Joint external evaluation of the International Health Regulations (2005) core capacities of Armenia

Mission report:
4–8 December 2023
Joint external evaluation of the International Health Regulations (2005) core capacities of Armenia

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## IHR Related hazards and Points of entry and border health

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Acknowledgements

The World Health Organisation Joint external evaluation (JEE) Secretariat would like to acknowledge the following entities, whose support and commitment to the principles of the International Health Regulations (2005) has ensured a successful outcome to this JEE mission:

• The government and national experts of Armenia for their work and support in preparation for the JEE mission include: the Ministry of Health and its departments and units; the National Center for Disease Control and Prevention, as well as: the Airport Zvartnots, Civil Aviation Committee, Environmental Protection and Mining Inspection Body, Food Safety Inspectorate, Health and Labor Inspection Body, Ministries of "Education, Science, Culture and Sport", Defence, Economy, Environment, Finance, Justice, Territorial Administration and Infrastructure, National Safety Committee, National Security Service, Security Council office, and Statistics Committee.

• The governments of France; Serbia, and the United Kingdom of Great Britain and Northern Ireland as well as the United States of America Centers for Disease Control and Prevention, Medicines and Medical Devices Agency of Serbia, Romanian National Institute of Public Health and the Dutch National Institute for Public Health, for providing technical experts for the peer review process.

• The European Centre for Disease Prevention and Control and EU SHIPSAN (a European Joint Action funded by the European Commission under the Health Programme (2008-2013)) for their contribution of experts and expertise.

• The Food and Agriculture Organization of the United Nations for their contribution of experts and expertise. The following World Health Organisation (WHO) entities: the Country Office for Thailand, the Regional Office for Europe, the WHO Health Emergencies Programme (WHE) South Caucasus Hub, the WHO Country Office in Armenia and the WHO headquarters Department of Health Security Preparedness of the WHO Health Emergencies Programme for supporting the mission.
## Abbreviations

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<tr>
<td>AMR</td>
<td>Antimicrobial resistance</td>
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<tr>
<td>ANPP</td>
<td>Armenian Nuclear Power Plant</td>
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<td>ArMed</td>
<td>Armenian National Digital Healthcare System</td>
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<tr>
<td>COVID-19</td>
<td>Coronavirus disease 2019</td>
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<td>EHS</td>
<td>Essential health services</td>
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<td>EIDSS</td>
<td>Electronic Integrated Disease Surveillance System</td>
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<td>EQA</td>
<td>External quality assessment</td>
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<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<td>FBE</td>
<td>Food business establishments</td>
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<td>FETP</td>
<td>Field Epidemiology Training Program</td>
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<td>FSIB</td>
<td>Food Safety Inspection Body</td>
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<td>HACCP</td>
<td>Hazard Analysis Critical Control Points</td>
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<td>HCAI</td>
<td>Health care acquired infections</td>
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<td>IHR</td>
<td>International Health Regulations</td>
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<td>IPC</td>
<td>Infection prevention and control</td>
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<td>JEE</td>
<td>Joint external evaluation of IHR core capacities</td>
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<td>MDRO</td>
<td>Multi-drug resistant organisms</td>
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<td>NAPHS</td>
<td>National Action Plan for Health Security</td>
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<td>NCDC</td>
<td>National Center for Disease Control</td>
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<td>NFP</td>
<td>National IHR Focal Point</td>
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<td>PHEOC</td>
<td>Public health emergency operations centre</td>
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<td>PoE</td>
<td>Points of entry and border health</td>
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<tr>
<td>RCCE</td>
<td>Risk communication and community engagement</td>
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<td>RCCE-IM</td>
<td>Risk Communication, Community Engagement and Infodemic Management</td>
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<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
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<td>SSFS</td>
<td>State Service for Food Safety</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Executive summary

The Joint External Evaluation (JEE) team expresses its appreciation to Armenia for volunteering to undertake its second Joint External Evaluation of the International Health Regulations (2005) core capacities (JEE). By participating in this evaluation, we recognize and acknowledge the commitment, foresight, and accountability shown by Armenia towards establishing core capacities under the International Health Regulations – IHR (2005).

Prior to this evaluation, 122 countries had completed the JEE, using either the first, second or third version of the evaluation tool. The third edition of the tool was extensively revised taking into account relevant lessons learnt from the COVID-19 pandemic and other public health emergencies. As more and more countries undertake a second evaluation with the revised JEE tool, it is expected that, despite their progress in implementing the IHR (2005), some scores may be lower than with previous editions of the tool. This should be interpreted with caution, and with consideration for the reason for revision. The third edition of the tool reflects key lessons of the COVID-19 experience. What were previously thought to be sufficient capacities to prevent, detect and respond to a typical public health threat were not enough. A lower capacity score using the third edition of the JEE tool therefore does not necessarily mean that country has lost capacity. To note, it should also be considered that comparisons of JEEs with other countries is not deemed as relevant due to the adjustments of the tool.

All countries that undertake a JEE should be commended for their hard work, transparency, and commitment to the shared goal of increasing national, regional, and global health security.

Findings from the joint external evaluation

During the JEE mission in early December 2023, capacities in 19 technical areas for Armenia were evaluated through a peer-to-peer, consultative process that brought a multi-sectoral group of national subject matter experts together with the multi-national, multi-disciplinary JEE team for a week of discussion, collaboration, and field visits. This process led to consensus on scores and priority actions across the 19 technical areas.

Armenia’s commitment to strengthening its IHR core capacities is evident from the decision to undertake a second JEE. Since the first JEE was conducted in August 2016, Armenia has worked hard to develop and improve its public health capabilities and capacities. Like all countries, Armenia was significantly impacted by the COVID-19 pandemic. Although the national and local pandemic responses revealed areas that can be further strengthened, it is noteworthy that a strong and resilient health sector was able to maintain essential health services, as exemplified by the continuation of commendably high vaccination rates by the national immunization programme. The recent humanitarian crisis arising from the military conflict in Nagorno-Karabakh resulted in forced displacement of more than 100 thousand refugees with a diversity of health issues serve as a reminder for the need to maintain vigilance and be fully prepared to respond to complex emergencies that require strong collaboration between public health, security and other concerned sectors.

Through a careful review of the findings of both the field visits and the plenary and bilateral technical discussions, the external team identified several cross-cutting themes and challenges that impact all 19 technical areas. In view of these findings, four recommendations are proposed.
Over-arching recommendations of the JEE:

1. Building on the JEE (and other relevant assessments) and through a collaborative multi-sectoral process, develop a costed National Action Plan for Health Security (NAPHS) and proceed to implement priority activities at national, intermediate (Marze) and local levels, with appropriate arrangements for monitoring and evaluation.

The development and subsequent implementation of a NAPHS will be a critically important step towards uplifting emergency preparedness and response capacities in Armenia. The development of a fully ‘joined-up’, risk-informed plan through effective inter-sectoral collaboration will ensure optimal results (for example, surveillance should cover all threats and hazards so there are no weak links in the chain. The development of a framework to monitor NAPHS implementation will ensure progress stays on track, and if needed, allow corrective measures to be applied.

2. Advocate for and secure funding both for NAPHS implementation and for long term sustainability of IHR-critical programmes in all sectors, including the human resources needed to support them. Develop a medium-long term plan to transition the funding of programmes currently receiving external support (for example laboratory services and the Field Epidemiology Training Programme).

Funding should be identified to cover both the ‘capital’ costs associated with NAPHS implementation and the recurrent costs of maintaining programmes that support IHR capacities. Consideration could also be given to conducting a human resources ‘needs assessment’ and advocating to address identified gaps. A transition plan should be developed to move towards national self-reliance for all programmes that are essential for national health security.

3. Establish robust arrangements to regularly review, strengthen and harmonize legal measures to support IHR implementation for, and between all sectors, and at all locations within and at the borders of Armenia.

Legal measures to support IHR implementation are of critical importance. Because threats to health security occur in a context that is constantly evolving, a dynamic approach to reviewing and strengthening the legal framework for IHR implementation is needed. An important element of this work should be to ensure harmonization of legal measures across sectors. Should any changes to IHR (2005) be agreed upon by Member States, consideration should be given to aligning national legislation to ensure full compliance.

4. With a focus on ‘One Health’, develop and consider options to strengthen multi-sectoral and intersectoral arrangements for IHR implementation which could include, (but not be limited to) the following:

• Strengthening the mandate and authority of National Center for Disease Control to support all functions of the National IHR Focal Point, ensuring sufficient financial and human resources to execute these functions.

• Revitalizing the intersectoral national IHR Committee to provide greater executive authority and regular oversight for the continuous strengthening of IHR capacities.

• Further strengthening arrangements for preparedness, surveillance (information and data sharing), risk assessment and response at national, intermediate (Marze) and local levels and to events related to all hazards, through the development of Memoranda of Understanding / written agreements between IHR stakeholders and ensure the functionality of these arrangements through regular ‘After Action Reviews’ and exercises.

Consideration may be given to undertaking a critical review aimed at optimizing arrangements for the governance of IHR functions, including both the 24/7 ‘alert and response’ obligations and the requirement to strengthen IHR core capacities. Arrangements for collaboration between sectors and across levels of the system are good but can be further strengthened by the development of additional, more formal arrangements to underpin critical functions across the emergency preparedness and response cycle. A culture of testing and strengthening these arrangements through regular exercises, drills and After-Action Reviews should be adopted.
## Armenia: scores and priority actions

Scores: 1=No capacity; 2=Limited capacity; 3=Developed capacity; 4=Demonstrated capacity; 5=Sustainable capacity.

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<th>Score</th>
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<td><strong>Prevent</strong></td>
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<td>P1. Legal in-</td>
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| struments       | P1.1.            | Legal instruments | 3     | • Building on existing legal mapping, conduct legal analysis (legal mapping/inventory and legal assessment/gap analysis) of relevant legal acts for IHR implementation at the national level to identify existing gaps, identify priority legal acts to revise, and present recommendations for legislative improvement to be considered when developing NAPHS.  
• Finalize formulation of sub-legislative legal acts following the enactment of Armenia Law “On Public Health Care” by December 2024.  
• Enact the Law “On Biosafety and biosecurity” and develop of sub-legislative legal acts derived from the law during 2024-2026  
• Develop a group of trained legal experts at the national level for legal preparedness. Develop a training program for legal experts at the National Center for Disease Control (NCDC) and health-related authorities for legal preparedness to align efforts to review identified gaps in legal instruments for IHR implementation across sectors and develop or revise legal instruments at all levels by 2024.  |
<p>| P1.2.           | Gender equity and equality in health emergencies | 1     |       |                  |
| <strong>P2. Financing</strong> |                  |           |       |                  |
| P2.1.           | Financing for IHR implementation | 3     | • Integrate funding and resourcing as part of the NAPHS development process to facilitate efficient implementation of activities. |
| P2.2.           | Financing for public health emergency response | 3     |       |                  |
| <strong>P3. IHR coord-</strong> |                  |           |       |                  |
| <strong>ination, National</strong> |                  |           |       |                  |
| <strong>IHR Focal Point functions and advocacy</strong> |                  |           |       |                  |
| P3.1.           | National IHR Focal Point functions | 4     | • Develop a NAPHS that incorporates recommendations from the JEE. |</p>
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| P3.2. Multisectoral coordination mechanisms |  | 3 | • Strengthen multisectoral mechanisms for coordination and communication between the IHR National Focal Point and the relevant sectors at national and intermediate levels for implementation of the IHR, through mapping of IHR points of contacts in relevant sectors and organizing regular meetings for the IHR intersectoral committee. Conduct multisectoral IHR awareness workshops to enhance understanding and collaboration across all sectors (especially non-health) in implementing International Health Regulations, disseminating key information/uploads on IHR, interpreting its implications for various sectors, and facilitating discussions to encourage active engagement.
• Establish formalized communication and collaboration mechanisms across sectors at marzes level through the development and adaptation of Standard Operating Procedures (SOPs), guidelines, and protocols for intersectoral communication and collaboration, including clear instructions on information sharing, decision-making processes, and coordination.
• Organize regular simulation exercises/After Action Reviews (AARs) to test communication, coordination, and collaboration between the national IHR focal point and the identified state bodies responsible for IHR implementation |
| P3.3. Strategic planning for IHR, preparedness or health security |  | 3 | • Establish formalized communication and collaboration mechanisms across sectors at marzes level through the development and adaptation of Standard Operating Procedures (SOPs), guidelines, and protocols for intersectoral communication and collaboration, including clear instructions on information sharing, decision-making processes, and coordination.
• Organize regular simulation exercises/After Action Reviews (AARs) to test communication, coordination, and collaboration between the national IHR focal point and the identified state bodies responsible for IHR implementation |
| P4. Antimicrobial resistance (AMR) | P4.1. Multisectoral coordination on AMR | 2 | • Successful endorsement and establishment of the national multisectoral co-ordination mechanism whereby partners are committed to work together to solve problems and reach agreement in the development of coherent recommendations for decision makers.
• Establishment of a reliable nationwide hospital surveillance system for drug resistant pathogens including private and public institutions to inform decision making.
• Inclusion of antimicrobial stewardship into the education of multisectoral teams to establish a robust mechanism to form an integral part in decision making for patient care.
• Support for the continuous development of AMR laboratory research capabilities in the health, agriculture, and food safety sectors. |
<p>| P4.2. Surveillance of AMR |  | 2 | |
| P4.3. Prevention of Multi-drug resistant organisms (MDRO) |  | 1 | |
| P4.4. Optimal use of antimicrobial medicines in human health |  | 3 | |
| P4.5. Optimal use of antimicrobial medicines in animal health and agriculture |  | 1 | |</p>
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<th>Indicator</th>
<th>Score</th>
<th>Priority Actions</th>
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| **P5. Zoonotic disease** | P5.1. | Surveillance of zoonotic diseases | 2 | • Develop a multispectral national response strategy for zoonotic events in accordance with the One Health Concept.  
• Develop an integrated risk assessment and surveillance system for zoonotic diseases in coordination with all relevant sectors.  
• Develop multisectoral contingency plans for the most important endemic and epidemic zoonotic diseases.  
• Develop SOPs and methods of procedure for all sectors involved in coordinated response to outbreaks.  
• Study and implement international sanitary standards for animal husbandry and production of animal products. |
| | P5.2. | Response to zoonotic diseases | 1 | |
| | P5.3. | Sanitary animal production practices | 2 | |
| **P6. Food safety** | P6.1. | Surveillance of foodborne diseases and contamination | 3 | • Create a joint order of action on foodborne diseases such as Brucellosis, Salmonellosis, Listeriosis, Shigellosis, and Trichinellosis in emergency situations.  
• Develop joint training programs between the Ministry of Health, the Ministry of Economy, and the Food Safety Inspection Body of Armenia for the management of foodborne zoonotic outbreaks.  
• Continuously implement joint information campaigns on foodborne diseases by the Ministries of Health and Economy, as well as the Food Safety Inspection Body of Armenia.  
• In agreement with the relevant stakeholders, appoint a joint food safety risk assessment center. |
| | P6.2. | Response and management of food safety emergencies | 2 | |
| **P7. Biosafety and biosecurity** | P7.1. | Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities | 2 | • Allocate predictable core governmental funds in support of the adoption of “the law on biosafety and biosecurity” to ensure sustainable and institutionalized implementation of the requirements stemming from the law.  
• Develop an approved training curriculum on biosafety and biosecurity for those with responsibilities in biorisk management, such as laboratory staff, biosafety officers, management, policy makers, maintenance engineers, etc.  
• Train experts in biosafety and biosecurity to qualify them for providing training and exercises on biosafety and biosecurity for public and private laboratories (human and animal) throughout the country.  
• Establish a biosafety and biosecurity association to create a national network of biosafety and biosecurity experts. |
| | P7.2. | Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture) | 2 | |
## Joint External Evaluation of the International Health Regulations (2005) core capacities of Armenia

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<td><strong>P8. Immunization</strong></td>
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| | P8.1. | Vaccine coverage (measles) as part of national programme | 5 | • Design a social strategy for all people to understand the value of immunization services and demand vaccination, including continuous parents’ reassurance from their regular healthcare professionals and refresher trainings for clinicians.  
• Include alert/reminders in the Armenian National Digital Healthcare System (ArMed) to reduce missed opportunities for vaccination during paediatric visits and improve its interoperability with the vaccine supply inventory and management system.  
• Secure sustainable funding for the procurement and routine repair of cold chain equipment (i.e. a separate line item should be costed and covered by national funding).  
• Ensure adverse event following immunization (AEFI) system can share notifications with WHO Collaborating Centre for International Drug Monitoring.  
• Conduct simulation exercises or after-action reviews for mass vaccination campaigns during epidemics of vaccine preventable diseases in collaboration with relevant sectors and update SOPs accordingly. |
| | P8.2. | National vaccine access and delivery | 5 | | |
| | P8.3. | Mass vaccination for epidemics of VPDs | 4 | | |

### Detect

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<th>Priority Actions</th>
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<td><strong>D1. National laboratory systems laboratory</strong></td>
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</table>
| D1.1. | Specimen referral and transport system | 3 | • Map laboratory capacities, create a laboratory register and integrate it as part of the tiered diagnostic laboratory system in a One Health concept (health, animal and environment) to improve collaboration, information sharing and specimen referral between different tiers of the system, relevant sectors and private laboratories.  
• Build a national laboratory quality management system based upon existing quality assurance procedures and in line with international standards and guidelines, including mandatory participation in (national) external quality assurance (EQA) schemes and training on quality assurance. Implement the EQA schemes at local, intermediate and national level.  
• Develop a national EQA program in accordance with ISO 17043:2023 and involve users of proficiency testing schemes, regulatory authorities, accreditation bodies and relevant stakeholders.  
• Develop a laboratory sequencing strategy to increase utilization of the Next Generation Sequencing (NGS) capacities of the national laboratory network. |
<p>| D1.2. | Laboratory quality system | 2 | | |
| D1.3. | Laboratory testing capacity modalities | 3 | | |
| D1.4. | Effective national diagnostic network | 2 | | |</p>
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<th>Indicator number</th>
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<th>Priority Actions</th>
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<td>D2. Surveillance</td>
<td>D2.1.</td>
<td>Early warning surveillance function</td>
<td>3</td>
<td>• Develop the legislative act “Standard case definitions of communicable diseases and related special health issues to be covered by epidemiological surveillance” with participation of all sectors and involving relevant legislative and regulatory bodies to align with the EU Commission Implementing Decision 2018/945.</td>
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<td>• Integrate human and animal surveillance activities (including vector surveillance) by:</td>
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<td>• Applying common standards (following approval of above mentioned legislative act),</td>
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<td>• Ensuring interoperability of the open-source Electronic Integrated Disease Surveillance System (EIDSS), that includes a laboratory component, and the Armenian National Digital Healthcare System (ArMed) for joint data analysis capabilities,</td>
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<td></td>
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<td></td>
<td></td>
<td>• Routine exchange of data, information and epidemic intelligence,</td>
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<td>• Conducting joint assessments, investigations and interventions,</td>
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<td>• Strategically aligning priorities and plans.</td>
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<td>• Automate routine data management and reporting in ArMed and develop dedicated dashboards for all infectious diseases under surveillance.</td>
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<td></td>
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<td>• Reinforce collaboration across sectors, namely Ministry of Health, the Food Safety Inspection Authority, and the Ministry of Economy by building capacities for joint risk assessments through regular meetings and multisectoral trainings.</td>
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<td></td>
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<td>• Review and update on regular basis the strategy for the multisectoral public health workforce capacity development within the private and public sector to ensure their alignment with health security needs at all levels.</td>
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<td>• Ensure the continuous improvement of the strategy for frontline and intermediate Field Epidemiology Training Program (FETP) workforce development, including a competency framework aligned with international standards.</td>
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<td>• Develop a plan to allow country to improve workforce surge capacity for responding to public health emergency situations.</td>
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<td>Technical areas</td>
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<td><strong>Respond</strong></td>
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<tr>
<td>R1. Health emergency management</td>
<td>R1.1.</td>
<td>Emergency risk assessment and readiness</td>
<td>4</td>
<td>• Establish a national multisectoral working group with a clear and detailed Terms of Reference (ToR), mandated to coordinate, implement, and regularly review multihazard Risk Assessments across Armenia at both national and subnational levels.</td>
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<td></td>
<td>R1.2.</td>
<td>Public health emergency operations centre (PHEOC)</td>
<td>2</td>
<td>• Establish a functional, efficiently managed, and effectively coordinated PHEOC:</td>
</tr>
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<td>R1.3.</td>
<td>Management of health emergency response</td>
<td>3</td>
<td>• Complete and adopt Road Map/ConOps on Formation of the Public Health Emergency Operations Center.</td>
</tr>
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<td>R1.4.</td>
<td>Activation and coordination of health personnel in a public health emergency</td>
<td>3</td>
<td>• Develop PHEOC Handbook (protocol) with regularly updated SOPs covering all critical functions, including activation/de-activation criteria.</td>
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<td>R1.5.</td>
<td>Emergency logistic and supply chain management</td>
<td>3</td>
<td>• Establish and test Incident Management System (IMS) at national PHEOC with clearly defined roles and responsibilities.</td>
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<td>R1.6.</td>
<td>Research, development and innovation</td>
<td>2</td>
<td>• Develop comprehensive public health emergency training program which includes:</td>
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<td>• PHEOC function testing through Tabletop and simulation exercises.</td>
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<td>• Regularly exercise, evaluate, and update/develop supply chain management plan related to sending and receiving medical countermeasures.</td>
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<td>R2. Linking public health and security authorities</td>
<td>R2.1.</td>
<td>Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological, chemical or radiological event</td>
<td>4</td>
<td>• Enhancing related legal frameworks:</td>
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<td>• Advance and endorse legal measures emanating from the Law on Public Health (ref);</td>
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<td>• Review and modify prevailing legal statutes to align them with current legal standards, including the IHR (2005).</td>
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<td>• Advancing collaboration between public health and security authorities:</td>
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<td>• Plan, approve and execute multi-sectoral exercises through resolutions by the Government of Armenia;</td>
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<td>• Establish a unified information platform, or ensure seamless interaction among existing information platforms;</td>
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<td>• Investigate and incorporate advanced practices in the collaborative efforts between the Ministry of Health and Security Authorities (MOD, NSS, etc…) during emergency situations in Armenia.</td>
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<td>Technical areas</td>
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<td><strong>R3. Health services provision</strong></td>
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<td>R3.1. Case management</td>
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<td>• Develop clinical case management guidelines for the prioritized health events, and foster their implementation at all levels of care through orientation, dissemination, and enforce compliance;</td>
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<td>• Expand the operationalization and the interoperability of the electronic health information management system to all types of health services, both private and government funded and all levels of care to enhance safety and continuity of EHS delivery;</td>
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<td>• Continue implementation of the reforms stated in the strategy for Primary Healthcare to improve standards of primary care in a way that also strengthens health security, integrating high quality infrastructure, increasing accessibility to various prevention programmes and engaging in public health emergency response;</td>
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<td>• Test planning assumptions and review the functionality of the operational plans and clinical case management guidelines of priority health events in emergency situations using standard approaches (e.g. simulation exercises (SIMEX), Inter-Action Review (IAR), After Action Review (AAR)).</td>
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<td>R3.2. Utilization of health services</td>
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<td>R3.3. Continuity of essential health services (EHS)</td>
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<td>R4. Infection prevention and control (IPC)</td>
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<td>R4.1. IPC programmes</td>
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<td>• Work towards the adoption of the Programme of Prevention of Nosocomial Infections</td>
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<td>• Pilot the implementation of hand hygiene programmes in a number of MCs. Under Order No. 46-N of Armenia Ministry of Health in 2023, sanitary rules titled &quot;Hand Hygiene Requirements&quot; were sanctioned, slated to become effective on June 1, 2024</td>
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<td>• Explore the introduction of IPC programme implementation in stomatology centres, cosmetology and other non-medical organizations.</td>
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<td>• Finalise and adopt the draft Sanitary Code titled &quot;Requirements to be Submitted to the Healthcare Service Centers within In-Hospital and Out-of-Hospital Settings&quot; currently under development.</td>
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<td>R4.2. Health care acquired infections (HCAI) surveillance</td>
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<td>R4.3. Safe environment in health facilities</td>
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| R5. Risk communication and community engagement (RCCE) | R5.1. | RCCE systems for emergencies | 3 | • Develop, approve, and implement tailored, internationally verified, and logistically and expertly supported strategic and operational acts (bylaws, guidelines, SOPs) for all major subfunctions in relevant organizations (Ministry of Health, NCDC HQ/regional centers, National Institute for Health, and major hospitals) on: RCCE systems for emergencies, Risk Communications, Community Engagement and Infodemic Management.  
• Formalize the establishment, jurisdiction, and activities of the so far informal Emergency Risk Communication and Community Engagement Interagency Task Force – by decision of the Government, Terms of Reference, and make its activities transparent, mandatory, and valorised.  
• Develop a pre-approved general flexible Risk Communication, community engagement and infodemic management (RCCE-IM) strategy and specific action plans to further enhance RCCE and tackle infodemic by creating national-level as well as community-focused innovative and creative Ministry of Health and NCDC-led campaigns based on deep social behavioural insights supported by academic research.  
• Develop continuous training and education on RCCE-IM followed by obligatory transfer of knowledge – for core personnel at Ministry of Health, NCDC, National Institute for Health, and major hospitals, as well as for all community-level partners and surge staff.  
• Procure technical tools – hardware and software, specialized services (social listening, tools to counter mis and disinformation) on an annual basis with a dedicated budget in each referent institution – with particular attention on building capacity to apply for projects/grants. |
<p>| R5.2. | Risk communication | 3 | |
| R5.3. | Community engagement | 3 | |
| IHR related hazards and points of entry and border health | POE1. | Core capacity requirements at all times for PoEs (airports, ports and ground crossings) | 3 | • Develop and disseminate SOPs to contain the spread of infectious diseases, and strengthen point of entry capacity to disinsect, de-rat, disinfect, de-contaminate as part of other regular infectious control practices. |
| POE2. | Public health response at PoEs | 3 | • Develop an incorporated multiagency public health emergency contingency plan that is commonly used at points of entry and aligned with the national disaster management framework. |
| POE3. | Risk-based approach to international travel-related measures | 2 | • Establish continuous education and training programs which include regular exercises involving all agencies at PoE. |</p>
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<th>Technical areas</th>
<th>Indicator number</th>
<th>Indicator</th>
<th>Score</th>
<th>Priority Actions</th>
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</table>
| CE. Chemical events     | CE1.             | Mechanisms established and functioning for detecting and responding to chemical events or emergencies | 3     | • Enhance the legal framework by amending existing legislative and sub-legislative acts to incorporate new requirements for chemical events, including strengthening systems to control the transport of highly effective chemical substances within the territory of Armenia.  
  • Review, exercise and update the national chemical incident response plans to ensure the plan addresses complex chemical incidents (e.g. at a toxic waste or landfill site).  
  • Explore mechanisms to further advance the timely and systematic exchange of chemical information for the purpose of surveillance and alerting.  
  • Strengthen poisons centre activities by starting the process to establish a fully operational 24/7 service.  
  • Enhance mechanisms for mutual co-operation and participate in international chemical and toxicology networks. |
| CE2.                    |                  | Enabling environment in place for management of chemical event             | 3     |                                                                                                                                                                                                                                                                                                                                                  |
| RE. Radiation emergencies| RE1.            | Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies | 3     | • Establish a radioanalytical laboratory within the Armenian Nuclear Safety Regulatory Committee.  
  • Update and/or develop protocols, resources and capacities for dose assessment, diagnosis and medical countermeasures (treatments) for radiation exposure and internal contamination of exposed individuals (whole body counter; biological dosimetry, etc.).  
  • Develop and establish a basic training scheme for the emergency medical staff, first responders (police, first aiders, firefighters, etc.) and other categories of identified responders without formal training in radiation protection on how to detect, recognize and respond to a radiological (event) emergency, and include them in exercises and drills.  
  • Design and conduct scalable exercises for a range of radiological emergencies, whether accidental (e.g. accidental exposure to orphan, lost or stolen radiation sources; accidents during transport of radioactive materials), combined with conventional emergencies (a fire or a release of chemical substances), or malicious acts involving radiation sources.  
  • Update the response plan, mechanisms and guidelines to address the non-radiological impact of nuclear emergencies (such as mental health issues and psycho-social impairments associated with the consequences of protective measures). |
| RE2.                    |                  | Enabling environment in place for management of radiological and nuclear emergencies | 3     |                                                                                                                                                                                                                                                                                                                                                  |
Prevent
P1. Legal instruments

Introduction

The International Health Regulations (IHR) (2005) provide obligations and rights for States Parties. In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even if new or revised legislation may not be specifically required, States may still choose to revise some regulations or other instruments in order to facilitate IHR implementation and maintenance. Implementing legislation could serve to institutionalize and strengthen the role of IHR (2005) and operations within the State Party. It can also facilitate coordination among the different entities involved in their implementation. See detailed guidance on IHR (2005) implementation in national legislation. In addition, policies that identify national structures and responsibilities as well as the allocation of adequate financial resources are also important.

Target

Adequate legal instruments for States Parties to support and enable the implementation of all their obligations and rights created by the IHR. The development of new or modified legal instruments in some States Parties for the implementation of the Regulations. Where new or revised legal instruments may not be specifically required under a State Party’s legal system, the State may revise some laws, regulations or other legal instruments in order to facilitate their implementation in a more efficient, effective or beneficial manner.

Level of capabilities

Armenia has extensive legal instruments at the national level which support the country’s obligations and implementation of core capacities under IHR. There are established legal acts, including laws, decrees, orders, and resolutions, in place, such as the: On Medical Assistance and Services to the Population (1996), On Ensuring Sanitary and Epidemic Safety on Armenia Population (2006), On Protection of the Population in Emergency Situations (1999), and other relevant legal acts which provide the foundation for health services provision, public health, and emergency response.

Public health in Armenia is an effort of multiple state bodies, with complementary authorities and roles and responsibilities which involve: Ministry of Health, National Center for Disease Control, National Institute of Health, Ministry of Economy, Ministry of Emergency Situations, security authorities, as well as other relevant state bodies.

In 2009, Armenia updated their legal framework for the implementation of IHR (2005) across sectors based on legal mapping, legal analysis, and the revision of legal acts. In 2015, Armenia adopted changes to its constitution which led to the cancellation of many joint orders and certain legal instruments. The change in the system of governance led to a lack of clarity on active legal instruments and roles and responsibilities for IHR implementation and multisectoral coordination. Presently, there is a need for stronger governance mechanisms, facilitated at the highest levels, to ensure institutionalized and functional multisectoral and One Health coordination and collaboration that is less dependent on individuals.

Following robust multisectoral consultation, the new Public Health Law was adopted in the first reading by the National Assembly and is in anticipation of the final steps required for its enactment. This legislative development represents significant progress for Armenia in aligning its legal acts to strengthen implementation of core capacities under IHR across multiple sectors at all levels of the country.
The Government of Armenia demonstrated its leadership and commitment to global health security and IHR implementation with a requirement to finalize the National Action Plan for Health Security (NAPHS) in 2024, develop the new Public Health Law and the Biosafety and Biosecurity Law, both which are national priorities in the Government Action Program 2021-2026.

Armenia has several legal acts addressing gender equality and equity of minority populations. Armenia guarantees rights relevant to gender equality and social inclusion in the Constitution, Family Code, and Election Code. There has been no systematic assessment of gender gaps in IHR capacities. As part of the COVID-19 pandemic response, the government developed programs to mitigate the consequences of the pandemic for the most vulnerable groups, paying special attention to the needs of women and girls. However, significant challenges remain in the full realization of gender equality in IHR-related capacities.

**Indicators and scores**

**P1.1. Legal instruments – Score 3**

**Strengths**

- Approximately 400 legal acts have been adopted within the framework of the IHR, providing an opportunity for their continuous enhancement.
- Armenia has developed a new Public Health Law titled “On Public Health Care,” which has been adopted by the National Assembly in the first reading. The new law includes a provision that designates the Ministry of Health as the national coordinating body, with the authority to coordinate efforts in preventing the international spread of diseases. The new law authorizes norms for legal acts in alignment with those emanating from the IHR.
- National legislation adheres to a multidisciplinary approach, wherein legal acts are collaboratively developed with various government bodies.
- All normative legal acts are publicly available and published in the legal information system of Armenia (https://www.arlis.am/).
- The draft law “On Biosafety and biosecurity” developed by the working group on “Biosafety and biosecurity” with the participation of all competent authorities in Armenia, has been submitted for state-legal expertise.
- There are more than 11 government bodies involved with public health emergencies.

**Challenges**

- There are more than 100 legal acts in force in Armenia after the cancellation of many legal acts. Many legal acts need to be updated due to the change in fundamental legislation. The Ministry of Health reports that about 27 need to be developed.
- There is a lack of a national multisectoral coordination working group for legal preparedness to align efforts to review identified gaps in legal instruments for IHR implementation across sectors and develop or revise legal instruments, including support for:
  - Enactment of the Law “On Biosafety and biosecurity” and formulation of sub-legislative legal acts stemming from the law.
- Lack of a data protection law to establish a process for individual consent to transfer personal data for the registration of diseases common to animals and humans that pose a threat to the environment.
• Conduct an inventory of the legislation governing the field based on IHR guidelines, analyse existing gaps, and provide recommendations for legislative improvement.

P1.2. Gender equity and equality in health emergencies  – Score 1

Strengths
• Armenia has a number of legal instruments that support and guarantee gender equality, including Constitution (Articles 29, 30), Armenia Family Code (Articles 1, 24), and Armenia Electoral Code (Articles 42, 43, 143), among other legal acts.
• Pilot program for has been implemented for a package of minimum initial services for sexual and reproductive health in crisis situations for selected communities of Vayots Dzor region under the framework of the Disaster Preparedness Program of the European Commission’s Humanitarian Aid Departments.

Challenges
• Although certain protective and prevention provisions and legal acts exist regarding gender equality, it is not clear that legal acts and programs are fully developed, implemented, or funded.

Recommendations for priority actions
• Building on existing legal mapping, conduct legal analysis (legal mapping/inventory and legal assessment/gap analysis) of relevant legal acts for IHR implementation at the national level to identify existing gaps, identify priority legal acts to revise, and present recommendations for legislative improvement to be considered when developing a National Action Plan for Health Security (NAPHS).
• Finalize formulation of sub-legislative legal acts following the enactment of Armenia Law “On Public Health Care” by December 2024.
• Enact the Law “On Biosafety and biosecurity” and develop of sub-legislative legal acts derived from the law during 2024-2026.
• Develop a group of trained legal experts at the national level for legal preparedness. Develop a training program for legal experts at the National Center for Disease Control (NCDC) and health-related authorities for legal preparedness to align efforts to review identified gaps in legal instruments for IHR implementation across sectors and develop or revise legal instruments at all levels by 2024.
P2. Financing

Introduction

The implementation of the IHR, including development of the core capacities, requires adequate financing. State Parties should ensure sufficient allocation of funds for IHR implementation.

Target

States Parties ensure provision of adequate funding for IHR implementation through the national budget or other mechanisms. Country has access to financial resources for the routine implementation of IHR capacities and financial resources that can be accessed on time and distributed for readiness and response to public health emergencies, is available.

Level of capabilities

Armenia has a predictable, timely, and prioritized government financial planning process organized and executed by the Ministry of Finance (MoF). The budget planning process is comprised of two phases: (1) preparation of the medium-term expenditure framework covering three years and (2) preparation of the annual budget proposal for the upcoming year. The government funds routine health security and IHR-related activities through the above budgeting process for the Ministry of Health and other relevant ministries. Budget structures support flexible spending and make budgets responsive to sectoral needs. The MoF monitors spending, addressing cases of underspending and overspending.

Government bodies have established pathways for funding outbreaks or public health emergencies. Ministries have flexibility in their budgets to reallocate funds to new activities to fund emergency response. Ministers may request funding from a general government reserve fund (Armenia Law “On the Budgetary System of Armenia,” Article 19) during emergencies or for unforeseen circumstances. Five percent of the annual budget is set aside in the government reserve fund. The Ministry of Health has accessed this fund recently for the national response to the COVID-19 pandemic. There are clear guidelines and procedures to request funding via this mechanism. However, the Ministry of Health, National Centers for Disease Control, and other related ministries do not have dedicated contingency funds for a public health emergency or outbreak response to rapidly fund local or regional actions.

There are a few weaknesses in financing for health security and IHR-related activities. The lack of a joint budgeting process presents a challenge for conducting multisectoral activities, which is particularly important to One Health related activities. Budgets requests are not currently associated with IHR implementation from relevant sectors, making it difficult to estimate the total annual expenditure related to IHR. There is not sufficient budget available for all relevant ministries and sectors to fully support IHR implementation. While there are established monitoring and accountability mechanisms, implementation of these mechanisms needs to be strengthened.
Indicators and scores

P2.1. Financing for IHR implementation – Score 3

Strengths
- The budget process, including medium-term expenditure framework and annual budgets, aligns annual activities to government strategic priorities. Implementation of IHR-related activities is facilitated by the clear and routine budget process.
- The annual budgeting process allows for projected resource needs to be taken into account for IHR-related domains.

Challenges
- The current system does not allow for the categorization of budgets for IHR-related activities. Multiple government bodies contribute to IHR-related work, but the budgets for this work are not known or monitored under existing processes.
- There is a lack of joint budgeting or coordination of funding across sectors, presenting difficulties with multisectoral and One Health related activities.
- Monitoring and accountability mechanisms exist but need to be fully implemented.
- There is a lack of sufficient budgets for intersectoral communication, coordination and joint activities between relevant government bodies.

P2.2. Financing for public health emergency response – Score 3

Strengths
- During a public health emergency, IHR-related ministries have access to a government reserve fund which has clear guidelines for access. The Ministry of Health accessed this fund during the recent COVID-19 pandemic.
- Centralized system for managing financial resource reserves at the national level.

Challenges
- IHR-related ministries do not have dedicated contingency funds for a public health emergency or outbreak response to rapidly fund local or regional action.
- There is a need for the establishment of a mechanism for aggregating public financial resources to facilitate the receipt, distribution, and utilization of funds in response to public health emergencies.

Recommendations for priority actions
- Integrate funding and resourcing as part of the NAPHS development process to facilitate efficient implementation of activities.
P3. IHR coordination, national IHR focal point functions and advocacy

Introduction
The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for efficient alert and response systems. Coordination of nationwide resources, including the designation of a national IHR focal point (NFP), and adequate resources for IHR implementation and communication, is a key requisite for a functioning IHR mechanism at country level.

Target
Multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and response systems for effective implementation of the IHR Coordinate nationwide resources, including sustainable functioning of a National IHR Focal Point – a national centre for IHR communications which is a key obligation of the IHR – that is accessible at all times. States Parties provide WHO with contact details of National IHR Focal Points, continuously update and annually confirm them. Timely and accurate reporting of notifiable diseases, including the reporting of any events of potential public health significance according to WHO requirements and consistent relay of information to Food and Agriculture Organization (FAO) and World Organisation for Animal Health (WOAH). Planning and capacity development are undertaken and supported through advocacy measures to ensure high-level support for implementation of IHR.

Level of capabilities
In Armenia, the Ministry of Health is formally designated as the National Focal Point (NFP) for International Health Regulations. Under its jurisdiction operates the National Center for Disease Control and Prevention, a key player in the country’s public health response. Key functions of the NCDC include epidemiological surveillance, prevention of communicable and non-communicable diseases, coordination of national immunization, and preparedness for various public health emergencies. The center also focuses on health promotion, environmental health, public health laboratory network coordination, biosafety, biosecurity, and public health scientific research. These responsibilities underscore the comprehensive approach taken by the Armenian government to address public health challenges.

The NCDC in Armenia actively functions as the NFP for the IHR as delegated by the Ministry of Health, despite the Ministry of Health being the designated NFP by decree. Strengthening NCDC’s role as the NFP through formal legal recognition would establish clear authority.

Legal frameworks in Armenia have been updated to align with IHR, encompassing preventive and anti-epidemic measures. The healthcare sector is authorized to initiate quarantine measures, formulate emergency healthcare plans, and endorse protocols for medical assistance in emergencies. This legal empowerment also extends to establishing sanitary and epidemiological safety regulations during emergencies.

Notably, an interdepartmental committee has been formed, crucial in implementing IHR and in the prevention and control of infectious diseases. This committee, which includes representatives from 20 different state bodies, demonstrates the multisectoral approach adopted by Armenia in managing public health emergencies.
While effective national-level coordination is apparent, more structured and consistent implementation of these mechanisms at intermediate levels is necessary. The current system seems to rely heavily on individual relationships and personal contacts for communication and collaboration. Enhancing formal communication and collaboration mechanisms, particularly at regional levels, remains a key area for further development to ensure a cohesive and efficient response to public health emergencies.

There is a need for regular exercising, reviewing, evaluating, and updating of coordination mechanisms. The information provided didn’t confirm an ongoing process for such systematic evaluations and updates. Establishing a routine for these activities would ensure that coordination mechanisms remain effective, relevant, and responsive to evolving public health needs and challenges.

**Indicators and scores**

**P3.1. National IHR Focal Point functions – Score 4**

**Strengths**
- The NCDC’s role in epidemiological surveillance and response demonstrates its ability to access relevant information sources and decision-making levels within the national surveillance and response system.
- The established intersectoral committee plays a pivotal role in implementing International Health Regulations and in the prevention and control of infectious diseases. This committee’s composition reflects a strong multisectoral approach.

**Challenges**
- While Armenia’s National IHR Focal Point functions demonstrate significant strengths, there may still be room for improvement in terms of intersectoral collaboration and comprehensive communication with all domestic sectors.
- While Ministry of Health is officially designated, the NCDC actively functions as the NFP for the IHR as delegated by the Ministry of Health. The division of roles and responsibilities between institutions may reduce the NCDC’s authority and overall operability.

**P3.2. Multisectoral coordination mechanisms – Score 3**

**Strengths**
- Mechanisms appear to be implemented at the national level, with specific plans and programs in place. This includes coordination within relevant ministries during public health events or risks, such as the COVID-19 pandemic, and established communication channels for zoonotic risks and urgent/emerging events.

**Challenges**
- While national-level coordination is evident, there is no clear indication that these mechanisms are consistently implemented at intermediate levels. There is a lack of regular exercising, reviewing, evaluating, and updating of these coordination mechanisms. The provided information didn’t confirm this ongoing process.
- The effectiveness of regional coordination, especially with local authorities, is currently hindered by the lack of formalized regulations and procedures. While traditional cooperation practices have shown some success, they are not a substitute for officially regulated and standardized processes.
P3.3. Strategic planning for IHR, preparedness or health security – **Score 3**

**Strengths**
- The country has demonstrated significant institutional capacity in public health management.
- The NCDC’s wide range of functions, including epidemiological surveillance, disease prevention, immunization coordination, and response to public health emergencies, showcases Armenia’s commitment to enhancing its public health system’s capacity and readiness.

**Challenges**
- Despite advancements in legal frameworks and emergency response mechanisms, Armenia’s strategic planning in public health is hindered by the absence of a comprehensive multisectoral, multidisciplinary and interoperable National Action Plan for Health Security.

**Recommendations for priority actions**
- Develop a National Action Plan for Health Security that incorporates recommendations from the JEE.
- Strengthen multisectoral mechanisms for coordination and communication between the IHR National Focal Point and the relevant sectors at national and intermediate levels for implementation of the IHR, through mapping of IHR points of contacts in relevant sectors and organizing regular meetings for the IHR intersectoral committee.
- Conduct multi-sectoral IHR awareness workshops to enhance understanding and collaboration across all sectors (especially non-health) in implementing International Health Regulations, disseminating key information/updates on IHR, interpreting its implications for various sectors, and facilitating discussions to encourage active engagement.
- Establish formalized communication and collaboration mechanisms across sectors at marz level through the development and adaptation of Standard Operating Procedures (SOPs), guidelines, and protocols for intersectoral communication and collaboration, including clear instructions on information sharing, decision-making processes, and coordination.
- Organize regular simulation exercises/After Action Reviews (AARs) to test communication, coordination, and collaboration between the national IHR focal point and the identified state bodies responsible for IHR implementation.
P4. Antimicrobial resistance (AMR)

Introduction

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, the problem was manageable as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics.

Over the past decade, however, this problem has become a crisis. Antimicrobial resistance is evolving at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security and national security.

Target

A functional system in place for the national response to combat antimicrobial resistance (AMR) with a One-Health approach, including:

a). Multisectoral work spanning human, animal, crops, food safety and environmental aspects. This comprises developing and implementing a national action plan to combat AMR, consistent with the Global Action Plan (GAP) on AMR.

b). Surveillance capacity for AMR and antimicrobial use at the national level, following and using internationally agreed systems such as the WHO Global Antimicrobial Resistance Surveillance System (GLASS) and the World Organisation for Animal Health (WOAH) global database on use of antimicrobial agents in animals.

c). Prevention of AMR in health care facilities, food production and the community, through infection prevention and control measures.

d). Ensuring appropriate use of antimicrobials, including assuring quality of available medicines, conservation of existing treatments and access to appropriate antimicrobials when needed, while reducing inappropriate use.

Level of capabilities

A new strategic plan has been outlined for the control of AMR in Armenia (RM), along with an interdepartmental program of measures for the years 2023-2027. Once approved, this strategy will supersede the 2015-2020 strategy. The National Center for Disease Control is fully equipped with both technical resources and skilled professionals to provide specialist testing for both the speciation of isolates and identification of antimicrobial resistance. Whilst several healthcare facilities, including facility-serving laboratories, possess the capability to identify clinically and/or epidemiologically significant microbes, the NCDC has the potential to play a central role in identification of healthcare associated infections (HAIs), significant community acquired infections, animal and environmental pathogens.

Plans are underway to integrate the HAI epidemiological system into the national health e-Health system ArMed. The development of the e-Health system is intended to enhance the country’s capability in providing healthcare information and statistics to stakeholders, both for monitoring and decision-making purposes. In Armenia, antimicrobial drug use has been monitored since 2002 according to the WHO methodology and data is submitted to the WHO Global Antimicrobial Resistance Surveillance System (GLASS). In September 2023, FAO conducted a study on the utilization of antimicrobial drugs in the agricultural sector in Armenia. The study focused specifically on priority livestock production systems, field veterinarians, veterinary pharmacies, and feed mills. In the agricultural sector, there is a need to establish a monitoring system for antimicrobial utilization and together with an epidemiological surveillance system to understand trends in AMR pathogens.
Indicators and scores

P4.1. Multisectoral coordination on AMR – **Score 2**

**Strengths**
- The delivery of the first AMR Strategy, approved on 8 July 2015, demonstrated improved multisectoral coordination and high-level ministerial co-operation, enabled the detection of gaps in the system, and facilitated the continued co-operation between specialists in all sectors.
- A multisectoral draft action plan titled “On Approving the Strategy for the Control and Prevention of Resistance to Antimicrobial Drugs and the Program of Interdepartmental Measures for 2023-2027” has been formulated and is undergoing circulation at the time of reporting.
- A multisectoral co-ordination mechanism has been established with government leadership. To close the workforce gap, plans to employ field epidemiologists are to be endorsed by the cabinet.
- Antimicrobials in Armenia are registered drugs providing a strong foundation for policy decisions.

**Challenges**
- A dedicated budget is not allocated for the implementation of the program of new measures.
- Insufficient dedicated funds have been earmarked for AMR. Financial sources, in accordance with Armenia law, are intended to be utilized.
- The number of healthcare staff remains a problem due to the high workload and high turnover rate.
- Antimicrobials used in agriculture and in animals is a serious challenge.
- Antimicrobials used for animals in agriculture is a serious challenge. A new plan exists to increase surveillance in the animal sector studying antimicrobial use, but information appears to be insufficient to influence political decisions.

P4.2. Surveillance of AMR – **Score 2**

**Strengths**
- The Reference Laboratory Center of the NCDC is fully equipped with both technical resources and skilled professionals.
- NCDC now receives a number of sample types providing better insight not only from the Yerevan area but also the regions.
- Antimicrobial drug use has been monitored since 2002 according to the WHO methodology and data, as submitted to the WHO Global Antimicrobial Resistance Surveillance System (GLASS).

**Challenges**
- Both inadequate data on AMR to inform policy decisions and broadening antimicrobial resistance data at the population level across geographic areas are challenging.
- Antimicrobial utilization amongst animals and in the agricultural sector is a challenge, together with the availability of surveillance data on antimicrobial use and/or administration.
- Whilst some laboratories have good microbiological systems for detection of organisms, capacity is an issue in many health care facilities.

P4.3. Prevention of Multi-drug resistant organisms (MDRO) – **Score 1**

**Strengths**
- Healthcare facilities, including facility-serving laboratories, possess the capability to identify improbable, unusual, and clinically and/or epidemiologically significant results.
Challenges
• Lack of laboratory capacity both in terms of personnel and technical aspects.
• Clinical laboratories identify stable forms and therefore have reduced ability for analysis, while a more comprehensive analysis of stability mechanisms is primarily conducted in the reference laboratory.

P4.4. Optimal use of antimicrobial medicines in human health – Score 3

Strengths
• From 2014, Armenia participated in providing data for each of the five years of data collection (2014–2018). The main sources of data are import records provided by the drug agency.
• Point Prevalence Survey (PPS), a one-day study (which formed part of a larger study in non-EU countries 2014-2018), whereby a specialist visited several hospitals, to view prescriptions provided internally. Findings were reported back to the WHO. The findings contributed to an understanding of the situation in Yerevan hospitals and compared findings with other non-EU countries in the WHO European Region.

Challenges
• Insufficient acquisition of data on the utilization of antimicrobial drugs in agriculture due to the lack of an established monitoring system for drug utilization.
• A lack of information on AMR resistant pathogens in the agricultural sector is a problem – requiring the establishment of an epidemiological surveillance system.

P4.5. Optimal use of antimicrobial medicines in animal health and agriculture – Score 1

Strengths
• The successful establishment of criteria for the utilization of feed additives (antibiotics).
• A significant provision has been instituted in legislation referring to “feed”.

Challenges
• None reported

Recommendations for priority actions
• Successful endorsement and establishment of the national multisectoral co-ordination mechanism whereby partners are committed to work together to solve problems and reach agreement in the development of coherent recommendations for decision makers.
• Establishment of a reliable nationwide hospital surveillance system for drug resistant pathogens including private and public institutions to inform decision making.
• Inclusion of antimicrobial stewardship into the education of multisectoral teams to establish a robust mechanism to form an integral part in decision making for patient care.
• Support for the continuous development of AMR laboratory research capabilities in the health, agriculture, and food safety sectors.
P5. Zoonotic disease

Introduction
Zoonotic diseases are communicable diseases that can spread between animals and humans. These diseases are caused by viruses, bacteria, parasites, and fungi carried by animals, insects or inanimate vectors that aid in its transmission. Approximately 75% of recently emerging infectious diseases affecting humans are of animal origin; and approximately 60% of all human pathogens are zoonotic.

Target
Functional multi-sectoral, multidisciplinary mechanisms, policies, systems, and practices are in place to minimize the transmission of zoonotic diseases from animals to human populations.

Level of capabilities
Armenia’s competent authorities responsible for addressing zoonotic diseases are as follows: The NCDC conducts surveillance activities on zoonotic diseases among humans, monitors vectors and reservoirs (e.g. ticks, fleas, mosquitoes, rodents, etc.), provides diagnostic capabilities on selected zoonotic diseases and develops recommendations. The Food Safety Inspection Body (FSIB) provides state control measures in the field and develops recommendations. The Republican Veterinary-sanitary and Phytosanitary Center of Laboratory Services provides diagnostic capabilities for selected zoonotic diseases.

Armenia has been introducing the One Health approach. Coordination mechanisms among the relevant ministries are outlined in a number of decrees and orders by the Armenian Government, the Ministry of Economy, and those jointly issued by different ministries including the Ministry of Health, the Ministry of Emergency Situations, the Ministry of Territorial Administration and Development, and the Ministry of Nature Protection. Most of the joint decrees are related to the collaboration between the Ministries of Economy and Health. These decrees provide guidelines for implementing an integrated epidemiological surveillance system, and stipulate coordination activities in regards of epidemiology investigations in case of zoonosis outbreaks and food borne diseases. Communication with the Ministry of Health is carried out in accordance with the requirements of the Government Decision No. 480 from 2006.

In 2012, Interdepartmental Working Group (IWG) was established under the One Health initiative (Protocol Decision #22 of the Government of Armenia as of June 6, 2012 on Approving the Schedule for the Implementation of the Multisector Training Program). In line with this decision, exercises to prevent and combat various infectious diseases, including zoonoses, have been carried out on a regular basis. According to the protocol, the Interdepartmental Working Group (IWG) is accountable to the Government of Armenia and requires regular reporting on the results of the conducted exercises.

The veterinary services have basic passive surveillance authority and capacity. Few diseases, infections and hazards are subject to active surveillance. The Ministries of Health and Economy have jointly approved the list of common infectious diseases for humans and animals through a decree.
There is an extensive list of 126 notifiable diseases regulated by the Decision of the Government of Armenia N 1477-H dated December 11, 2008 “On the procedure of notification and registration of infectious animal diseases”. The FSIB receives information on confirmed animal diseases in accordance with the official reporting form. Information on animal diseases reported is collected and recorded in the central database - TADInfo system. This system has been gradually replaced by the Electronic Integrated Disease Surveillance System (EIDSS). This system allows real-time access to human and animal laboratory research results, eliminating redundancies. Furthermore, information exchange is conducted in accordance with the stipulations outlined in Armenia Government Decision No. 480-N, dated January 19, 2006.

The Ministries of Health and Economy have contingency plans for some zoonotic diseases, including avian influenza (which needs to be updated) and brucellosis. Further contingency plans are in the draft phase (for rabies and anthrax), and a general contingency plan for responses to disease outbreaks is also under development. A multisectoral approach to the development and review of these plans will be ensured by the consultation process in between of relevant stakeholders.

Within the framework of the State Program, research on brucellosis is carried out twice a year in small ruminants, and once a year - nationwide. In some regions, tuberculosis is also being researched. The program, which is free of charge for farmers, is implemented by the Ministry of Economy, which, through the state non-profit organization Center for Agricultural Practices and under the supervision of the FSIB, takes samples and sends them to the marze regional laboratories (rose bengal test). In case of a positive answer, the samples are sent to the FSIB laboratory for confirmation. If brucellosis is confirmed, the owner is obliged to slaughter the animal within 15 days. This process is supervised by FSIB.

Although the Law on Veterinary Medicine provides the legal basis for compensation to the farmers for animals that have died, were euthanized, or were subjected to sanitary slaughter in case of contagious animal diseases, no such system has been established and implemented.

There is no official surveillance program for zoonotic diseases in wildlife. This provides an opportunity for more intensive involvement of the Ministries of Health and Economy as competent authorities for wildlife and for closer collaboration with relevant authorities on developing and implementing zoonosis surveillance and control programs.

There is no mechanism for joint risk assessment for zoonotic disease events, however, efforts to minimize zoonotic diseases, along with risk assessments and prompt response have been undertaken in the field of public health. Veterinary and public health services conduct joint public awareness campaigns on brucellosis. These included the distribution of educational materials on zoonotic diseases among farmers.

**Indicators and scores**

P5.1. Surveillance of zoonotic diseases – **Score 2**

**Strengths**

- Legislative framework is in place for disease notification including for farmers to notify sudden and mass morbidity and deaths of animals.
- Legislation is in place regarding notifiable animal and human diseases.
- There is ongoing implementation of animal identification/registration and traceability system.
- There is an established list of agreed major priority diseases.
- Organised network of veterinarians and veterinary paraprofessionals exists at the community level to collect and transmit samples and relevant information from the farm and herd level.
- Sufficient number of personnel and epidemiologists to gather and transfer the information.
Joint External Evaluation of the International Health Regulations (2005) core capacities of Armenia

Challenges
- Limited incentive among contracted veterinarians and veterinary paraprofessionals to be involved in passive surveillance,
- Limited capacity of contracted veterinarians and veterinary professionals to effectively implement passive surveillance activities.
- Limited awareness and motivation among farmers to report due to the lack of a compensation scheme.
- Missing processes/systems for disease information collection from slaughterhouses.
- Irregular collection and analysis of laboratory results.
- Limited capacity of public laboratories and missing diagnosis alternatives for private laboratories for a number of diseases.
- No involvement of private veterinary sectors in passive surveillance.
- Active surveillance is not part of the risk analysis approach and processes.
- Missing active surveillance programs for important diseases like Peste des Petits Ruminants, Bluetongue, Rabies and Newcastle Diseases.
- Limited specialized epidemiology capacity among data collection personnel.

P5.2. Response to zoonotic diseases – Score 1

Strengths
- Legislative framework is in place for emergency response, including a procedure for the notification of contagious animal diseases.
- Animal (bovine) identification and registration and traceability system is functioning.
- Existence of cooperation mechanisms among relevant departments.
- High quality education programs are in place to educate and train highly skilled veterinarians.
- Non-formal intersectoral cooperation has been on-going.

Challenges
- Limited number of diseases for which there are contingency plans in place.
- Missing farmer compensation mechanisms.
- Limited formal multisectoral information.
- There is no data on wildlife.

P5.3. Sanitary animal production practices – Score 2

Strengths
- Legislative framework (Law on Veterinary Medicine, Law on Food Safety, Law on Feed and numerous secondary legislative acts) is in place.
- The practice of developing risk-based annual inspection plans and performing inspections is in place.
- Inspection plans and annual reports on the execution of the inspection plans are publicly available.
- Legislative frameworks are in place for animal identification and registration.
- Implementation of an identification and registration program targeting bovines in the country.
  » Veterinary Medicinal Products registration procedure is in place for veterinary drugs (under the Ministry of Health) and veterinary biologicals.
  » A residue monitoring programme for honey and fish is in place.
Legislative framework is in place governing mandatory labelling and ensuring traceability as a responsibility of the Food Business Enterprises (FBE).

Challenges
- The sale of antimicrobials without veterinary prescription.
- There is no record keeping on using of Veterinary Medicinal Products among farmers.
- Low frequency of FBEs inspection frequency.

Recommendations for priority actions
- Develop a multispectral national response strategy for zoonotic events in accordance with the One Health Concept.
- Develop an integrated risk assessment and surveillance system for zoonotic diseases in coordination with all relevant sectors.
- Develop multisectoral contingency plans for the most important endemic and epidemic zoonotic diseases.
- Develop SOPs and methods of procedure for all sectors involved in coordinated response to outbreaks.
- Study and implement international sanitary standards for animal husbandry and production of animal products.
P6. Food safety

Introduction

Food- and water-borne diarrhoeal diseases are leading causes of illness and death, particularly in less developed countries. The rapid globalization of food production and trade has increased the potential likelihood of international incidents involving contaminated food. The identification of the source of an outbreak and its containment is critical for control. Risk management capacity with regard to control throughout the food chain continuum must be developed. If epidemiological analysis identifies food as the source of an event, based on a risk assessment, suitable risk management options that ensure the prevention of human cases (or further cases) need to be put in place.

Target

A functional system is in place for surveillance and response capacity of States Parties for foodborne disease and food contamination risks or events with effective communication and collaboration among the sectors responsible for food safety.

Level of capabilities

Armenia has dedicated significant efforts to enhance food safety, aligning it with global standards. The Ministry of Economy serves as the policy-making body for food safety, with the State Service for Food Safety (SSFS) acting as the Competent Authority for authorizing and inspecting food safety establishments. The Food Safety and Quality Control Inspection unit within the SSFS is in charge of formulating official control plans, procedures, and checklists, as well as coordinating food safety inspections at the regional level (marze).

SSFS has been established as the competent authority for the supervision and inspection of the whole food chain, “from farm to fork”, including food of animal and nonanimal origin. The whole approach in food safety is being changed to give the food business operators (FBO) primary responsibility for ensuring the safety of their products and based on the hazards in primary production, transport, processing, storage, and distribution instead of focusing on the final products. The Law on Food Safety was adopted in 2014, giving the legal basis for the above-mentioned approach and introducing mandatory Good Manufacturer Practices, Good Hygiene Practices, and Hazard Analysis Critical Control Points (HACCP) systems by FBE. SSFS has established a central register of FBE and a risk-based annual inspection plan.

All the FBE have to be registered in the SSFS database (slaughterhouses, processing establishments, cold storage, retail shops, food catering, and restaurants). There is an established approval procedure in place, and all Food Business Enterprises (FBE) exclusive of abattoirs have been required to have HACCP system in place. FBEs are obliged to register online in the SSFS database and then be included in the annual inspection plan.

Significant developments have been observed in the slaughterhouse sector since 2018. The number of abattoirs has increased from 18 to 91. Increased attention is placed on the transparency of inspection activities. Risk-based inspection plans have been introduced based on a methodology approved by the Government. Inspection plans and inspection reports are regularly published on the official website. The official control system has been changing, giving the food business operators (FBO) responsibility for food safety measures and introducing quality management systems based on HACCP principles. Plans are risk-based, taking into account different parameters (history of noncompliance, type of product, the volume of production, variety of product) with establishments are categorized into 3 categories of risk...
Prevent

(low, medium, high). The inspection frequency for high-risk establishments is supposed to be once a year, medium - once in 3 years, and low - once in 5 years.

Slaughterhouses, processing establishments, and local markets are obliged to contract private veterinary-sanitary expertise companies to check their raw material (meat and milk). These companies must have staff with university degrees in veterinary medicine or veterinary-sanitary expertise and basic laboratory skills and are subject to SSFS veterinary inspection. Since June 1, 2018 meat originated only from slaughterhouses can be legally sold (Government degree 142N, 15 February 2018).

When a medical establishment detects a food-borne zoonosis in a human, the information is immediately provided to the Ministry of Health (or its regional representative), which in turn instantaneously transfers the information to the SSFS headquarters. However, as a rule, as soon as the disease is detected, the medical staff contacts the SSFS regional representative by phone to respond as quickly as possible. Depending on the cause of the disease, samples are taken from the store or animal, and a laboratory investigation is done. Although there are many cases of such successful cooperation between agencies, they are not adequately documented.

**Indicators and scores**

**P6.1. Surveillance of foodborne diseases and contamination – Score 3**

**Strengths**

- The law on Food Safety adopted in 2014 gives the primary responsibility for food safety to the food business operators (FBOs), introduces mandatory HACCP requirements, and stipulates all FBEs can only purchase meat derived from slaughterhouses. This is enforced in public institutions only.
- There is an FBE establishment approval procedure in place.
- SSFS is the competent authority for authorizing and inspecting all FBEs.
- The central register of FBE is established and operating.
- Risk-based annual official control plan is being implemented for inspections.
- A food safety communication strategy has been developed.
- Private veterinary-sanitary expertise companies conduct post and ante-mortem inspections at slaughterhouses; furthermore, SSFS conducts inspection of both, abattoirs and private veterinary-sanitary expertise companies.
- Unidentified animals (ovine) are prohibited from being slaughtered at the slaughterhouse.

**Challenges**

- There is no system for approval/authorization of FBE in place, FBEs can only be registered.
- No establishment approval number system is in place by which other FBEs and consumers can recognize whether the establishment complies with requirements.
- The annual inspection plan does not consider whether the FBE complies with HACCP requirements.
- Low frequency of inspections (high-risk establishments such as slaughterhouses are to be done only once a year).
- No collection of animal disease information from slaughtered animals.
- HACCP is still not enforced in slaughterhouse establishments.
- Staff performing ante and postmortem investigations is not obliged for any continuous professional development, and no SOPs are developed to perform these official tasks.
P6.2. Response and management of food safety emergencies – Score 2

Strengths

• A comprehensive crisis management plan for the food and feed sector has been developed, outlining the various situations that pose direct or indirect risks to human and animal health due to food and/or feed.

• There is a system in place to facilitate the exchange of operational information among authorities and sectors regarding the occurrence or suspicion of foodborne disease outbreaks and emergencies related to food safety. This system is a crucial component of both early warning and rapid response systems for communicable diseases, as well as an alert mechanism for food and feed at national and territorial levels.

• National Emergency Contact Points ensure links and data exchange with the International Food Safety Authorities Network (INFOSAN) and the World Organisation for Animal Health (WOAH).

Challenges

• Lack of laboratory management information systems.

• Lack of an integrated national system to control and manage food safety.

• Absence of an integrated e-National Food Safety Authority system with clear flows for collecting, reporting, processing, and storing data.

Recommendations for priority actions

• Create a joint order of action on foodborne diseases such as Brucellosis, Salmonellosis, Listeriosis, Shigellosis, and Trichinellosis in emergency situations.

• Develop joint training programs between the Ministry of Health, the Ministry of Economy, and the Food Safety Inspection Body of Armenia for the management of foodborne zoonotic outbreaks.

• Create a joint Rapid Response Teams (RRT) at the national level to act in emergency situations.

• Continuously implement joint information campaigns on foodborne diseases by the Ministries of Health and Economy, as well as the Food Safety Inspection Body of Armenia.

• In agreement with the relevant stakeholders, appoint a joint food safety risk assessment center.
P7. Biosafety and biosecurity

Introduction

It is vital to work with pathogens in the laboratory to ensure that the global community possesses a robust set of tools – such as drugs, diagnostics, and vaccines – to counter the ever-evolving threat of infectious diseases.

Research with infectious agents is critical for the development and availability of public health and medical tools that are needed to detect, diagnose, recognize and respond to outbreaks of infectious diseases of both natural and deliberate origin. At the same time, the expansion of infrastructure and resources dedicated to work with infectious agents have raised concerns regarding the need to ensure proper biosafety and biosecurity to protect researchers and the community. Biosecurity is important in order to secure infectious agents against those who would deliberately misuse them to harm people, animals, plants or the environment.

Target

A whole-of-government multisectoral national biosafety and biosecurity system with high-consequence biological agents identified, held, secured and monitored in a minimal number of facilities according to best practices, biological risk management training and educational outreach conducted to promote a shared culture of responsibility, reduce dual-use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing and pathogen control measures in place as appropriate.

Level of capabilities

IHR requires preventive measures to be in place to prevent the accidental or deliberate release of (high consequence) pathogens. A draft law on biosafety and biosecurity is currently under consideration by the Government. Once the draft law is approved, a legal basis is established for a whole-of-government system covering biosafety and biosecurity, including the governance of biological toxins.

General laws regulating several biosafety aspects have been in place for years, such as regulations for waste management, transportation of dangerous goods, physical safety of laboratories and incident reporting, covering a substantial part of biosafety, but do not control biosecurity and dual-use risks. By drafting a law on biosafety and biosecurity and with its approval being foreseen soon, the Government of Armenia acknowledges the urgency of additional control measures to reduce the risks of loss of biological materials or knowledge, theft or misuse. Measures controlling biosecurity risks include a national inventory of high consequence pathogens, a national oversight mechanism of dual-use research and responsible code of conduct for scientists.

At present, the Reference Laboratory Centre (within the NCDC) is the only facility that is licensed by the Government of Armenia to store high consequence pathogens. Since Armenia doesn’t have operational biosafety level 3 facilities in place, propagation of high consequence pathogens is restricted to a minimum and is only allowed for diagnostic purposes using approved procedures that are based on a proper biological risk assessment in a limited number of NCDC branch laboratories.
Courses and training sessions on biosafety and biosecurity have been conducted with funding often provided by donor organizations, such as WHO and the US Defence Threat Reduction Agency and applies mainly to public health facilities. Upon approval of the draft law, private healthcare facilities and authorities in the veterinary and food safety sectors will be obliged to develop and implement training programs to get familiarized and trained in biosafety and biosecurity best practices. In addition, academic curricula will be developed aligned with international best practices, thereby introducing opportunities to engage future workers in the life sciences to create an institutionalized biosafety and biosecurity culture in laboratory facilities from different sectors including at the local and intermediate level.

During the COVID-19 pandemic, a working group was establishment that fostered active collaboration between representatives from local, national and international levels to ensure that procedures were continuously in line with recommendations made by international organisations. This working group is still in place and conducts audits at state public health facilities to assess the implementation of biosafety and biosecurity best practices and will be tasked with the implementation of the law upon approval.

Indicators and scores

P7.1. Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities – Score 2

Strengths
• A draft law on biosafety and biosecurity, that is currently under consideration by the government, will establish the legal basis for a whole-of-government system covering biosafety and biosecurity, including the governance of biological toxins, in a one health approach.
• There is a strong dedication of biosafety officers, management and policy makers in public healthcare facilities to further improve biosafety and biosecurity within their responsibilities.
• Laboratory equipment required to ensure a safe working environment as well as personal protective equipment, are sufficiently available.

Challenges
• Funding to further improve biosafety and biosecurity is mainly dependent on donor organizations and there should be predictable governmental funding earmarked for this purpose to become sustainable.
• Site specific biosafety and biosecurity management programs are lacking in most laboratories, except within a few governmental organizations.

P7.2. Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture) – Score 2

Strengths
• Biosafety and biosecurity related training has been delivered by international organizations, such as WHO, to laboratories in the public health sector, thereby further improving national expertise in this field.
• National training related to laboratory biosafety has been carried out by the NCDC, mainly in public health laboratories, where they are conducted once a year and are monitored and evaluated through annual audits and evaluations.
Challenges

- At present, education and training have a focus on biosafety, whereas elements on biosecurity are underrepresented, likely due to a lack of national experts in this field. Gaining expertise relies on trainings conducted by and with funding of donor organizations.
- Internal introduction and refresher trainings are only conducted in laboratories that have their own biosafety officer in place, that can organize the training. This is the case for only a minority of public health laboratories.

Recommendations for priority actions

- Allocate predictable core governmental funds in support of the adoption of “the law on biosafety and biosecurity” to ensure sustainable and institutionalized implementation of the requirements stemming from the law.
- Develop an approved training curriculum on biosafety and biosecurity for those with responsibilities in biorisk management, such as laboratory staff, biosafety officers, management, policy makers, maintenance engineers, etc.
- Train experts in biosafety and biosecurity to qualify them for providing training and exercises on biosafety and biosecurity for public and private laboratories (human and animal) throughout the country.
- Establish a biosafety and biosecurity association to create a national network of biosafety and biosecurity experts.
P8. Immunization

Introduction

Immunizations are estimated to prevent more than two million deaths a year globally. Immunization is one of the most successful global health interventions and cost-effective ways to save lives and prevent disease. Measles immunization is emphasized because it is widely recognized as a proxy indicator for overall immunization against vaccine preventable diseases. Countries will also identify and target immunization to populations at risk of other epidemic-prone vaccine preventable diseases of national importance (e.g. cholera, Japanese encephalitis, meningococcal disease, typhoid and yellow fever). Diseases that are transferable from cattle to humans, such as anthrax and rabies, are also included.

Target

A national vaccine delivery system – with nationwide reach, effective distribution, easy access for marginalized populations, adequate cold chain and ongoing quality control – that is able to respond to new disease threats.

Level of capabilities

Government Decree No1134-N enacted in 2013 stipulates the National Center for Disease Control is responsible for coordinating and managing the National Immunization Programme (NIP). Therefore, NCDC in Yerevan and NCDC branches in the regions take care of the forecasting, storage, and distribution of vaccines and consumables. More than 500 healthcare facilities countrywide, including primary healthcare facilities and polyclinics/maternity centers (perinatal services), administer vaccines within their premises and also conduct outreach activities.

Immunization is a priority for the Government of Armenia, as confirmed by the continuous increase of the proportion of the health budget devoted to it, and their target of 95% full vaccination coverage of those under one year of age by 2025 (immunization performance is considered as an indicator of the quality of primary health care). As of October 2023, already 92% of children less than one year of age are fully vaccinated.

In this aspect, Armenia has successfully maintained vaccination coverage after transitioning from GAVI assistance in 2018. Consecutive comprehensive Multiyear Action Plans were adopted (2011-2015 and 2016–2020) and the current 2021-2025 plan is fully aligned with the European Immunization Agenda for 2030. Of note, Armenia has a formally established independent National Immunization Technical Advisory Group (NITAG) to provide evidence-based advice to national authorities on immunization since 2009. It was expanded in 2022 with the formulation of its terms of reference and SOPs.

Armenia has a comprehensive routine childhood immunization programme and steps have already been taken towards a life-course immunization approach. There is also extensive experience in introducing new vaccines: Hepatitis B (1999), MMR (2002), Hib-containing pentavalent vaccine (2009), rotavirus (2012), pneumococcal conjugate vaccine (2014), inactivated polio vaccine (2016), Hexavalent (2018), human papillomavirus vaccine (2019). Stepwise introduction of the varicella vaccine is scheduled to start in 2024. Other free vaccinations are tularemia (pre-military age), seasonal influenza, and rabies. Additionally, NCDC has a vaccination service for travelers offering Japanese encephalitis, typhoid, and yellow fever vaccines (at a cost).
While vaccination is not mandatory in Armenia, a written form is required to opt out. Vaccines are administered with the consent of parents or legal representatives for minors or individuals deemed incompetent (and without medical exemptions).

Although coverage remains high, there has been increasing vaccine refusal and hesitancy over the last years, especially in Yerevan. Substantial research has been conducted to understand vaccination uptake of which two drivers have been addressed. To ensure clinicians (specialists) provide proper advice, immunization training with continuing medical education credits is about to be included in the national curriculum. Second, work is being carried out with religious leaders specifically targeting each community (Jehovah’s witnesses, Evangelical Church, and others).

There has been a countrywide measles outbreak since February 2023. Immediate public health actions have included greater intensification of the routine immunization programme, such as changing the routine immunization schedule to provide measles containing vaccine second dose earlier (getting it at 4 years), and the addition of a zero dose for contacts.

Indicators and scores

**P8.1. Vaccine coverage (measles) as part of national programme – Score 5**

**Strengths**
- Government commitment and sustained public budget allocation for the National Immunization Programme (NIP), with the share of national immunization schedule vaccine expenditure funded by domestic government resources increased over the last decade.
- There are supportive normative-legal frameworks in place to support the National Immunization Programme (NIP).
- Smooth and successful introduction of various new vaccines based on evidence-based medicine as advised by National Immunization Technical Advisory Group (NITAG).
- High childhood immunization coverage for all WHO-recommended vaccine antigens.
- Implemented strategies to address vaccination refusal and hesitancy.

**Challenges**
- While the adverse event following immunization (AEFI) system is functional and well-equipped there remains an issue of transferring information about serious adverse event following immunization (AEFI)’s to the WHO Collaborating Centre for International Drug Monitoring (the Uppsala Monitoring Centre) and there is no visibility in their global database, thus limiting the response possibilities.
- Overall, there is generally high acceptance and utilization of immunization services in Armenia. However, studies have shown some challenges with delayed vaccination of multidose series and misinformation spreading about false contraindications to vaccination translating in lower vaccination coverage rate in Yerevan.

**P8.2. National vaccine access and delivery – Score 5**

**Strengths**
- Centralised procurement of WHO pre-qualified vaccines through the United Nations Children’s Fund (UNICEF) is well established. Vaccine stocks at the peripheral level are confirmed monthly.
- Cold chain equipment compliant with performance, quality and safety standards is in place at central, marz (intermediate), and peripheral levels as well as for transportation.
- Standard operating procedures are in place for effective vaccine management and preventing wastage.
- The National digital healthcare system (ArMed) has improved immunization data quality and completeness.
Challenges

- Limited identification, documentation and patient follow-up for vaccination, through the ArMed system. Further development of the ArMed vaccine module is required to allow easy identification of patients with missed vaccines or incomplete vaccination courses. Barcode scanning technology is to be fully introduced for more accurate documentation of administered vaccines and to facilitate real-time estimation of number of vaccine doses needed by local providers.

P8.3. Mass vaccination for epidemics of vaccine preventable diseases – Score 4

Strengths

- Nationwide coverage of routine antigens fell very slightly during first months of the COVID-19 pandemic and regain quickly high levels, demonstrating the resilience of National Immunization Programme in Armenia.
- Regulatory pathways to expedite the importation, marketing authorization and licensing of pandemic vaccines is already established by Scientific Centre of Drug and Medical Technology Expertise of Ministry of Health, with liability arrangements included in the operational vaccine distribution plan.

Challenges

- Issues regarding trust by general population and even healthcare professionals in fast-track procedures for novel vaccines such as mRNA and similar products.
- Limited capacity to assess and test for quality on a large number of products or batches in short time span.

Recommendations for priority actions

- Design a social strategy for all people to understand the value of immunization services and demand vaccination, including continuous parents’ reassurance from their regular healthcare professionals and refresher trainings for clinicians.
- Include alert/reminders in ArMed to reduce missed opportunities for vaccination during paediatric visits and improve its interoperability with the vaccine supply inventory and management system.
- Secure sustainable funding for the procurement and routine repair of cold chain equipment (i.e. a separate line item should be costed and covered by national funding).
- Ensure adverse event following immunization (AEFI) system can share notifications with WHO Collaborating Centre for International Drug Monitoring.
- Conduct simulation exercises or after-action reviews for mass vaccination campaigns during epidemics of vaccine preventable diseases in collaboration with relevant sectors and update SOPs accordingly.
Detect
D1. National laboratory systems laboratory

Introduction

Public health laboratories provide essential services including disease and outbreak detection, emergency response, environmental monitoring and disease surveillance. State and local public health laboratories can serve as a focal point for a national system, through their core functions for human, veterinary and food safety including disease prevention, control and surveillance; integrated data management; reference and specialized testing; laboratory oversight; emergency response; public health research; training and education; and partnerships and communication.

Target

Surveillance with a national laboratory system, including all relevant sectors, particularly human and animal health, and effective modern point-of-care and laboratory-based diagnostics.

Level of capabilities

The national public health laboratory system of Armenia is comprised of public and private laboratories and operates at local, intermediate and national level. The NCDC includes a laboratory network of ten regional branch laboratories and the Reference Laboratory Centre branch, the latter being positioned in Yerevan.

WHO designated the virology laboratory of the Reference Laboratory Centre as a national lab for influenza, measles and rubella. The parasitology lab has been acknowledged as the national reference laboratory for malaria, and the bacteriology lab for tuberculosis. The Reference Laboratory Centre recently received accreditation according to ISO 35001:2019 on Biorisk management and are finalising the process of accreditation according to ISO/IEC 17025:2019. In 2021, the Government of Armenia approved the procedure for the appointment of reference laboratories in healthcare settings and in 2022, the same was achieved for laboratories operating in the field of food safety, veterinary medicine and phytosanitation. None of the laboratories meet the standards set by this procedure.

The entire population of Armenia can be diagnosed for the designated priority diseases. The list of these priority diseases stems from 2016, an update of the list based on surveillance data is anticipated. Laboratory results generated by the public health laboratories are reported in the Armenian National digital healthcare system (ArMed), the national unified electronic healthcare data management system.

The Republican Centre for Veterinary, Sanitary and Phytosanitation Laboratory Services operates under the Food Safety Inspection Authority and comprises of three testing laboratories dealing with veterinary, phytosanitary and food safety research, and is positioned in Yerevan. The Centre operates throughout the food production chain (from farm to fork) within 37 regions in the country. The three laboratories are accredited according to ISO/IEC 17025:2019 or ISO/IEC 17025:201 and the veterinary and Food Testing Laboratory is accredited according to ISO 35001:2019.

In July 2023, the Government of Armenia approved the ‘Strategy for the Development of the laboratory system in the healthcare sector and the program of activities for 2023 – 2026’. This recent approval opened the way for further strengthening of the national laboratory system.
Indicators and scores

D1.1. Specimen referral and transport system – **Score 3**

**Strengths**
- Regulations on transportation of dangerous goods are in place and fully align international regulations and standards.
- Training courses for drivers on the transportation of samples are available at the National Institute of Health, courses on specimen packaging and transport requirements are conducted by WHO. Training is mandatory for drivers that are responsible for transportation of samples. Five vehicles are in place for transportation of sample between laboratories within the national laboratory system.
- Procedures for specimen referral are in place, including forms to register referral, acceptance or rejection of samples.
- Registration of samples and reporting of results is performed electronically in ArMed.

**Challenges**
- Procedures for rushing high-priority specimens (e.g. suspect viral haemorrhagic fever specimens) in case of an emergency are not in place.
- Tracking possibilities of specimen shipment and receipt is not in place, nor is scheduling and transit times.
- Since a laboratory register is not in place, laboratory capabilities are not systematically mapped, leaving the referral laboratory network incomplete and not utilized to its full potential.

D1.2. Laboratory quality system – **Score 2**

**Strengths**
- The Reference Laboratory Centre is accredited conform ISO 35001:2019 on Biorisk management and is finalising the process of accreditation according to ISO/IEC 17025:2019.
- WHO designated the Virology Laboratory of the Reference Laboratory Centre as a national lab for influenza, measles and rubella.
- National bodies for certification (National Body of Standardization and Metrology and accreditation (the National Accreditation Body) are in place.
- Normative requirements are in place for annual calibration, licensed organizations are in place that perform metrology and calibration.
- NCDC staff is trained in their own training facility, that is also open for training by other organizations. Staff of the three laboratories of the Republican Centre for Veterinary, Sanitary and Phytosanitary Laboratory Services also use this training facility.

**Challenges**
- Besides the Reference Laboratory Centre, no other public health laboratories are accredited by any ISO standard.
- A national external quality assurance (EQA) program is not in place, impacting both the public health and the veterinary and food safety laboratories.
- Licensing requirements for labs are very basic and there are little to no requirements on quality assurance and control.
- Within laboratory facilities, staff responsible for quality assurance and Biorisk management are very limited in place.
D1.3. Laboratory testing capacity modalities – **Score 3**

**Strengths**
- Diagnostic testing capacity of the National Reference Centre of NCDC covers a large variety of sample types including human diagnostic samples, environmental matrices (water, air, soil and mud), ticks, vectors and rodents. Also food and grocery products are investigated, for example in outbreak situations. Applied techniques cover classical microbiological methods, microscopy, immunology, molecular detection techniques, as well as rapid test and sequencing.
- Procedures describing diagnostic algorithms for laboratory testing for priority diseases have been developed and approved by the Ministry of Health and are based on WHO guidelines.
- Regulations for procurement are in place and there are registered suppliers of diagnostic tests.

**Challenges**
- Diagnostic capacities are not in place for all 10 listed priority diseases, and currently, there are no plans to develop them.
- Quality assurance and control is vulnerable in several local and intermediate laboratory facilities, indicating that minimum requirement for diagnostic capacities at the local and intermediate levels are not always met.
- Especially in the veterinary sector, most of the laboratory equipment is concentrated within the headquarter structure in the capital, hindering timely analyses.

D1.4. Effective national diagnostic network – **Score 2**

**Strengths**
- Advanced molecular and serological testing of referred samples is done by the Reference Laboratory Centre at the NCDC, the only laboratory receiving referred samples from the local and the intermediate level.

**Challenges**
- Because an accurate register of public health laboratories does not exist, a constituted tier-specific diagnostic laboratory network is not in place.

**Recommendations for priority actions**
- Map laboratory capacities, create a laboratory register and integrate it as part of the tiered diagnostic laboratory system in a One Health concept (health, animal and environment) to improve collaboration, information sharing and specimen referral between different tiers of the system, relevant sectors and private laboratories.
- Build a national laboratory quality management system based upon existing quality assurance procedures and in line with international standards and guidelines, including mandatory participation in (national) EQA schemes and training on quality assurance. Implement the EQA schemes at local, intermediate and national level.
- Develop a national EQA program in accordance with ISO 17043:2023 and involve users of proficiency testing schemes, regulatory authorities, accreditation bodies and relevant stakeholders.
- Develop a laboratory sequencing strategy to increase utilization of the Next Generation Sequencing (NGS) capacities of the national laboratory network.
D2. Surveillance

Introduction

The purpose of real-time surveillance is to advance the safety, security and resilience of the nation by leading an integrated surveillance effort that facilitates early warning and situational awareness of all IHR hazard-related events.

Target

Strengthened early warning surveillance systems that are able to detect events of significance for public health and health security; (2) improved communication and collaboration across sectors and between national, intermediate and primary public health response levels of authority regarding surveillance of events of public health significance; and (3) improved national and intermediate level capacity to analyse data. This could include epidemiological, clinical, laboratory, environmental testing, product safety and quality, and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR.

Level of capabilities

Since the reform of the inherited sanitary-epidemiological service into a broader public health service in 2013, most public health functions including epidemiological surveillance became the responsibility of the National Centre for Disease Control and Prevention (NCDC), a state nonprofit organization under the Ministry of Health. This legislative framework also promotes cooperation of NCDC with the State Health Inspectorate and the National Institute of Health, which includes the Information Analytic Centre, responsible for health trends monitoring.

Approximately 180 infectious diseases and poisonings are notifiable according to Amending Order No. 35-N of the Ministry of Health of Armenia, dated December 17, 2010, “On the approval of sanitary-epidemiological norms and rules for ‘real-time’ electronic epidemiological control of infectious diseases”. Standard definitions for specific diseases such as food poisoning, flu, acute respiratory infection and coronavirus diseases, as well as for smallpox, legionellosis, and chemical poisoning, are established by separate legal acts.

An extensive revision of legal acts in 2023 has highlighted the diseases requiring immediate and emergency reporting. Of note, there are defined thresholds for various diseases, like acute respiratory infections, but this is not legally established.

The epidemiological surveillance system in Armenia has a well-established indicator-based surveillance of infectious diseases component compliant with International Classification of Diseases version 10. All health facilities report case-based or aggregated data, using a standard pre-established paper form. Cases and contacts of notifiable diseases are investigated by the marzes (regional) or local epidemiologist using a standardized form and require reporting to central NCDC to be done within 12-24 hours of diagnosis. The epidemiologist ensures laboratory results are duly fulfilled in the reporting form. Of note, the Ministry of Health is in the process of implementing a unified electronic reporting system comprising both epidemiological and laboratory findings, but it is not yet fully functional at NCDC. Currently mutual information exchange is facilitated electronically through the mulberry system.

In addition, there is an Electronic Integrated Disease Surveillance System used in both human and animal health sectors, but it does not yet have analytical capabilities and integration of other relevant stakeholders in EIDSS, like the Ministry of Economy remains an issue.
Event-based epidemiologic surveillance entails the swift collection of information related to events that may pose a potential risk to public health and at central level includes media monitoring, a hotline and some activities to detect community rumors. At the regional level, event-based surveillance verifies the data provided by the call center, health institutions, the municipality, the governor’s office, community leaders, as well as the Ministry of Internal Affairs.

There is also real-time syndromic surveillance for respiratory syndromes, acute flaccid paralysis, hemorrhagic fever syndrome, and hemorrhagic uremic syndrome. The syndromic surveillance in Armenia focuses on visits to hospitals and does not include other data like absenteeism, over-the-counter and prescription medication sales, reports to poison control, Emergency Medical Service ambulance data, etc.

Armenia has conducted both influenza-like illness (ILI) and severe acute respiratory infection (SARI) surveillance since 2010. It started in the cities of Yerevan, Kapan (Syunik marze) and Vanadzor (Lori marze) and was gradually extended to all marzes. The sentinel surveillance on respiratory infections now includes COVID-19.

Compliance with International Health Regulations 2005, requiring notification of any event that may constitute a public health emergency of international concern, is stipulated by Resolution No. 1138-N of the Government of Armenia “On the approval of the cooperation mechanisms and coordination procedures of the National Coordinating Body and interested bodies on issues of international health (medical and sanitary) rules” issued on August 26, 2010. In case of emergency situations in the field of public health caused by biological, chemical and radiological threats the Ministry of Emergency Situations immediately provides any available information to the National Coordinating Body and cooperates in the organization of appropriate response measures. NCDC reports systematically (quarterly) on implementation of IHR to the Government of Armenia.

Following the COVID-19 pandemic there have been many changes in regard to the surveillance system in place and some governmental structures have merged.

Indicators and scores

D2.1. Early warning surveillance function – Score 3

Strengths

• Epidemiological surveillance, including its early warning function, is mandated by a national law and responsibilities are defined within the legislation, including all healthcare providers. Furthermore, it relies on the strong commitment and sense of responsibility of the professionals involved.

• Detailed guidelines and SOPs are available for the early detection of cases, syndromes and events. There is an established feedback loop, with all levels both receiving and transmitting information. Although resource-intensive, all reporting units seemingly provide timely and complete notifications.

Challenges

• While completeness, data quality and timeliness of the epidemiological surveillance are monitored, there is no formal procedure established for regular evaluation.

• The open-source EIDSS, and the National digital healthcare system (ArMed) are not interoperable, precluding real-time data sharing.

D2.2. Event verification and investigation – Score 4

Strengths

• Armenia has an established process for event verification, investigation and risk assessment involving all levels (national, marze and local). Precisely, for outbreak investigation there is
a manual with SOPs, including details on collection and transport of biological samples. Epidemiologists and laboratory specialists from NCDC, receive regular training through seminars, training sessions, and workshops with national and international faculty.

- An Interdepartmental Working Group is in place to assess the risk and ensure timely response to biological threats. Risk assessments are conducted at national level using a specific tool and a decision is made whether to disseminate this information to other ministries and agencies. Current communication channels include official letters, phone calls, and emails. A collegial after-action review is also carried out at national level following outbreak investigation.

**Challenges**

- There is a recognized need to further streamline and facilitate information sharing across all sectors. Capacity for advanced data analysis is not ensured.

**D2.3. Analysis and information sharing – Score 3**

**Strengths**

- Article 19 of the Governmental Order No. 35-N dated December 17, 2010, states that electronic data at national and sub-national levels are to be analysed on a monthly, quarterly, semi-annual, and annual bases. Reportedly, surveillance data on priority diseases and on unusual events are analysed in a timely way.
- The adoption of the European Centre for Disease Prevention and Control European Surveillance System (TESSy) for electronic epidemiological surveillance for case surveillance.
- The implementation of monthly information exchanges in accordance with bilateral international and interstate agreements signed between Armenia and several countries.

**Challenges**

- While the 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” established mechanisms for information exchange across sectors, there is no requirement for joint analysis and criteria have not been defined.

**Recommendations for priority actions**

- Develop the legislative act “Standard case definitions of communicable diseases and related special health issues to be covered by epidemiological surveillance” with participation of all sectors and involving relevant legislative and regulatory bodies to align with the EU Commission Implementing Decision 2018/945.
- Integrate human and animal surveillance activities (including vector surveillance) by:
  - Applying common standards (following approval of above-mentioned legislative act),
  - Ensuring interoperability of the EIDSS, that includes a laboratory component, and the National digital healthcare system (ArMed) for joint data analysis capabilities,
  - Routine exchange of data, information and epidemic intelligence,
  - Conducting joint assessments, investigations and interventions,
  - Strategically aligning priorities and plans.
- Automate routine data management and reporting in ArMed and develop dedicated dashboards for all infectious diseases under surveillance.
- Reinforce collaboration across sectors, namely Ministry of Health, the Food Safety Inspection Authority, and the Ministry of Economy by building capacities for joint risk assessments through regular meetings and multisectoral trainings.
D3. Human resources

Introduction

Human resources are important in order to develop a sustainable public health system over time by developing and maintaining a highly qualified public health workforce with appropriate technical training, scientific skills and subject-matter expertise. Human resources include nurses and midwives, physicians, public health and environmental specialists, social scientists, communication, occupational health, laboratory scientists/technicians, biostatisticians, IT specialists and biomedical technicians and a corresponding workforce in the animal sector: veterinarians, animal health professionals, para-veterinarians, epidemiologists, IT specialists etc.

The recommended density of doctors, nurses and midwives per 1,000 populations for operational routine services is 4.45 plus 30% surge capacity. The optimal target for surveillance is one trained (field) epidemiologist (or equivalent) per 200,000 populations who can systematically cooperate to meet relevant IHR and PVS core competencies. One trained epidemiologist is needed per rapid response team.

Target

States Parties with skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR (2005).

Level of capabilities

The latest country data demonstrates that the density of health workers was 50.6 doctors per 10,000 inhabitants with 74% of the medical doctors serving in the capital city of Yerevan. Together the density of nurses and midwives was 56.1 per 10,000 inhabitants with 53% concentrated in the capital city. Regarding epidemiologists, there are currently 38 epidemiologists in service at the national level and 23 at regional (marze) level.

In February 2023, the Government of Armenia approved the “2023-2026 Development Strategy of the Healthcare System of Armenia”. One fundamental objective is to improve the capabilities and capacities of health care services with a competent workforce by providing medical staff with continuous professional development, and the development of high-quality graduate and post postgraduate programmes to satisfy the growing demands for health services.

Armenia has a Field Epidemiology Training Program (FETP) which recently received accreditation by the Ministry of Health in 2023. The FETP trains health professionals who have received medical education from the national, regional, and district workforce.

Accredited continuing professional development courses are organized by the Department of Epidemiology, Tropical Diseases, and Hygiene at the National Institute of Health of the Ministry of Health. The courses are designed for medical doctors, nurses and other health professionals that want to improve skills and refresh their knowledge in communicable and non-communicable disease and disease outbreak control.
Indicators and scores

D3.1. Multisectoral workforce strategy – Score 3

**Strengths**
- Armenia has in place a Human Resources Development Strategy for 2023-2026 for the Healthcare System, accompanied by supporting documentation approved by the Government.
- The strategy is adapting a modern educational infrastructure to improve knowledge and skills in medical and nursing graduate and postgraduate courses and aligns workforce training programmes with the healthcare system’s demands.
- The ongoing strategy ensures the adoption of a competency-based model to establish standards and accreditation procedures for continuous professional development opportunities of the health care professionals.
- Analyses of the human resources situation for the health sector are performed and published on a yearly basis.
- A re-prioritization of the human resources has been completed at all levels of care.

**Challenges**
- A key challenge that the health system faces is the imbalanced distribution of the workforce across the regions.
- Worker turnover poses a challenge in human resources management due to health care worker the retirement, transition to higher-paid positions, or relocation abroad.
- Workplace benefits and career opportunities to help health care workers stay at the regional and local level.
- Healthcare workers from regional and local levels have limited workplace benefits and career opportunities.

D3.2. Human resources for implementation of IHR – Score 3

**Strengths**
- Currently there are 38 trained epidemiologists at the NCDC to cover the national level and 25 at the regional level.
- A database of health workforce human resources has been established through domestic laws, to collect, record, store, study, analyse, and forecast data on medical worker capacity operating in the field of health care.
- An inter-ministerial policy in is process that will ensure and define multisectoral and multidisciplinary communication channels during multisectoral support.
- An interdisciplinary task force has been established for zoonotic diseases.
- When an outbreak is suspected, and a multisectoral management is needed an inter-agency cooperation is activated with all related stakeholders, as a key factor in successfully controlling the spread of pathogens and the immediate application of prevention and control measures.

**Challenges**
- Coordination issues in the operation and leadership of multidisciplinary teams.
Joint External Evaluation of the International Health Regulations (2005) core capacities of Armenia

D3.3. Workforce training  – Score 4

Strengths
- A Field Epidemiology Training Program (FETP) was approved by the Ministry of Health in 2023 and is available for medical doctors.
- There are various accredited continuing professional development courses in place for epidemiology of infectious and non-infectious diseases, and disease outbreak control. The courses target epidemiologists, nurses, public health professionals, hygienists, as well as doctors from various specialties.
- Armenia is a partner of the Mediterranean and Black Sea Programme for Intervention Epidemiology Training (MediPIET) that is implemented by European Centre for Disease Prevention and Control as a part of the EU Initiative on Health Security.
- A Field Epidemiology and Laboratory Training Program (FETP-Intermediate), gives the opportunity to health personnel from laboratory specialists to veterinarians and epidemiologists throughout the country.
- A specific course in disaster medicine is currently being offered by the National Institute of Health to medical workers.

Challenges
- Due to the generation of huge quantities of health data, the need to collect, store, analyse and disseminate them has created the need of qualified professionals and has driven to the high demand of biostatisticians.
- Most training opportunities are offered in the capital city of Yerevan and due to lack of funding regional health workers are not usually represented.
- There is a need of the development of a contemporary evaluation of skills and capabilities of individuals in the Health Sector (implementation of licensing system).

D3.4. Workforce surge during a public health event  – Score 1

Strengths
- The National Institute of Health has developed a registry to serve as a database to monitor the available healthcare workers capacity.
- In case of emergency situations, the government can provide inexperienced, graduate clinical residents and untrained medical workers with relevant courses to provide the necessary health care and service implementation.

Challenges
- There is no strategy in place to improve the healthcare workforce capacity and urgently recruit personnel.
- Armenia does not have any plan in place for surge and reserve personnel as part of public health emergency response.

Recommendations for priority actions
- Review and update on regular basis the strategy for the multisectoral public health workforce capacity development within the private and public sector to ensure their alignment with health security needs at all levels.
- Ensure the continuous improvement of the strategy for frontline and intermediate FETP workforce development, including a competency framework aligned with international standards.
- Develop a plan to allow the country to improve workforce surge capacity for responding to public health emergency situations.
Respond
R1. Health emergency management

Introduction

This capacity focuses on management of health emergency and systems for enabling countries to be prepared and operationally ready for response to any public health event, including emergencies, as per the all-hazard requirement of IHR. Ensuring risk-based plans for emergency preparedness, readiness and response, robust emergency management structures and mobilization of resources during an emergency is critical for a timely response to public health emergencies.

Target

(1) Existence of national strategic multi hazard emergency assessments (risk profiles) and resource mapping. (2) Existence of emergency readiness assessment (3) Development of national health EOC81 plans and procedures. (4) Establishment of an emergency response coordination mechanism or incident management system. (5) Evidence of at least one response to a public health emergency within the previous year that demonstrates that the country sent or received medical countermeasures and personnel according to written national or international protocols. (6) Existence of an emergency logistic and supply chain management system/mechanism. (7) Existence of policies and procedures for research, development and innovation for emergency preparedness and response.

Level of capabilities

Armenia, situated in a region prone to various natural and man-made disasters, faces challenges such as earthquakes, landslides, extreme weather events, and chemical hazards. The recent COVID-19 pandemic and ongoing regional conflict have underscored the critical need for robust disaster risk management and emergency preparedness. In response, Armenia has developed and recently endorsed a National Disaster Risk Management Strategy, affirming its commitment to addressing these challenges effectively.

The structure of Armenia’s emergency management system plays a vital role in coordinating the response for national or international public health emergencies. This system operates on multiple levels: the national level, led by the Prime Minister; regional levels, headed by governors; and local levels, under the guidance of community heads. The Minister of Health is an integral part of the national emergency committee, leading operational management within the Ministry of Health. This multi-tiered committee structure ensures effective coordination of emergency responses across different administrative regions.

The emergency management system in Armenia is further divided into functional and territorial sub-systems. These sub-systems encompass a range of ministries, government bodies, and local administrations, allowing for a comprehensive and coordinated approach to disaster response across various sectors and regions. The Ministry of Health, in collaboration with other ministries, is responsible for a broad spectrum of activities, from healthcare provision to participating in life support activities during emergencies.

A key aspect of the Ministry of Health’s role within the disaster risk management system is to prepare and equip medical facilities adequately, manage the quality of imported medicines, and coordinate actions with international medical teams. The ministry is also actively involved in life support during chemical and biological accidents, assessing biological accidents, and overseeing sanitary and epidemiological safety measures.
In terms of logistics and supply chain management, Armenia has established a robust system for maintaining a secure stock of medicines and medical supplies. This system is crucial for ensuring continuous access to essential medical items, particularly during emergencies. The Ministry of Health plays a pivotal role in this regard, working closely with pharmaceutical importers and international organizations.

Comprehensive disaster risk assessment is a cornerstone of Armenia’s approach to disaster risk management. The development of the Disaster Risk Reduction National Platform (ARNAP), the Disaster Risk Reduction National Platform, along with various ministries and departments, coordinates efforts in national disaster risk assessment and reduction. This multi-sectoral approach ensures that disaster risk management in Armenia is holistic and effective.

In conclusion, the Ministry of Health’s proactive engagement in coordinating health-related disaster risks, combined with the involvement of other sectors and local governments, exemplifies Armenia’s comprehensive and multi-sectoral approach to disaster risk management. This collaborative framework is essential for mitigating risks and enhancing the nation’s preparedness for various emergencies.

**Indicators and scores**

**R1.1. Emergency risk and readiness assessment – Score 4**

**Strengths**
- The development and approval of the National Disaster Risk Management Strategy demonstrates Armenia’s commitment to a structured approach in addressing various natural and man-made disasters.
- The Ministry of Health’s active engagement in comprehensive country-level assessments, covering all medical organizations, demonstrates an effective evaluation mechanism.
- Armenia has a robust legal framework, as demonstrated by various laws and government decisions, that explicitly outline the procedures and responsibilities in emergencies at national level.
- One notable strength of Armenia’s emergency management system is its well-structured and multi-tiered system. This system, led at the national level by the Prime Minister and extending to regional and local levels, ensures effective coordination and swift response to emergencies.
- Armenia’s bottom-up approach in carrying out risk assessments and developing the National Disaster Risk Management Strategy to further mitigate and reduce identified risks at all levels.

**Challenges**
- As the Disaster Risk Management Strategy was recently adopted (October 2023) it is not clear yet if the strategy will be reviewed annually and updated to accommodate emerging threats and be shared regularly across sectors.

**R1.2. Public health emergency operations center (PHEOC) – Score 2**

**Strengths**
- PHEOC establishment is recognized as the high priority by Ministry of Health.
- Armenia demonstrates a strong incident command structure, led by high-level officials such as the Deputy Minister of Health and, in national emergencies, the Prime Minister. This structure ensures clear leadership and decision-making authority during national crises.

**Challenges**
- The PHEOC is still under development, indicating a gap in regard to having dedicated public health emergency response facilities.
- While there is a PHEOC Roadmap with basic content in place, developed together with WHO, it is in early draft and needs to be further revised and implemented.
R1.3. Management of health emergency response  – Score 3

Strengths
• The Ministry of Health’s vital role in disaster risk management, including equipping medical facilities, coordinating international medical forces, and implementing preventive measures, showcases a well-prepared healthcare system ready to address various emergency scenarios.

Challenges
• Lack of integrated Incident Management System (IMS) within the PHEOC, ensuring that roles, responsibilities, and response protocols are clearly defined, standardized, and effectively communicated across.
• Application of the Incident Management System (IMS) system at a national level that includes high-level leadership, which can limit the coordination and timeliness of operations during emergency response.

R1.4. Activation and coordination of health personnel in a public health emergency  – Score 3

Strengths
• The Ministry of Internal Affairs has established mutual cooperation plans with various departments, ensuring collaboration and coordination in emergency situations. This indicates a proactive approach to inter-agency coordination.
• The presence of Emergency Medical Teams (EMTs), training programs for emergency situations, and efforts to engage final-year medical students indicate a commitment to building specialized capacity and ensuring a trained workforce.
• Active participation in the international Emergency Medical Team (EMT) movement, hosting events, and significant efforts toward certifying national Emergency Medical Team (EMTs) showcase Armenia’s commitment to global collaboration and aligning with international standards.

Challenges
• While engaging in international events, the absence of detailed information on outcomes, collaborations, and support frameworks for the host country hinders a comprehensive understanding of the impact of these engagements on emergency response capabilities.
• The lack of information on the capacity of Rapid Response Teams (RRT)s poses a gap in addressing a wide range of potential emergencies beyond medical situations.

R1.5. Emergency logistic and supply chain management  – Score 3

Strengths
• The presence of the “National Center for Provision of Medicines and Medical Supplies” under the Ministry of Health, which maintains and regularly updates a stock of necessary medical equipment and drugs, shows a proactive and strategic approach to emergency preparedness. Hospitals equipped with a 30-day supply of drugs further strengthen this system.
• The active involvement of volunteers from non-governmental organizations and medical educational institutions in the transportation and reception of response materials indicates a strong community and institutional engagement.
Challenges

• Armenia’s participation in regional/international procurement agreements for response assets was not mentioned, potentially limiting access to critical resources.

• It’s not clear if the supply chain management system is regularly exercised, reviewed, evaluated, and updated. This lack of clarity can lead to inefficiencies and ineffectiveness in the system during actual emergencies.

• There’s no mention of Armenia being part of regional or international countermeasure sharing or distribution agreements. This could hinder the country’s ability to both receive and contribute resources in a coordinated international response.

• Armenia relies on volunteers from diverse non-governmental organizations and medical educational institutions to support with the transportation and reception of medical countermeasures. A lack of dedicated resources and staffing may hinder logistic and supply chain management capacities.

R1.6. Research, development and innovation – Score 2

Strengths

• The efforts of various research centers like the Disaster Risk Reduction National Platform (ARNAP) and the National Institute of Health under the Ministry of Health in producing analytical and guiding literature, as well as conducting ongoing research and analysis in the health sector, indicate a strong focus on evidence-based practice.

Challenges

• The absence of a clearly defined national strategic framework for operational research specifically tailored to health emergencies. Such a framework is crucial for guiding research efforts and ensuring that they are aligned with national emergency response priorities.

• It’s not clear if there are dedicated resources and networks specifically for research, development, and innovations in the field of health emergency management.

Recommendations for priority actions

• Establish a national multisectoral working group with a clear and detailed Terms of Reference (ToR), mandated to coordinate, implement, and regularly review multihazard Risk Assessments across Armenia at both national and subnational levels.

• Establish a functional, efficiently managed, and effectively coordinated PHEOC:
  » Complete and adopt Road Map/Concept of Operations on Formation of the Public Health Emergency Operations Center.
  » Develop PHEOC Handbook (protocol) with regularly updated SOPs covering all critical functions, including activation/de-activation criteria.

• Establish and test Incident Management System at national PHEOC with clearly defined roles and responsibilities.

• Develop comprehensive public health emergency training program which includes:
  » Training of all-hazard Rapid Response Teams (RRT) at national and intermediate levels.
  » PHEOC function testing through Tabletop and simulation exercises.

• Regularly exercise, evaluate, and update/develop supply chain management plan related to sending and receiving medical countermeasures.
R2. Linking public health and security authorities

Introduction
Public health emergencies pose special challenges for law enforcement, whether the threat is manmade or naturally occurring. In a public health emergency, law enforcement will need to quickly coordinate its response with public health and medical officials.

Target
Country conducts a rapid, multisectoral response for any event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide timely international assistance.

Level of capabilities
Armenia places a high priority on maintaining and further developing capacities for preparedness, awareness and response to suspected or confirmed deliberate events, as evidenced by established arrangements for intersectoral collaboration, relevant legislation, capacities for surveillance and joint risk assessment, development of Standard Operating Procedures for response and related training materials and the conduct of exercises designed to address multiple hazards and scenarios. The conduct of related multi-sectoral preparedness activities was impacted by the diversion of efforts to support the COVID-19 response. More recently, the resumption of border hostilities in late 2023 resulted in the mass movement of displaced persons with a diverse range of health needs, requiring an ongoing response with close collaboration between public health and security authorities.

Indicators and scores

R2.1. Public health and security authorities, (e.g., law enforcement, border control, customs) are involved during a suspect or confirmed biological, chemical or radiological event – Score 4

Strengths
- Formal (and strong informal) partnerships are established by the Ministry of Health with the Ministry of Defense, the Rescue Service of the Ministry of Internal Affairs, the National Security Service, the State Revenue Committee and law enforcement agencies, underpinned by legal provisions.
- Contact with Interpol is established through the relevant department of the police.
- Collaborative arrangements are in place between the Ministry of Health and security authorities for information sharing, risk assessment and investigation of suspected deliberate events.
- Response plans are available for multi-hazards and prior to the COVID-19 pandemic, plans were tested through a regular cycle of drills and exercises based on different scenarios and hazards.
- Planning is underway for a multi-sector exercise in 2024 encompassing chemical, biological, and radiological emergencies, as well as deliberate actions, in collaboration with the US Defense Threat Reduction Agency.
Challenges

• Deliberate events are highly unpredictable, but the risk may be increasing, requiring a high level of vigilance, preparedness and intersectoral collaboration to be continuously maintained and further strengthened on an ongoing basis.
• There are ongoing risks associated with conflict in border areas.
• Legal measures to support the response to deliberate events are sub-optimal.
• Capacities to assess risks and implement public health measures at border crossing points are insufficiently strong.

Recommendations for priority actions

• Enhancing related legal frameworks:
  • Advance and endorse legal measures emanating from the Law on Public Health.
  • Review and modify prevailing legal statutes to align them with current legal standards, including the IHR (2005).
• Advancing collaboration between public health and security authorities:
  • Plan, approve and execute multi-sectoral exercises through resolutions by the Government of Armenia.
  • Establish a unified information platform or ensure seamless interaction among existing information platforms.
  • Investigate and incorporate advanced practices in the collaborative efforts between the Ministry of Health and Security Authorities during emergency situations in Armenia.
R3. Health services provision

Introduction

Resilient national health systems are essential for countries to prevent, detect, respond to and recover from public health events, while ensuring the maintenance of health systems functions, including the continued delivery of essential health services at all levels. Particularly in emergencies, health services provision for both event-related case management and routine health services are equally as important. Moreover, ensuring minimal disruption in health service utilization before, during and beyond an emergency and across the varied contexts within a country is also a critical aspect of a resilient health system.

Target

(1) Evidence of demonstrated application of case management procedures for events caused by IHR relevant hazards.

(2) Optimal utilization of health services, including during emergencies.

(3) Ensuring continuity of essential health services in emergencies.

Level of capabilities

Primary health and inpatient care facilities (hospitals) that operate in both public and private sectors are responsible for the delivery of essential health services, covering the needs of the population at national, regional, and local levels. As stated by the government’s decision (No. 318-N dated March 4, 2004), all primary, secondary, and tertiary health care services are provided free of charge to all population groups, including those who are socially disadvantaged. Primary health care services (with defined volume) are provided to the entire population free of charge. Certain hospital health care and services, such as resuscitation measures, urgent surgical treatment of acute myocardial infarction, treatment of acute or subacute ischemic strokes, surgeries for ruptures and (or) exfoliation of aortic aneurysms, are provided free of charge to all population groups. Healthcare and services (surgical, therapeutic and rehabilitation), special and hard-to-reach diagnostic research services in hospital conditions are provided free of charge to the persons included in the list of socially disadvantaged and separate (special) groups of the population.

The Ministry of Health serves as the highest public health authority in Armenia. At the national level, the National Center for Disease Control is the primary technical body for public health coordinates infection prevention and control activities that is accountable to the Ministry of Health. A National digital healthcare system (ArMed) that was established in 2017 by the Ministry of Health to monitor the provision and utilization of health services and provide a regular flow of quality data from the health sector.

Between 2019-2022, using the WHO Hospital Safety Index tool, the department of emergency situations and mobilization preparedness of the Ministry of Health jointly with WHO and US Agency for International Development carried out assessments in nine hospitals with the aim to measure the hospitals’ safety and vulnerabilities regarding the continuity of health services and strengthen their overall emergency preparedness and response.

In 2021, the Government of Armenia approved the 2021-2026 Action Plan. Regarding the health sector, the strategy outlines specific tasks and actions including involved stakeholders, funding sources, timeline and documents the steps to achieve each goal. The Plan draws attention towards accessibility and availability of medical care within a defined package of essential health services (EHS) for the population. To ensure
continuity of EHS, the plan takes also into consideration the harmonization of the health system to deliver EHS during emergencies. The implementation considers reforms in Primary Healthcare with the aim to increase the per capita visits up to six annually and have a reduction of inpatient and emergency care by ten per cent. The Plan emphasizes the reconfiguration of health infrastructure aiming to improve standards of care across, with the construction and reconstruction of approximately fifty medical institutions across the regions (twenty urban medical centres, twenty rural primary health care facilities and ten urban polyclinics).

Indicators and scores

R3.1. Case management – Score 3

Strengths
- Clinical guidelines have been produced in a comprehensive way and address a wide variety of health conditions.
- Resource mapping has been performed at all levels of health service delivery to identify available resource capacities and target interventions for effective case management when an emergency crisis arises.
- The provision of continuous and sustainable health service delivery to the population is a core component of the emergency preparedness and response plans for the health sector.

Challenges
- Lack of implementation of clinical case management guidelines for priority health events have been assessed by the country
- Case management referral protocols are in place for every level of service delivery but not all diseases are addressed, and many standard operating procedures are under development.
- Maintaining capabilities that the public health system has developed.

R3.2. Utilization of health services – Score 4

Strengths
- The health system consisted of 967 primary care facilities and 122 inpatient medical facilities providing access to health services in urban and rural areas.
- The reconstructions of the improvement of health care infrastructure of approximately fifty medical institutions across different regions is currently being implemented.
- A defined list of different types of services are offered by hospital and primary care facility free of charge to all population groups, including those who are socially disadvantaged.
- A strategy for the Development of the Healthcare System of Armenia for 2023-2026 has been approved.
- The electronic management system is available to facilitate monitoring and control of health service provision, and to generate quality strategic data.
- Data are collected through the e-health system and analysed by age, sex, region, and type of medical facility. Summaries are published on the Annual Health Bulletin and are made available to relevant policy-making bodies in order to provide insight.
- There is a referral mechanism in place but only for the government funding health services.

Challenges
- Use all the functional capacities of the electronic management health information system for all types of health care services, both private and public sector, and all levels of care, in order to ensure the interoperability and sustainability of the electronic management health information system.
• There is a referral mechanism in place that it used only for the government funded health services.
• There is a legal framework for providing telemedicine services to the population but is not fully operated.

R3.3. Continuity of essential health services (EHS) – Score 3

Strengths
• The package of services included in the National Service is defined by the relevant 2004 decree (Government Decree No. 318-N dated March 4, 2004) on free and preferred conditions guaranteed by the state medical aid and service of the Government of Armenia;
• According to the law on medical care and service of the population, the state is responsible to provide the medical care and services delivery to all who need it during public health emergency situations.
• Health sector plans, national emergency preparedness and response plans are harmonized and consider the continued provision of EHS (including population-based services) during emergencies.

Challenges
• In the beginning of COVID-19 EHS provided by hospitals were challenged
• In the beginning of COVID-19 there was not any mechanism in place to monitor and control the huge workload distribution of the health workforce burnout with

Recommendations for priority actions
• Develop clinical case management guidelines for the prioritized health events and foster their implementation at all levels of care through orientation, dissemination, and enforce compliance.
• Expand the operationalization and the interoperability of the electronic health information management system to all types of health services, both private and government funded and all levels of care to enhance safety and continuity of EHS delivery.
• Continue implementation of the reforms stated in the strategy for Primary Healthcare to improve standards of primary care in a way that also strengthens health security, integrating high quality infrastructure, increasing accessibility to various prevention programmes and engaging in public health emergency response.
• Test planning assumptions and review the functionality of the operational plans and clinical case management guidelines of priority health events in emergency situations using standard approaches (e.g. simulation exercises, intra-action reviews, After Action Reviews (AARs)).
R4. Infection prevention and control

Introduction
To have strong, effective infection prevention and control (IPC) programmes that enables safe health care and essential services delivery and prevention and control of health care acquired infections (HCAIs). It is critical to initially ensure that at least the minimum requirements for IPC are in place, both at the national and facility level, and to gradually progress to the full achievement of all requirements within the WHO IPC core components recommendations.

Target
(1) National IPC programme strategy has been developed and disseminated. (2) Implementation of the national IPC programme plans, with monitoring and reporting of HCAIs. (3) Established national standards and resources for safe health facilities.

Level of capabilities
In Armenia, a significant amount of work has been undertaken at national level to strengthen infection prevention and control in healthcare. The 2018 strategic plan for HCAI, approved for the first time by the order of the Ministry of Health of Armenia, demonstrated the country’s commitment to safe and auditable IPC practices across the healthcare system. The development of the national strategic plan for infection prevention and control for the years 2024-2028 is underway in collaboration with WHO specialists. Although a commitment to high quality IPC is clear, understanding the concepts of safe IPC appears to be variable across the sector, with observed practices needing further attention to maintain compliance with the core components of IPC. The IPC program is executed at national level under the oversight of the Professional Council for Infection Control. In response to the pandemic, an operational action plan was formulated in 2020. As prevention of HCAI is the responsibility all individuals and health care providers, effective IPC requires constant action at all levels of the health system, including policymakers, facility managers, health workers and those who access health services.

Indicators and scores
R4.1. IPC programmes – Score 3

Strengths
• In 2024, a law requiring hospitals to report nosocomial infections will come into effect.
• IPC programs and procedures have been revised in 124 hospitals and brought into line with WHO guidelines.
• An IPC plan for dental clinics has been approved.
• A draft law on a national program for HCAI surveillance is waiting to be approved and adopted.
• Planning is underway to conduct a nationwide point prevalence survey on antibiotic use in hospitals.
Challenges

• Two significant areas of work are planned but have not yet been implemented:

• A single, significant process for an ongoing review of legal documents is required for all health care facilities with the creation of a national-level monitoring plan, separated by systems for different mandatory requirements (e.g. blood, person protective equipment).

• Plans to implement a system of epidemiological control for specific HCAIs in accordance with WHO recommendations are yet to be realized by endorsement of the “2024-2028 National Program and List of Measures for the Prevention of Infections Acquired During Medical Care and Service,” a binding, legal document which will require facilities to report of HCAIs.

R4.2. HCAI surveillance – Score 2

Strengths

• In 2018, the strategic plan for combating HCAIs was approved for the first time through the order of the Ministry of Health Armenia. The development of the national strategic plan for IPC (2024-2028) is underway in collaboration with specialists from the WHO.
  » Close integration is required between the surveillance system for infectious diseases, together with the strategic program "Control and Prevention of Antimicrobial Drug Resistance."
  » The guide “Epidemiological Control System of Infections Caused by Medical Interventions” has been endorsed. The guide serves as the basis for the implementation of the HCAI surveillance system in Armenia as of December 20, 2019.
  » Management of the existing surveillance system, as well as the development of legal acts, is overseen by a working team, approved by the Ministry of Health. To ensure the effective functioning of the system the team have undergone appropriate training, including sessions organized by WHO.
  » In 2018, standard definitions for HCAI cases were officially approved and with a revision to enhance reporting in 2023.
  » Methodological guidelines for the prevention of specific types of HCAI are in place, and efforts are ongoing to develop additional guidelines for various HCAIs

• HCAI Control at medical center (MC) level - In 2022-23, a pilot Point Prevalence Survey (PPS) study was carried out on the prevalence of HCAIs and use of antimicrobials at a specific point in time in two selected hospitals.

• HCAI Control at Medical Center Level, carry more complexity in their implementation in a number of areas
  » Implementation of a mandate for secondary and tertiary level inpatient facilities in Armenia to have a dedicated microbiological laboratory. This measure will enable medical centers to conduct microbiological confirmation of HCAIs.
  » The conducting of Point Prevalence Survey (PPS) research in selected hospitals in Armenia.
  » Implementation of regular monitoring in Armenia inpatients, with a particular focus on medical centers that report "zero" incidents of HCAI.

Challenges

Arrangements for the planning and smooth implementation of:

• Epidemiological surveillance of specific HCAIs -
  » The project titled “Requirements for the Detection, Recording, and Reporting of HCAIs” is currently under development and will require the implementation of a supporting surveillance system to complete the project.
  » There are plans to integrate the epidemiological system of HCAIs with the ArMed national digital healthcare system a task that is likely to be challenging due to its complexity.
R4.3. Safe environment in health facilities – Score 3

**Strengths**

Relevant legislation

The legal acts pertaining to environmental safety possess a normative nature, making them universally applicable and obligatory for all medical centers in Armenia:

- It is legally mandated to have access to safe drinking water.
  - All inpatient facilities are equipped with an isolation room adjacent to the reception desk.
  - All health centers are obligated to possess the capability for sterilization.
  - Regarding the management of medical waste, adherence to the regulations outlined in Armenia Ministry of Health Order No. 03-N of 2008 is mandatory.
  - There are requirements for Hand Hygiene in Organizations Providing Medical Care and Service.

- Education and Training of Medical Staff
  - The medical staff at healthcare centers undergo regular training at all levels, encompassing topics related to HCAIs, including within the framework of HCAIS. Moreover, each health center develops its internal training plan, which incorporates training sessions for healthcare workers on Global Handwashing Day issues.

- Monitoring and Feedback
  - Routine assessment of Water, Sanitation, and Hygiene, workload, bed occupancy, and other pertinent issues utilizing the WHO Infection Prevention and Control Assessment Framework (WHO IPCAF) tool.
  - The draft of the Sanitary Code titled "Requirements to be Submitted to the Healthcare Service Centers within In-Hospital and Out-of-Hospital Settings" is currently under development.
  - Amendment of several legal acts to align with contemporary World Health Organization approaches.

**Challenges**

- The gradual roll out of the hand hygiene assessment tool in all medical centers of Armenia is to be undertaken - a task that requires time and resources.

**Recommendations for priority actions**

- Work towards the adoption of the programme for the prevention of nosocomial Infections.
- Pilot the implementation of hand hygiene programmes in a number of MCs. Under Order No. 46-N of Armenia Ministry of Health in 2023, sanitary rules titled "Hand Hygiene Requirements" were sanctioned, slated to become effective on June 1, 2024.
- Explore the introduction of IPC programme implementation in stomatology centres, cosmetology and other non-medical organizations.
- Finalize and adopt the draft Sanitary Code titled "Requirements to be Submitted to the Healthcare Service Centers within In-Hospital and Out-of-Hospital Settings" currently under development.
R5. Risk communication and community engagement

Introduction

Risk communications should be a multilevel and multifaceted process which aims at helping stakeholders define risks, identify hazards, assess vulnerabilities and promote community resilience, thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is the dissemination of information to the public about health risks and events, such as disease outbreaks. For any communication about risk caused by a specific event to be effective, the social, religious, cultural, political and economic aspects associated with the event should be taken into account, including the voice of the affected population.

Target

States Parties use multilevel, multisectoral and multifaceted risk communication and community engagement (RCCE) capacity for public health emergencies. Real-time exchange of information, advice and opinions during unusual and unexpected events and emergencies so that informed decisions to mitigate the effects of threats, and protective and preventive action can be made. This includes a mix of communication and engagement strategies, such as media and social media communications, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement community engagement and infodemic management.

Level of capabilities

Starting from the high-level big picture overview, all the way down to the in-depth assessment of the current status of risk communication and community engagement (RCCE) of Armenia, it is evident that there is an understanding of the central role it should play in an overall, holistic public health approach and all its specific activities. This is in line with the current WHO philosophy that puts communities at the center of all public health initiatives and perceives risk communication as not only a reactionary, crisis-related activity. Armenia has shown a strong commitment to having RCCE as a crucial preventive, continuous, and overarching all-of-government and all-of-society measure, essential in achieving success in any intervention towards safeguarding the well-being and reducing harm for the populations, communities and individuals in this country.

However, this needs to be backed, firstly - with adequate legal provisions and documents, and then with substantial human and technical resources – that is, the capacities that require constant building. On one side, binding acts below the level of a Law, such as guidelines, SOPs, specific groups Terms of Reference (ToR) must be drafted and put into power with utmost urgency – justifying and formalizing the already long-term performed activities. On the other side, capacity building should also be done in the practical and technical sense: procure IT equipment – hardware (computers, cameras) and software (editing, visualization tools) specialized social and general media monitoring services, behavioral insight studies, and continuous training of the key personnel in the most current RCCE approaches and tools developed by WHO and other referent international and national authorities in this area.

Passionate, adequately educated, well-organized, and hard-working expert communicators from the Ministry of Health, NCDC, National Institute of Health, and biggest hospitals are coordinated and they perform key RCCE functions, expanding to infodemic management. The major public health risk
communication campaigns have used various channels (traditional media, Facebook, Telegram, YouTube, phone hotlines in Ministry of Health and NCDC, direct face-to-face interactions) and gone beyond the COVID-19 pandemic.

There is particular focus on specific communities and good partnerships with the non-governmental organization sector, community leaders, and trusted messengers leading to communities’ co-ownership of intervention and increased trust. In this sense, Armenia can share its accomplishments with other countries with a major caveat of previously developing structured background documents and enhancing monitoring and evaluation of the impact of its RCCE ventures.

The very specific geopolitical situation of Armenia with many uncertainties and potential threats to national and health security present a major challenge in tackling infodemics and malign influences that affect vulnerable communities as specified in the “National strategy for combating disinformation 2022-2024”. The support from international partners is therefore essential in overcoming this situation, especially in the time of concurrent, or permacrisis times that span beyond infectious diseases and include conflicts, forced migrations, environmental health issues, and more.

RCCE must be constantly and thoughtfully supported both internally and externally for Armenia. The goal is for RCCE to become a sustainable system of its own, well integrated within healthcare functions on central and local levels, and all other relevant government structures as it becomes increasingly, existentially important over time on national, regional, and global stages.

**Indicators and scores**

**R5.1. RCCE systems for emergencies – Score 3**

**Strengths**
- Creation of a dedicated, very large task force for RCCE during the COVID-19 pandemic and active cooperation with the involvement of representatives of state, local, and international organizations and its continuous existence beyond the pandemic in smaller form.
- Centralized state management system for emergencies that enables and encourages interdepartmental cooperation, especially for RCCE (e.g. advisory council attached to the minister of health)
- Ministry of Health and NCDC 24/7 hotlines for inquiries during emergencies.
- Innovative, creative solutions for RCCE – the flash mobs, videos of celebrities and medical doctors endorsing and explaining vaccinations, etc.
- Successful cooperation with mass media and regular training of journalists.
- Multisectoral commissions - both in Yerevan city and other regions (marzes) composed of various local government authorities and departments (mayor’s office, health, education, etc.) were created during the COVID-19 pandemic and have continued to perform several RCCE functions among other things.

**Challenges**
- The legal framework that coordinates work activities is for the most part lacking, and a comprehensive review and revision of existing regulations and policies governing various aspects of organizational operations has not been done regarding RCCE systems.
- Training and education of staff is not continuous nor specifically planned but mostly ad-hoc and dependent on support and offers by external partners (e.g. WHO, European Centre for Disease Prevention and Control, the United States of America Centers for Disease Control and Prevention).
- Addressing the low level of public trust in information disseminated by state institutions requires a multi-faceted, transparent approach that is limited and fragmented in Armenia.
Mitigating conflicting information, particularly during emergencies, necessitates the development of robust communication strategies and protocols that are not particularly well developed or exist in Armenia at the time of this assessment.

**R5.2. Risk communication – Score 3**

**Strengths**
- There are seasonal flu vaccination, European Immunization Week, Healthy Lifestyles (on a regional level, with various approaches to different communities and target groups), and Refugee Response Campaigns, that were performed successfully. They are done based on overall strategies and specific action plans, with involvement and co-ownership by communities that are targeted.
- Establishment of the Public Health Emergency Operation Center in NCDC with its call center that has remained beyond the COVID-19 pandemic performs several Risk communication and even infodemic management functions, with all necessary documents and procedures backing its work and mandate.
- Conducting large-scale surveys (e.g. current the United Nations Children’s Fund (UNICEF)-supported survey of parents/healthcare professionals) that are the basis for detailed risk communication plans.
- Mis- and disinformation issues are addressed in real-time on national (NCDC HQ) and regional levels (NCDC field offices) by using search engines on social media (Facebook, Telegram) and in traditional media as part of infodemic management activities.

**Challenges**
- Mis- and disinformation on public health measures (e.g. safety of vaccines) are very present and even shared by irresponsible healthcare professionals with substantial traditional media presence and following on social media channels.
- Even though there are very detailed annual and campaign-specific decrees by Ministry of Health – there is limited long-term structure and foundation for evaluation of results and gradual increase of all measurable desired effects (e.g. increase in trust in government and public health interventions, reduction of mis and disinformation, the rise of vaccine uptake for HPV vaccination, etc.).
- Infodemic management is specifically addressed in the “2022-2024 Anti-Disinformation Strategy of Armenia” which was developed by the Freedom of Information Center of Armenia. However, an official high-level government strategy and action plan arising from it that would tackle this issue is still not developed and the health-specific issues are not separated from the more political and national security topics.
- Evaluation and analysis of the effects of campaigns and risk communication activities are mostly underdeveloped because of a lack of human and financial resources.

**R5.3. Community engagement – Score 3**

**Strengths**
- Mapping and updating of registers of communities and representative organizations with increased specific risks (e.g. LGBT for Mpox, religious communities that refuse vaccinations, etc.) is done by different authorities.
- Establishing relationships, building trust, and educating community leaders (e.g. bishop of the evangelistic Christian church) and trusted messengers (e.g. medical doctors on the local level) was done, so they may convey science-based public health information to their communities.
- Key Performance Indicator studies aimed at particular risk groups have been performed.
- Mobile labs during COVID-19 and beyond – trucks that reached various communities, performed, some RCCE functions in addition to testing and immunization activities.
**Challenges**

- Even though there is an understanding of the importance of communities, there is not enough emphasis on prioritizing non-emergency response non-campaign related community engagement that can foster and enhance relationships with community stakeholders.
- There are limited standardized training opportunities and no particular assessment of the effectiveness of knowledge transfer activities for communities and their leaders/trusted messengers.
- Improved community mapping is required – so far it is fragmented and there is duplication of work.
- Lack of testing and simulation exercises for all community-based interventions in current activities.

**Recommendations for priority actions**

- In up to two years develop, approve, and implement tailored, internationally verified, andlogically and expertly supported strategic and operational acts (bylaws, guidelines, SOPs) for all major subfunctions in relevant organizations (Ministry of Health, NCDC HQ/regional centers, National Institute for Health, and major hospitals) on: RCCE systems for emergencies, Risk Communications, Community Engagement and Infodemic Management.
- Formalize the establishment, jurisdiction, and activities of the so far informal Emergency Risk Communication and Community Engagement Interagency Task Force – by decision of the Government, Terms of Reference, and make its activities transparent, mandatory, and valorised.
- Develop a pre-approved general flexible Risk Communication, Community Engagement and Infodemic Management (RCCE-IM) strategy and specific action plans to further enhance RCCE and tackle infodemic by creating national-level as well as community-focused innovative and creative Ministry of Health and NCDC-led campaigns based on deep social behavioural insights supported by academic research.
- Develop continuous training and education on RCCE-IM followed by obligatory transfer of knowledge – for core personnel at Ministry of Health, NCDC, National Institute for Health, and major hospitals, as well as for all community-level partners and surge staff.
- Procure technical tools – hardware and software, specialized services (social listening, tools to counter mis and disinformation) on an annual basis with a dedicated budget in each referent institution – with particular attention on building capacity to apply for projects/grants.
IHR Related hazards and Points of entry and border health
POE. Points of entry and border health

Introduction

All core capacities and potential hazards apply to “points of entry” and thus enable the effective application of health measures to prevent international spread of diseases. States Parties are required to maintain core capacities at designated international airports and ports (and were justified for public health reasons, a State Party may designate ground crossings), which will implement specific public health measures required to manage a variety of public health risks.

Target

States Parties designate and maintain core capacities at international airports and ports (and were justified for public health reasons, a State Party may designate ground crossings) that implement specific public health measures required to manage a variety of public health risks.

Level of capabilities

Armenia is a landlocked country with seven official points of entry (PoE): five ground crossings and two airports. In 2011, the primary international airport (EVN) and Bagrataheshen border crossing were initially designated under IHR. In 2020, all PoEs were designated under the Law “On State Border” (Article 14). There is a system in place to detect and limit the introduction of communicable diseases and other health risks into Armenia through the PoE.

Historically, the Health and Labour Inspectorate (HLI) in collaboration with the Ministry of Health managed a robust program to implement IHR-core capacities at PoEs. In December 2022, Armenia changed the structure of border health and ended HLI’s permanent medical and sanitary control at PoEs. The State Revenue Commission now maintains responsibilities for coordinating border health and IHR core capacities at PoEs.

Public health responses at PoE are achieved through the coordinated activities among multiple agencies. These include coordination and collaboration among local public health departments, law enforcement agencies, emergency medical services, airlines, as well as port and ground crossing operators. Public health personnel from the federal agencies as well as local health officers provide public health consultations and investigations, medical examinations and immediate treatment, and facilitate the transfer of ill travelers to access complete care. There is a permanent medical station with one medical doctor and two nurses at the Zvartnots International Airport near the capital Yerevan. In the case of an incoming sick (communicable disease) person by aircraft more help is to be ordered at the hospital in the airport organization nearby. An ambulance car with the permit to enter the airport is permanently stationed at the airport.

The Food Safety and Quality Programme and other local agencies have specific authorities to detain, test, or remove materials to prevent hazardous or contaminated materials from entering Armenia.

Disease Control Division, State Health Department, Immigration, Customs and PoE authority, have mechanisms for information sharing, travelers’ health and medical services. These agencies coordinate inspection and entry requirements, quarantine enforcement and detention, transportation from PoE to medical facilities and disease prevention activities.
The designated PoE provides place for medical examination for affected travelers. These PoE has SOPs in place to transport travelers to the appropriate nearby medical facility as needed. Health authority at PoE is also responsible to conduct risk assessments at PoE for travelers deemed to be at risk for communicable disease spread.

PoE health authorities of Armenia are able and trained to identify sick travelers or other public health risks and are required to report problems immediately to health authority at PoE. At the PoE, public health officers conduct activities including screening and reporting illnesses; inspection of conveyances and monitoring the health of travelers. Upon a report of suspected illness from a partner (e.g., an airline or Customs and Border Protection) lodges, health officers will determine if the traveler requires further health assessments upon arrival at the PoE, as well as conducting appropriate measures to prevent the spread of infectious diseases into the country.

Points of Entry response to Public Health Emergencies of International Concern (PHEIC) is according to SOP on Crisis Management Plan Ministry of Health Armenia No. 777 (Intersectoral Committee, State Revenue Committee).

At PoE, this plan is adapted accordingly due to the unique stakeholders and partners, specific structures, and logistics systems at each PoE. Written SOPs and guidelines can be helpful to PoE in identifying strengths and gaps in Crisis Management plans to protect travelers and employees during an event/incident. Functional exercises drills, workshops, tabletop exercises, and functional should be regularly included.

The pilot in command is responsible for notifying any suspected ill travelers to health authority through the aircraft control tower or its designated representative. The health authority is also responsible for arranging an appropriate public health response at identified gate.

In case of the travelers need to be isolated and for further management, the travelers will be sent to the appropriate hospital. For infectious diseases, the transport that has been used will go a thorough disinfection procedure.

There is a mechanism for communication and coordination between health authority at PoE with the hospital and define roles and expectations for both health authority at PoE and the hospitals when a traveler requires hospital admission.

**Indicators and scores**

**POE1. Core capacity requirements at all times for PoEs (airports, ports, and ground crossings) – Score 3**

**Strengths**
- Armenia has established a sustainable public health capacity at designated points of entry and always collaborates closely with multisectoral agencies.
- The designated points of entry have access to appropriate medical services, including diagnostic facilities for the prompt assessment and care of sick travelers including transport of ill patients to hospital, with adequate staff, equipment and premises.
- The points of entry carried out inspection programmes to ensure safe environment at points of entry facilities.
- Armenia has trained personnel for the inspection of conveyances available at designated points of entry.
- Adequate legislation and/or policies exist for provision of health services at points of entry in Armenia are in place.
- Regular internal and external evaluation on public health capacity has been conducted and remedial action has been taken effectively.
• Full commitments from POE authority and all other agencies at POE for enhancing health security like as a member in an Airport Quality Committee.

Challenges
• Lack of continuity in the training of POE officers.
• Regulations of Ministry of Health are not present as part of the SOPs or guidelines.
• Unclear public health mechanisms at the ground border cross points.

POE2. Public health response at PoEs – Score 3

Strengths
• The designated PoEs have capacities to apply recommended health measures related to travelers, crews, conveyances, animals, goods and dangerous items.
• Points of entry have experienced in handling various pandemic and Public Health Emergencies of International Concern (PHEIC) events such as severe acute respiratory syndrome, according to new flights in the Middle East-Asian regions.

Challenges
• Irregular exercises involving all agencies and all aspect of Public Health hazards.

POE3. Risk-based approach to international travel-related measures – Score 2

Strengths
The personnel are very aware of the IHR recommendations at the PoE.
• Staff demonstrated some knowledge on how to manage Public Health Emergencies of International Concern (PHEIC) at the Zvartnots International Airport.

Challenges
• Limited availability of written and implemented SOPs and Guidelines, including training programs for the management of public health issues.
• Armenia is not a member of the CAPSCA (Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation from the International Civil Aviation Organization) which limits the country’s access to the latest information related to air transport and illnesses. As the airport follows the ICAO regulations; it would be highly recommended for Armenia to adopt CAPSCA regulations and guidelines.

Recommendations for priority actions
• Develop and disseminate SOPs to contain the spread of infectious diseases, and strengthen point of entry capacity to disinsect, de-rat, disinfect, de-contaminate as part of other regular infectious control practices.
• Develop an incorporated multiagency public health emergency contingency plan that is commonly used at points of entry and aligned with the national disaster management framework.
• Establish continuous education and training programs which include regular exercises involving all agencies at PoE.
CE. Chemical events

Introduction

Timely detection and effective response of potential chemical risks and/or events requires collaboration with other sectors responsible for chemical safety, industries, transportation and safe disposal. This would entail that State Parties need to have surveillance and response capacity to manage chemical risk or events and effective communication and collaboration among the sectors responsible for chemical safety.

Target

States Parties with surveillance and capacity for chemical risks or events. This requires effective communication and collaboration among the sectors responsible for chemical safety, including health, occupational health, emergencies, environment, transportation and safe disposal, agriculture/veterinary, as well as industries.

Level of capabilities

Armenia has a very comprehensive legislative framework, including being a signatory to all the key international chemical conventions and agreements. Whilst Armenia used to have significant chemical industrial facilities, this is no longer the case; however, they still have large volume of chemicals (e.g. chlorine and ammonia) in storage facilities which need to be managed to reduce the risk of a chemical release. To respond to chemical incidents, the Armenian Government has developed and approved a Decision, which in turn has been used by state administrative bodies to formulate chemical incident response plans.

Armenia has a well-developed environmental monitoring programme and the capacity to undertake regular analysis of chemical substances in food and non-food products, air and water. They also have a good system for surveillance and response to chemical events, which operates at local, regional and national levels. This includes daily monitoring of poisoning cases and places the responsibility of submitting a report to the NCDC and law enforcement agencies on medical centres. There is very good cooperation and liaison between environmental, chemical and other relevant government authorities. The Ministry of Health has established an electronic system available to NCDC state non-commercial organization and they are working towards providing access to information relevant to other departments. A mechanism has also been established to collate information on chemical poisoning and treat exposed individuals in hospitals, but a dedicated poisons information service is yet to be established.

Indicators and scores

CE1. Mechanisms established and functioning for detecting and responding to chemical events or emergencies – Score 3

Strengths

- Armenia has the capacity to undertake regular analysis of chemical substances in food and non-food products, air and water.
- There is a good system in place for surveillance and chemical response, which operates at local, regional and national levels.
- Mechanisms for dealing with poisonings and treatment of patients are also in place.
Challenges
• There is a shortage of newly qualified chemical specialists that needs to be addressed and limited funding to meet chemical safety requirements
• There is currently no established poisons information centre in Armenia. It is therefore important to develop such a centre building on the existing network of medical toxicology specialists in the country.

CE2. Enabling environment in place for management of chemical events
– Score 3

Strengths
• A good legislative framework is already in place to enable Armenia in the management of chemical events.
• Chemical emergency response plans are in place, including a national plan for dealing with accidents at chemical facilities.
• A register for chemical substances and mixtures has also been established.

Challenges
• There are few control mechanisms in place for managing the movement of chemical substances within Armenia.
• Armenian specialists limited participation in international chemical/toxicological networks has led to an enhanced need for international collaboration.
• Exercises have not been carried out in recent years due to the impact of the pandemic and armed conflict and humanitarian situation as a result of mass influx of refugees.

Recommendations for priority actions
• Enhance the legal framework by amending existing legislative and sub-legislative acts to incorporate new requirements for chemical events, including strengthening systems to control the transport of highly effective chemical substances within the territory of Armenia.
• Review, exercise and update the national chemical incident response plans to ensure the plan addresses complex chemical incidents (e.g. at a toxic waste or landfill site).
• Explore mechanisms to further advance the timely and systematic exchange of chemical information for the purpose of surveillance and alerting.
• Strengthen poisons centre activities by starting the process to establish a fully operational 24/7 service.
• Enhance mechanisms for mutual co-operation and participate in international chemical and toxicology networks.
RE. Radiation emergencies

Introduction
To counter radiological and nuclear emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies are required in collaboration with sectors responsible for radiation emergency management.

Target
States Parties should have surveillance and response capacity for radiological emergencies and nuclear accidents. This requires effective coordination among all sectors involved in radiation emergencies preparedness and response.

Level of capabilities
The basic framework for preparedness and response to radiation emergencies in Armenia is given by the Armenian Government Decision No. 2328-І of December 22, 2005, on approving the National Plan for the Protection of the Population in case of a Nuclear and (or) Radiological Accident at the Armenian NPP (The Nuclear Plan). This Government Decision assigns the main role to state authorities and other organizations, and regulates the issues related to the different aspects of emergency preparedness and response such as notification, organization and implementation of evacuation, transportation, emergency radiation monitoring, etc. The Nuclear Plan provides amongst others the following arrangements: the chart of communication arrangement in case of an accident at the Armenian Nuclear Power Plant (ANPP), the chart of organization of warning in case of an accident at the ANPP, the organizational chart of the planning system for the protection of the population, the command and control chart for evacuation of the population in case of an accident at the ANPP. Also, the Nuclear Plan clearly names and provides a set of responsibilities to all state and local governing bodies and other organizations that play roles in the protection of the population from the radiation exposure in case of a nuclear and (or) radiological accident at the ANPP and set up specific requirements for all response organizations.

In case of emergencies the Rescue Service of the Ministry of Emergency Situations of Armenia acts as the national coordinator in the organization and implementation of population protection measures. The Armenian Nuclear Regulatory Authority (ANRA) has a complementary role in planning and supports the Rescue Service of the Ministry of Internal Affairs in case of radiological or nuclear emergency. The ANRA is the national advisor in making arrangements for response to radiological or nuclear emergency and also a contact point and a competent authority under the Convention on Early Notification of a Nuclear Accident.

The ANRA develops and implements policy in the nuclear and radiological field, as well as the national legal framework. It promotes their implementation and adopts measures for the efficient regulation of nuclear and radiological activities, licenses all activities involving radiation sources and generators and conducts the state registration of ionizing radiation sources, with data recorded in the “RASOD” system.

There are two reference health care facilities for clinical management of radiation injuries. However, there is limited capacity for determine the degree of internal contamination or external exposure.

An adequate supply of potassium iodide is available for the radiation workers from the ANPP. Currently, a tender has been announced to fill up the necessary stockpile of potassium iodide required for nuclear emergency countermeasures.
Within the period of its operation, no incidents or accidents have taken place at the ANPP, while exercises and drills are performed annually. In case of nuclear emergency, the ANRA is able to request international technical assistance in line with international collaborations, treaties and conventions to which Armenia is a party.

**Indicators and scores**

**RE1. Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies – Score 3**

**Strengths**
- Armenia’s national response plan is based on a unified, multilevel, multisectoral system that includes relevant authorities and organizations involved in surveillance, alert and response to radiological and nuclear emergencies.
- “The Environmental Radiation Monitoring System”, consisting of 32 automatic gamma dose rate stations, provides 24/7 automatic transmission of the measurement results.
- National capability to identify and neutralize orphan sources and radioactive materials entering the country has been proved.

**Challenges**
- Laboratory capacity for screening and monitoring of the environment, drinking water and food products is developing.
- There is also a need for biodosimetry equipment, thyroid and whole-body counters.
- No mechanisms currently exist for assessing health facilities’ capacity to manage patients from radiological or nuclear emergencies.

**RE2. Enabling environment in place for management of radiological and nuclear emergencies – Score 3**

**Strengths**
- Strong legislation framework and planning. is in place within Armenia
- Nuclear emergency response exercises and drills are carried out regularly.
- JRODOS (Joint Radiation Decision Support System) software is used for decision-making support in case of emergency.

**Challenges**
- Provisions for a different type of radiological emergency, whether accidental or malicious acts involving radiation sources were not clearly identified.
- The links with global networks, such as the WHO’s Radiation Emergency Medical Preparedness and Assistance Network (REMPAN), the global biodosimetry laboratories network for radiation emergencies (BioDoseNet) and the International Atomic Energy Agency’s Response Assistance Network (RANET), need to be reviewed, coordinated and updated.
Recommendations for priority actions

- Establish a radioanalytical laboratory within the Armenian Nuclear Safety Regulatory Committee.

- Update and/or develop protocols, resources and capacities for dose assessment, diagnosis and medical countermeasures (treatments) for radiation exposure and internal contamination of exposed individuals (whole body counter; biological dosimetry, etc.).

- Develop and establish a basic training scheme for the emergency medical staff, first responders (police, first aiders, firefighters, etc.) and other categories of identified responders without formal training in radiation protection on how to detect, recognize and respond to a radiological (event) emergency, and include them in exercises and drills.

- Design and conduct scalable exercises for a range of radiological emergencies, whether accidental (e.g. accidental exposure to orphan, lost or stolen radiation sources; accidents during transport of radioactive materials), combined with conventional emergencies (a fire or a release of chemical substances), or malicious acts involving radiation sources.

- Update the response plan, mechanisms and guidelines to address the non-radiological impact of nuclear emergencies (such as mental health issues and psycho-social impairments associated with the consequences of protective measures).
Annex: JEE background

Mission location and duration
Yerevan, Armenia. 4 to 8 December 2023

Mission team members including technical areas

<table>
<thead>
<tr>
<th>Team leads and Co-leads</th>
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<tbody>
<tr>
<td>Richard Brown, Programme Manager for Health Emergencies, IPC and AMR WHO Thailand</td>
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<tr>
<th>IHR core capacity</th>
<th>Lead</th>
<th>Co-lead</th>
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<tr>
<td>P1 Legal instruments</td>
<td>Daniel Stowell, U.S. Centers for Disease Control and Prevention</td>
<td>Richard Brown, WHO Country Office in Thailand</td>
</tr>
<tr>
<td>P2 Financing</td>
<td>Daniel Stowell, U.S. Centers for Disease Control and Prevention</td>
<td>Clement Lazarus, Ministry of Health, France</td>
</tr>
<tr>
<td>P3 IHR coordination, NFP functions</td>
<td>Ana Kasradze, CDC, Eastern Europe and Central Asia Regional Office</td>
<td>Miranda Tran Ngoc, WHO Regional Office for Europe</td>
</tr>
<tr>
<td>P4 Antimicrobial resistance (AMR)</td>
<td>Elizabeth Stokle, WHO Regional Office for Europe</td>
<td>Mikheil Sokhadze, UN-FAO, Georgia</td>
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<tr>
<td>P5 Zoonotic disease</td>
<td>Mikheil Sokhadze, UN-FAO, Georgia</td>
<td>Elizabeth Stokle, WHO Regional Office for Europe</td>
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<tr>
<td>P6 Food safety</td>
<td>Mikheil Sokhadze, UN-FAO, Georgia</td>
<td>Adela Paez Jimenez, WHO Regional Office for Europe</td>
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<tr>
<td>P7 Biosafety and biosecurity</td>
<td>Saskia Rutjes, Dutch National Institute for Public Health and the Environment</td>
<td>Konstantinos Koutentakis, European Centre for Disease Prevention and Control</td>
</tr>
<tr>
<td>P8 Immunization</td>
<td>Adela Paez Jimenez, WHO Regional Office for Europe</td>
<td>Pavle Zelic, Medicines and Medical Devices Agency of Serbia</td>
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<tr>
<td>D1 National laboratory systems</td>
<td>Saskia Rutjes, Dutch National Institute for Public Health and the Environment</td>
<td>Adela Paez Jimenez, WHO Regional Office for Europe</td>
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<tr>
<td>D2 Surveillance</td>
<td>Adela Paez Jimenez, WHO Regional Office for Europe</td>
<td>Ana Kasradze, CDC, Eastern Europe and Central Asia Regional Office</td>
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<tr>
<td>D3 Human resources</td>
<td>Konstantinos Koutentakis, European Centre for Disease Prevention and Control</td>
<td>Ana Kasradze, CDC, Eastern Europe and Central Asia Regional Office</td>
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<tr>
<td>R1 Health emergency management</td>
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<td>Miranda Tran Ngoc, WHO Regional Office for Europe</td>
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<tr>
<td>R2 Linking public health and security authorities</td>
<td>Richard Brown, WHO Country Office in Thailand</td>
<td>Daniel Stowell, U.S. Centers for Disease Control and Prevention</td>
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Joint External Evaluation of the International Health Regulations (2005) core capacities of Armenia

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<tr>
<td>R3</td>
<td>Health services provision</td>
<td>Konstantinos Koutentakis, European Centre for Disease Prevention and Control</td>
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<tr>
<td>R4</td>
<td>IPC</td>
<td>Elizabeth Stokle, WHO Regional Office for Europe</td>
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<tr>
<td>R5</td>
<td>RCCE</td>
<td>Pavle Zelic, Medicines and Medical Devices Agency of Serbia</td>
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<tr>
<td>PoE</td>
<td>Points of entry and border health</td>
<td>Mathias Kalkowski, European SHIPSAN ACT Joint Action</td>
</tr>
<tr>
<td>CE</td>
<td>Chemical events</td>
<td>Raquel Duarte-Davidson, UK Health Security Agency, UK</td>
</tr>
<tr>
<td>RE</td>
<td>Radiation emergencies</td>
<td>Alina Dumitrescu, Romanian National Institute of Public Health, Romania</td>
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**Objective**

To reassess Armenia’s capacities and capabilities in the 19 technical areas of the JEE tool, building on the results of the first JEE evaluation, and to provide updated data based on the updated tool that will further support Armenia’s ongoing efforts to enhance their public health security.

**The JEE process**

The JEE process is a peer-to-peer review. The entire external evaluation – including discussions around the priority actions, strengths, areas that need strengthening, best practices, challenges, and scores – is collaborative, with JEE team members and host country experts seeking full agreement on all aspects of the final report findings and recommendations.

Should there be significant and irreconcilable disagreements between the external team members and the host country experts, or among the external experts, or among the host country experts, the JEE team lead will decide the outcome. This will be noted in the final report along with the justification for each party’s position.

**Field visits**

**Group 1:**
National Center for Disease Control Laboratory

**Group 2:**
The NCDC Public Health Emergency Operation Center

**Group 3:**
“Surb Grigor Lusavorich Medical Center” Hospital

**Group 4:**
Reference Laboratory for Especially Dangerous Pathogens, Republican Veterinary and Phytosanitary laboratory center State Non-Commercial Organization (SNCO) (Food safety inspection body of the Government of Armenia)
Limitations and assumptions

- The evaluation was limited to one week, which limited the amount and depth of information that could be managed.
- It is assumed that the results of this evaluation will be publicly available.
- The evaluation is not an audit. Information provided by Armenia will not be independently verified but will be discussed and the evaluation rating mutually agreed by the host country and the evaluation team. This is a peer-to-peer review.
- Lack of documentation and background information provided prior to the assessment resulted in limited initial discussions with national counterparts.

Key Armenia participants and institutions

### Overall

**Nune Bakunts, Ministry of Health, National Center for Disease Control**

<table>
<thead>
<tr>
<th>IHR core capacity</th>
<th>Technical Lead</th>
<th>Institution</th>
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<tbody>
<tr>
<td>P1 Legal instruments</td>
<td>Lusine Hayrapetyan</td>
<td>Ministry of Health</td>
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<tr>
<td>P2 Financing</td>
<td>Vahan Manukyan</td>
<td>National Center for Disease Control</td>
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<td>P3 IHR coordination, NFP functions</td>
<td>Nune Bakunts</td>
<td>National Center for Disease Control</td>
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<tr>
<td>P4 Antimicrobial resistance (AMR)</td>
<td>Kristina Gyurijyan,</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>P5 Zoonotic disease</td>
<td>Gayane Grigoryan</td>
<td>National Center for Disease Control</td>
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<tr>
<td>P6 Food safety</td>
<td>Melanya Karapetyan</td>
<td>Ministry of Economy</td>
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<td>P7 Biosafety and biosecurity</td>
<td>Karo Palayan</td>
<td>National Center for Disease Control</td>
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<td>P8 Immunization</td>
<td>Svetlana Grigoryan</td>
<td>National Center for Disease Control</td>
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<td>D1 National laboratory systems</td>
<td>Sergey Chakhmakhchyan</td>
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<td>Romella Abovyan</td>
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<td>Gohar Yerinyan</td>
<td>National Institute of Health</td>
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<td>Gabriel Tepelikyan</td>
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<td>Gabriel Tepelikyan</td>
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</tr>
<tr>
<td>RE Radiation emergencies</td>
<td>Elizabet Nersisyan</td>
<td>Nuclear Safety Committee</td>
</tr>
</tbody>
</table>
WHO Armenia facilitation support

- Marthe Everard, Special Representative of the WHO Regional Director to Armenia
- Lusine Paronyan, National Professional Officer, Country Emergency preparedness and IHR
- Khachik Avetikyan, Program Assistant
- Hripsime Ohanyan, National Professional Officer, RCCE

WHE South Caucasus Hub support

- Vasily Esenamanov, Hub coordinator

Supporting documentation provided by Armenia

01. Legal instruments

- Implementation of International Health (Medical and Sanitary) Rules, Prevention and Control of Infectious Diseases, Establishment of an Interdepartmental Committee to Coordinate the Activities of the Universal Laboratory Network, and Approval of its Specific Composition and Operating Procedures (2013); No. 22-A (Prime Minister): https://www.arlis.am/DocumentView.aspx?DocID=162569
- Joint Order ”On Approval of the Mutual Cooperation Plan between the Ministry of Health and the Ministry of Internal Affairs of Armenia in Emergency Situations” (2023); No. 900-A (Minister of Internal Affairs), No. 4355-A (Minister of Health)
- Joint Order ”On Approval of the Standard Definitions of Phenomena (Cases of Infectious Diseases, Poisoning, Radiation Damage) Representing an 'Emergency Situation of International Significance in the Field of Public Health' Caused by Biological, Chemical, and Radiation Factors” (2011-2012); No. 31-N (Minister of Health), No. 02-N (Minister of Emergency Situations), No. 258-N (Minister of Agriculture), No. 301-N (Minister of Nature Protection), Joint Order No. 325-N (Chairman of the State Committee for Nuclear Safety Regulation): https://www.arlis.am/DocumentView.aspx?DocID=74026
02. Financing


03. IHR coordination, NFP functions

- Acknowledging the Rules for the National Coordinating Body for International Health (Medical and Sanitary) and delineating the authority of the National Coordinating Body for International Health (Medical and Sanitary) pursuant to Rule 16.07.2009 N 809-N of the Government of Armenia. https://www.arlis.am/DocumentView.aspx?docID=87952

04. Antimicrobial resistance (AMR)

- WHO Regional Office for Europe Antimicrobial Medicines Consumption (AMC) Network

05. Zoonotic disease

- Joint Order: “Methodology for assessing, managing, and reducing the risks of common infectious diseases in humans, animals, and humans” (Ministry of Health of Armenia dated 26.05.2015, No. 1302-A, 08.06.2015, No. 144-A).
- Order: “On approving the methodology for assessing, managing, and reducing the risks of common infectious diseases in humans and animals in the field of public health” (H 08.10.2015, No. 2754-A) etc.
Joint Order No. 66-N of the Minister of Health of Armenia dated November 13, 2014, and No. 247-N of the Minister of Agriculture of Armenia dated December 1, 2014,

“Protocol Decision No. 22 of June 6, 2012, of the Government of Armenia” on approving the schedule of the implementation of the multi-sector training program

The procedure for notification and registration of infectious diseases in animals is stipulated by the decision of the Government of Armenia No. 1477 of December 11, 2008.

Decision No. 2005 of the Government of Armenia, approving the list of helminths, microorganisms of the 1st-4th groups of pathogenicity for humans, and poisons of biological origin, was enacted on November 15.

PVS Evaluation Follow-up Mission (Oie) 2018


"On the Approval of the Standard Procedure Providing Cooperation Mechanisms and Defining Processes Between the National Coordinating Body and the Ministries of Agriculture, Emergency Situations, and Environmental Protection of Armenia" - issued by Armenia Minister of Health (August 19, 2015, No. 46-N), RA Territorial Administration and Emergency Situations (No. 943-N of September 17, 2015), a joint order of Armenia Minister of Agriculture (No. 198-N of September 8, 2015), and Armenia Minister of Nature Protection (No. 274-N of September 25, 2015)

On the Approval of the Standard Procedure Defining the Processes to Ensure Cooperation Mechanisms Between the National Coordinating Body and the Ministries of Emergency Situations, Environmental Protection, and Agriculture of Armenia" by RA Healthcare (20.06.2013 No. 32-H), Emergency Situations (05.08.2013 No. 670-H), a joint order of the ministers of Environmental Protection (07.09.2013 No. 132-N) and Agriculture (07.01.2013 No. 120-N).


Order No. 1433-A of the Minister of Health of Armenia dated May 12, 2016, on the approval of the methodological guidelines for "Epidemiological Analysis and Assessment of Common Infectious Diseases in Humans and Animals."

Joint Order of Armenia Ministry of Health (14.07.2016 No. 2187-A) and Armenia Ministers of Agriculture (27.07.2016 No. 188-A) on approving the methodological guide "Indicators for the Evaluation of the Epidemiological and Livestock Epidemiological Control System for Common Infectious Diseases in Humans and Animals."

06. Food safety

the Law of Armenia "On Inspection Bodies"
the Law of Armenia "On Food Safety"
the Law of Armenia "On State Control of Food Safety,"
the Law of Armenia "On Feed,"
the Law of Armenia "On Veterinary Medicine,"
the Law of Armenia "On Phytosanitary "

07. Biosafety and biosecurity

Biosecurity and Biosafety Draft Legislation https://www.e-draft.am/projects/4718/about
• To endorse the protocol for mandatory pre-employment and routine health assessments, specifying the extent and frequency of medical examinations based on the occupational sectors requiring mandatory assessments. Additionally, approval for the format of the individual sanitary (medical) record book and the compilation of individuals subject to medical evaluations. This is in accordance with Government Decision 347-N. [https://www.arlis.am/documentview.aspx?docid=10762]


• Government Decision 276-N “Defining the Catalog of Medical Care and Services Offered in Armenia.” [https://www.arlis.am/documentview.aspx?docid=102562]

• Joint Order No. 35-H “Approval of Requirements and Obligations for Personnel Engaged in Processes and Procedures Pertaining to Biosafety, Biosecurity, and Quality within the Laboratory System, including those in Supervisory Roles.” [https://www.arlis.am/documentview.aspx?DocID=92347]

08. Immunization


• Order No. N2030-L issued by the Minister of Health of Armenia on July 25, 2019, approving the list of indicators for evaluating the performance of primary health care medical institutions.

• Order N361-A issued by the Minister of Health of Armenia on February 14, 2019, “On approval of standard procedures for the effective management of the import, transportation, distribution and storage processes of vaccines, vaccination accessories and equipment”.

• Paragraph 3 of the Government of Armenia’s decision N489-N issued on April 12, 2018 covering the procurement of vaccines through the United Nations Children’s Fund.

• Order No. 373-A of the Ministry of Health issued on February 9, 2021, “On approving the list of priority measures for the introduction of vaccinations against the coronavirus disease (COVID-19).”


09. National laboratory systems

• August 9, 2016: Decree No. 2513-A “List of 10 main laboratory research tests in Armenia”

• December 1, 2014: Joint Decree No. 247-N “On approval of the list of common priority infectious diseases for humans and animals”

• January 5, 2023: Decree No. 25-L “On approving the program of activities for the laboratory diagnosis of diseases of agricultural animals and the laboratory examination of raw materials and materials of animal origin”

• July 20, 2023: Decision No. 1237-L “On Approving the Strategy for the Development of the Laboratory System in the Healthcare Sector and the Program of Activities for 2023-2026 Derived from it”

• June 24, 2021: Decision No. 1044 on “principles, coordination, levels, and control procedures of the Universal Laboratory Network” and “procedure for appointing reference laboratories in the field of healthcare”

• July 22, 2021: Decision No. 1206 “On the procedure for the appointment of reference laboratories in the field of healthcare”

10. Surveillance

- RA Government Decision No. 1138 of August 26, 2010, "On Approving Cooperation Mechanisms and Coordination Procedures of the National Coordinating Body and Interested Bodies on International Health (Medical and Sanitary) Rules"
- Order No. 35-N of the Minister of Health of Armenia, dated December 17, 2010, "On the approval of sanitary-epidemiological norms and rules for ‘real-time’ electronic epidemiological control of infectious diseases"
- Order No. 3919-A of the General Director of the National Center for Disease Control and Prevention of Armenia Minister of Health, dated October 15, 2014, on the establishment of a system of analyses at all levels of the state non-profit organization “National Center for Disease Control and Prevention of Armenia Ministry of Health.”
- Order No. 3254-A of the Minister of Health of Armenia, dated October 28, 2016, on the approval of the methodological guidelines for the epidemiological investigation and rapid response to outbreaks in Armenia.

11. Human resources

- Resolution 174-L of the Government of Armenia dated February 9, 2023, "On approving the development strategy of the healthcare system of Armenia for 2023-2026 and the list of measures arising from it."
- https://nih.am/am/publications/report_yearbook_guide/1
- Order No. 35 of December 17, 2010, from the Ministry of Infrastructure, approving "Real-time" Electronic Epidemiological Surveillance of Infectious Diseases, [on Approval of Sanitary and Epidemiological Norms and Rules]

12. Health emergency management

- "Methodological guide for developing hospital disaster risk management plans, sample forms of disaster risk management plans, schematic images of the area and building plans, disaster risk reduction plan-schedule, notification and information exchange scheme, evacuation plan, standard operating procedures according to typical disasters, data collection on hazards, vulnerabilities, negative consequences, disaster risk reduction measures, identification of capabilities, and approving the toolkit of the risk calculator," Minister of Health of Armenia Decision No. 2370-L dated 21.06.2021 Armenia Minister of Emergency Situations Decision No. 734-L dated 15.06.2021.
Annex: JEE background

- Armenia06.05.20 HO-268: “On approving the action plan for the implementation of the national disaster risk reduction strategy of Armenia.”.


- Law of Armenia “On ensuring the sanitary and epidemiological safety of the population of Armenia.”

- “Decision No. 134 of January 30, 2003 of the Government of Armenia regarding the preparation of state administration, local self-government bodies, and organizations in Armenia in the fields of population protection and civil defense during emergency situations, and the establishment of procedures and programs for training the population in these fields, is recognized as lost.” (ArmeniaGovernment Decision No. 46-N of 22.01.2015.)

- The order “On approving the activity plans of the health sector in emergency situations” of the Minister of Health of Armenia dated 14.06.2021. Order No. 48-N.

- “On defining the nomenclature, accumulation norms, and schedule of drugs and medical properties to be included in the reserve of strategic reserves” of the Government of Armenia dated 24.12.2020. Decision No. 2144-N.

13. Linking public health and security authorities

- Regarding the implementation of international health regulations at state border crossing points in Armenia and the approval of the action plan during emergency situations, as stipulated in the Government of Armenia’s decision dated 22.06.2012, under Decision No. 777-N. https://www.arlis.am/DocumentView.aspx?DocID=144704


- Regarding the endorsement of the national population protection plan (external emergency plan for the Armenian nuclear power plant) in the event of nuclear and/or radiological accidents at the Armenian nuclear power plant, as specified in the Government of Armenia’s decision dated 22.12.2005, under Decision No. 2328-N. https://www.arlis.am/DocumentView.aspx?DocID=120731

- Regarding the endorsement of the population protection plan for accidents or chemical hazards at chemical facilities in Armenia, as well as emergency recovery operations in case of an accident at a chemical hazardous facility, in accordance with the Government of Armenia’s decision dated 07.08.2010, under Decision No. 861-N. https://www.arlis.am/DocumentView.aspx?DocID=155774

- Regarding the approval of the procedure for the evacuation of the population, material, and cultural values from the hazardous area, as outlined in the Government of Armenia’s decision dated 18.08.2011, under Decision No. 1180-N. https://www.arlis.am/DocumentView.aspx?DocID=94959

- Concerning the determination of the cases, procedures, and conditions for logistics and financing in the event of a quarantine, as specified in the Government of Armenia’s decision dated 12.08.2021, under Decision No. 1315-N. https://www.arlis.am/DocumentView.aspx?DocID=155136

- NB – there are some more documents listed in the self-assessment document, but without references to where they are located
14. Health services provision

- https://www.moh.am/#1/237
- National Institute of Health (nih.am)
- https://www.arlis.am/
- Amended: Government of Armenia Resolution No. 318-N, dated March 4, 2004
- Order No. 48 of June 14, 2021 of Armenia Minister of Health

15. IPC

- Order No. 35-N dated December 17, 2010, of Armenia Ministry of Health was revised in 2023 to enhance the process of reporting HCAI cases.
- ArmeniaGovernment Resolution No. 867 dated June 29, 2002, and ArmeniaMinistry of Health Order No. 44-N issued on October 18, 2019, mandated for all Republic of Armenia inpatient facilities to be equipped with an isolation room adjacent to the reception desk.
- Republic of Armenia Ministry of Health on September 10, 2015, in compliance with the specifications outlined in Order No. 48-N All health centers are obligated to possess the capability for sterilization.
- Sanitary rules and hygienic norms specified in SC No. 3.1.1-002-23, titled "Requirements for Hand Hygiene in Organizations Providing Medical Care and Service.
- Draft of the Sanitary Code titled "Requirements to be Submitted to the Healthcare Service Centers within In-Hospital and Out-of-Hospital Settings"
- Order No. 03 dated March 4, 2008, of the Minister of Health of Armenia on "Hygienic and Anti-epidemic Requirements for the Use of Medical Waste," No. 2.1.3-3 Sanitary Rules and Norms.
- Order No. 46-N dated October 3, 2023, of the Minister of Health of Armenia, "On the Approval of the Sanitary Rules and Hygienic Norms of SC No. 3.1.1-002-23 ‘Hand Hygiene Requirements in Organizations Providing Medical Care and Service.’"
- "Requirements for Cleaning, Disinfection, Pre-Sterilization, and Sterilization of Medical Products" - Order No. 48-N, dated September 10, 2015, approving sanitary rules and hygienic norms.
- Decree No. 4265-L of September 12, 2022, approving the clinical guideline "Prevention of Infections Caused by Urinary Catheters in Organizations Providing Medical Care and Service."
- Order No. 3847-L dated December 20, 2019, of the Minister of Health of Armenia, approving the methodological guidelines "Epidemiological Control System of Infections Caused by Medical Interventions."
- Guidelines on the Core Components of Infection Prevention and Control at the National and Acute Health Care Facility https://www.who.int/teams/integrated-health-services/infection-prevention-control/core-components
16. RCCE

- Charter of the Ministry of Public Relations Department

- Charter of the Department of Rapid Response to Citizens' Applications and Complaints of the Ministry of Health of Armenia On creating a public council attached to the Minister of Health of Armenia, approving the procedure of the public council and revoking the order No. 1370-A of the Minister of Health of Armenia of May 6, 2016 (*May 21, 2019 No. 1288-A)

- Ministry of Health Order No. 1069-A of April 1, 2021 PROCEDURE FOR VACCINATION AGAINST CORONAVIRUS DISEASE (COVID-19) ESTABLISHING A RAPID RESPONSE COMMISSION FOR A POSSIBLE CRISIS SITUATION, ITS COMPOSITION AND CORONAVIRUS HISTORY PROCESS OF VACCINATION AGAINST CORONAVIRUS (COVID-19) TO APPROVE A PLAN OF ACTION FOR A POSSIBLE CRISIS SITUATION ABOUT:

- National strategy for combating disinformation 2023-2025

- Armenian Law "ON THE PROTECTION OF THE POPULATION IN EMERGENCY SITUATIONS"

- Decree of the Minister of Health of Armenia No. 48 of June 14, 2021 "ON APPROVING THE ACTIVITY PLANS OF THE HEALTH DEPARTMENT IN EMERGENCY SITUATIONS"

17. Points of entry and border health

- Law "On State Border" (Article 14)

- Crisis Management Plan Ministry of Health Armenia No. 777 (Intersectoral Committee, State Revenue Committee).

18. Chemical events


- Additionally, relevant orders from Armenian Ministry of Health (No. 3250-A of November 18, 2015), Armenian Minister of Territorial Administration and Emergency Situations (No. 1245-A of December 12, 2015), Armenian Minister of Agriculture (No. 246-A of November 24, 2015), and the joint order of the Director of the Public National Security Service of Armenia (Order No. 41-A of December 10, 2015) on the organization of the implementation of the electronic complex system of disease control.


19. Radiation emergencies

• Armenian Government Decision No. 2328-H of December 22, 2005, on approving the National Plan for the Protection of the Population in case of a Nuclear and (or) Radiological Accident at the Armenian NPP


• Armenia Government decision No. 573 from November 16, 1993, on establishing the Nuclear Safety Regulatory Committee