation for Armenia states that there are appointed focal points for risk communication at national, regional and local levels in Armenia, every ministry has a public relations department with trained spokespersons, and every senior manager has an appointed press person. [2] There is no further relevant information on the websites of the Ministry of Health and the Ministry of Emergency Situations. [3, 4]


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?
Armenia’s public health system has actively shared messages via online media platforms in the past year to inform the public about ongoing public health concerns and dispel rumors, misinformation, or disinformation. The Ministry of Health (MoH), the National Center for Disease Prevention and Control (NCDC), and the National Institute of Health (NIH) all have websites that contain news and announcements sections. [1, 2, 3] The Ministry of Health shares messages via five online media platforms (Facebook, YouTube, Twitter, Instagram, and Telegram), the NCDC has a presence on Facebook, while the NIH shares on Facebook, LinkedIn, and Instagram. [4, 5, 6, 7, 8, 9, 10, 11, 12] The MoH website analysis suggests that it published around 400 news releases in 2019; around 630 have been published since 1 January 2020. [13] There are around 100 announcements on the MoH website (the earliest dated 16 February 2017 and the latest 19 January 2021), and 330 videos about ongoing public health concerns, such as antibiotics use, first aid, HIV/AIDS, and seasonal influenza vaccinations. [14] The MoH’s Facebook makes posts almost every day, with recent posts addressing public health concerns such as COVID-19, breast cancer screening, colorectal cancer screening and botulism. [4] As of January 2021, the Ministry has around 150,000 followers on Facebook, more than 4,000 followers on Twitter, and 644 subscribers on its YouTube channel. [15] Both the Ministry and NCDC have used their communication channels to dispel rumors and misinformation. [16, 17, 18]

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

No = 1, Yes = 0

Current Year Score: 1

There is insufficient evidence that senior leaders in Armenia have shared misinformation on infectious diseases in the past two years. At a press conference on 19 March 2020, Armenia's minister of health, Arsen Torosyan, said that citizens should not wear medical masks to protect against COVID-19, unless they are infected or work in healthcare. [1] Although the World Health Organization's Interim Guidance at the time was inconsistent regarding the effectiveness of masks as personal protective equipment and advised against use in community settings, medical research evidence, including from randomized controlled trials, was increasingly supportive of the claim that masks do provide protection in community settings, thereby reducing the risk of coronavirus disease spread. [2, 3] There is no further evidence on prominent national outlets that senior leaders, including the prime minister and the minister of health, have shared misinformation or disinformation on infectious diseases. [4, 5, 6] The leaders' social media handles also do not contain such evidence. [7, 8]


3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

3.6.1 Internet users

3.6.1a

Percentage of households with Internet

Input number

Current Year Score: 64.74
3.6.2 Mobile subscribers

3.6.2a Mobile-cellular telephone subscriptions per 100 inhabitants
Input number
Current Year Score: 122.35

3.6.3 Female access to a mobile phone

3.6.3a Percentage point gap between males and females whose home has access to a mobile phone
Input number
Current Year Score: 0

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: 3.0

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?
Armenia has issued a restriction, without international support, on the import and export of non-medical goods due to an infectious disease outbreak in the past year. On 26 January 2020, the Head of the Food Safety Inspectorate of Armenia issued a ban on the import of animal products from China – and of any products that contain animal products from China among their ingredients – due to the outbreak of COVID-19. [1] On 30 January 2020, a ban was placed on the import of poultry and poultry products from Vinnytsia region of Ukraine due to outbreak of avian influenza. [2] From 31 March until 30 June 2020, the Eurasian Economic Union (EEU), of which Armenia is a member state, introduced a temporary restriction on exporting certain food products (onions, garlic, turnips, most grains, flour, soybeans, and sunflower seeds) to non-EEU countries due to the COVID-19 pandemic. [3, 4]
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

Armenia has implemented a ban, without international support, on travelers arriving from specific countries due to an infectious disease outbreak in the past year. Due to the coronavirus disease outbreak, a ban on travelers from 16 countries, including China and Iran, was issued by a decree on 17 March 2020. The decree has been amended twice since adoption (on 18 March 2020 and 22 March 2020), but is still in force as of January 2021. [1] The government decree on introducing a state of quarantine in relation to the COVID-19 pandemic (adopted 11 September 2020, set to be in force until 11 January 2021) states that non-citizens may not enter the territory of Armenia via the land border. Exempted are family members of the citizens of Armenia; individuals having the right to legal residence; diplomats, consuls, and representatives of international organizations, as well as their family members; close relatives (parent, spouse, child, sibling) of deceased citizens of Armenia; international truck and freight train drivers. A certificate testifying the negative PCR test result for COVID-19, taken not earlier than 72 hours, should be presented upon arrival. [2]


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: 440.23

2017

WHO; national sources

4.1.1b
Nurses and midwives per 100,000 people
Input number
Current Year Score: 610.7

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

Armenia has a health workforce strategy to identify fields where there is insufficient workforce and strategies to address these shortcomings, but it has not been updated in the past five years. The Healthcare Workforce Development Strategy and its Action Plan were approved by a government protocol decree in February 2014. [1] The Strategy has six sections, including an introduction, strategic goals and objectives, an overview of the healthcare workforce, main directions of strategy implementation, monitoring and expected results, and the implementation action plan. [1] The document provides an analysis of the healthcare workforce demographics and capabilities as of 2011, indicating its size by sectors and shortages, and provides an overview of workforce trends over the past decade (2001-2011). Its seven directions of implementation include healthcare workforce development policy; improvements in workforce planning and utilization; job quality (moral and material incentives); healthcare workforce management; introduction of an accreditation system for healthcare workers; improvement of the information system for workforce management, and increase of the role of professional associations. [1]
The Five-Year Healthcare System Development Strategy (2020-2025), which includes a section on the workforce, was discussed in September-October 2019, as well as in April 2020, but has not been adopted yet. [2, 3] Like the 2014 Strategy, the draft document contains an overview of workforce trends, identifying current challenges and setting strategic directions to address those. [2] There is no further evidence on a health workforce strategy on the websites of the Ministries of Health, Labor, and Education. [4, 5, 6]


4.1.2 Facilities capacity

4.1.2a
Hospital beds per 100,000 people
Input number
Current Year Score: 420

2015

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

Armenia has the capacity to isolate patients with highly communicable diseases in biocontainment patient care units and patient isolation rooms located within the country. According to the interim guidance of the minister of health (adopted January 2020), COVID-19 suspected patients should wear masks and be guided to a biocontainment unit or a room (160 liters per second), where at least one-meter distance could be kept between the patients. [1] The requirement for biocontainment units/rooms (1.5 m distance between the patients) is also stated in the Sanitary Norms for Preventing the Coronavirus.
Disease Spread, adopted by the minister of health in August 2020 and updated in October 2020. [2] There is evidence that biocontainment patient care units and isolation rooms are in place at the Arabkir, Erebouni, and Izmirlian medical centers. [3, 4, 5]


4.1.2c

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

Yes = 1, No = 0

Current Year Score: 1

In the past two years, Armenia has demonstrated the capacity to expand isolation capacity in response to an infectious disease outbreak, but there is no evidence that it has developed, updated or tested a plan to expand isolation capacity. There is evidence that isolation capacity was expanded at major hospitals in the country to address the COVID-19 pandemic, including "COVID Temporary Isolation Unit for Suspected and Contact Patients". [1, 2, 3] For example, one of the largest hospitals in the country, the Erebouni Medical Center, increased the number of beds to treat COVID-19 patients by 10%, increased the capacity of the intensive care unit (ICU) by another 10%; a new ICU was added to the hospital in late March 2020. [2] The World Health Organization’s 2016 Joint External Evaluation of Armenia states that the country has a tertiary hospital with a capacity for isolation in place. [1] However, it does not refer to expanding isolation capacity in response to
infectious disease outbreaks, or any plans to do so. [1]


4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

4.2.1 Routine health care and laboratory system supply

4.2.1a

Is there a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs?
Yes for both laboratory and medical supply needs = 2, Yes, but only for one = 1, No = 0

Current Year Score: 2

There is a national procurement protocol in place in Armenia, which can be utilized by the ministries responsible for health and agriculture for the acquisition of laboratory supplies and medical supplies for routine needs. The current national procurement protocol was adopted by a government decree in May 2017 (last amended July 2020), replacing the procurement protocol of 2011. [1] It can be and is utilized by both the Ministry of Health and the Ministry of Economy for the acquisition of laboratory equipment, reagents, media, and medical supplies. [2, 3, 4, 5] The Ministry of Economy is responsible for agriculture, having taken over the functions of the former Ministry of Agriculture in February 2019. [6] The central government e-procurement system and portal are managed by the Ministry of Finance. [7, 8]


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:** 1

Armenia has a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency, but there is limited evidence about what the stockpile contains. The 2016 Joint External Evaluation (JEE) of IHR Core Capacities of the Republic of Armenia states that Armenia has a national stockpile of supplies for emergencies, including medicines, and medical facilities are obliged to have a 30-day stockpile of medical supplies. [1] The report does not specify what is contained in MCM stockpiles. [1] Article 6 of the Law on Material Reserve (adopted March 2020) states that the inventory list of strategic medicines and laboratory supplies, as well as the rules and timeline for stockpiling, are set by the Government of Armenia, but it does not contain any list itself. [2] The Law also lists "personal protective equipment" (without specifying what this consists of) among "rapid response" stockpiles, along with easy-to-prepare and dry food, noting that these are used for rescue operations during emergencies. [2] The formation, maintenance, and service of the national material reserve are carried out by the Ministry of Emergency Situations. [3, 4]


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 Armenia has a stockpile of laboratory supplies for national use during a public health emergency. Articles 6 and 16 of the Law on Material Reserve, adopted March 2020, state that the inventory list of strategic medicines and medical supplies, as well as the rules and timeline for stockpiling, are to be set by a government decree issued within nine months after entry into force of the current law. [1] As of December 2020, such a decree has not been adopted. [2] The 2016 Joint External Evaluation (JEE) of IHR Core Capacities of Republic of Armenia states that Armenia has a national stockpile of supplies for emergencies that includes "medicines and medical and sanitary equipment" but it does not specifically mention laboratory supplies. [3] There is no further relevant evidence on the websites of the Ministries of Health and Emergency Situations. [4, 5]


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: 1

Armenia requires and conducts an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. An annual review of the national stockpile is required by the Law on Material Reserve (adopted March 2020). The law covers multiple strategic items, including medicines. [1] Article 13 of the Law states that the public authority in the field, the Ministry of Emergency Situations (MES), develops the schedule for the annual review of the national stockpile, and may suggest the three inspectorates, including the drug regulatory authority and the Food Safety Inspectorate, to hold a review at any time to reveal the actual state of the reserve. The review is intended not only to maintain the stockpile, but
also on accumulating new items in the reserve, based on data of the current reserve. [1] Article 14 of the same law states that the annual reviews are held by the inspectorates, in accordance with the schedule established by the Ministry of Emergency Situations and with the involvement of Ministry representatives. [1] The Ministry website attests that such reviews are conducted in practice. [2]


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: 1

There is evidence of a mechanism to procure medical supplies for national use during a public health emergency in Armenia and of agreements to leverage domestic manufacturing capacity to produce medical supplies. Article 9 of the Law on Material Reserve (adopted March 2020) states that public procurement of material supplies for the national reserve is conducted through agreements, in accordance with the national legislation on procurement. [1] Article 3 of the same law states that the rapid response supply (which includes personal protective equipment) is maintained for use during emergencies or when there is a threat of emergency. Further, the law also specifies that it encompasses "State reserve - a reserve of special significance of material values, which is the property of the Republic of Armenia includes the stocks of raw materials, materials, goods necessary for health care of the population of the Armed Forces of the Republic of Armenia other troops, which are provided for use by this law for" in its definition as well as specifies that it be carried out during emergencies. [1] The Procurement Protocol (adopted May 2017, last amended July 2020) contains provisions on public procurement during emergencies, but does not list medical supplies among the applicable items. [3] The 2016 World Health Organization Joint External Evaluation report on Armenia states that the Ministry of Emergency Situations has signed contracts with five major pharmaceutical importers for the production and import of medical countermeasures during emergencies. [3] There is no further evidence on a plan or agreement to leverage domestic manufacturing capacity to produce medical supplies for national use during a public health emergency at the Ministry of Health and Ministry of Emergency Situations websites. [4, 5]
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: 1

There is evidence of a mechanism to procure laboratory supplies for national use during a public health emergency in Armenia, but there is no evidence of an agreement to leverage domestic manufacturing capacity to produce laboratory supplies. The Procurement Protocol of Armenia (adopted May 2017, last amended July 2020) contains provisions on public procurement during emergencies, and lists laboratory supplies among the applicable items. [1] The 2016 World Health Organization Joint External Evaluation report on Armenia states that the Ministry of Emergency Situations has signed contracts with five major pharmaceutical importers for the production and import of medicines during emergencies, but no reference is made to laboratory supplies. [2] There is no further evidence of agreements to leverage domestic manufacturing capacity to produce laboratory supplies for national use during a public health emergency on the Ministry of Health and Emergency Situations websites. [3, 4]

4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

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

4.3.1a
Does the country have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics)?
Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Armenia has a plan and a guideline for dispensing medical countermeasures (MCM) for national use during a public health emergency. Article 11 of the 2020 Law on Material Reserve states that rapid response supplies, including medicines, are dispensed by the consent of the prime minister, based on the order of the state authority for population defense during emergencies (the Ministry of Emergency Situations of Armenia). The letter presented to the prime minister should clearly state the types, total amount, and value of the dispensed supplies. [1] Article 7 of the Guideline for Formation, Maintenance, and Dispensing the Rapid Response Supplies of the National Reserve (adopted by a government decree in August 2015, last amended November 2020) states the following instances in which rapid response supplies are dispensed: intended use (i.e., emergencies) and destruction; replenishment and substitution; and borrowing. [2] However, neither of these documents presents any further plans or guidelines for dispensing MCM during public health emergencies, and there is no further evidence of such plans or guidelines on the websites of Ministry of Health and the National Center for Disease Prevention and Control. [1, 2, 3, 4]


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: 1
There is a public plan to receive health personnel from other countries to respond to a public health emergency in Armenia. The 2016 Joint External Evaluation (JEE) of IHR Core Capacities of Republic of Armenia assigns a score of 5 to Armenia’s system of sending and receiving health personnel during a public health emergency due to the following strengths/best practices, among others: developed legal framework, recognition of foreign professional certificates; developed plans for secure accommodation; transportation cost coverage; and existence of committees responsible for overseeing deployment.

[1] Article 42.1 of the Law on Public Healthcare (adopted March 1996, last amended July 2020) states that the plans for public healthcare provision during emergencies are developed by the Ministry of Health and revised at least every five years. [2] However, these could not be found on the Ministry of Health, NCDC, and the Ministry of Emergency Situations websites. [3, 4, 5]


4.4 HEALTHCARE ACCESS

4.4.1 Access to healthcare

4.4.1a

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

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

Current Year Score: 0

2020
4.4.1b
Access to skilled birth attendants (% of population)
Input number
Current Year Score: 99.8
2016

4.4.1c
Out-of-pocket health expenditures per capita, purchasing power parity (PPP; current international $)
Input number
Current Year Score: 844.38
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
The government of Armenia has not issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick due to responding to a public health emergency. The government decree on state-guaranteed free and prioritized healthcare (adopted March 2004, last amended October 2020) lists 19 groups of people entitled to state-guaranteed free and prioritized healthcare. Among those are people with
disabilities, children, war veterans, child-bearing women, rescue workers, and refugees, but healthcare workers who become sick as a result of responding to a public health emergency are not mentioned. [1] Article 27 of the Law on Public Healthcare (adopted March 1996, last amended July 2020) states the rights of healthcare workers, among which are the provision of licensed care and services, organizing and joining professional associations, training and development, and participation in decision-making processes in the field of healthcare. Being entitled to prioritized healthcare services during emergencies is not among these rights. [2] There is evidence that healthcare workers have undergone extensive training to respond to the COVID-19 pandemic, but there have not been public statements that would commit to providing prioritized healthcare services to infected healthcare workers. [3, 4, 5]


4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

4.5.1 Communication with healthcare workers

4.5.1a Is there a system in place for public health officials and healthcare workers to communicate during a public health emergency?
Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Armenia has a system for public health officials and healthcare workers to communicate during a public health emergency. The 2016 World Health Organization Joint External Evaluation report on Armenia states that Armenia has a developed risk communication system, and that risk communication planning includes all stakeholders' roles and responsibilities. [1] The protocol on the use and management of the electronic communication networks during emergencies (adopted by a government decree in November 2012, last amended November 2019) states that the Ministry of Health is entitled to priority use of all communication networks to provide service to the population during a public health emergency, but it does not refer to a two-way communication between public health officials and healthcare workers. [2] There are no dedicated pages on risk communications on the Ministry of Health and the Ministry of Emergency Situations websites, but there is evidence that regular meetings and training on the subject are conducted at the Ministry of Emergency Situations.
4.5.1b

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

Yes = 1, No = 0

Current Year Score: 0

There is no public evidence that the system for public health officials and healthcare workers to communicate during an emergency in Armenia encompasses healthcare workers in both the public and private sectors. The 2016 World Health Organization Joint External Evaluation report on Armenia states that there is multi-stakeholder cooperation in the risk communication system and planning, with local and international non-governmental organizations involved, but there is no reference to public and private sector healthcare workers. [1] The Ministry of Health and the Ministry of Emergency Situations websites do not have dedicated pages on risk communications. [2, 3]


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
There is evidence that Armenia’s national public health system is monitoring for and tracking the number of healthcare-associated infections (HCAIs) that take place in healthcare facilities. According to the 2016 World Health Organization Joint External Evaluation report on Armenia, an HCAI strategy is in place, training is conducted for healthcare workers in designated facilities, and monitoring of rational use of drugs in hospitals and pharmacies is ongoing. [1] The HCAI control strategy is in place since 2015, contained in the Protocol Decree on Approving the Quality Assurance Strategy at Healthcare Facilities. [2] Monitoring and tracking of the number of HCAIs are conducted by the National Center for Disease Prevention and Control (NCDC) of the Ministry of Health. [3] Section 2 of the October 2019 situation report published by the NCDC includes statistics on 22 HCAIs, indicating, for each infection, the number of observed cases, cases per 100,000 population, breakdown by age groups (under 14 and above 14), and deaths. Among the observed infections are viral and bacterial pneumonias, septicemia, encephalitis, phlebitis, osteomyelitis, infections due to implantations and transplantations, infections due to infusions and injections, and cystitis. [4]


4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

4.7.1a

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

Yes = 1, No = 0

Current Year Score: 1

There is a national requirement for ethical review before beginning a clinical trial in Armenia. Article 14 of the Law on Pharmaceuticals (adopted May 2016, last amended June 2020) and Article 3 of the government decree on clinical trial licensing and examination (adopted February 2019) state that clinical trials in Armenia are licensed by the Ministry of Health upon approval of the trial plan and the supporting documents, as reviewed by an expert organization and the clinical trials ethics committee. Members of the expert organization and the ethics committee are obliged to sign a statement on conflicts of interest and confidentiality for each trial, and the powers of members who refuse to sign the statement are terminated.
[1, 2] Article 15 of the Law is devoted to the ethics committee, stating its objectives and functions. According to the article, the committee is an independent non-governmental organization having at least five members (doctors, pharmacists, lawyers, and representatives of patients’ rights NGOs). Its members are elected according to procedures established by the Ministry of Health and serve for a five-year non-consecutive term. [1]


4.7.1b
Is there an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics?
Yes = 1, No = 0

Current Year Score: 0

There is no evidence of an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing epidemics in Armenia. Article 10 of the government decree on licensing and examination of clinical trials (adopted February 2019) states that the ethics committee sends its decision to the Ministry of Health within five days from the date of receiving the review documents. [1] There is no provision on an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing epidemics in the decree. [1] There is no evidence of expedited trials on the website of the Scientific Center for Drug and Medical Technology Expertise of the Ministry of Health of Armenia, the government agency responsible for drug control, safety, and medical research oversight. [2]


4.7.2 Regulatory process for approving medical countermeasures

4.7.2a
Is there a government agency responsible for approving new medical countermeasures (MCM) for humans?
Yes = 1, No = 0

**Current Year Score: 1**

There is a government agency responsible for approving new medical countermeasures for humans in Armenia. The government agency responsible for implementing the national policy for drug safety, efficacy, and quality is the Scientific Center for Drug and Medical Technology Expertise of the Ministry of Health of Armenia, established in 1992 and operating based on its 2004 statute. [1, 2] The Center performs expert assessments and evaluations of human, veterinary, and herbal medicines and medical devices; provides expertise for medicine import and export; carries out oversight over pharmaceutical companies, control over drug and substance abuse, and clinical trials, also engaging in research, publishing, education, and training activities. [2]


### 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: 1**

There is an expedited process for approving medical countermeasures for human use during public health emergencies in Armenia. Article 21 of the Law on Pharmaceuticals (adopted May 2016, last amended June 2020) states that medicine registration is not a precondition for import licensing under an emergency or its threat. [1]

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

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

5.1.1 Official IHR reporting

5.1.1a
Has the country submitted IHR reports to the WHO for the previous calendar year?
Yes = 1, No = 0

Current Year Score: 1

2020

World Health Organization

5.1.2 Integration of health into disaster risk reduction

5.1.2a
Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?
Yes = 1, No = 0

Current Year Score: 1

Epidemics and pandemics are integrated into the national risk reduction strategy of Armenia. The risk reduction strategy was approved by a government decree in March 2012 and has not been amended since. [1] Article 31 states the priority threats for national security risk reduction, among which are epidemics, pandemics, natural and technological disasters, urbanization, the concentration of population in seismic areas, and decreasing population density in border communities. The Strategy has eight sections (introduction, an overview of disaster risk reduction and main actors, main preconditions for strategy development, challenges in the field, strategy aim and objectives, principles, expected outcomes, and financing) and an action plan. [1] In 2017, the Government of Armenia approved a disaster risk management strategy, which also covers epidemics and pandemics. [2]

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

5.2.1 Cross-border agreements

5.2.1a Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?
Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0
Current Year Score: 2

Armenia has cross-border agreements, protocols, and memoranda of understanding with neighboring countries and as part of a regional group with regards to public health emergencies, and there is no evidence of gaps in implementation. Armenia has bilateral and multilateral agreements concerning sharing situation alerts, information, and mutual aid during public health emergencies with over 25 countries. [1, 2] Of the four neighboring countries, bilateral cooperation agreements are in place with Georgia and Iran. [2, 3] Signed in May 1993, the cooperation agreement with Georgia entails provisions on disease prevention, information exchange during public health emergencies, specialized healthcare for the elderly and children, pharmacology and medical technology, joint conferences, research, and personnel exchange. [4] Six agreements and memoranda of understanding with Iran, signed between May 1995 and December 2015, entail medical knowledge and medical technology exchange, recognition of higher education certificates, personnel cross-training, medical tourism, cooperation on communicable and non-communicable diseases, and cooperation during emergencies, including epidemics and pandemics. [5] At the regional level, cooperation takes place within the Commonwealth of Independent States (CIS), entailing cooperation between member states' medical institutions, organization of joint conferences, food safety control, training of emergency response personnel, scientific collaboration, mutual aid during emergencies, and exchange of healthcare information. [6] Bilateral cooperation agreements are also in place with most post-Soviet countries (Belarus, Kazakhstan, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan), several Middle Eastern states (Egypt, Jordan, Iraq, Kuwait, Lebanon, Syria, Israel and UAE), and numerous countries further afield (Bulgaria, the Czech Republic, Slovakia, Romania, Argentina, Cuba, Uruguay, China, Italy, Germany, and Greece). [2, 3] There is no evidence of gaps in the implementation of any of these agreements. [2]

5.2.1b
Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?
Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0
Current Year Score: 0

There is insufficient evidence that Armenia has cross-border agreements, protocols, and memoranda of understanding with neighboring countries, or as part of a regional group, with regards to animal health emergencies. Armenia has bilateral agreements on animal health and veterinary medicine with neighboring Iran (2006 and 2017) and Georgia (2008), but full texts of these agreements are not publicly available. [1, 2, 3] There is evidence that the 2006 agreement with Iran covers animal health information exchange; cooperation on disease prevention, control, and eradication; and examination of imported, exported, and transferred animal source foods. [4] Armenia also has bilateral agreements, protocols, and memorandum of understanding on animal health and veterinary medicine with Bulgaria (1995), Romania (2000), Uruguay (2002), Russia (2009 and 2010), Argentina (2011), Poland (2011), and Turkmenistan (2012), of which only those with Bulgaria and Romania are publicly available, stating, inter alia, that the parties exchange information on prevention and control of animal infectious and non-infectious diseases. [1, 5, 6] At the regional level, cooperation on animal health takes place within the Eurasian Economic Union (EEU), the agreement on which (adopted May 2014, amended October 2014) states that the member states implement measures to prevent the import and spread of animal infectious and zoonotic diseases and unsafe animal source foods in the Union, and that, in case of having detected animal and zoonotic diseases and unsafe animal source foods, member states should immediately inform the Eurasian Economic Commission and enter data in the EEU’s unified electronic database. [7] EEU members also commit to mutual research and methodological and technical assistance in the field of veterinary medicine. [7] However, there is no clear evidence that any of the aforementioned agreements cover response to animal health emergencies, or of other agreements that do, including on the websites of the Food Safety Inspectorate and the Ministry of Economy. [8, 9]

5.3 INTERNATIONAL COMMITMENTS

5.3.1 Participation in international agreements

5.3.1a
Does the country have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?
Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

Current Year Score: 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: 3

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: 1

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda
5.4.1b
Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?
Yes = 1, No = 0

Current Year Score: 0

2021

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

5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

5.4.2a
Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?
Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

5.4.2b
Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?
Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

5.5 FINANCING

5.5.1 National financing for epidemic preparedness

5.5.1a
Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?
Yes = 1, No = 0

Current Year Score: 1

There is evidence that Armenia has allocated national funds to improve the capacity to address epidemic threats within the past three years. State dedicated programs for healthcare, which are adopted each September by the Government and
incorporated into the state budget of the coming year at the National Assembly in December of the same year, have been adopted in 2018, 2019, and 2020. [1, 2, 3] The decrees contain sections on the epidemic safety program, stating its objectives, financing from the state budget, main directions, and international financing. [1, 2, 3] Among the 25 investments financed from the state budget in 2019 were communicable disease prevention, immunization, emergency response preparedness, nosocomial disease detection and control, sanitary control at border passes, and laboratory biosecurity and biosafety. [1] In 2020, 17 programs were financed, among which communicable disease prevention, immunization, laboratory system development, and public awareness-raising. [2] 18 investment programs are planned for 2021, among which are also COVID-19 detection and prevention. [3]


### 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
5.5.3 Financing for emergency response

5.5.3a

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

Yes = 1, No = 0

Current Year Score: 1

There is a publicly identified special emergency public financing mechanism and funds that Armenia can access in the face of a public health emergency. Article 22 of the Law on Population Protection During Emergencies (adopted December 1998, last amended September 2020) states that population protection efforts of the national and local governments during emergencies are financed from the state budget and community budgets. The law covers multiple emergencies, including large-scale accidents, technological and natural disasters, and pandemics. [1] According to Article 19 of the Law on the Budgetary System (adopted July 1997, last amended March 2020), the source of financing emergency response is the government reserve fund, which constitutes a separate entry in the expenditures section of the budget and may equal up to five percent of the total expenditures of the year. Allocations from the reserve fund are made by government decrees. [2] As an IDA graduate (fiscal year 2014), Armenia is currently not eligible for funding through the World Bank Pandemic Emergency Financing Facility. [3, 4]


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

5.5.4a

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

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

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

Current Year Score: 0

There is no evidence that in the past three years senior Armenian leaders have made any public commitments to improve the domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity, and there is no evidence that in the past three years senior Armenian leaders have made any public commitments to support other countries to improve capacity to address epidemic threats. In January 2019, the prime minister and the acting health minister of Armenia voiced commitments to expand healthcare financing in order to facilitate the development of a universal health insurance system and ensure high-quality healthcare, but no reference was made to epidemic threats. [1] Since January 2020, Armenia has requested and received financing and material and technological support from partner countries and international organizations to combat the ongoing COVID-19 pandemic. Among those are China, Russia, the United States, the European Union, the World Health Organization, the Asian Development Bank, and the World Bank. [2] Annual reports on international cooperation, published by the Ministry of Health, suggest that Armenia mostly requests rather than provides healthcare financing and support, although there are multilateral cooperation mechanisms within the CIS and EEU. [3] There is no further evidence on the commitment to domestic epidemic prevention and control capacity development on the websites of the prime minister or the Ministry of Health. [4, 5] There no further evidence on the commitment to foreign epidemic prevention and control capacity development on the websites of the Ministry of the Foreign Affairs, the United Nations or the World Health Organization. [6, 7, 8]


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

In the past three years, Armenia has invested finances from donors to improve domestic capacity to address epidemic threats, but there is no evidence that Armenia has provided other countries with financing or technical support to improve capacity to address epidemic threats. The national programs for healthcare, adopted by the government each September, contain provisions on international financing for epidemic safety programs, revealing that support has been received from...
the World Bank and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFFATM) to finance programs in 2019, 2020, and 2021. [1, 2, 3] Programs financed from the World Bank have been directed to prevention and control of non-communicable diseases (hypertension, diabetes, and cancer), while those financed from the GFFATM include prevention, early detection, and treatment of HIV/AIDS and tuberculosis, healthcare personnel training, social assistance to patients, and public awareness raising. [1, 2, 3] The Georgetown Infectious Disease Atlas (GIDA) Global Health Security Tracker data suggest that a total of USD 43.3 million in aid was disbursed to Armenia in 2017-2019. Since 2014, most funding has been allocated to antimicrobial resistance, immunization, and zoonotic disease capacity development. [4] There is no evidence of Armenia providing financial or technical support to other countries to improve capacity to address epidemic threats on the websites of the Government and the Ministry of Health. [5, 6] The funder page for Armenia on the Georgetown Infectious Disease Atlas (GIDA) Global Health Security Tracker does not mention any evidence of funding for the same. [7]


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: 1

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country
5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

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

5.6.1a
Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?
Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available policy in Armenia for sharing biological materials along with the associated epidemiological data with international organizations and other countries that goes beyond influenza. According to the government decree on the national IHR focal point (adopted July 2009, amended January 2014), the Ministry of Health ensures exchange of laboratory materials and associated epidemiological data between Armenia and the World Health Organization. [1] As a signatory state to the Minsk Agreement on Cooperation in the Field of Public Healthcare (adopted June 1992, amended November 2005), Armenia shares biological materials with members of the Commonwealth of Independent States, but this is not explicitly inclusive of pathogens with pandemic potential. [2] Article 4 of the Minsk Agreement states that the parties cooperate in exchange of medical and other information concerning public health, healthcare indicators, and the provided medical care, but no reference is made to genetic data, clinical specimens, or isolated specimens. [2] There is no further evidence on sharing biological materials along with the associated epidemiological data on the Ministry of Health and National Center for Disease Prevention and Control websites. [3, 4]


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 Armenia has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years. The World Health Organization's (WHO's) European Region news releases from October 2018 and November 2019 do not contain evidence that Armenia has not shared samples in accordance with the PIP framework. [1, 2] There is no evidence of non-sharing in the WHO Member States Survey of Pandemic Influenza Preparedness Report (June 2019). [3] There are no articles in major international and local media outlets documenting Armenia as not having shared samples in accordance with the PIP framework in the past two years.


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 Armenia has not shared pandemic pathogen samples during an outbreak in the past two years. World Health Organization regional and country pages do not contain evidence that Armenia has not shared pandemic pathogen samples during the ongoing COVID-19 outbreak or other outbreaks in the past two years. [1, 2] There are no articles in top international and local media outlets documenting Armenia as not having shared pandemic pathogen samples during an outbreak in the past two years.

Category 6: Overall risk environment and vulnerability to biological threats

6.1 POLITICAL AND SECURITY RISK

6.1.1 Government effectiveness

6.1.1a
Policy formation (Economist Intelligence score; 0-4, where 4=best)
Input number
Current Year Score: 2

2020
Economist Intelligence

6.1.1b
Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)
Input number
Current Year Score: 1

2020
Economist Intelligence

6.1.1c
Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)
Input number
Current Year Score: 2

2020
Economist Intelligence

6.1.1d
Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)
Input number
Current Year Score: 1

2020
Economist Intelligence
6.1.1e
Country score on Corruption Perception Index (0-100, where 100=best)
Input number

Current Year Score: 49

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: 2

2020

Economist Intelligence

6.1.2 Orderly transfers of power

6.1.2a
How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?
Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

Current Year Score: 2

2021

Economist Intelligence
6.1.3 Risk of social unrest

6.1.3a
What is the risk of disruptive social unrest?
Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

Current Year Score: 1

2021
Economist Intelligence

6.1.4 Illicit activities by non-state actors

6.1.4a
How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?
No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 2

2021
Economist Intelligence

6.1.4b
What is the level of illicit arms flows within the country?
4 = Very high, 3 = High, 2 = Moderate, 1 = Low, 0 = Very low

Current Year Score: 0

2020
UN Office of Drugs and Crime (UNODC)

6.1.4c
How high is the risk of organized criminal activity to the government or businesses in the country?
Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 2

2021
Economist Intelligence
6.1.5 Armed conflict

6.1.5a
Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?
No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 1

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: 99.74

2017
6.2.2 Gender equality

6.2.2a
United Nations Development Programme (UNDP) Gender Inequality Index score
Input number
Current Year Score: 0.74
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: 0.2
2018

World Bank; Economist Impact

6.2.3b
Share of employment in the informal sector
Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0
Current Year Score: 1

According to the latest available figures, informal employment represents between 25% and 50% of Armenia’s employment. Referring to the national Household Labor Force Survey (LFS), ILOSTAT data indicate that in 2019, 37% of employment in Armenia was in the informal sector. The statistic is 18% for non-agricultural sectors in 2019. [1] The World Bank data on informal employment are retrieved from the ILOSTAT database, indicating that in 2018, informal employment (% of total non-agricultural employment) was 34% in Armenia. [2]


6.2.3c
Coverage of social insurance programs (% of population)
Scored in quartiles (0-3, where 3=best)

Current Year Score: 3

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: 0.3

Latest available.

World Bank; Economist Impact calculations
6.3 INFRASTRUCTURE ADEQUACY

6.3.1 Adequacy of road network

6.3.1a
What is the risk that the road network will prove inadequate to meet needs?
Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0
Current Year Score: 1

2021
Economist Intelligence

6.3.2 Adequacy of airports

6.3.2a
What is the risk that air transport will prove inadequate to meet needs?
Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0
Current Year Score: 1

2021
Economist Intelligence

6.3.3 Adequacy of power network

6.3.3a
What is the risk that power shortages could be disruptive?
Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0
Current Year Score: 2

2021
Economist Intelligence

6.4 ENVIRONMENTAL RISKS

6.4.1 Urbanization

6.4.1a
Urban population (% of total population)
Input number
Current Year Score: 63.22
6.4.2 Land use

6.4.2a
Percentage point change in forest area between 2006–2016
Input number

Current Year Score: -0.07

2008-2018

World Bank; Economist Impact

6.4.3 Natural disaster risk

6.4.3a
What is the risk that the economy will suffer a major disruption owing to a natural disaster?
Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 1

2021

Economist Intelligence

6.5 PUBLIC HEALTH VULNERABILITIES

6.5.1 Access to quality healthcare

6.5.1a
Total life expectancy (years)
Input number

Current Year Score: 74.94

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: 525.9

2019

WHO

6.5.1c
Population ages 65 and above (% of total population)
Input number
Current Year Score: 11.48

2019

World Bank

6.5.1d
Prevalence of current tobacco use (% of adults)
Input number
Current Year Score: 26.7

2018

World Bank

6.5.1e
Prevalence of obesity among adults
Input number
Current Year Score: 20.2

2016

WHO

6.5.2 Access to potable water and sanitation

6.5.2a
Percentage of homes with access to at least basic water infrastructure
Input number
Current Year Score: 99

2017
6.5.2b
Percentage of homes with access to at least basic sanitation facilities
Input number

Current Year Score: 93.64

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: 127.96

2018

WHO Global Health Expenditure database

6.5.4 Trust in medical and health advice
6.5.4a
Trust medical and health advice from the government
Share of population that trust medical and health advice from the government, More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 1

2018

Wellcome Trust Global Monitor 2018

6.5.4b
Trust medical and health advice from medical workers
Share of population that trust medical and health advice from health professionals, More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 1

2018