Joint external evaluation of IHR core capacities of

Kyrgyzstan

Mission report:
3–7 July 2023

World Health Organization

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Contents

Acknowledgements

Abbreviations

AMR	antimicrobial resistance
AAR	after action review
AWaRe	Access, Watch and Reserve
CAESAR	WHO central Asian and European Surveillance of Antimicrobial Resistance network
CDC	US Centers for Disease Control and Prevention
DDP-SSES	Department of Disease Prevention and State Sanitary and Epidemiological Surveillance
DRCU	Disaster Response Coordination Unit
EAEU	Eurasian Economic Union
EBS	event-based surveillance
EHS	essential health services
ELISA	enzyme-linked immunosorbent assay
EMT	emergency medical teams
ENF	emergency notification form
EOC	emergency operation centre
EQA	external quality assessment
EUCAST	European Committee on Antimicrobial Susceptibility Testing
FAO	Food and Agricultural Organization
FELTP	Field Epidemiology and Laboratory Training Program
FETP	Field Epidemiology Training Program
FETP CAR	central Asia Field Epidemiology Training Program
Gavi	Gavi, The Vaccine Alliance
GOARN	Global Outbreak Alert and Response Network
HACCP	Hazard Analysis Critical Control Point
HBV	hepatitis B virus
HCAI	health-care-acquired infection
HCO	health-care organization
HCV	hepatitis C virus
IAEA	International Atomic Energy Agency
IAR	Intra-Action Review
IBS	indicator-based surveillance system
ICT	information and communication technology
iEPID	integrated electronic disease surveillance platform

IHR	International Health Regulations (2005)
ILI	influenza-like illness
IMS	incident management system
IPC	infection prevention and control
ISO	International Organization for Standardization
JEE	Joint External Evaluation
MAC	Medical Accreditation Commission
MDRO	multidrug resistant organism
MES	Ministry of Emergency Situations
NFP	National Focal Point
NISUR	national information system for management of resources
PCR	polymerase chain reaction
PHE	public health emergency
PHEOC	public health emergency operations centre
PoE	point of entry
PPE	personal protective equipment
PVS	performance of veterinary services
QMS	quality management systems
RCCE	risk communication and community engagement
RCCE-IM	risk communication, community engagement and infodemic management
RCI	Republican Center for Immunoprophylaxis
RRT	Rapid Response Team
SARI	severe acute respiratory infection
SimEX	simulation exercise
SOP	standard operating procedure
SPAR	IHR State Party Self-Assessment Annual Report
SQP	Sanitary Quarantine Points
SSES	State Sanitary and Epidemiological Surveillance
STAR	WHO Strategic Toolkit for Assessing Risks
TB	tuberculosis
TESSy	the European Surveillance System
UNICEF	United Nations Children's Fund
VPD	vaccine-preventable disease
WASH	water, sanitation and hygiene
WOAH	World Organisation for Animal Health

Executive summary

Overall, the Republic of Kyrgyzstan, with significant leadership and expertise from the Ministry of Health, is conducting a significant amount of work to protect and strengthen national public health security, including accounting for innumerable lessons learnt from the COVID-19 pandemic. The WHO Joint External Evaluation (JEE) team appreciated that several new laws and ministerial orders were enacted from 2019–2022 to respond to COVID-19, with a new, comprehensive public health law and updated terms of reference being discussed in parliament at the time of the external evaluation visit. In combination, the emerging set of legal mechanisms discussed with counterparts from various ministries promises to significantly modernize the entire public health emergency preparedness and response system. Information provided in the Self-Assessment Report and during meetings with national counterparts provided ample evidence of active involvement of numerous ministries with the legislative body and president's office; there appears to be a strong, concerted national effort to achieve public health goals and ultimately meet Kyrgyzstan's obligations under the International Health Regulations (IHR) 2005.

Findings from the JEE

Financing for health security in Kyrgyzstan, which remains a consistent challenge across the world, will benefit greatly from development of a National Action Plan for Health Security (NAPHS) or equivalent following the JEE 2023. It appears that key financing mechanisms are in place, which could be further strengthened and aligned to ensure coordinated and potentially combined financing for the action plan from the human, animal, environment, food, security and emergency management sectors. The external evaluation team noted that there were many instances of effective cooperation between sectors, which could be considerably expanded and strengthened through formal development of a strategy for One Health and identification of technical and operational activities where linking human–animal–environment programmes are needed. In almost all technical areas of the JEE, formalizing multisectoral coordination through the development of joint strategies, plans, standard operating procedures (SOPs), reports and technical guidelines will be needed to achieve higher capacity levels. This would include tools and communications mechanisms needed to expand the role of the National IHR Focal Point (NFP) to receive and coordinate information as required under the IHR and continue to advocate for multisectoral coordination, reporting and ongoing improvements to address public health risks.

Control and prevention of antimicrobial resistance (AMR) and zoonotic diseases, as well as promotion of food safety, are three technical areas where human–animal sector coordination is particularly critical. The current national AMR plan in Kyrgyzstan and planned point-prevalence study are key steps, although additional refinement of that strategy to cover a wider range of technical activities is needed, as well as timelines for implementation of the plan. Establishment of a national coordinating centre for AMR including strong intersectoral planning and surveillance of AMR, as well as coordination of financing, will be key to launching implementation of this plan. Regarding zoonotic diseases control, there are strong examples of cooperation around brucellosis, rabies and anthrax, although those remain primarily reactive to seasonal patterns. Work is needed to link human and animal surveillance to specific disease eradication objectives, as well as to expand testing for other zoonotic pathogens based on a comprehensive priority-setting exercise. Similarly, there are effective strategies in place for investigation of foodborne outbreaks, although reporting of such outbreaks seems very limited. Food safety could be greatly improved through development of indicator-based surveillance and a more proactive strategy for food production oversight and food product testing.

In the area of biosafety and biosecurity, it was evident that ministry experts in Kyrgyzstan are committed to international norms and standards, with many measures in place to ensure safe and security working

environments. Additional coordination is needed to ensure that routine inspection and maintenance occurs, with development of an overarching plan to consolidate and contain biological material in the fewest necessary locations.

Kyrgyzstan's national immunization programme is particularly strong, although the external evaluation team strongly encourages a detailed technical review of immunization tracking systems and reporting to ensure long-term consistency and accuracy. Major improvements in vaccine acquisition and distribution were made during COVID-19, which need to be sustained and further expanded to implement the full array of essential childhood and adult vaccinations.

In the areas of human health surveillance and laboratory capacity, Kyrgyzstan maintains relatively high capacities, although timely transportation of specimens from point of collection to either diagnostic or public health laboratories and between local and reference laboratories remains a significant challenge. Enhanced systems to procure adequate supplies, including reagents and modernization of equipment and procedures would greatly improve the breadth and speed of public health surveillance and diagnostics. Animal laboratory capacities lag behind human health systems and from a One Health perspective, both sectors would benefit from more active exchange of data, collaborative studies and analyses related to zoonotic disease risks and relevant cross-training.

Strong capabilities are in place for both health emergency management and responding to intentional acts, but there needs to be additional work to align and ensure operational capacity when there are public health emergency responses and law enforcement concerns. This observation also applies to PoEs, where there are health systems and plans in place that need to be fully integrated into airport emergency operations. Joint health hazard analyses, risk assessments, planning, training and exercising would result in stronger threat detection and response systems, ensuring that all relevant experts are involved as soon as needed. Additional discussion and planning are needed to formalize health emergency surge plans.

For health services provision, infection prevention and control and risk communication and community engagement (RCCE), many of the essential activities are taking place. Resources are needed to expand all activities to community levels, with standardization and quality assessment related to case management and emergency treatment, health facility hygiene and sanitation protocols and development of effective health messages during an emergency. Consolidation of implementation plans for key activities, training for specialized functions, monitoring and evaluation and essential research are needed to fully adapt international standards and best practices to the existing systems in Kyrgyzstan.

For both radiation and chemical emergency prevention and response, Kyrgyzstan has the essential legislative and technical capabilities in place, with recognition of key international agreements and standards. Systems require additional technical and human resources to expand to cover all hazard sites and conduct routine surveillance activities. Emergency response protocols are well developed, although there is a lack of resources, coordination and expertise for emergency medical services and clinical case management. Radiation hazards are thoroughly mapped, although this appears to be lacking for chemical hazards and incident reporting systems and databases require significant investment.

Overarching recommendations of the JEE

- Endorsing legislative instruments, including the new Public Health Law, updating terms of reference for all Government programmes and coordinating financing/budgets will strengthen operations.

- Multisectoral coordination through formal planning and engagement among the relevant ministries will be needed to achieve higher capacities in almost all technical areas.

- Strengthening and expanding the role of the (Office of the) IHR NFP, including training with regional counterparts, will promote efficiency, coordination and compliance with the IHR.

- Development of agency and interagency documents with technical guidelines, standard procedures, operations plans and communication protocols for preparedness and response activities will strengthen coordination and lead to systematic improvements.

- A national workforce strategy including education, training and retention will be needed to fill human resource gaps.

- Strengthening policy frameworks and operational planning for One Health will be needed to achieve many of the higher capacity levels.

Kyrgyzstan: scores and priority actions

The table below is the summary of the final scores for each technical area (details and priority actions are shown in the respective report chapters), as agreed by the national and external JEE teams. The principles of the scoring system are described in the JEE tool, available from:

https://www.who.int/emergencies/operations/international-health-regulations/joint-external-evaluations

While there is overlap among the capacity sections of the tool, each capacity is considered separately in the evaluation exercise. The following describes the level of advancement using JEE scoring.

1. No capacity: attributes of a capacity are not in place.
2. Limited capacity: attributes of a capacity are in development stage (implementation has started with some attributes achieved and others commenced).
3. Developed capacity: attributes of a capacity are in place; however, sustainability has not been ensured (such as through inclusion in the operational plan of the national health sector plan with a secure funding source).
4. Demonstrated capacity: attributes are in place and sustainable for a few years and can be measured by the inclusion of attributes or IHR core capacities in the national health sector plan and a secure funding source.
5. Sustainable capacity: all attributes are functional and sustainable and the country is supporting one or more other countries in their implementation. This is the highest level of the achievement of implementation of IHR core capacities.

For ease of overview, a traffic light colouring system is used, where scores of one are shown as red; scores of two and three are yellow; and four and five are green.

This evaluation was conducted using version three of the JEE tool. It is important to note that the third edition of the tool reflects the key lessons of COVID-19, in which experiences around the world raised the bar for what can be considered sufficient capacity to prevent, detect and respond to a public health threat. A capacity score using the third edition of the JEE tool is not, therefore, directly comparable with scores achieved using any other version of the JEE tool. Likewise, if a country undergoing a second JEE achieves a lower score for a given technical area than it did on a previous JEE, this does not necessarily mean that country has lost capacity.

Scores: 1=no capacity; 2=limited capacity; 3=developed capacity; 4=demonstrated capacity; 5=sustainable capacity.Scores and priority actions

Technical areas	Indicator no.	Indicator	Score	Priority actions
Prevent				
P1. **Legal In-struments**	**P1.1.**	Legal instruments	**2**	• Pass the newly drafted Public Health Law to enhance preparedness and response to health emergencies and increase the level of implementation of the IHR (2005).
	P1.2.	Gender equality in health emergencies	**1**	• To ensure IHR obligations are fulfilled and that the NFP is integrated into intersectoral information-sharing and communication develop and pass a legislation that would require:
				» a multisector collaboration
				» a defined terms of reference
				» coordination mechanisms
				» reporting protocols with the health and non-health sectors involved in IHR implementation (e.g. border control, transport, chemical safety, food safety, animal health protection and environmental protection).
				• Develop and fund a strategic framework, implementation plan and SOPs to address gender and equity gaps in the preparedness and response to health emergencies. This also involves guidance on systematic collection, reporting and dissemination of disaggregated data across IHR capacities that would guide public health decision and action.
				• Review legislative frameworks and address gaps that would support IHR implementation at sub-national levels.
P2. **Financing**	**P2.1.**	Financing for IHR implementation	**2**	• Review legal mechanisms for establishing an emergency fund, or transfer of funds from one ministry to another, that would ensure immediate funding is available for moderate-scale, complex, or simultaneous health emergency responses.
	P2.2.	Financial resources for public health emergency response	**1**	• Using existing procedures, select a handful of recommendations for priority action from the 2023 JEE to formulate a MoH supplemental budget request for implementation in the next available fiscal year.
				• During one of the routines, multisectoral public health risk management meetings or zoonotic disease control activities, conduct a budget review and planning exercise to estimate how much additional funding from involved sectors would be required to improve risk management or disease control.
				• Following approval of the NAPHS, conduct a comprehensive cost and prioritisation exercise, including specific aligned sectoral budget proposals for implementation in the next feasible fiscal year.

Technical areas	Indicator no.	Indicator	Score	Priority actions
P3. **IHR coordination, NFP functions and advocacy**	**P3.1.**	IHR NFP functions	**2**	• Create a comprehensive national action plan for IHR by setting priorities, establishing objectives, implementing strategies, mobilizing resources, monitoring progress and fostering collaboration among stakeholders. • Develop new terms of reference for the IHR NFP which can be implemented once the proposed law on cross sectoral cooperation has been approved. • Develop SOPs on cross sectoral cooperation so as not having to rely on personal connections.
	P3.2.	Multisectoral coordination mechanisms	**2**	
	P3.3.	Strategic planning for IHR preparedness or health security	**1**	
P4. **AMR**	**P4.1.**	Effective multisectoral coordination on AMR and the national action plan	**2**	• Review and update the current National Action Plan on AMR using a One Health perspective and accelerate the implementation of the action plan to strengthen multisectoral governance structures, costing of AMR plan, monitoring and evaluation plan, clear roles and responsibilities between the Ministries and administrative levels. • Establish a National Coordination Centre on AMR where data are collected, consolidated, and communicated to the relevant national and international stakeholders (e.g. policy -makers, physicians, nurses, veterinarians, farmers, research institutes, WHO, FAO, WOAH). Data should include resistance data, and antimicrobial use and consumption in the human and agriculture (animal and crops) sectors. • Develop and implement AMR surveillance in the human, animal and environmental sectors and establish a national AMR laboratory network that includes standardized report forms, infrastructure, and analysis of data and expand the implementation of quality management systems in all laboratories of both the human and animal sectors • Review the number of confirmation tests that need to be carried out according to international standards and share resources (like laboratory capacity and instruments) between sectors. • Develop a strategy to improve rational use of antibiotics in humans, including the implementation of the WHO AWaRe classification of antimicrobials. review clinical recommendations for management of AMR cases, and strengthen law enforcement for antimicrobial prescriptions. • Develop law to ban the use of antimicrobials as growth promoters in food-producing animals, ensure compliance with internationally established maximum residue limits of veterinary drugs in food. • Capacity building/training in One Health AMR, surveillance, field epidemiology, analytical skills and ICT tools for data analysis for the human, animal and environmental sector staff. This includes research projects, online training and national and international academic exchanges.
	P4.2.	AMR surveillance	**1**	
	P4.3.	Prevention of MDRO transmission in health-care facilities	**2**	
	P4.4.	Optimize use of antimicrobial medicines in human health	**2**	
	P4.5.	Optimize use of antimicrobial medicines in animal health and agriculture	**2**	

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Technical areas	Indicator no.	Indicator	Score	Priority actions
P5. Zoonotic disease	**P5.1.**	Surveillance of zoonotic diseases	2	• Develop and integrate a comprehensive One Health strategy that is supported by national legislation. Essential elements include multisectoral priority disease lists, standardized information sharing and risk-based surveillance protocols, cross-sectoral and cross-disciplinary professional development, improved national and international data sharing and reporting, and subsequent development of regulations that strengthen zoonotic disease prevention and control.
	P5.2.	Responding to zoonotic diseases	2	
	P5.3.	Sanitary animal production practices	2	
				• Improve the quality of laboratory systems, and efficiency of data sharing and surveillance reporting within and across relevant sectors and agencies at national and international level, including participation to external quality assurance/proficiency testing to ensure generation of reliable data in all laboratories and evaluation to ensure regular reporting of suspected and/or confirmed human and animal cases of zoonotic diseases to international agencies following specific requirements.
				• Allocate additional funding to the national budget specifically for zoonotic activities, ensuring that the allocated funds are dedicated to effectively address and combat zoonotic infections.
				• Carry out national and provincial simulation exercises and training, as well as post-implementation and in-process reviews;
				• Strength a digital approach across all sectors by enabling the integration of ICT to facilitate seamless communication and collaboration.
P6. Food safety	**P6.1.**	Surveillance of food-borne diseases and contamination	2	• Collaboratively develop and adopt a list of priority diseases and hazards of food origin, encompassing both chemical and microbiological risks. This should involve the participation of all relevant ministries and agencies to ensure comprehensive coverage and alignment in addressing food-related health threats.
				• Provide reagents, consumables and training opportunities for laboratories and staff involved in the determination of the aetiology of foodborne diseases and origin of contamination events, and investigation of hazards in foods linked with cases, outbreaks or events – including field epidemiological training for outbreak investigation.
				• Develop a national food safety emergency plan using a participatory approach that involves all relevant sectors and stakeholders and includes thresholds for response to a food safety emergency, clear definitions of roles and responsibilities (for each member of the multiagency central coordination group), procedures for communication / exchange of information among the participating agencies), and evaluation and monitoring mechanisms.

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Technical areas	Indicator no.	Indicator	Score	Priority actions
	P6.2.	Response and management of food safety emergencies	1	• Develop and enforce national policies and regulations in the field of food production and safety in line with international standards, including the systematic testing of food products for domestic consumptions within a national food control programme which ensures the implementation of HACCP along the food value chain.
P7. Biosafety and biosecurity	P7.1.	Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities)	2	• Develop agreed terms of reference, establish a permanent multisectoral working group on biosafety and biosecurity with a One Health approach, promoting cross-agency coordination and collaboration. • Finalize the national draft law on biosafety and biosecurity ready to be enacted and enforced at national level.
	P7.2.	Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture)	1	• Develop standardized training modules based on risk- and need-assessment on biosafety and biosecurity using international guidelines and ensure training is provided in a systematic manner to staff handling high-consequence agents. • Develop a system for sharing information on high-consequence biological agents which are stored in the country and limit the number of such facilities.
P8. Immunization	P8.1.	Vaccine coverage (measles) as part of national programme	4	• Ensure sustainable financial support for immunization programs and extend the normative framework and procedures established for the COVID-19 mass vaccination campaign to other mass vaccinations in response to potential epidemics of other VPDs.
	P8.2.	National vaccine access and delivery	5	
	P8.3.	Mass vaccination for epidemics of VPDs	5	• Expedite the complete implementation of the online register for immunization per individual (i-Emdoo) to enhance the quality of coverage data, vaccine stock monitoring, and storage management. • Offer comprehensive training to the staff responsible for administering vaccines. This training should focus on educating them about the benefits of vaccines and equipping them with effective communication skills to address any concerns or doubts raised by parents. Emphasis should be placed on highlighting the minimal risk of serious side effects associated with vaccines, ensuring that both the child and society at large can reap the benefits of immunization. • Develop a comprehensive communication strategy that highlight the advantages and safety of immunizations, while also addressing concerns which have led to immunization refusal. Target these strategies towards both parents and community/religious leaders.

Technical areas	Indicator no.	Indicator	Score	Priority actions
Detect				
D1. National laboratory system	**D1.1.**	Specimen referral and transport system	**2**	• Develop a set of documentation (including SOPs, guidelines and action plan) and expand the I-Lab information platform to establish a sustainable multisectoral and cross-laboratory coordination and collaboration in a One Health approach at all levels. • Train laboratory managers in internationally recognized leadership programs (i.e. GLLP) and conduct activities to improve laboratory quality management system in accordance with current international standards ISO 17025 and ISO 15189. • Allocate resources to develop and standardize the referral and transport system for most of priority diseases from intermediate to international level. • Ensure resources are allocated to guarantee a sustained maintenance of laboratory equipment, including safety cabinets and PCR machines in all sectors.
	D1.2.	Laboratory quality system	**3**	
	D1.3.	Laboratory testing capacity modalities	**3**	
	D1.4.	Effective national diagnostic network	**3**	
D2. Surveillance	**D2.1.**	Early warning surveillance function	**4**	• Revise and implement legislative acts and norms concerning surveillance of infectious diseases within the scope of One Health. • Finalize the implementation of the existing electronic surveillance platform to all level and areas as planned, integrating IBS and EBS. Also assess the availability and interoperability for additional systems such as veterinary surveillance system and data sources. • Develop and implement cross-sector training and communication activities on surveillance and analysis of data on infectious diseases between ministries and agencies. • Assess the availability of ICT, human resources and capacities at all levels and allocate resources to update equipment and retain personnel and capacities at all levels.
	D2.2.	Event verification and investigation	**3**	
	D2.3.	Analysis and information sharing	**4**	
D3. Human resources	**D3.1.**	Multisectoral workforce strategy	**2**	• Incorporate a One Health approach to existing pre-service and in-service training, including FETP. • Increase joint routine training involving veterinary, environmental, and human health sectors to promote continuing professional education for a multisectoral workforce. • Harmonize existing workforce strategies into one inclusive multisectoral strategy and develop a national multisectoral workforce surge strategic plan in emergencies across sectors including human health, animal health, environment and security. • Conduct a multisectoral gap analysis and competencies mapping of the health workforce including relevant sectors and professions, including clinicians, informaticians, laboratorians, animal and environmental health specialists.
	D3.2.	Human resources for implementation of IHR	**3**	
	D3.3.	Workforce training	**3**	
	D3.4.	Workforce surge during a public health event	**1**	

Technical areas	Indicator no.	Indicator	Score	Priority actions
Respond				
R1. Health emergency management	**R1.1.**	Emergency risk and readiness assessment	**3**	• Develop, approve, and implement multisectoral multihazard health emergency action plans addressing preparedness and response in accordance with the existing overarching national emergency management plans and procedures on all levels. • Develop a PHEOC plan incorporating the existing SOPs, allocate permanent staff and implement and test the SOPs though simulation exercises and provide sustainable funding. • Review existing plans, develop, and implement a national plan for surge staff including SOPs on pre-deployment, deployment and post-deployment for RRT and EMT considering relevant specialties and expertise. • Review and align existing protocol on rapid procurement, supply chain management and logistics, catalogue national and subnational resources and stockpiling and allocate funding to close identified gaps as well as emergency response activities; review, adapt and test a system to distribute and to track medical countermeasures. • Map existing capacities and professional networks to conduct research in areas relevant to emergency preparedness and response, develop and implement a plan to prioritize, conduct, disseminate and fund research activities in an emergency setting.
	R1.2.	PHEOC	**2**	
	R1.3.	Management of health emergency response	**2**	
	R1.4.	Activation and co-ordination of health personnel in a public health emergency	**1**	
	R1.5.	Emergency logistic and supply chain management	**2**	
	R1.6.	Research, development and innovation	**1**	
R2. Linking public health and security authorities	**R2.1.**	Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical or radiological event	**1**	• Establish SOPs to ensure coordination and a clear operating model, including who will be the lead agency for deliberate release events between public health, animal health, and security professionals. Note: this could be based on the positive experiences during the COVID-19 pandemic. • Document authorised points of contact and the triggers for notification of events between public health, animal health professionals (and other relevant agencies.) • Establish a regular programme of simulation exercises to test the SOPs and allow for greater collaboration and confidence between public health, animal health and security professionals. • Provide training to health care workers on security-related issues with respect to deliberate release biological, chemical, and radio-nuclear events. • Provide public health workers with the appropriate communication technology, equipment, and means of protection to respond to such events.

Technical areas	Indicator no.	Indicator	Score	Priority actions
R3. Health services provision	**R3.1.**	Case management	**3**	• Consolidate, implement, and disseminate the national clinical management guidelines for all (e.g. epidemic-prone diseases, trauma, chemical events, radiation emergencies, etc.) as a priority at the regional and local level • Conduct a stakeholder analysis in order to develop and consolidate SOPs (i.e. procedures with a list of designated referral health care facilities, referral procedures, field triage, safe transportation, and case management guidelines to treat pathologies) for agencies involved in health service provision during health emergencies to enhance coordination in this area at all levels and within the MoH • Improve the governance capacities for emergency preparedness, by conducting a mapping and gap analysis of health-care facilities at all levels to guarantee delivery of essential health services during all priority health events. • Strengthen the national service utilization monitoring system at all health facility levels based on the list of essential health services already defined in order to adequately support the consolidation of a plan for continuity of EHS during health emergencies, including considerations for hard-to-reach and vulnerable populations, as these groups are currently not accounted for in existing plans
	R3.2.	Utilization of EHS	**2**	
	R3.3.	Continuity of EHS	**3**	
R4. IPC	**R4.1.**	IPC programmes	**2**	• Consolidate existing documents to develop a new (updated) IPC plan that meets all the minimum requirements outlined by WHO and that is linked to a dedicated budget and timeline • Adopt WHO recommended multimodal strategies as part of IPC interventions which include expanded IPC training (both in-service and pre-service), regular and timely monitoring and feedback, and culture change • Establish a multisectoral digitized surveillance system for HCAI that is implemented in all facilities with ability to detect AMR that includes an integrated system for data use to improve IPC practices. • Scale up existing efforts to ensure safe environments, specifically efforts related to waste management, safe water and overcrowding and understaffing to all facilities
	R4.2.	HCAI surveillance	**2**	
	R4.3.	Safe environment in health facilities	**3**	

Technical areas	Indicator no.	Indicator	Score	Priority actions
R5. RCCE	**R5.1.**	RCCE systems for emergencies	**2**	• Building on lessons learned during COVID-19, develop a national multihazard multisectoral RCCE-IM plan integrated into national preparedness and response strategies, including allocating appropriate human resources and funding for implementation
	R5.2.	Risk communication	**2**	• Develop a multisectoral standards of operating procedures (SOPs) for RCCE-IM
	R5.3.	Community engagement	**2**	• Develop and implement an RCCE capacity development program across sectors to strengthen skills on effective risk communication strategies, social listening, message development and testing, community engagement, and infodemic management
				• Establish mechanism for collecting insights on people's perceptions, knowledge and behaviour and strengthen the system of regular social listening and community feedback
				• Establish a mechanism for regular monitoring, learning and evaluation of RCCE activities

IHR-related hazards and points of entry and border health

Technical areas	Indicator no.	Indicator	Score	Priority actions
PoE. Points of entry and border health	**PoE1.**	Core capacity requirements at all times for PoEs	**2**	• Establish and maintain a public health emergency contingency plan to be incorporated into the aerodrome emergency plan.
	PoE2.	Public health response at PoEs	**2**	• Schedule regular activities to ensure a safe environment for travellers, including potable water safety, food safety, general hygiene maintenance, liquid and solid waste management, and vector control.
	PoE3.	Risk-based approach to international travel-related measures	**2**	• Create a tailored training and capacity-building programme for the public health staff at PoEs considering International Civil Aviation Organization and other international organizations' health-related standards and recommended practices.
				• Regarding neighbouring countries sharing common land borders with Kyrgyzstan, consider entering into bilateral or multilateral agreements concerning the prevention or control of international transmission of diseases or joint designate adjacent ground crossings for the IHR Annex 1B capacities.
				• Develop airport SOPs related to the detection, health assessment, and notification of ill travellers on board aircraft or at the passengers' terminal building and their referral to health-care facilities.

Technical areas	Indicator no.	Indicator	Score	Priority actions
CE. Chemical events	CE1.	Mechanisms established and functioning for detecting and responding to chemical events or emergencies	2	• Urgently develop and implement a Chemical Laboratory Report and Incident database, to allow better analysis and communication of laboratory data at SSES with partner agencies in Kyrgyzstan. • Update the current National Chemicals Profile within the next 18 months.
	CE2.	Enabling environment in place for management of chemical events	3	• Integrate the Operations Center of the SSES, response activities in relation to chemical incidents and threats and to conduct, at least yearly, simulation exercises with partner agencies to test the emergency response plan. • SSES should work with the MES, State administrations and local governments, and other interested Ministries and Departments (Ministry of Natural Resources, etc.) to ensure that the Minamata Convention on transboundary impacts of industrial accidents and the Geneva: International Labour Organization; Convention 174 and 170 are ratified and implemented by Kyrgyzstan. • Equip the laboratories of the SSES with up-to-date diagnostic equipment to conduct more in-depth scientific research on the impact of chemicals on public health.
RE. Radiation emergencies	RE1.	Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	2	• Ratify the International Convention on Notification and Convention on Assistance in case of a radiological or nuclear emergency. • Review and update national response plans to ensure incorporation of clear mechanisms for cross-sector coordination, sharing of resources and communication through regular information exchange and joint activities, such as regular joint exercises, workshops etc.
	RE2.	Enabling environment in place for management of radiological and nuclear emergencies	1	• Develop detailed practical arrangements (regional, local plans and SOPs) for detection, assessment and monitoring of radiation exposure, and response to radiation emergencies - to complement existing national all-hazard emergencies plans. • Allocate resources for strengthening public health sector's capacity with regard to emergency medical services (ambulances, hospital ERs, and specialized departments) and implementation of urgent protective actions, including sheltering, evacuation, and pre-hospital response (decontamination and triage, transportation of patients) and long-term recovery. • Allocate resources for efficient hospital response and clinical management of radiation injuries, including developing national stockpiles for medical countermeasures, provision of protocols for clinical management of radiation injuries, reinforcing relevant laboratory capacities, and provision of regular training and education to health workers.

Note: EHS: essential health services; FAO: Food and Agriculture Organization of the United Nations; GLLP: Global Laboratory Leadership Programme; HCAI: health-care-acquired infection; IBS: indicator-based surveillance system; ICT: information and communication technology; IPC: infection prevention and control; ISO: International Organization for Standardization; MES: Ministry of Emergency Situations; PCR: polymerase chain reaction; PHEOC: public health emergency operations centre; PoE: point of entry; RTCCE-IM: risk communication, community engagement and infodemic management; RRT: Rapid Response Team; SSES: State Sanitary and Epidemiological Surveillance; VPD: vaccine-preventable disease; WOAH: World Organisation for Animal Health..

Prevent

P1. Legal instruments

Introduction

The IHR (2005) provide obligations and rights for States Parties. In some States Parties, implementation of the regulations may require new or modified legislation. Even if new or revised legislation may not be specifically required, States Parties may still choose to revise some regulations or other instruments in order to facilitate IHR implementation and maintenance. Implementing legislation can serve to institutionalize and strengthen the role of the IHR (2005) and operations within the State Party. It can also facilitate coordination between the different entities involved in their implementation (see detailed guidance on IHR 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

Kyrgyzstan has enacted various legal instruments, administrative arrangements and guidelines that support the country's obligations and implementation of core capacities under the IHR (2005). National legislation has been put in place to define state policy in various areas of public health emergency and response, spanning relevant sectors. The Constitutional Law of the Kyrgyz Republic No. 135 dated 24 October 1998 outlines the provisions on the declaration of a state of emergency, and the Law of the Kyrgyz Republic No. 54 on civil protection adopted in 2018 (amended in 2022 and 2023) outlines protection of people during emergency situations. There is a decree appointing the Ministry of Health of the Kyrgyz Republic as the NFP. Since becoming a member of the Eurasian Economic Union (EAEU) in August 2015, national legislation aligns with EAEU requirements with respect to prevention and response to infectious diseases. Cross-border cooperation and information sharing agreements are in place among EAEU countries aimed at preventing and combating threats to public health.

Mapping of legal instruments, policies and other government instruments was conducted in 2018 in collaboration with WHO staff. In February 2021 the Government issued Presidential Order No. 26, to conduct inventory and mapping of legal instruments at the national and intermediate levels to identify the need for additional revisions or development of new legal instruments on public health emergencies. This mapping resulted in the drafting of a new Public Health Law, undergoing public hearing and expected to be ratified in 2023. The Law aims to increase the level of protection of human health through modernization of the public health system.

There are some legal instruments in place in support of the specific technical areas, such as Decree No. 583 (23 September 2010) outlining guidelines for recording infectious diseases in the Kyrgyz Republic to ensure early detection and immediate reporting of unusual public health events. There are laws on radiation/nuclear safety, chemical security, food safety and water safety, in addition to a series of government decrees and more than 40 orders made by the Ministry of Health covering various aspects of public health. A law establishing a national framework for biosafety has been drafted.

Although there are critical legal instruments in place to address IHR requirements, there is a notable gap in the integration of relevant sectors to ensure all-of-government and all-of-society approaches at all levels for public health emergency preparedness and response. There are limited provisions for multisectoral coordination and for coordination across the national, intermediate and local levels of government. Most of the laws on IHR implementation are limited to the human health sector, with few in the animal health sector.

At the time of the JEE, there were no national laws or policies specifically addressing gender equity and equality. Excepting a requirement to report demographic data in surveillance reports, there was no evidence of a mechanism, legal instrument, tool or study that clearly defines responsibilities related to gender and equity as a component of health security. There is no evidence of systematic collection, reporting or dissemination of data related to health emergencies disaggregated by sex, age, education, economic status and other variables that could be used to analyse differentiated exposure to risk across people of diverse gender identities.

Indicators and scores

P1.1. Legal instruments: score 2

Kyrgyzstan has conducted a series of legal mapping of relevant legal instruments for IHR implementation at the national and intermediate levels and results are guiding development of new laws. Kyrgyzstan has made significant progress in its legislative frameworks, laws, regulations, administrative orders and other government instruments to advance implementation of the IHR (2005). As a result of this process, a new Public Health Law has been drafted to address the gaps identified in the current legislations.

Strengths
* Kyrgyzstan has conducted regular review of its legislative frameworks to identify gaps and opportunities for improvement. The recent review was made in February 2021 through a Presidential Order and the new Public Health Law was drafted based on the mapping.
* There are a wide range of legal instruments that support the implementation of key technical capacities under the IHR (2005).
* There are legal instruments that align the country's cooperation with the EAEU requirements and information sharing arrangements with EAEU Member States for prevention and response to health emergencies.

Challenges
* IHR implementation primarily emphasizes the Ministry of Health, lacking a comprehensive legal instrument that mandates multisectoral cooperation and involvement of various national non-health sectors in the IHR implementation.
* There is very limited coordination and coherence among the existing legal instruments of the various sectors involved in the IHR implementation in accordance with an all-hazard, whole-of-government approach.
* The legal instruments are applied at national level and there is no evidence of legislations that support the implementation of IHR capacities at the subnational levels.

P1.2. Gender equity and equality in health emergencies: score 1

Kyrgyzstan does not have legal instruments, policies or mechanisms in place to address gender equity and equality in its preparedness and response to health emergencies. Implementation and action plans across IHR capacities do not mention or include gender and equity, and data collection tools do not currently require gender disaggregation.
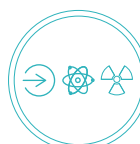
Strengths

- There is growing awareness of the significance of addressing gender and equity in public health. As part of this effort, surveillance reporting has begun to disaggregate data by gender, recognizing the importance of understanding health disparities and ensuring equity in public health interventions.

Challenges

- There are no existing mechanisms in place to address gender equity and equality in health emergencies or in public health. There is a strategic need to conduct a systematic assessment of gender gaps.

- The existing tools for collection, reporting and dissemination of data across IHR capacities do not consider disaggregation by gender, age and other social variables which prevents effective analysis of vulnerabilities.

- There is no systematic analysis on gender and equity gaps, and no action plan to address high-priority gaps.

Recommendations for priority actions

- Pass the newly drafted public health law to enhance preparedness and response to health emergencies and increase the level of implementation of the IHR (2005).
- To ensure that IHR obligations are fulfilled and that the NFP is integrated into intersectoral information-sharing and communication, develop and pass legislation that would require:
- a multisector collaboration;
- defined terms of reference;
- coordination mechanisms; and
- reporting protocols with the health and non-health sectors involved in IHR implementation (e.g. border control, transport, chemical safety, food safety, animal health protection and environmental protection).
- Develop and fund a strategic framework, implementation plan and SOPs to address gender and equity gaps in the preparedness and response to health emergencies. This also involves guidance on systematic collection, reporting and dissemination of disaggregated data across IHR capacities that would guide public health decision and action.
- Review legislative frameworks and address gaps that would support IHR implementation at subnational levels.

P2. Financing

Introduction

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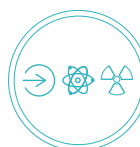
Target

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

Level of capabilities

The Ministry of Health of the Republic of Kyrgyzstan provided a detailed presentation on their annual budget and budget planning process for health services provision and public health emergency preparedness and response. It is evident that a carefully considered process is utilized to obtain requirements from Ministry of Health programmes to determine near- and mid-term (up to 4 years ahead) budget goals and that there is no lack of awareness concerning the specific gaps that prevent full implementation of strategic goals. Data acquisition and analytic methods allow for resource prioritization within the limits of available funding, with year-to-year increases in budgets reliant on approval from the Ministry of Finance.

Within the Ministry of Health surveillance and epidemiology service, there are operational funds available that can be used at unit leaders' discretion to respond to typical outbreaks and small-scale emergencies; budget categories (accounts) are available for emergency supplementation if needed. There are procedures for requesting and allocating supplemental contingency funds, and these were well-tested during the response to the COVID-19 pandemic, but such procedures can take a month or more to complete. From an immediate disaster response perspective, only the MES has significant contingency funds available.

Health sector financing is formed independently from other sectors, apparently with no direct or indirect dialogue between ministries to align funding priorities aimed at shared health security concerns. Implementation of the IHR (2005) per se is primarily financed by the Ministry of Health, and the extent to which other sectors or the Ministry of Finance view financing through the lens of national public health security is uncertain. There appear to be adequate systems in place for government financial monitoring and accountability, so strategic funding considerations, such as would be needed to collectively finance a NAPHS, seem feasible.

Indicators and scores

P2.1. Financing resources for IHR implementation: score 2

In Kyrgyzstan, financial planning is limited with respect to IHR technical areas, with national allocation and external financing in place for some of the relevant sectors and their respective ministries. Monitoring and accountability systems are also already in place. To achieve a higher capacity level, financial planning must be based on estimated resource needs, with respective budgetary allocation among all relevant ministries and sectors.

Strengths

- Detailed, comprehensive budgeting and planning within the Ministry of Health.
- Methods to assess gaps and estimate funding requirements.
- Clearly described procedures to adjust budgets and allocation within a fiscal year and for future years.

Challenges

- Processes for multisectoral collaboration to identify common funding priorities among ministries involved in IHR implementation
- Mechanisms to align and deconflict budgets that support capacity development for national public health security

P2.2. Financial resources for public health emergency response: score 1

At the time of the evaluation visit in 2023, effective financial resources for responding to public health emergencies in Kyrgyzstan were not planned or clearly identified. While some funds are allocated and distributed for relatively uncomplicated public health emergencies, activation of financing and disbursement mechanisms for major emergencies are cumbersome and untimely.

Strengths

- Laws and regulations permit expenditure of funds for epidemic response.
- Procedures are available to request and allocate supplemental emergency funds.
- Financial staff have significant experience in requesting, receiving and distributing emergency supplemental funding.

Challenges

- General funding for epidemiological response exists but is significantly limited.
- Mechanisms to increase and/or redistribute funds based on emergency needs are cumbersome and slow.
- Ministry-level and subnational senior administrators are not empowered to execute funds quickly to initiate a full-scale response to a major public health threat.
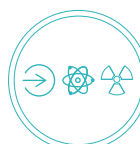
Recommendations for priority actions

- Review legal mechanisms for establishing an emergency fund or transfer of funds from one ministry to another, which would ensure the availability of immediate funding for moderate-scale, complex or simultaneous health emergency responses.
- Using existing procedures, select several recommendations for priority action from the 2023 JEE to formulate a Ministry of Health supplemental budget request for implementation in the next available fiscal year.
- During routine multisectoral public health risk management meetings or zoonotic disease control activities, conduct a budget review and planning exercise to estimate the level of additional funding from involved sectors that would be required to improve risk management or disease control.
- Following approval of the NAPHS, conduct a comprehensive cost and prioritization exercise, including specific aligned sectoral budget proposals for implementation in the next feasible fiscal year.

P3. IHR coordination, NFP 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 an NFP and adequate resources for IHR implementation and communication, is a key requisite for a functioning IHR mechanism at country level.

Target

Multisectoral and multidisciplinary approaches through national partnerships that allow efficient, alert and response systems for effective implementation of the IHR (2005). Coordinate nationwide resources, including sustainable functioning of an NFP – a national centre for IHR communications which is a key obligation of the IHR and which is accessible at all times. States Parties provide WHO with contact details of IHR NFPs, continuously update and annually confirm them. Ensure 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 the FAO and WOAH. Planning and capacity development must be undertaken and supported through advocacy measures to ensure high-level support for implementation of the IHR (2005).

Level of capabilities

The Ministry of Health has delegated responsibility for the IHR NFP to the Director of the Department of Disease Prevention and State Sanitary and Epidemiological Surveillance (DDP-SSES) of the Ministry of Health. The NFP coordinates IHR implementation activities in the country, including monitoring and reporting events through the epidemiology service, conducting risk assessment in the event of a public health emergency (PHE), submitting annual IHR State Party Self-Assessment Annual (SPAR) Reports , conducting WHO Strategic Toolkit for Assessing Risks (STAR) risk assessment, assessing the capacities of agencies present at PoEs, evaluating measures implemented during the PHE and conducting tabletop and simulation exercises. The NFP centre has sufficient capacity to consolidate surveillance information as it forms a part of the national-level organization for disease prevention and epidemiological surveillance and is available 24/7. The 2018 law on civil protection does not specifically include the concept of a public health emergency but references epidemics or outbreaks of infectious diseases as a potential threat.

After the JEE in November 2016, a national action plan for implementation of the IHR (2005) was developed, but never adopted. A new Public Health Law will specifically include IHR implementation, formalising the NFP's function in coordinating multisectoral cooperation. The main challenge for the NFP is the lack of formalized intersectoral cooperation and interaction, although there are many examples of cooperation between different sectors on specific diseases. There is also a need for an update of terms of reference for the function of the NFP, reflecting an increased role in coordinating multisectoral cooperation when implementing the IHR (2005). The Ministry of Health does not currently have the authority to coordinate in case of a public health emergency but requires separate written requests and on an ad hoc basis.

Indicators and scores

P3.1. IHR NFP functions: score 2

The NFP is a designated centre and has a duty officer system to ensure availability at all times for urgent communications with WHO. However, legal, normative and institutional instruments and arrangements, including terms of reference describing roles and responsibilities, are insufficient to communicate effectively with all levels and relevant sectors of the State Party's administration.

Strengths

- The Department of Disease Prevention and Disease Surveillance represented by the National IHR Coordinator has sufficient capacity to consolidate surveillance information, as it is the national organization for disease prevention and public health surveillance.
- The National Coordinator is available at any time to contact WHO regarding the IHR (2005).

Challenges

- An all-country approach working towards the implementation of the IHR (2005).
- A current provision of the terms of reference and roles for the IHR NFP.

P3.2. Multisectoral coordination mechanisms: score 2

Multisectoral coordination mechanisms for IHR implementation are developed but not disseminated. Multisectoral coordination activities occur on an ad hoc basis.

Strengths

- Effective coordination between relevant ministries has been demonstrated in cases involving risks that hold significance for national or international public health.

Challenges

- No intersectoral cooperation exists on an ongoing or formalized basis.

P3.3. Strategic planning for IHR preparedness or health security: score 1

A national action plan for IHR preparedness or health security is not available or is under development.

Strengths

- There is a timely and systematic information sharing among the national, the intermediate and primary agencies, human health surveillance units, laboratories and other relevant sectors in regard to potential zoonotic risks and new zoonotic events that require urgent measures.

Challenges

- There is limited awareness about the IHR (2005) among local communities, non-health sectors and the population of the Kyrgyz Republic.
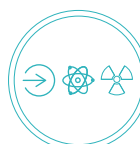
Recommendations for priority actions

- Create a comprehensive national action plan for IHR by setting priorities, establishing objectives, implementing strategies, mobilizing resources, monitoring progress and fostering collaboration among stakeholders.
- Develop new terms of reference for the NFP which can be implemented once the proposed law on cross sectoral cooperation has been approved.
- Develop SOPs on cross-sectoral cooperation to reduce reliance on personal connections.

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. The primary causes for increasing AMR are the overuse and misuse of antibiotics, resulting in AMR that is currently evolving at an alarming rate within the country. This situation threatens patient care, public health, food security and agriculture production, economic growth and national security.

Target

A functional system in place for the national response to combat AMR with a One Health approach, including:
- 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;
- surveillance capacity for AMR and antimicrobial use at national level, following and using internationally agreed systems such as the WHO Global Antimicrobial Resistance Surveillance System (GLASS) and the WOAH global database on use of antimicrobial agents in animals;
- prevention of AMR in health-care facilities, food production and the community, through infection prevention and control measures; and
- 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

Like many other Member States of the WHO European Region, Kyrgyzstan is facing an increasing challenge in terms of AMR. The recently published Global burden of AMR highlighted the lack of data in central Asian countries.[1] To establish the burden of AMR in Kyrgyzstan, a point prevalence study is planned to be initiated in October 2023. The aim of the study will be to establish national prevalence data on AMR.

To improve efforts to combat the rising threat of AMR, Kyrgyzstan is in the process of applying for support through the AMR Multi-Partner Trust Fund to support a One Health approach to combat AMR including through activities related to human, animal and environment sectors.

Kyrgyzstan is actively engaging in research using C-reactive protein measurement as a point of care proxy to distinguish between bacterial and viral infections; a study is implemented with the International Centre of Antimicrobial Resistance Solutions.

Indicators and scores

P4.1. Effective multisectoral coordination on AMR and the national action plan: score 2

Since the last JEE in 2016 Kyrgyzstan has developed a multisectoral National Action Plan on AMR 2022–2025. This plan has been developed and signed by the Ministry of Health and the Ministry of Agriculture. It includes the establishment of a multisectoral coordination mechanism with government leadership, but involvement of the environmental sector is lacking, and no regular meetings are held. The plan could be further developed to fully reflect a One Health approach to AMR, with the inclusion of environmental

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1   https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02724-0/fulltext

aspects of AMR and addressing governance structure for the multisectoral work. Additionally, financial and technical support for the implementation of the plan is needed, including the establishment of a multisectoral coordination mechanism.

Strengths
- Kyrgyzstan has developed a National Action Plan on AMR that includes multisectoral aspects.

Challenges
- The inclusion of the environment in the National Action Plan on AMR is lacking.
- The intersectoral working group for the implementation of the national action plan needs to revise the terms of reference reflecting a One Health approach and regular meetings should be held with documented minutes.

P4.2. AMR surveillance: score 1

Currently, Kyrgyzstan has limited capacity for generating, collating and reporting data (antibiotic susceptibility testing and accompanying clinical and epidemiological data). Further work is needed to develop both national coordination and quality management. The country has the laboratory capacity and technical skills to conduct resistance testing in both the human and veterinary sectors; however, surveillance infrastructure needs to be strengthened to support this. Like other countries in the region, laboratories face challenges from lack of reagents and materials, high levels of staff turnover and a lack of continued education and training. Kyrgyzstan has joined the Central Asian and European Surveillance of Antimicrobial Resistance network (CAESAR) recently, and currently five laboratories are reporting to the network. A national reference laboratory for AMR has been appointed and is testing human, animal and environmental samples. Additionally, European Committee on Antimicrobial Susceptibility Testing (EUCAST) standards are being applied in the Department of Disease Prevention and State Sanitary and Epidemiological Surveillance laboratories. Food safety measures include testing for antimicrobial veterinary drug residues in raw and processed food products of animal origin. The surveillance system infrastructure and associated templates, forms, surveillance data flow and guidelines must be reviewed and developed within and across sectors to facilitate effective integration and data sharing. Electronic reporting for swift communication between different administrative levels may also be considered. Additionally, newer laboratory technologies may be shared between sectors. SOPs have been developed for clinical handling of samples.

Strengths
- Well-trained and motivated laboratory staff in the human and veterinary sectors.
- Functional and well-equipped laboratories in the human sector, advanced equipment for AMR testing in place in the high-risk pathogen laboratory.
- Application of international standards in laboratories.

Challenges
- High turnover and lack of laboratory staff resources.
- Lack of ICT systems for transfer of data and overall data management.
- Weak intersectoral surveillance infrastructure for AMR in place in both the human and animal sectors.

P4.3. Prevention of MDRO transmission in health-care facilities: score 2

Currently, Kyrgyzstan has guidance for MDRO management, and some health facilities can detect priority MDRO pathogens based on laboratory data. Guidance on MDRO has been developed for the health-care sector in Kyrgyzstan; however, this needs to be revised and strengthened based on surveillance to ensure that prevention and control actions are carried out in good time.

Kyrgyzstan has an infection prevention and control (IPC) programme which is implemented in health-care facilities to prevent and control MDRO infections. This includes continuous IPC training across the whole country. A recent survey showed high compliance in hand hygiene and good implementation of IPC (Order of the Ministry of Health of the Kyrgyz Republic No. 716 dated 15.08.2017). This programme does not expand to the veterinary sector.

Strengths
- The national and subnational reference laboratory for AMR is established and functioning.
- An Atlas on Bacteriology Fundamentals has been developed as guidance in bacteriology and is in use in bacteriological labs.
- SOPs on clinical sampling for high-risk departments have been developed and are being used.

Challenges
- High turnover and lack of laboratory staff resources.
- Lack of reagents and lab equipment and a lack of templates and ICT systems to support surveillance with fast feedback of results.
- Weak surveillance infrastructure for notification of MDRO events.

P4.4. Optimal use of antimicrobial medicines in human health: score 2

Kyrgyzstan has a national policy and regulations promoting appropriate antimicrobial use, and antimicrobial stewardship activities have been developed for community and health-care settings. An ideal next step for implementation would be to further develop antimicrobial stewardship and apply the Access, Watch and Reserve (AWaRe) classification of antibiotics to the national essential medicines list.

In Kyrgyzstan, all registered antibiotics for human use have a prescription status. Control over the procedure for prescriptions for drugs and their dispensing (Decree of the Government of the Kyrgyz Republic No. 2, dated 05.01.2011) is carried out by the pharmaceutical inspection unit. Over-the-counter sales of antibiotics without prescription seems to be a common practice, and challenges remain in addressing the rational use of antibiotics. In hospital settings, use of antimicrobials is recorded. However, there is no documentation of the of antimicrobials dispensed in primary care settings.

AMR stewardship refers to coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of an optimal antimicrobial drug regimen, dose, duration of therapy and route of administration. Kyrgyzstan has some stewardship programmes in place; however, there is a need to review the clinical recommendations for management of AMR cases as part of a comprehensive programme. One impactful tool regarding prescription of antimicrobials is the WHO AWaRe list, which governs national essential medicines lists. AWaRe stands for Access, Watch and Reserve, and outlines which antibiotics to use for the most common and serious infections (Access), which should be prescribed with care (Watch), and which should be reserved as a last resort and only used in the most severe circumstances or for highly drug-resistant bacteria (Reserve). This protocol is not yet implemented in Kyrgyzstan.

Access to antimicrobials and the mitigation of stock shortages is addressed in the Law of the Kyrgyz Republic No. 165 dated August 2, 2017 "On circulation of drugs". Additionally, to combat fake medicines and counterfeit drugs, quality assessment is carried out on drugs imported into the country or manufactured in the country based on the requirements of a regulatory document on quality.

Strengths
- Guidance on diagnosis on bacteriology has been developed and is being applied.
- SOPs on clinical sampling for high-risk departments have been developed and are being utilized.
- A stewardship programme has been developed alongside national guidance on the appropriate use of antibiotics in humans.
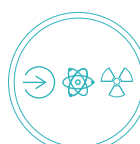
Challenges

- No adoption of AWaRe antibiotic classification into the national essential medicines list.
- Remaining implementation of stewardship programme according to WHO recommendations.

P4.5. Optimize use of antimicrobial medicines in human and animal health and agriculture: score 2

Currently, Kyrgyzstan has national legislation that covers some aspects of national manufacture, import, marketing authorization, control of safety, quality and efficacy and distribution of antimicrobial products and/or antimicrobial pesticides.

Since 2018 Kyrgyzstan has also been recording the use of antibiotics in the veterinary sector at national level. There is no existing legislation addressing the use of antibiotics as growth promoters in the veterinary sector, although this point is mentioned in the national action plan on AMR. No prescriptions are required for antimicrobial use in animals.

Strengths

- Monitoring of antibiotic use in animals based on consumer request is being conducted.

Challenges

- No plan to monitor the use of antibiotics in agricultural sector.
- No regulation of use of antibiotics in the agricultural sector.

Recommendations for priority actions

- Review and update the current National Action Plan on AMR using a One Health perspective and accelerate the implementation of the action plan to strengthen multisectoral governance structures, costing of AMR plan, monitoring and evaluation plan, clear roles and responsibilities between the Ministries and administrative levels.
- Establish a National Coordination Centre on AMR where data are collected, consolidated and communicated to the relevant national and international stakeholders (e.g. policy-makers, physicians, nurses, veterinarians, farmers, research institutes, WHO, FAO, WOAH). Data should include resistance data and antimicrobial use and consumption in the human and agriculture (animal and crops) sectors.
- Develop and implement AMR surveillance in the human, veterinary and environmental sectors and establish a national AMR laboratory network that includes standardized report forms, infrastructure and analysis of data and expand the implementation of quality management systems in all laboratories of both the human and veterinary sectors.
- Review the number of confirmation tests that need to be carried out according to international standards and share resources (like laboratory capacity and instruments) between sectors.
- Develop a strategy to improve rational use of antibiotics in humans, including the implementation of the WHO AWaRe classification of antimicrobials. Review clinical recommendations for management of AMR cases and strengthen law enforcement for antimicrobial prescriptions.
- Develop a law to ban the use of antimicrobials as growth promoters in food-producing animals and ensure compliance with internationally established maximum residue limits of veterinary drugs in food.
- Capacity-building/training in One Health AMR, surveillance, field epidemiology, analytical skills and ICT tools for data analysis for human, veterinary and environmental sector staff. This includes research projects, online training and national and international academic exchanges.

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.
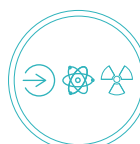
Target

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

Level of capabilities

The Republic of Kyrgyzstan has one of the highest livestock-to-human ratios in Asia, 5.8 per household, raising vulnerability to zoonoses. Zoonotic diseases such as rabies, anthrax and brucellosis are observed relatively frequently in animals and humans. The Ministry of Health is responsible for the surveillance of zoonotic diseases in the human health sector, while the veterinary service surveys livestock and wild animals. All sectors recognize the need for multisectoral, multidisciplinary, cross-agency collaboration to address these and other risks to human health. Infectious disease surveillance in human populations is more developed than in the animal health system. The country has not yet developed and adopted a One Health strategy.

The Republic of Kyrgyzstan has developed a list of prioritized zoonotic diseases, which includes rabies, leptospirosis, brucellosis, leishmaniasis, anthrax and echinococcosis. However, it is important to note that the list of diseases presented in each sector is based on their respective strategy and financial resources. The prioritization of a One Health strategy has not been conducted through a multisectoral coordination process. The Ministry of Health conducts annual or semi-annual exercises related to zoonotic disease threats, which includes the Ministries of Agriculture and of Emergency Situations, as well as some private sector stakeholders and local agencies. Although progress has been noted in the short term in some disease control programmes, as indicated by a decrease in human cases and in the prevalence of animal diseases, critical deficiencies remain that prevent the Ministry of Health from reaching targets for control and eradication. Surveillance and rapid response are hampered by a lack of detailed and clear procedures, low levels of clinical diagnostic capacity and challenges with sample submission, particularly from animal sources. Kyrgyzstan has experience with a variety of international tools for zoonotic disease control, including those provided by WHO (JEE 2016 and 2023), WOAH (performance of veterinary services [PVS] 2016, PVS GAP 2019 and PVS Lab 2018) and the FAO (SET 2019 and the Laboratory Mapping Tool).

As a member of the EAEU, Kyrgyzstan has implemented the supranational legislation concerning zoonotic infections. This includes inspection of farms, products, enterprises and slaughterhouses. Additional capacity of veterinary laboratories had been taken up during the COVID-19 crisis. An identification system of animals has now been developed and implemented which can function as a support tool for state surveillance and prevention in response to future events.

Indicators and scores

P5.1. Surveillance of zoonotic diseases: score 2

Kyrgyzstan currently has a list of priority zoonotic diseases, which has been agreed upon between the animal health and public health sectors. Coordination of surveillance between the animal and public health sectors is informal, limited to diseases indicated in these prioritized lists, and does not include environmental factors despite their importance. The sharing of information is not systematic. To achieve a score of 3 or higher, the country needs to improve the coordination of surveillance activities for all listed priority emerging and endemic zoonotic diseases. This must be formalized between the animal, public and environmental health sectors at national level.

Strengths

- The country has established a prioritized list of zoonotic diseases that are of concern to both the health authority and by the animal health sector separately.
- The state possesses the capacity to detect pathogens associated with zoonotic diseases listed in priority lists.
- A One Health strategy is under development and consideration by the Kyrgyz Government. The strategy will aim to provide a general framework for collaboration and coordination of public, animal and environmental health sectors and institutions. This framework is supported by the WHO Country Office with an aim to have the first draft developed by Autumn 2023.
- The health authority and the animal health sectors both have the capacity to conduct surveillance based on methods developed by each agency. A mechanism is in place to facilitate the sharing of data between sectors and is indicated in national legislation.
- The national veterinary service has developed an identification system to make surveillance more efficient.
- IP and iLAB (online electronic data systems) are available and regularly used.

Challenges

- Data sharing mechanisms between sectors and agencies are not well defined, with no joint risk assessment.
- No systematic approach exists for coordination and information sharing between relevant stakeholders for priority zoonotic diseases, including intersectoral surveillance infrastructure for alerts.
- There is no legal support such as legislation in the country dedicated to a One Health approach.
- There is no established ICT system for sharing laboratory reports or alerts between public and animal health laboratories.
- The Veterinary Service is responsible for surveillance of diseases in the wildlife sector with no systematic financial support from the government.
- There is no joint risk assessment process in place utilising the Tripartite tool.
- The tender process is not flexible in terms an emergency situation.
- There is no point at which environmental actors are involved in surveillance.

P5.2. Responding to zoonotic diseases: score 2

The country has a multisectoral national policy and a response guideline for zoonotic events that have been documented and approved. Multisectoral contingency plans following a One Health approach have been developed for the most important endemic and epidemic zoonotic diseases. To improve scoring, Kyrgyzstan must formalize a multisectoral operational mechanism for coordinated response to outbreaks of endemic, emerging or re-emerging zoonotic diseases by human health, animal health and environment sectors.

Strengths

- Formal guidelines and operational mechanisms are in place for joint outbreak investigations for zoonoses.
- An established ICT system is in operation at the SSES where each case of dangerous diseases is recorded.
- The country has outbreak response plans for some zoonoses (i.e. anthrax, brucellosis, rabies) that indicate the responsibilities of each agency.
- Simulation exercises are conducted twice per year across the country at both the national and intermediate levels for select zoonotic diseases.

Challenges

- For zoonotic events there is no joint strategy based on a One Health approach.
- There are no contingency plans for all relevant zoonotic diseases or new emerging diseases.

P5.3. Sanitary animal production practices: score 2

Some activities are in place to develop and promote good sanitary practices in animal breeding and production of animal products. All these activities allow the state to limit the risks of transmission of zoonotic diseases. To advance to the level three the national plan for good practices in animal breeding and production of animal products, including sanitary practices, should be established based on international standards (e.g. WOAH Terrestrial and Aquatic Codes, Codex Alimentarius) and implemented. National guidelines for good production practices need to be developed, published, disseminated and adjusted for implementation from local farm to the trade of animal product level what can help to increase the capability limiting the risk of transmission of zoonotic diseases.

Strengths

- The county has established an annual plan of measures aimed at preventing the spread of diseases, including certain zoonotic infections.
- The Veterinary Service has been assessed using the WOAH Performance of Veterinary Services (PVS) Pathway and intends to develop a national action plan based on the results.
- A public–private Partnership has been established in accordance with standards set by WOAH.
- The country has established veterinary services for services at the field level.

Challenges

- Biosafety and biosecurity measures for farms are not well developed in the country.
- The implementation of good practices and guidelines are not stringently enforced.
- Guidelines and animal farming policies for different species have not been developed.
- Identification and traceability systems are still being developed and do not cover all aspects of breeding and production.
- Due to a lack of finance and funding in the animal sectors, the identification of small ruminants is not yet covered.
- There is limited capacity to conduct regular testing of products; this is currently only carried out at the request of businesses when applying for export/import certification.
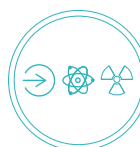
Recommendations for priority actions

- Develop and integrate a comprehensive One Health strategy supported by national legislation. Essential elements include multisectoral priority disease lists, standardized information sharing and risk-based surveillance protocols, cross-sectoral and cross-disciplinary professional development, improved national and international data sharing and reporting and subsequent development of regulations that strengthen zoonotic disease prevention and control.
- Improve the quality of laboratory systems and efficiency of data sharing and surveillance reporting within and across relevant sectors and agencies at national and international level, including participation to external quality assurance/proficiency testing to ensure generation of reliable data in all laboratories and evaluation to ensure regular reporting of suspected and/or confirmed human and animal cases of zoonotic diseases to international agencies following specific requirements
- Allocate additional funding to the national budget specifically for zoonotic activities, ensuring that the allocated funds are dedicated to effectively address and combat zoonotic infections.
- Carry out national and provincial simulation exercises and training, as well as post-implementation and in-process reviews;
- Strength a digital approach across all sectors by enabling the integration of ICT to facilitate seamless communication and collaboration;

P6. Food safety

Introduction

Food- and waterborne 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 risk assessment, suitable risk management options that ensure the prevention of human cases (or further cases) must 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

The responsibility for food safety in the Republic of Kyrgyzstan is shared among multiple ministries, departments and agencies. In principle, the Ministry of Agriculture holds responsibility for the prevention and control of food safety risks from primary production through processing and distribution. The Ministry of Health is responsible for controlling possible food safety risks from processing and distribution to the consumer. There are evident overlapping areas and gaps in the implementation of control measures, and roles and responsibilities are not clearly defined.

In 2017 a draft Law on Food Safety was developed and submitted to Parliament for approval. However, the draft was rejected, and so the country still lacks a national overarching legal framework for food safety.

As the Republic of Kyrgyzstan is a member of the EAEU, the country still follows the technical regulations established for Member States. A comprehensive list of notifiable infectious diseases, including foodborne pathogens, is in use. Additionally, a recently established online surveillance system for infectious diseases is now being managed by the DDP-SSES. This system enables efficient monitoring and tracking of infectious diseases for timely response and intervention. Cases are reported automatically by primary health-care facilities and hospitals in the country through the electronic system. Veterinary services manage a similar electronic system which covers infectious disease detection in animals, including foodborne pathogens. The two systems work independently, and there are no requirements or mechanisms for exchange of information between the two systems. Foodborne outbreak investigations are usually triggered by emergency calls by clinicians or health-care workers. The communication and involvement of the Veterinary Service Inspectorate in any outbreak investigation is only required at later stages.

Indicators and scores

P6.1. Surveillance of foodborne diseases and contamination: score 2

The Republic of Kyrgyzstan currently uses event-based surveillance and has a limited monitoring system to monitor and detect foodborne events as outbreaks and contamination. To achieve JEE level 3 for this indicator, the country should prioritize enhancing its surveillance and laboratory capacities to promptly detect foodborne events. This includes implementing indicator-based surveillance methods and strengthening laboratory capabilities for confirming the etiology of foodborne diseases, identifying the source of contamination and conducting investigations.

Strengths

- The Republic of Kyrgyzstan has established guidelines for outbreak investigation and response since 2019. These guidelines cover infectious diseases including foodborne pathogens, and emphasize the importance of multisectoral collaboration.
- Laboratory networks for the human and animal health sectors are established and have facilities at central, regional (oblast) and district (rayon) level.
- An online surveillance system for infectious diseases is in place and cases are reported automatically by primary health-care facilities and hospitals in the country through the electronic system.
- Veterinary Services have an electronic system which covers infectious disease detection in animals including foodborne pathogens.

Challenges

- There is no prioritized list of foodborne diseases and contamination.
- The implementation of guidelines for detection, information sharing and response in case of outbreaks and contamination events, including foodborne, is limited.
- Cross-departmental and interagency coordination between human, animal and environment is not systematic.
- Sustainable resources for ensuring the availability of high-quality reagents and consumables, as well as the provision of training for laboratory personnel, have not been adequately determined.
- Not all laboratories involved in testing have obtained accreditation.

P6.2. Response and management of food safety emergencies: score 1

The Republic of Kyrgyzstan currently has limited mechanisms in place to effectively respond to and manage food safety emergencies. Furthermore, there is a lack of prompt implementation of control measures following the investigation of foodborne outbreaks. To attain JEE level 2 and eventually level 3 for this indicator, the country must develop a national food safety emergency plan through a participatory approach involving all relevant ministries and stakeholders, establishing a functional multisectoral central coordination mechanism and arrangements for the implementation of responses in the event of any food safety emergency. In addition, it is essential for the Government to expedite the development and enforcement of national policies and regulations in the field of food production and safety in line with international standards.

Strengths

- Kyrgyzstan is a member of the International Food Safety Authorities Network (INFOSAN) and an HQMS (quality management system) Emergency Contact Point/Focal Point at the Department of Disease Prevention and State Sanitary and Epidemiological Surveillance (SSES) has been officially nominated.

- A Codex Alimentarius Contact Point has been designated and actively engages in the activities at international level.

Challenges

- There is no national food control programme in the Republic of Kyrgyzstan and testing of raw and processed food products for microbiological and chemical hazards is limited to food products from private enterprises upon request and for export.

- The implementation of a Hazard Analysis Critical Control Point (HACCP) into the food production value chain is limited.

Recommendations for priority actions

- Collaboratively develop and adopt a list of priority diseases and hazards of food origin, encompassing both chemical and microbiological risks. This should involve the participation of all relevant ministries and agencies to ensure comprehensive coverage and alignment in addressing food-related health threats.

- Provide reagents, consumables and training opportunities for laboratories and staff involved in the determination of the etiology of foodborne diseases and origin of contamination events and investigation of hazards in foods linked with cases, outbreaks or events, including field epidemiological training for outbreak investigations.

- Develop a national food safety emergency plan using a participatory approach that involves all relevant sectors and stakeholders and includes thresholds for response to a food safety emergency, clear definitions of roles and responsibilities (for each member of the multiagency central coordination group), procedures for communication/exchange of information among the participating agencies and evaluation and monitoring mechanisms.

- Develop and enforce national policies and regulations in the field of food production and safety in line with international standards, including the systematic testing of food products for domestic consumptions within a national food control programme which ensures the implementation of HACCP along the food value chain.
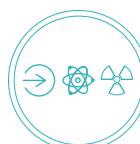
P7. Biosafety and biosecurity

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 using infectious agents is critical for the development and availability of public health and medical tools that are necessary in order to detect, diagnose, recognize and respond to outbreaks of infectious diseases of both natural and deliberate origin. The expansion of infrastructure and resources dedicated to work with infectious agents has raised concerns regarding the need to ensure proper biosafety to protect researchers and the community, alongside biosecurity 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

A good level of knowledge of the concept of biosafety and biosecurity and its relevance is recognized and well diffused among several facilities in the country. Some biosafety and biosecurity measures are in use, such as personal protective equipment (PPE), SOPs, regulations, ESCO-certified biosafety cabinets, laboratories and biorepository rooms equipped with restricted access and digital locks and CCTV monitoring systems, among others. Training modules have been developed and resources to sustain training programmes are available. Laboratory staff undergo regular training and retraining (at both national and international level) in most facilities handling high-consequence pathogens. However, there is a need to develop standardized training modules based on risk and need assessment on biosafety and biosecurity using international guidelines.

A multisectoral working group has started the process of drafting a new law on biosafety and biosecurity based on conducted risk assessment and international guidelines. Unfortunately, due to the recent COVID-19 pandemic and the high turnover of staff, the draft law was not finalized when intended. Establishing the working group permanently could be beneficial; not only for the completion of the law, but also for the implementation of additional activities using a One Health approach. Besides the draft of the new law, it is important to note that existing policies that regulate measures related to biosafety and biosecurity are already in place. Facilities licensed to store high-consequence pathogens keep a regularly updated record of the biological agents contained in their biorepository; however, this information is not shared with other institutes and currently there is no plan to reduce these facilities to a minimum number. Overall, the Kyrgyz Republic demonstrates a strong willingness and commitment to finalize the drafting process of a biosafety and biosecurity law which will be pivotal for the implementation of additional biosafety and biosecurity measures required to increase countries' capacity level.

Indicators and scores

P7.1. Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities): score 2

Some, but not all, elements of a comprehensive biosafety and biosecurity system are in place. The country has started the process of monitoring and sharing regularly updated records and inventory of what is housed within facilities that store or process dangerous pathogens and toxins. In addition, the country is developing, but has not finalized, a comprehensive national biosafety and biosecurity regulatory framework to regulate their possession and use.

Strengths
- In 2018–2019, 12 national biosafety trainers and 160 veterinary and medical specialists were trained under the European Union International Science and Technology Centre Project 53.
- There is an updated record and inventory of high-consequence biological agents within registered and recorded facilities in some, but not all, facilities.
- There is an appropriate waste management policy applied at national level.
- A national association on biosafety has been set up.
- The tools and resources (such as PCR testing) used in diagnostic support do not require the cultivation of dangerous pathogenic microorganisms.

Challenges
- There is no national legislation in place concerning biosafety and biosecurity.
- Communication and collaboration between agencies and sectors needs to be strengthened.
- Biosafety cabinets cannot be serviced locally.

P7.2. Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture): score 1

Kyrgyzstan has not yet conducted a training needs assessment to identify gaps in biosafety and biosecurity. Furthermore, comprehensive training programmes that align with the incumbent roles and responsibilities have not been fully implemented. Currently, the Kyrgyz Republic lacks sustained institutional academic training programmes on these assessed risks, particularly concerning training people who handle or work with high-consequence agents.

Strengths
- Training on biosafety and biosecurity was provided to laboratory staff at all facilities
- The country has an operational Biosafety Centre providing academic training.
- Staff in state laboratories have undergone training on the transportation of infectious materials in accordance with United Nations standards.

Challenges
- Training is provided only to laboratory staff and is not provided in a systematic manner or based on a needs assessment.
- Training modules need to be standardized, delivered academically and improved based on a needs assessment.
- There is no mechanism in place to ensure and monitor staff competence and training standards.
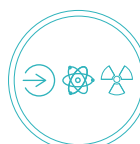
Recommendations for priority actions

- Develop agreed terms of reference, establish a permanent multisectoral working group on biosafety and biosecurity using a One Health approach, promoting cross-agency coordination and collaboration.
- Finalize the national draft law on biosafety and biosecurity ready for deploying and enforcement at national level.
- Develop standardized training modules based on risk and needs assessments on biosafety and biosecurity using international guidelines and ensure that training is provided in a systematic manner to staff handling high-consequence agents.
- Develop a system for sharing information on high-consequence biological agents that are stored in the country and limit the number of such facilities.

P8. Immunization

Introduction

Vaccines are estimated to prevent more than 3 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 highlighted in review, because it is widely recognized as a proxy indicator for overall immunization levels against VPDs. Countries will also identify and target immunization to populations at risk of other epidemic-prone VPDs 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

The Kyrgyzstan national immunization programme for 2020–2024 covers 13 vaccine-preventable infections.[2] Immunization is voluntary, free of charge and aligned with the WHO Global Vaccine Action Plan. Vaccine coverage is tracked at national level by the Republican Center for Immunoprophylaxis (RCI) through monthly aggregated data sent from regional SSES centres. Kyrgyzstan has officially reported measles immunization coverage of more than 90% for almost 20 years. This denominator represents the official target population, which is based on a biannual medical census that excludes unregistered people living in Kyrgyzstan.

In 2014 to 2015 there was a large outbreak of measles, presumably attributable to lower overall vaccination coverage. Recognizing an increasing number of refusals due to doubts about safety or for religious reasons, the RCI reached out to religious leaders, resulting in a fatwa in 2018 explaining that immunization is permissible. The number of refusals for religious reasons decreased, but the total number of refusals remained high, which may explain the subsequent measles surges in 2018–2019 and 2023. Additionally, the proportion of migrant and transient residents who are not registered with government health services is unknown, although there are known to be multiple informal and growing community settlements in or around urban areas. A survey in 2018 indicated lower coverage among unregistered internal migrants in the Bishkek and Osh regions.

Kyrgyzstan has developed a new electronic reporting system called i-Emdoo, which is being implemented in phases. This system includes a module for individualized immunization data, as well as a module to monitor vaccine stocks and storage temperatures. By incorporating these features, i-Emdoo will enhance the quality of data on immunization coverage and ensure better monitoring of vaccine supplies. This will contribute in turn to improved decision-making and planning for immunization programmes in Kyrgyzstan.

Kyrgyzstan created a national plan for mass vaccination response defining a vaccination strategy for COVID-19 for 2021–2022, which resulted in capacity development that the Ministry of Health expects to sustain for future responses. As part of the deployment plan, community outreach, mobile teams and mobile clinics were used. The country created a unique electronic immunization registry with information on each vaccinated individual to monitor progress in the vaccine roll-out.

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2   Tuberculosis, hepatitis B, diphtheria, pertussis, tetanus, haemophilus influenza B, Pneumococcus pneumoniae, rotavirus, poliovirus, measles, mumps, rubella, papillomavirus.

Indicators and scores

P8.1. Vaccine coverage (measles) as part of national programme: score 4

Ninety per cent of the country's 12-month-old population have received at least one dose of measles-containing-vaccine, and the trajectory of progress, plans and capacities is on course to achieve 95% coverage by 2030. More than 90% of all intermediate (districts/provinces or states) units are covered.

Strengths

- High vaccination coverage in all districts of the country.
- Monitoring activities take place from local to national level. Routine analysis and monitoring of coverage at national level.
- Public health care institutions have a good networking system and there is strong institutional commitment and consistent institutional communication and cooperation.
- Vaccines are free of charge and available for all the population, including hard-to-reach communities.
- Various catch-up campaigns have been carried out. In 2021 an inactivated polio vaccine campaign was carried out across the entire country covering the missed cohorts of children born in 2016, 2017 and 2018.
- In 2022 according to the updated country immunization schedule, 11–14-year-old girls were vaccinated against the human papillomavirus. A hepatitis B vaccination campaign was launched among adults in Chui Province, in Bishkek and in Osh. On 16 January 2023 the vaccination process expanded to cover all parts of the country.

Challenges

- To enhance the reliability of coverage data, it is recommended to register individual immunization data using personal identity numbers and obtain the denominator from the population register.
- There is currently a low level of public awareness regarding vaccines, their benefits and safety.
- There is a shortage of personnel within the health system.
- The mechanisms and capacity within health-care organizations (HCOs) and health workers to track and identify children with missed vaccine opportunities are inadequate.
- At primary health care level, there is a lack of effective recording and registration systems for vaccination, particularly among migrant populations.
- Parts of the population face challenges in accessing health-care services due to geographical or social inaccessibility.

P8.2. National vaccine access and delivery: score 5

Vaccine delivery (maintaining a cold chain) is available in over 80% of districts within the country, or is available to more than 80% of the national target population. Systems to reach marginalized populations using culturally appropriate practices are in place. Vaccine delivery has been tested through a nationwide vaccine campaign or functional exercise. Functional procurement and vaccine forecasting results in no stock-outs.

Strengths

- An effective centralized approach is in place and includes a well-organized national vaccine storage system, central procurement and a very well-structured approach to vaccine access and delivery.
- The country has an annual vaccine procurement programme following United Nations Children's Fund (UNICEF) guidelines.

- Kyrgyzstan has developed and disseminated a national cold chain guide for all vaccination centres within the country.
- Mobile immunization teams support the equal distribution and administration of vaccines, with special attention paid to hard-to-reach communities.

Challenges
- Long-term sustainability of the system is uncertain due to the lack of professionals in district areas.
- There is a dependency on co-financing mechanisms for new vaccines, supplied by Gavi and the Government.

### P8.3. Mass vaccination for epidemics of VPDs: score 5

National plan and relevant SOPs for mass vaccination response have been applied against at least one epidemic of VPDs in the country. National guidelines for regulatory approval and acquisition of new and experimental vaccines have been utilized in a real event or SimEx, and plans and SOPs are assessed, tested and updated regularly.

Strengths
- A national plan for mass vaccination for epidemics of VPDs was implemented for COVID-19 in 2021.
- Related SOPs have since been produced and disseminated.
- Tailored immunization programme activities, supported by WHO, were carried out during the COVID-19 mass vaccination campaign to reach and serve hard-to-reach populations.
- Sentiment analysis related to the immunization campaign has been conducted.

Challenges
- Raising public awareness regarding vaccination, its benefits and safety.
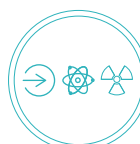
Recommendations for priority actions

- Ensure sustainable financial support for immunization programmes and extend the normative framework and procedures established for the COVID-19 mass vaccination campaign to other mass vaccinations in response to potential epidemics of other VPDs.
- Expedite the complete implementation of the online register for immunization per individual (i-Emdoo) to enhance the quality of coverage data, vaccine stock monitoring and storage management.
- Offer comprehensive training to the staff responsible for administering vaccines. This training should focus on educating them about the benefits of vaccines and equipping them with effective communication skills to address any concerns or doubts raised by parents. Emphasis should be placed on highlighting the minimal risk of serious side-effects associated with vaccines, ensuring that both the child and society at large can reap the benefits of immunization.
- Develop a comprehensive communication strategy that highlights the advantages and safety of immunization while also addressing concerns which have led to immunization refusal. Target these strategies towards both parents and community/religious leaders.

Detect

D1. National laboratory system

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.
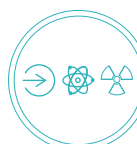
Target

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 laboratory network consists of 185 public health laboratories, 143 clinical diagnostic laboratories, 25 veterinary laboratories and 61 private laboratories falling under several departments of different ministries. Within the Ministry of Health, 14 laboratories are accredited by ISO/IEC 17025, one laboratory by ISO 17020–1, one laboratory by ISO 17043–1 and two laboratories by ISO 15189. Within the Ministry of Agriculture, two laboratories are accredited by ISO/IEC 17025. Twenty-four Ministry of Health laboratories participated in the WHO mentoring programme for QMS (10 Ministry of Health public health laboratories, eight COVID-19 diagnostic laboratories, four AMR laboratories, two SSES laboratories) and three of these are currently under the process for ISO 15189 accreditation. The Medical Accreditation Commission (MAC) under the Ministry of Health conducts periodic inspections of laboratories every 3 years. Among MAC-accredited laboratories, four are National Reference Laboratories:

- the reference laboratory for AMR at SSES
- the tuberculosis (TB) reference laboratory
- the national reference laboratory for communicable diseases
- the viral hepatitis and HIV reference laboratory.

The reference laboratory for AMR takes part in external quality assessments according to the international proficiency testing programme CAESAR on identification of opportunistic microorganisms and determining their resistance to antimicrobials.

In general, laboratories participate in international external quality assessment (EQA) through WHO for influenza, measles, rubella, COVID-19, HIV and TB. There is a national EQA system organized by the Republican Scientific Practical of Quality Control of Lab Tests, which is a national body that oversees internal quality control and EQA programmes for PCR diagnostics of COVID-19, ELISA diagnostics of blood-borne diseases, ELISA diagnostics of urogenital infections, serodiagnosis of brucellosis and viral tick-borne encephalitis.

Laboratory diagnostics are performed under vertical programmes: HIV/AIDS and blood-borne infections, measles/rubella, influenza, COVID-19 , high-risk infections, tuberculosis and AMR. A platform called "I-Lab" was created and implemented for sharing information and results from laboratory service. SOPs have been developed and a National Sequencing Strategy in the Kyrgyz Republic is being developed.

Indicators and scores

D1.1. Specimen referral and transport system: score 2

Referral and transport of specimens is organized for some priority diseases but may be restricted within districts or at the intermediate and national level.

Strengths
- A system for sample transportation from the regional to national level has been established.
- Established tracking systems accurately record the dates of sample shipment/referral and receipt, enabling efficient monitoring and ensuring timely delivery to the designated laboratory or testing facility.
- National standardized SOPs are in place for specimen collection, packaging and transport.

Challenges
- Sample transport is not financially supported by the Ministry of Health, except for the TB Service.
- Funding for sample transportation to the National Public Health Reference Laboratories is financially supported only by international partners and donors.
- There are no expedited procedures, administrative or delivery options for sample transfer of high priority samples outside the country.

D1.2. Laboratory quality system: score 3

National quality standards have been developed and implemented at national level. Activities include licensing of laboratories in conformity with national quality standards.

Strengths
- There are designated national bodies for laboratory accreditation (e.g. using ISO 15189), for licensing, inspection and for overseeing internal quality controls and EQA schemes for public health laboratories at all levels.
- There is a designated national regulatory authority responsible for the qualification and registration of in vitro diagnostic devices.
- Accredited laboratories have quality assurance, quality control and quality management system in place.
- QMS guidelines and protocols are applied.

Challenges
- There is no National body in charge of laboratory certification (e.g. using ISO 9001).
- The national EQA programme (proficiency-testing or rechecking) is not applied in all areas.

D1.3. Laboratory testing capacity modalities: score 3

Laboratory systems can perform nucleic acid amplification testing, bacterial culture with antimicrobial sensitivity testing with quality assurance process in place and have access to (or have) sequencing capacity.

Strengths
- The reference laboratory for AMR takes part in external quality assessments according to the international proficiency testing programme CAESAR on identification of opportunistic microorganisms and determining their resistance to antimicrobials.

- Laboratories participate in the international EQA through WHO (influenza, measles, rubella, COVID-19, HIV, TB).
- There is a national EQA system that oversees internal quality control and EQA programmes for PCR diagnostics of COVID-19, ELISA diagnostics of blood-borne diseases, ELISA diagnostics of urogenital infections, serodiagnosis of brucellosis and viral tick-borne encephalitis.
- Sequencing capacity is in place and training on bioinformatics is performed.
- SOPs for sequencing have been implemented and a National Sequencing Strategy is currently under development, aiming to provide a comprehensive framework for sequencing initiatives in the Kyrgyz Republic.

Challenges
- Further development of sequencing capacity is required, extending beyond the analysis of SARS-CoV-2.
- Training on bioinformatics and sequencing analysis is lacking and essential to enhance capacity.

D1.4. Effective national diagnostic network: score 3

Tier-specific diagnostic testing strategies at national level; intermediate and primary public health levels facility laboratories, exist but not fully implemented.

Strengths
- Laboratory diagnostic testing for priority diseases such as HBV, HCV, HIV and measles/rubella have been aligned with international standards.
- Ten new PCR diagnostic laboratories were provided with the support of the Islamic Development Bank.
- Priority diseases such as HBV, HCV, HIV, ILI, severe acute respiratory illness (SARI), COVID-19, measles/rubella and TB are tested effectively within the lab network.
- Rapid testing for priority diseases such as HBV and HCV as well as HIV has been introduced.
- Referred samples are subjected to both molecular and serological testing methods, such as ELISA and PCR, to confirm or reconfirm the diagnosis of diseases including measles/rubella, influenza, COVID-19 and TB.

Challenges
- Laboratories lack essential material and state-of-the-art technical equipment
- Maintenance is not provided for safety cabinets, PCR machines or sequencers.
- The current procurement system is not adapted to ordering in small quantities and is primarily cost-oriented.
- There is weak coordination of activities among laboratories.
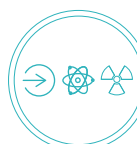
Recommendations for priority actions
- Develop a set of documentation (including SOPs, guidelines and action plan) and expand the I-Lab information platform to establish a sustainable multisectoral and cross-laboratory coordination and collaboration using a One Health approach at all levels.
- Train laboratory managers in internationally recognized leadership programmes (i.e. GLLP) and conduct activities to improve laboratory quality management system in accordance with current international standards ISO 17025 and ISO 15189.
- Allocate resources to develop and standardize the referral and transport system for most of priority diseases from the intermediate to international levels.
- Ensure resources are allocated to guarantee a sustained maintenance of laboratory equipment, including safety cabinets and PCR machines in all sectors.

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

- 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.

- 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

Kyrgyzstan has a routine IBS based on Ministry of Health Order No. 610 issued in 2008, implemented by the DDP-SSES. A respective local public health authority is present at each level (regional and local SSES centres).

Since 2022, the Ministry of Health has provided an online, integrated electronic disease surveillance platform (iEPID) for reporting suspected cases of infectious disease/infection that require notification. An emergency notification form (ENF) is completed by a health practitioner or upon hospital admission within 24 hours, which must be verified by the local SSES within seven days. The list of priority diseases contains infectious and parasitic diseases or pathogens as well as syndrome constellations, including SARI, flu-like illnesses, acute flaccid paralysis, acute watery diarrhoea with dehydration and jaundice with fever. The local SSES can request additional information from the reporting unit through the system and add updates when the case investigation has been completed. The system uses the unique national identification number or, if a unique identifier is not available, name and date of birth to prevent duplication.

Laboratories report results on COVID-19 and TB automatically through an online interface and on other pathogens manually through a portal of the iLAB system. This system is included as module in the IEPID, but not yet completely rolled out, and private laboratories and part of public laboratories do not use iLAB yet. Refined implementation has begun to include additional data on infectious disease cases (ICD-10 codes) from general practitioners and hospitals (diagnosis on admission and discharge), which are submitted to the public insurance fund for reimbursement. Data from the ENF, public health officials and laboratories are available in real time at the local and national levels. Data from hospitals have a delay of 5–7 days. The regional level has no access to the platform. The system cannot be used to report other public health events, such as when there is an unidentified syndrome, intoxication, chemical incident or radiation exposure.

iEPID automatically generates "signals" for possible events at national level. For a subset of pathogens, based on expert opinion and the literature, a threshold for a signal has been defined. An epidemiologist conducts a risk assessment and contacts the district-level SSES if needed. The SSES conducts the investigation and submits the information via the platform. There are SOPs for outbreak investigation, including foodborne diseases and a list of diseases that should trigger an investigation, although staff members at hospitals or food safety authorities may conduct investigations separate from SSES. If an event involves cases of several districts or regions, coordination of the investigation is escalated to the next administrative level. The collaboration between the veterinary, food safety and human sectors functions well at local level but coordination at national level could be improved.

A monthly bulletin including surveillance data with an epidemiological context is published on the website of the DDP-SSES, which is accessible to the public. The data on COVID-19 and influenza are reported to the European Surveillance System (TESSy). Data are also analysed to detect long-term health trends and developments and monitor vulnerable groups. The capacities for advanced analysis are supported by Field Epidemiology and Laboratory Training Program (FELTP) graduates. Additionally, information about potential events is gathered through social media screening by designated staff members in SSES. If a potential event is identified the local level SSES is contacted by the team and a verification process is triggered.

Data exchange between the human and veterinary sectors takes place on an ad hoc basis or upon request. Public health topics such as AMR, vaccine coverage and data from the food, environmental or veterinary services is not covered by the iEPID system. The iEPID platform is not accessible to other institutions outside of SSES, and no mechanism is in place for a joint review of data from different sectors. A sentinel surveillance system for SARI is present in three sites (in different regions), but separate from iEPID.
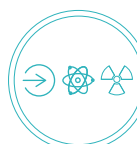
Indicators and scores

D2.1. Early warning surveillance function: score 4

Kyrgyzstan has a national strategy and guidelines and SOPs for surveillance are in place at the national and intermediate levels. An electronical reporting system has been implemented and enables immediate reporting of data. An IBS and EBS are in place but can be expanded in their functions. The system captures cases and events of infectious diseases in human but is not yet interoperable with other sectors.

Strengths
- An electronical reporting system is in place and enables reporting from relevant stakeholders. Data are available in real-time at different administrative levels.
- IBS is guided by law, including a priority disease list for infectious and parasitic diseases.
- Within in the IBS, information on syndromes (severe acute respiratory syndrome, flu-like illness, acute flaccid paralysis, acute watery diarrhoea with dehydration and jaundice with fever) is collected.
- Each disease, pathogen and symptom (constellation) has a separate reporting form and can be reported in an online portal by a medical doctor or hospital.
- A threshold for signals (number of cases in certain time frame, geographical distribution, etc.) for a selected subset of the priority disease list is defined and is automatically flagged at national level.
- A sentinel surveillance system for SARI in three regions is in place.
- Social media screening is performed and a verification process is in place.

Challenges

- The electronical reporting system has been introduced in 2022 and for some component has not been fully implemented or rolled out.
- No electronical/paper form for reporting of unusual event is available.
- The implementation of the automatic inclusion of secondary data (insurance data from general practitioners and hospitals) is still ongoing.
- Laboratory confirmation for cases is not systematically performed and based on clinical confirmation.
- Private laboratories and part of the public laboratories have no access to the electronic reporting system (iLAB).
- Data intoxication, chemical or radiological poisoning in humans is not captured.

D2.2. Event verification and investigation: score 3

Mechanism with respective methods and processes for verification and investigation on all administrative level are in place. The collaboration on activities concerning several areas such human health and veterinary lack coordination and joint approach.

Strengths

- Collaboration and data exchange on local level during outbreak investigation involves all relevant sectors.
- A coordination mechanism and clear mandates for larger outbreaks is in place.
- SOPs for RRTs have been developed at national level.

Challenges

- Collaboration and data exchange; for example, to detect outbreaks, is not formalized and lacks any formal coordination mechanism.
- There are no guidelines or mechanisms for risk assessment at the national or intermediate levels.
- The deployed teams to support outbreak investigations consist of mainly of epidemiologist. No coordination and deployment with other relevant sectors are conducted.

D2.3. Analysis and information sharing: score 4

The Kyrgyz DDP-SSES receives and analyses data on a regular basis, and publishes a monthly bulletin on its website. Capacity for advanced data analysis is available but limited. Data with other sectors is shared ad hoc upon request, particularly with the veterinary sector and within investigation of events. Data on certain diseases are shared on a regular basis with international organizations.

Strengths

- Data analysis is conducted on regular basis and is published on the web page accessible to the public.
- Advanced analysis of data such as time series or modelling and forecasting is conducted only on the national level, but the capacities are limited.
- Epidemiologists from the DDP-SSES participate in the central Asia Field Epidemiology Training Program (FETP CAR) and advanced data analysis capacities are strengthened within the programme.
- Selected data are reported to international bodies.

Challenges

- Data sharing channels are not formally established and there is no platform to facilitate data sharing.
- Existing databases across sectors are not integrated and no mechanism for joint data analysis and assessment across sectors is in place.
- Data analysis capacities are limited and are distributed across different institutions within the DDP-SSES.
- Lack of information communication technology and specialists at local level.
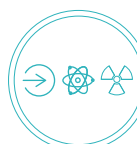
Recommendations for priority actions

- Revise and implement legislative acts and norms concerning surveillance of infectious diseases within the scope of One Health.
- Finalize the implementation of the existing electronic surveillance platform to all levels and areas as planned, integrating IBS and EBS. Assess availability and interoperability for additional systems such as veterinary surveillance system and data sources.
- Develop and implement cross-sectoral training and communication activities on surveillance and analysis of data on infectious diseases between ministries and agencies.
- Assess the availability of ICT, human resources and capacities at all levels and allocate resources to update equipment and retain personnel and capacities at all levels.

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, ICT specialists and biomedical technicians and a corresponding workforce in the animal sector: veterinarians, animal health professionals, para-veterinarians, epidemiologists, ICT specialists, etc.

The recommended density of doctors, nurses and midwives per 1000 population 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 population 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 Kyrgyz health sector has a strategy to develop its health workforce for public health protection and for health system development. A roadmap to improve the human resources (HR) planning system in the Kyrgyz Republic sets the strengthening of the public health workforce as a priority. This strategy and roadmap do not include all relevant sectors or multidisciplinary public health professionals, particularly animal and environmental health professionals, information technology specialists and communication specialists.

There are six universities in Kyrgyzstan offering medical education and turning out approximately 900 specialists in medicine and 10–15 public health specialists annually. Additionally, there are 18 colleges providing medical secondary education. Appropriate human resources are available in most relevant sectors at national level but not in all sectors, nor in all intermediate and local levels. There are shortages and high turnover among clinicians, public health specialists, laboratory specialists and veterinarians.

The country has adopted several innovative approaches to increase geographical diversity and retention of health professions, but attrition remains an ongoing and growing concern with inequitable distribution of human resources for health in the public sector and in non-urban areas. A national multisectoral workforce surge strategic plan in emergencies is not available and there has not been a gap analysis conducted of required surge of multidisciplinary workforce and capacities.

Regular and routine competency-based training programmes are available for some specialists. In the Ministry of Health, public health specialists are certified once every 5 years and must have 250 credit hours in that time. There are limited training opportunities that include a One Health approach in pre-service and in-service training. The country participates in two tiers of the basic FETP. There have been three cohorts of the national Frontline FETP since 2021 with 44 residents and have participated in the regional advanced FETP based since 2003 with 47 graduates.

Indicators and scores

D3.1. Multisectoral workforce strategy: score 2

Kyrgyzstan has carried out an assessment of health workforce implications and requirements for implementation of health policies, strategies, plans and programmes to ensure sustained support and investment and optimal utilization of workers across the public and private sectors. The country also has a strategy to develop its health workforce, but this strategy does not include all relevant sectors and cadres of public health professionals (e.g. risk communications specialists, social scientists, ICT specialists, legal/policy experts, veterinarians/livestock specialists and community health workers). To increase their score in this area, the Government of Kyrgyzstan would need to at the minimum have this strategy in place and conduct routine monitoring and ensure that it is implemented consistently.

Strengths
- The country has conducted a workforce assessment for the health sector and there exists a health sector workforce strategy that includes provisions to address continuing professional education and attrition.
- Multisectoral human resources were effectively utilized during the COVID-19 pandemic.

Challenges
- There are separate workforce strategies for human and animal health; these have not been harmonized into one inclusive multisectoral workforce strategy.
- The health sector workforce strategy is limited to mostly clinicians and does not include specialists in animal health, environmental health, information technology, legal/policy and communication.

D3.2. Human resources for implementation of IHR: score 3

Appropriate human resources are available in the relevant sectors in Kyrgyzstan at national and intermediate levels to effectively detect, assess, notify, report and respond to events according to IHR provisions. However, in order to achieve a higher score, Kyrgyzstan should strive to ensure the availability of human resources at all levels, including the primary public health level.

Strengths
- There are several universities and academic institutions that provide education in medicine, public health, epidemiology and veterinary science. This ensures a sufficient supply of qualified human resources for the health-care sector.
- Innovative strategies have been implemented to attract, retain and maintain the existing workforce within the country, particularly in the geographical areas of the country that are most in need.
- The human health sector has a centrally managed database that is regularly updated and able to track continuing professional education and competencies within the health-care sector.

Challenges
- There is an imbalance in the availability of human resources in and across relevant sectors to ensure adequate human resources and in place to detect and respond to events of public health importance.
- Despite innovative approaches, attrition and staff turnover remain an ongoing and growing concern with uneven distribution of human resources for health in the public sector and non-urban areas.
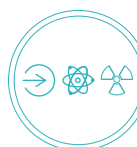
D3.3. Workforce training: score 3

The country has some regular and routine competency-based training programmes and standards which include to some extent a One Health approach for some professions, cadres or sectors at national level. In addition, Kyrgyzstan participates in basic and advanced levels of the FETP. To achieve a score of 4, it is necessary to expand competency training across all relevant disciplines, extending it to at least intermediate levels of the system.

Strengths
- In-service training for both human and animal health sectors are in place, although mostly separate.
- Kyrgyzstan participates in a regional advanced FETP and has established a Frontline FETP. There are 1.4 epidemiologists per 200 000 population.

Challenges
- There is no intermediate tier for FETP and minimal country ownership of FETP to ensure sustainability.
- A One Health competency-based approach has not formally been included into existing training and there is no joint routine training involving veterinary, environmental and human health specialists.

D3.4. Workforce surge during a public health event: score 1

A national multisectoral workforce surge strategic plan in emergencies is not available or is under development. To increase this score, Kyrgyzstan would need to conduct a gap analysis of required surge health workforce for emergencies and develop a national multisectoral workforce surge strategic plan in emergencies.

Strengths
- Workforce surge strategic plans for the COVID-19 response were developed and successfully enacted; these can serve as the foundation for developing a broader national multisectoral workforce surge strategic plan.

Challenges
- A national multisectoral workforce surge strategic plan in emergencies is not available.
- No gap analysis has been conducted to assess the required surge of multidisciplinary workforce and capacities.

Recommendations for priority actions
- Incorporate a One Health approach to existing pre-service and in-service training, including FETP.
- Increase joint routine training involving veterinary, environmental and human health sectors to promote continuing professional education for a multisectoral workforce.
- Harmonize existing workforce strategies into one inclusive multisectoral strategy and develop a national multisectoral workforce surge strategic plan in emergencies across sectors including human health, animal health, environment and security.
- Conduct a multisectoral gap analysis and competencies mapping of the health workforce including relevant sectors and professions, including clinicians, informaticians, laboratorians, animal and environmental health specialists.

Respond
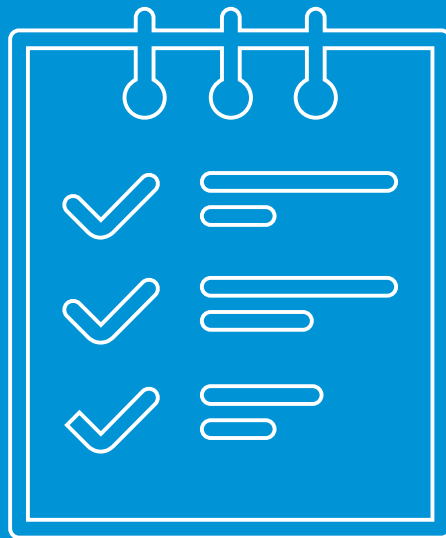
R1. Health emergency management

Introduction

This capacity focuses on the management of health emergency and systems to enable countries to be prepared and operationally ready for response to any public health event, including emergencies, as per the all-hazard requirement of the IHR (2005). 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

- Existence of national strategic multi hazard emergency assessments (risk profiles) and resource mapping.

- Existence of emergency readiness assessment

- Development of national health emergency operations centre (EOC81) plans and procedures.

- Establishment of an emergency response coordination mechanism or incident management system.

- 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.

- Existence of an emergency logistic and supply chain management system/mechanism.

- Existence of policies and procedures for research, development and innovation for emergency preparedness and response.

Level of capabilities

A wide body of legislation (laws, decrees and regulations) addressing the mandate for coordination of emergency situations, including biological hazards, is in place in Kyrgyzstan. The MES is the main governmental body with the mandate for coordination of emergency situations. The main strategic decision-making body at national level is an emergency committee including all relevant ministries under the leadership of the deputy prime minister. The Ministry of Health is included in the committee and regularly advises on health-related topics as well as implementing and coordinating health-related measures in case of an emergency event. Emergency funds are available across different sectors and levels and can be released if needed, but are limited.

Additionally, the Disaster Response Coordination Unit (DRCU) consists of governmental and nongovernmental stakeholders, which includes other United Nations agencies, nongovernmental organizations and the International Federation of the Red Cross and Red Crescent Societies among others, and is co-chaired by the Minister or Deputy Minister of MES. This committee meets on a regular basis, coordinated by MES and the United Nations Convention on the Rights of the Child and during

emergencies. Kyrgyzstan provides data on health emergency capacities each year to WHO within the SPAR; for health emergency management, the country scored its capacity at 33% in 2022.

An assessment of capacities for prevention, response and control was conducted during the JEE in 2016, but the subsequent implementation plan was not approved. There are multiple response plans at various levels and within separate institutions, although coordination of preparedness planning among the different institutions within the public health sector is lacking. An all-hazards emergency risk assessment using the STAR tool was conducted in 2018 and 2022. This strategic assessment was carried out by the Ministry of Health in coordination with other ministries. Additionally, the MES conducts internal risk assessments. Regional strategic risk assessment across all regions were conducted in 2019. In 2022 three southern regions of the country (Osh, Jalal-Abad and Batken) updated the strategic risk assessment. The risk assessment for the health sector does not feed into the national risk assessment activities. No risk assessment is conducted at local level. Several joint simulation exercises were conducted within the last 2 years, such as a table-top exercise at Manas International Airport in 2022 and at Issyk-Kul International Airport and at the Dostuk checkpoint in Osh in 2023.

The national PHEOC was approved by decree and established within the DDP-SSES in 2022. It is equipped with necessary hardware and occupies a designated space with a conference room and several desks. A contingency plan for DDP-SSES infrastructure is in place for the same building. Staff assigned to the PHEOC have additional (routine) duties through the DDP-SSES. PHEOC SOPs have been developed but are pending approval, and there is no handbook for formal communication with the national EOC. Additionally, the physical infrastructure for a regional PHEOC in the Osh region was established, but not fully staffed.

An incident management system has been included in the SOPs but has not yet been implemented yet. Coordination and communication structures for emergency response similar to an incident management system (IMS) have been used to some extent during emergency response in the past 2 years. The national information system for management of resources (NISUR) to track capacities and stock in health-care facilities was introduced in 2022; limited stockpiling and logistic capacities are in place on various levels. There is no national personnel surge plan in place that identifies procedures and decision-making related to sending and receiving health personnel during a public health emergency. In the past years research during emergency situations were conducted with support of donors on ad hoc bases.
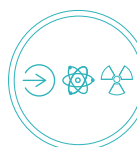
Indicators and scores

R1.1. Emergency risk and readiness assessment: score 3

Kyrgyzstan has conducted capacity and readiness assessment for potential public health, but the developed plan was not implemented and a national all hazards risk profile developed based on a multihazard risk assessment is conducted for different sectors lacking coordination.

Strengths
- A range of legislative acts and decrees defining responsibilities and roles within emergency preparedness and response are approved and in place.
- Disease-specific plans (e.g. the Pandemic Influenza Plan) were developed and used during COVID-19 pandemic.
- Different public health institutions have response and contingency plans according to their mandate in place.
- Strategic hazard health emergency risk assessment is conducted including relevant sectors and stakeholders on regular bases.
- Coordination between the different sectors during emergencies is ensured through inclusion in the national emergency committee under the PM and has been tested in emergency events.

- Simulation exercises (tabletop and functional exercises) have been conducted including relevant sectors on different levels and topics as routine activities in the past 2 years.

Challenges
- The national health hazard risk profile and results of the multisectoral health risk assessment is not included into or considered in the national all-hazards risk assessment.
- Activities on health hazard risk assessment at the national, regional and local levels are not performed on a regular basis.
- Information from the public health-care sector is not included in the monitoring and forecasting of relevant hazards at national level.
- Guidelines for a standardized approach for risk assessment at the national and subnational levels are lacking.
- Lack of human resources and high turnover of staff at all levels requires a mechanism for continuous capacity-building.
- Capacities and expertise on design, implementation and evaluation of simulation exercises is limited in the health sectors on all level.

R1.2. PHEOC: score 2

At national level a PHEOC was recently established occupying a designated permanent facility and SOPs covering basic managerial aspects are pending approval. Designated staff are identified and familiar with core IMS functions. Staff to fulfil core IMS functions have not been identified and trained yet.

Strengths
- Legal basis for the PHEOC has been approved and implemented.
- The PHEOC occupies a permanent space with necessary equipment and continuity plans are developed and implemented.
- SOPs for the PHEOC have been developed and are pending formal approval.
- Staff within the Ministry of Health have been identified and assigned to the PHEOC.
- During the development and implementation IMS functions were developed.

Challenges
- The role of the PHEOC within national emergency response structures is defined but not implemented and tested.
- Mechanisms for communication, coordination, notification and data sharing between national EOC at the MES and PHEOC need to be developed, implemented and tested on regular bases.
- A PHEOC handbook has not yet been developed.
- A lack of permanent staff presents a gap for the further development of the PHEOC.
- No strategy on recruitment and training of surge staff for the different PHEOC functions has been developed.
- A PHEOC exists at subnational level in one region (Osh region) but have not been fully operationalized.

R1.3 Management of health emergency response: score 2

An IMS has been considered and adapted to the Kyrgyz context in the development process of the PHEOC pending implementation and test through exercises.

Strengths

- The public health sector is represented in the strategic emergency committee at the national EOC to ensure timely communication and coordination between sectors and ministries.
- Emergency response plan at the DDP-SSES and other adjacent relevant institutions is in place. For example, a comprehensive plan for emergency response to quarantine and highly dangerous diseases exists at the Republican Center of Quarantine and Extremely Dangerous Diseases within the Ministry of Health.
- Regular exercises and review of response activities (e.g. IAR and AAR) are conducted.
- Department of emergency medicine in national and subnational hospitals to ensure provision of emergency medical care at the national and subnational levels is in place.
- Oblast health care coordinator in each region as focal point for emergency response coordination with the national level.

Challenges

- The response plans are not updated and synchronized across the different institutions and sectors within the Ministry of Health at national level.
- No health hazard-specific multiagency response plans with SOPs exist.
- Resources and expertise for coordination of health emergency are limited on all administrative levels.
- Resources, capacities and training for on triage and emergency care protocols and provision are limited on hospital level.
- A mapping and activation mechanism of relevant subject matter experts is done ad hoc.

R1.4. Activation and coordination of health personnel in a public health emergency: score 1

Kyrgyzstan has currently no national personnel surge plan for emergency response in place. In emergency situation specialists are recruited and deployed on ad hoc bases.

Strengths

- A medical response team (brigade) mechanism at the national hospital of the Ministry of Health is in place.
- A mechanism to deploy national response teams to support local authorities in case of infectious disease outbreak or event investigation is in place.
- Deployment of medical staff in emergency situation has been exercised during the COVID-19 pandemic.
- A national focal point for coordination of health personnel deployments in emergencies at the department of disaster management at the national hospital is in place.
- Capacity-building activities on the concept of EMTs have been conducted.
- Within the NISUR system, human resources in the health-care sector on different levels are recorded. This tool has been introduced in 2022 and is maintained by the Ministry of Health.
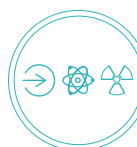
Challenges

- The preparedness planning does not yet include guidance for national or subnational surge personnel.
- The gaps identified within the mapping of human resources in the NISUR system are not yet addressed in a strategical way with adequate resources.
- No formal mechanism, legal regulation and SOPs for pre-deployment, deployment and post-deployment for medical teams exist.
- Sustainable and formalized training of medical personnel on deployment mechanism and practices for emergency response is not in place and training is conducted only during emergencies.
- The guiding principles on EMTs have not been adapted and no participation in international or regional activities (meeting, training) takes place.
- Kyrgyzstan does not participate in the WHO Global Outbreak Alert and Response Network (GOARN) and activities within this area are limited.

R1.5. Emergency logistic and supply chain management: score 2

Kyrgyzstan has a mechanism in place to ensure procurement, supply chain management and logistics during emergencies at national level due to limited human and financial resources in case of emergency the capacities are limited.

Strengths

- The NISUR system provides data on capacity indicators (e.g. staff, building, equipment, bed capacity) on each administrative level and is updated on a regular basis.
- The mandate to coordinate and supply medical countermeasures and provide necessary infrastructures is within the mandate of DDP-SSES under the Ministry of Health; hospitals are managed by the Department of Medicine Provision and Medical Devices.
- Limited stockpiling and provision is in place at all administrative levels.
- A legal basis and regulations for emergency procurement of medical countermeasures are in place and are operationalized by commission of key Ministry of Health agencies according to their mandate and expertise in case of emergencies.

Challenges

- No guidance and mechanism to use the NISUR system in emergency settings exists.
- The public health authorities at local level are not part of the NISUR system.
- Regional strategies and systems on coordination, distribution and supply management need to be updated.
- The procurement of medical countermeasures in emergency settings requires the involvement and coordination multiple agencies.
- There is no guidance and training of surge capacity for logistics functions in emergencies.
- There are limited financial resources to purchase and distribute medical countermeasures in case of emergency.
- Networks for joint procurement and logistics of medical counter measures within the region have not been established yet.

R1.6. Research, development and innovation: score 1

The country has demonstrated the capacity to conduct operational research for relevant public health topics in emergency setting on an ad hoc basis with the support of international partners.

Strengths

- Capacities for operational research at different institutions under the Ministry of Health are in place and can be mobilized during an emergency.
- Cadres for trained scientists exist across different disciplines and are available at national level.
- Research priorities are identified by the respective entity and submitted for approval to the Ministry of Health.
- Results of research during emergencies if available feed into strategical decision-making during emergency response and priority setting.

Challenges

- The is no overview of research institutions, capacities and cadres for research in the sphere of preparedness and emergency response.
- A framework and guiding principles for research in emergency setting has not yet been developed.
- Priorities for research to guide emergency response are decided ad hoc and are only possible in most cases with external (financial) support.
- There is no formal mechanism or platform to collect, document and disseminate research results.
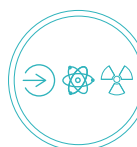
Recommendations for priority actions

- Develop, approve and implement multisectoral multihazard health emergency action plans addressing preparedness and response in accordance with the existing overarching national emergency management plans and procedures on all levels.
- Develop a PHEOC plan incorporating the existing SOPs, allocate permanent staff and implement and test SOPs although simulation exercises and provide sustainable funding.
- Review existing plans, develop and implement a national plan for surge staff including SOPs on pre-deployment, deployment and post-deployment for RRTs and EMTs, considering relevant specialties and expertise.
- Review and align existing protocols on rapid procurement, supply chain management and logistics; catalogue national and subnational resources and stockpiling; and allocate funding to close identified gaps as well as emergency response activities; review, adapt and test a system to distribute and to track medical countermeasures.
- Map existing capacities and professional networks to conduct research in areas relevant to emergency preparedness and response, develop and implement a plan to prioritize, conduct, disseminate and fund research activities in an emergency setting.

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 must 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

The government of Kyrgyzstan has a well-practised national response system that is coordinated by the MES. However, the involvement of the health sector in major incident response, and in particular, linking with security and law enforcement bodies, has historically not been strong. This has improved some during the response to the COVID-19 pandemic based on the need for support from the security and law enforcement sector by the health sector in COVID-19 response, with increasing realization by the security and law enforcement sector that public health input can be of value. There is considerable interest in joint communication and joint functions, with expression of the desire to continue to advance with the informal connections that have been developed between the sectors.

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 1

No specific legislation, relationships, protocols, memoranda or other agreements exist between public health, animal health, radiological safety, chemical safety and security authorities to address all hazards. Formalisation of activities that have taken place during the COVID-19 pandemic, including joint training, are needed to raise the capacity level.

Strengths

- Collaboration among the ministries and state security bodies can be ensured by Government Decree No. 404 On Collaboration among the State Bodies and the Executive Branch.
- The response to public health emergencies is promoted by governmental decrees on collaboration among the law enforcement bodies, border guard services, Interpol, Ministry of the Interior and the State Committee for National Security.
- Ministry of Health, Veterinary Services and the Ministry of Agriculture collaborate on technical aspects of public health cases in case of a threat to security.

Challenges

- Lack of joint training programmes on illegal biological, chemical and/or radio-nuclear events for professionals in public health, agriculture, veterinary services, environmental protection and security.

- The technology to detect, track and validate illegal actions that affect health is poorly developed and outdated in many ways.

- The irregularity of security-related information sharing among the Ministry of Health, Ministry of Agriculture, veterinary services and the MES.
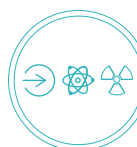
Recommendations for priority actions

- Establish SOPs to ensure coordination and a clear operating model, including who will be the lead agency for deliberate release events between public health, animal health and security professionals. This could be based on the positive experiences during the COVID-19 pandemic.
- Document authorized points of contact and the triggers for notification of events between public health, animal health professionals (and other relevant agencies).
- Establish a regular programme of simulation exercises to test SOPs and allow for greater collaboration and confidence between public health, animal health and security professionals.
- Provide training to health-care workers on security-related issues with respect to deliberate release biological, chemical and radio-nuclear events.
- Provide public health workers with the appropriate communication technology, equipment and means of protection to respond to such events.

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

- Evidence of demonstrated application of case management procedures for events caused by IHR-relevant hazards.

- Optimal utilization of health services, including during emergencies.

- Ensuring continuity of essential health services in emergencies.

Level of capabilities

Kyrgyzstan has demonstrated its proficiency in managing EHS during the COVID-19 pandemic under the leadership of the Ministry of Health in collaboration with Civil Protection. Explicit considerations have been implemented to ensure the continuity of EHS during emergencies both within the health sector and in national emergency preparedness and response plans. These plans were developed before the COVID-19 pandemic and medical workforce professionals receive regular and ongoing training as part of routine practices. These plans were tested during the COVID-19 response and the lessons learned from that experience are currently being utilized to strengthen the continuity of EHS during emergencies. Additionally, Kyrgyzstan is actively planning to consider the provision of mental health services in emergencies for all populations. the initial focus will be on medical providers and vulnerable populations.

There are multisectoral exercises held annually to test the functionality of plans and systems, but these are limited in scope and geography. There is a need to expand on this and include a broader range of relevant stakeholders, and to better use findings from these exercises to review and update national, intermediate and facility-level plans. For 2023 the Ministry of Health is planning to conduct a joint exercise with the medical service of Civil Protection.

A robust electronic health record system is in place to monitor health services utilization. This system is accessible for central level decision-making, there are plans to extend the platform to allow for the use of information more readily and for more interoperability by other levels. All this information is collected and analysed at the Ministry of Health e-health Centre.

Indicators and scores

R3.1. Case management: score 3

National clinical case management guidelines for priority health events are developed and being implemented at national level. Since 2022 46 clinical protocols related to case management were developed and disseminated across the country and are currently under implementation.

Strengths
- There are clinical protocols for national priority conditions, including all hazards according to the IHR (2005), available at national level. These clinical protocols and SOPs are regularly updated.
- There is a strong national system in place for referring patients from primary care to tertiary care.

Challenges
- Case management protocols are available across all levels of service delivery, but their use and functionality are not regularly monitored at intermediate and facility levels.
- No mapping has been conducted of available resources for case management for emergency response priority conditions at all levels (national, regional and local).
- Improvement of policies that consider cross-sectoral collaboration (MES, Ministry of Economy, Ministry of Interior, Ministry of Agriculture) along with the development of NLAs that consider gender, supply chain of medicines, medical devices, psychological support, volunteers' role, etc.

R3.2. Utilization of EHS: score 2

Kyrgyzstan has strong capacity to monitor the utilization of health services through the implementation of a robust electronic health record system. The system captures individual-level patient data from all public health-care facilities (across all primary health care levels) and the data are used to inform policy and decision-making. The level of service utilization (number of outpatient department visits) currently is $1.0 \geq X < 2.0$ visits per person per year, in both urban and rural areas.

Strengths
- A national electronic health information system is in place that monitors the utilization of health services at levels of public health-care facilities for the entire population. This data are routinely analysed by the e-health centre centrally in the Ministry of Health.
- During the COVID-19 pandemic, the mobilization and deployment of health workers from areas with low transmission levels have been effectively carried out.
- Involvement of volunteers to provide first aid and transportation to patients during the COVID-19 response.

Challenges
- Health service utilization is low at population level, with inequitable access geographically and for vulnerable and high-risk populations.
- There is a need for greater quality control of services provided and tracking of public trust in service utilization, particularly during emergencies.

R3.3. Continuity of EHS: score 3

A list of essential services during an emergency exists at national level. There are explicit considerations for continuity of EHS during emergencies that are dispersed across different plans.
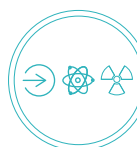
Strengths

- The national electronic health record system is able to monitor continuity of EHS routinely during emergencies.
- During the COVID-19 response, cross-disciplinary committees (both at the national and, regional levels) were established to facilitate continuity and coordination of EHS.

Challenges

- Limited mechanisms are in place for ensuring the continued monitoring of EHS routinely and during emergencies at intermediate and facility level.
- Plans and guidelines for continuity of EHS are lacking contingencies for vulnerable, marginalized and high-risk populations and considerations for intermediate and rural settings.
- Specific training to family doctors and nurses in counselling patients on issues of depression, violence, family planning,, etc. during emergency situations are needed

Recommendations for priority actions

- Consolidate, implement and disseminate the national clinical management guidelines for all (e.g. epidemic-prone diseases, trauma, chemical events, radiation emergencies, etc.) as a priority at the regional and local levels.
- Conduct a stakeholder analysis in order to develop and consolidate SOPs (i.e. procedures with a list of designated referral health-care facilities, referral procedures, field triage, safe transportation and case management guidelines to treat pathologies) for agencies involved in health service provision during health emergencies to enhance coordination in this area at all levels and within the Ministry of Health.
- Improve the governance capacities for emergency preparedness, by conducting a mapping and gap analysis of health-care facilities at all levels to guarantee delivery of essential health services during all priority health events.
- Strengthen the national service utilization monitoring system at all health facility levels based on the list of essential health services already defined in order to adequately support the consolidation of a plan for continuity of EHS during health emergencies, including considerations for hard-to-reach and vulnerable populations, as these groups are currently not accounted for in existing plans.

R4. Infection prevention and control
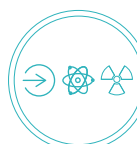
Introduction

To have strong, effective IPC programmes that enable safe health care and essential services delivery, alongside prevention and control of HCAIs, it is critical to initially ensure that at least the minimum requirements for IPC are in place, both at the national and facility levels, and to gradually progress to the full achievement of all requirements within the WHO IPC core components recommendations.

Target

- National IPC programme strategy has been developed and disseminated.

- Implementation of the national IPC programme plans, with monitoring and reporting of HCAIs.

- Established national standards and resources for safe health facilities.

Level of capabilities

The Government of Kyrgyzstan has made great strides in improving IPC across all segments of their health-care and essential public health services system over the last decade. Though scale-up of IPC capacities began before the COVID-19 pandemic, they expanded at an unprecedented rate during the response. While the country does lack a single, standalone national strategy for IPC, components of a strategy are found across several national documents and guidelines including the Program of the Kyrgyz Republic Government for Protection of public health and health system development for 2019–2030 "Healthy person – prosperous country", in the Program of the Kyrgyz Republic Cabinet of Ministers "to overcome HIV infection and blood-borne viral hepatitis for 2023–2027" and in over 30 regulations on IPC for over 43 infectious diseases. These documents have been disseminated to all facilities at all levels and an evaluation in 2022 found that 100% of those facilities had these IPC documents onsite. This combination of documents contains most, but not all, of the WHO minimum requirements for IPC. Notably, it does not contain multimodal strategies, such as monitoring and surveillance and promoting culture change through regular feedback.

National checklists (scorecards) for internal and external IPC monitoring and evaluation of IPC have also been developed and are currently in use at all facilities. These self-assessments are conducted on a quarterly basis in all facilities. The process at each is led by IPC specialists from the facility itself and local SSES stations. All health facilities at the primary, secondary and tertiary levels have at least one IPC medical officer or IPC nurse, but only an estimated one third of these are fully dedicated to IPC work.

With regards to safe environments, the country has made great strides to increase safe water, sanitation and hygiene (WASH) in health-care facilities, and 83% are connected to local water supply systems, from below 70% in a prior assessment. Although facilities have been linked to water supplies, there can be quality control issues with local water supply systems. Safe disposal of medical waste continues to be an ongoing concern across the country. Overcrowding and understaffing also occurs in facilities, particularly in remote regions, due to lack of updated infrastructure and high staff turnover.

Indicators and scores

R4.1. IPC programmes: score 2

Kyrgyzstan has an active national IPC programme that includes most of the WHO minimum requirements. There are also several national IPC guidelines/standards, although these are not fully implemented across all facilities in all sectors. To reach the next score, the Government of Kyrgyzstan would require a consolidated operationalized plan that meets all minimum requirements, including multimodal strategies such as monitoring and feedback. This programme would also need to be implemented in selected facilities at national level at a minimum.

Strengths
- All health facilities at the primary, secondary and tertiary levels have an IPC specialist and IPC nurse and an estimated two thirds of these are fully dedicated to IPC work.
- IPC self-evaluation tools are used by all public health-care facilities and IPC specialists conduct internal reviews biannually.

Challenges
- While an IPC programme exists, some critical pieces of the WHO minimum requirements are missing, specifically components related to multimodal strategies[3] and monitoring.
- IPC self-assessments are only carried out every 6 months. Routine monitoring is not conducted; neither is there a feedback loop system to ensure that results are being shared back and used to improve IPC standards.
- There is limited IPC training in pre-service health care education, limited dedicated budget for in-service IPC training and high turnover of trained staff.

R4.2. HCAI surveillance: score 2

The Government of Kyrgyzstan currently has a national strategic plan for HCAI surveillance, although not in a single comprehensive document. This strategy includes surveillance of pathogens that are antimicrobial resistant and/or prone to outbreaks, but the plan is not fully implemented. To increase the country's score, the Government needs to develop a comprehensive multisectoral national strategic plan for HCAI surveillance that includes antimicrobial-resistant pathogens impacting animal, environmental or human health. This plan should be available and implemented through a national programme, with systems for timely data collection and analysis. Lastly, secondary and tertiary health-care facilities should be conducting HCAI surveillance and providing timely and regular feedback to senior management and health workers to improve IPC practices.

Strengths
- There is a cadre of IPC specialists trained to conduct HCAI surveillance training to all health-care facilities.
- A national strategic plan for HCAI surveillance exists, although not as a standalone document

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3   A multimodal strategy comprises several components or elements (three or more, usually five) implemented in an integrated way with the aim of improving an outcome and changing behaviour. It includes tools, such as bundles and checklists, developed by multidisciplinary teams that consider local conditions. The five most common elements include: (i) system change (availability of the appropriate infrastructure and supplies to enable IPC good practices); (ii) education and training of health-care workers and key players (for example, managers); (iii) monitoring infrastructures, practices, processes, outcomes and providing data feedback; (iv) reminders in the workplace/communications; and (v) culture change within the establishment or the strengthening of a safety climate (For further information see: https://www.who.int/publications/m/item/who-multimodal-improvement-strategy, accessed 16 March 2022).

Challenges

- IPC-related activities and nosocomial infection surveillance do not receive specific public funding.
- Not all health-care facilities have laboratory capacities or contracts with external laboratories to carry out the necessary microbiological–etiological interpretation of some HCAI and AMR surveillance and control.
- Results from patient tests are not routinely shared with epidemiologists for surveillance and with IPC specialists for changing IPC practices (e.g. contact precautions, patient isolation or cohorting as appropriate).
- There are no formal channels for providing feedback based on HCAI surveillance data.

R4.3. Safe environment in health facilities: score 3

At national level in Kyrgyzstan, health-care facilities have implemented national standards and resources for a safe-built environment, such as WASH, screening, isolation areas and sterilization services in health-care facilities, including appropriate infrastructure, materials and equipment for IPC; as well as standards for reduction of overcrowding and optimization of staffing levels in health-care facilities, according to WHO minimum requirements. To reach the next score level, these standards would need to be available at the very minimum at all intermediate-level facilities.
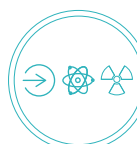
Strengths

- There has been a great deal of progress in ensuring safe WASH in health-care facilities, and 83% of facilities are connected to local water supply systems, from below 70% in a prior assessment.
- All facilities have sterilization services either at the facility or through collaboration, and all intermediate level or higher facilities have isolation rooms.

Challenges

- Not all facilities have safe water, and water from health-care organizations using decentralized water does not meet quality standards for hand hygiene.
- Medical waste for containment continues to be an area of concern for environmental health and containment of pathogens nationwide.
- Overcrowding and understaffing is a concern in several facilities due to lack of updated infrastructure and high staff turnover.

Recommendations for priority actions

- Consolidate existing documents to develop a new (updated) IPC plan that meets all minimum requirements outlined by WHO and follows a dedicated budget and timeline.
- Adopt WHO-recommended multimodal strategies as part of IPC interventions that include expanded IPC training (both in-service and pre-service), regular and timely monitoring and feedback and culture change
- Establish a multisectoral digitized surveillance system for HCAI that is implemented in all facilities with ability to detect AMR that includes an integrated system for data use to improve IPC practices.
- Scale-up existing efforts to ensure safe environments for all facilities, specifically efforts related to waste management, safe water and overcrowding and understaffing.

R5. Risk communication and community engagement

Introduction

Risk communication should be a multilevel and multifaceted process aimed at helping stakeholders to 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 considered, including the voice of the affected population.

Target

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

Level of capabilities

Kyrgyzstan has made notable advancements in certain aspects of RCCE, demonstrating the implementation of several RCCE best practices during the COVID-19 response. The country has established effective channels of communication, including mass media and social media platforms, which have facilitated rapid dissemination of information to the public. A risk communication strategy specific to COVID-19 has also been developed. However, there are areas that require improvement, such as the fragmented nature of RCCE interventions that primarily focus on message dissemination. RCCE functions and mechanisms were developed for the COVID-19 response and coordination activities were conducted, but there is limited implementation of such best practices and community listening activities informing RCCE strategy.

The country currently lacks a comprehensive multisectoral approach to RCCE, including coordination mechanisms, plans and SOPs. Moreover, the existing human resources and budgetary provisions for RCCE activities are inadequate and unsustainable. While Kyrgyzstan conducts media monitoring and social listening on an ad hoc basis to inform RCCE activities, there is a lack of infodemic management plans, mechanisms and of a system for prompt analysis of public perceptions, concerns and fears.

Although Kyrgyzstan has made significant progress in engaging communities for disease control and public health programmes, such as immunization and maternal and child health, there is room for improvement in strengthening intersectoral cooperation and collaborating with community leaders, faith-based organizations and civil society for effective emergency preparedness and response. Risk communicators are resourced to conduct media relations and maintain a basic online presence with multiple channels available to reach target audiences. However, evaluation and monitoring of RCCE efforts, as well as training and capacity-building for RCCE personnel, is limited.

Indicators and scores

R5.1. RCCE systems for emergencies: score 2

To enhance multihazard emergency preparedness and response, Kyrgyzstan would benefit from scaling up the successful RCCE practices implemented during the COVID-19 pandemic. There is a little infodemic management activity through social listening activities that track a few online or offline sources on an ad hoc basis

Strengths
- An RCCE strategy and function developed for the COVID-19 response reflects some of the best practices for effective response, including message testing, social listening and behavioural insights research.
- There are mechanisms in place to inform the public about risks and relevant protective measures rapidly and through multiple channels such as TV, radio, SMS notifications and mobile applications.

Challenges
- Lack of a multisectoral multihazard strategy and SOPs for RCCE.
- There is no multisectoral coordination mechanism for RCCE.
- Need for inclusion of infodemic management function into national preparedness and response plans and establishment of mechanisms and tools to address infodemic on a routine basis.
- Lack of clarity on roles and responsibilities of RCCE staff.
- Insufficient budgetary provisions and human resources for RCCE.
- Inadequate evaluation and monitoring of RCCE efforts during emergencies.
- Need for increased training and capacity-building for risk communication personnel in emergency situations.

R5.2. Risk communication: score 2

Mechanisms for public communication were developed for specific health hazards, such as COVID-19; however, multihazard plans, policies and procedures for emergency response and coordination, including RCCE and infodemic management are not in place. The country would benefit from implementation of best practices and community listening activities to inform the design of RCCE strategy.

Strengths
- Development of communication strategies for disease control programmes and strong COVID-19 response.
- There is a mechanism in place to analyse the target audiences based on demographics and sociocultural factors.
- Effective use of multiple communication channels to disseminate information to the public.

Challenges
- There are no capacities for addressing misinformation and rumours that can hinder effective risk communication.
- There is a lack of regular monitoring of people's perceptions, unfounded beliefs, health behaviours and health information needs.
- There is no mechanism for evaluating the reception and engagement of communication on a regular basis.
- There is a need to continue to improve targeting and outreach to minority and vulnerable communities on a routine basis, and to ensure accessibility of information for individuals with disabilities or limited digital access.
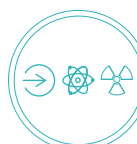
- Infodemic management is not recognized as an important element of effective RCCE strategy and there is no infodemic management mechanism in place, including for addressing the overwhelming amount of information including mis- and disinformation.
- There is no mechanism for coordination of risk communication strategies and messages across sectors.
- There is a need to strengthen spokespeople skills in risk communication.
- There is a need to enhance the process of early announcement of a real or potential risk.

R5.3. Community engagement: score 2

There are guidelines on community engagement with a focus on health literacy enhancement and disease control but can be used for emergency preparedness and response. Community engagement activities involve some community participation, including consulting and gathering their feedback on health information needs and community perceptions of risks.

Strengths

- There are guidelines on community engagement and bilateral memorandums of understanding with a number of community support organizations that enable community engagement activities.
- 1500 volunteers across the country are collecting community health information needs.
- There is systematic engagement of communities for disease control programmes that contributes to building trust and collaboration during emergency responses.

Challenges

- Existing guidelines are outdated and require a more specific inclusion of multihazard approaches.
- There are no multisectoral SOPs for community engagement for emergency preparedness and response.
- There is a lack of engagement of community leaders, faith-based organizations and civil society in decision-making processes during emergencies.
- Community engagement coordination mechanisms do not exist at the national, intermediate and community levels, and there are no coordination mechanisms to facilitate collaboration between stakeholders and communities.
- There is no systematic collection and analysis of community feedback, sociobehavioural or infodemic insights.
- Community feedback is limited to public health information and does not contribute to informing broader emergency preparedness and response activities.

Recommendations for priority actions

- Building on lessons learned during COVID-19, develop a national multihazard multisectoral RCCE-IM plan integrated into national preparedness and response strategies, including allocating appropriate human resources and funding for implementation
- Develop multisectoral SOPs for RCCE-IM.
- Develop and implement an RCCE capacity-development programme across sectors to strengthen skills on effective risk communication strategies, social listening, message development and testing, community engagement and infodemic management.
- Establish mechanism for collecting insights on people's perceptions, knowledge and behaviour and strengthen the system of regular social listening and community feedback.
- Establish a mechanism for regular monitoring, learning and evaluation of RCCE activities.

IHR-related hazards, PoEs and border health
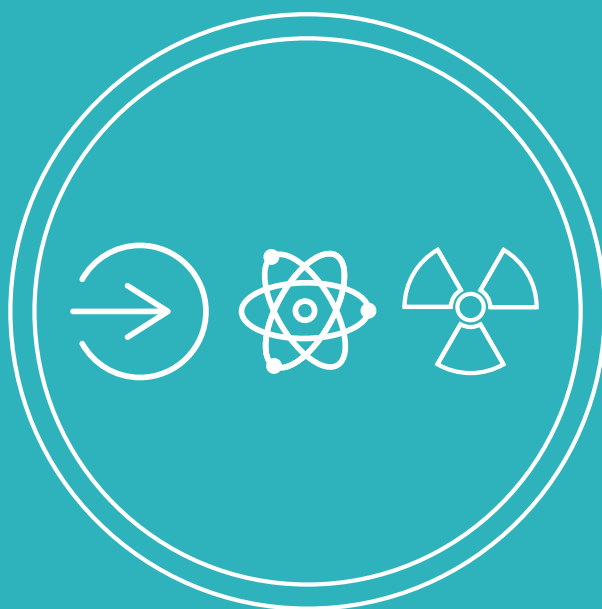
PoE. PoEs and border health

Introduction

All core capacities and potential hazards apply to PoEs and therefore enable the effective application of health measures to prevent the international spread of diseases. States Parties are required to maintain core capacities at designated international airports and ports (and where 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 should designate and maintain core capacities at international airports and ports (and where 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

Kyrgyzstan is a landlocked country in central Asia, bordered by Kazakhstan to the north, Uzbekistan to the west, Tajikistan to the south and China to the east and southeast. There are thirty-nine functional PoEs, including four international airports, five railway checkpoints and 29 road crossings. Ministry of Transportation Sanitary Quarantine Point (SQP) staff are the prevailing authority at PoEs, per the IHR (2005) definition, although only 12 have SQPs, including the three designated PoEs: Manas International Airport, Osh International Airport and Torugart ground crossing with China.

The main contact at airports for the SQP is Manas International Airport OJSC, a state-owned company responsible for airport management, operation and development. Manas International Airport OJSC has medical emergency units and ambulances stationed at the airport, in addition to the public health staff provided by SSES. Public health staff, medical staff and emergency units work in close cooperation. Public health staff maintain a separate public health emergency/communicable disease response plan that has been endorsed by airport officials, but which is not fully integrated into the aerodrome emergency response plan.

Indicators and scores

PoE1. Core capacity requirements at all times for PoEs: score 2

Several of the designated PoEs are implementing a portion of the routine core capacities based on completed associated strategic risk assessments.

Strengths

- Adequate medical services, including diagnostic facilities and appropriate staff, equipment and premises.
- Arrangements are in place with Manas International Airport OJSC for transporting ill travellers to appropriate medical facilities by safe, hygienic means of transport.
- SQPs are part of the national surveillance system through the transportation SES at national level.
- Kyrgyzstan has designated two airports and one ground crossing as PoEs following IHR Article 20.

Challenges

- The SQP has not yet established a sustainable monitoring, oversight, sampling and data collection programme for managing food safety, potable water and liquid and solid waste.
- Lack of a vector and reservoir control methods, including disinfecting, deratting and the integrated vector.
- There is no established SOP encompassing all the activities carried out at PoEs.

PoE2. Public health response at PoEs: score 2

Some designated PoEs have developed a multisectoral public health emergency contingency plan for events caused by biological hazards.

Strengths

- Manas International Airport OJSC ensures adequate transport by ambulance to appropriate health-care settings.
- Availability of PPE and temperature measurement infrared devices.
- Availability of appropriate space, separate from other travellers, to interview suspect or affected people.
- Availability of an isolation room.

Challenges

- The public health emergency contingency plan has not been incorporated into the aerodrome emergency plan.
- There are no established SOPs related to the detection, health assessment and notification of ill travellers on board aircraft or at the passenger terminal building, or their subsequent referral to health-care facilities.
- There are no procedures currently in place concerning communication with aircraft and air transport operators regarding the request of the health section of the General Declaration of Aircraft when requested by national authorities.
- There are no established arrangements for carrying out public health measures on affected ground transport conveyances when recommended or requested by national authorities.

PoE3. A risk-based approach to international travel-related measures: score 2

A national multisectoral strategy for international travel related measures has been developed based on a risk-based approach with identified and assigned responsibilities.

Strengths

- An established multisectoral process is in place to design and implement international travel-related measures when required. This process is drafted by a committee involving all travel-related relevant stakeholders under the Vice-Prime Minister, and created by governmental decree.

Challenges

- Regular risk assessments to ensure that decisions concerning international travel-related measures are proportional to public health risk are not conducted.
- SOPs and guidelines developed for implementing international travel-related measures are not available to the committee to help promote informed decision-making.

Recommendations for priority actions

- Establish and maintain a public health emergency contingency plan to be incorporated into the aerodrome emergency plan.
- Schedule regular activities to ensure a safe environment for travellers, including potable water safety, food safety, general hygiene maintenance, liquid and solid waste management and vector control.
- Create a tailored training and capacity-building programme for public health staff at PoEs considering International Civil Aviation Organization and other international organizations' health-related standards and recommended practices.
- Regarding neighbouring countries sharing common land borders with Kyrgyzstan, consider entering into bilateral or multilateral agreements concerning the prevention or control of international transmission of diseases or joint designate adjacent ground crossings for IHR Annex 1B capacities.
- Develop SOPs related to the detection, health assessment and notification of ill travellers on board aircraft or at passenger terminal buildings and their subsequent referral to health-care facilities.

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 requires that State Parties have surveillance and response capacity to manage chemical risk or events, and effective communication and collaboration among sectors responsible for chemical safety.

Target

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

Level of capabilities

Chemical response capability in Kyrgyzstan within the health sector is situated at the DDFS-SESS, and the chemicals division is divided into six units. Kyrgyzstan has few major chemical plants, but a number of large chemical plants in neighbouring countries close to its borders. There have been no major chemical incidents reported in the country in recent years and there is a perception that smaller-scale chemical incidents may not always be reported. Resources for environmental surveillance and detection are limited both in frequency and scope of testing (see below) and in particular with the difficulty in retaining staff due to low wages; testing of clinical specimens is very limited in the country.

Coordination and leadership of the response to chemical events is performed by MES, in liaison with other relevant bodies in the Kyrgyz Republic, State administrations and local government, and other interested ministries and departments (Ministry of Health, Ministry of Natural Resources, etc.). EAEU legislation on chemical legislation exists, but there is a need for this to be fully implemented in Kyrgyzstan, particularly with respect to hazardous chemical sites and disposal. In an emergency, MES establishes an ad hoc task force or uses the existing national committee for the exchange of information, which also coordinates activities strategically and on the ground. Separately, the coordinating body for chemical safety in Kyrgyzstan is the Ministry of Natural Resources, Ecology and Technical Surveillance

The DDP-SSES laboratory tests drinking-water for safety indicators, including physical and chemical tests, as well air quality testing in the field and enclosed facilities. The laboratory also conducts tests of food products for the content of salts of heavy metals, pesticides and other indicators in accordance with Technical Regulations TR-TS 0021/2011 "On food safety". Analysis capability is about 80% of capacity needed at the laboratory, and the increase in mining activity in Kyrgyzstan will likely increase workload. Laboratories receive direct testing and environmental monitoring requests from businesses. They have very effective and comprehensive paper and computerized logging of requests and results, but there is no chemical results and events database, which significantly limits ability to compile and share data.

Kyrgyzstan has ratified the Rotterdam, Stockholm and Basel conventions, but not the Minamata and ILO 174 and 170 conventions. The national chemical profile has not been revised in the last 5 years. There are no toxicology centres in the country, but plans have been considered for one.

Indicators and scores

CE1. Mechanisms established and functioning for detecting and responding to chemical events or emergencies: score 2

Guidelines or manuals on surveillance, assessment and management of chemical events, intoxication and poisoning are available.

Strengths
- Agreed lead government department is designated for chemical safety.
- A mechanism for the coordination of response to chemical incidents is established.
- A system is in place for routine chemical testing, as well as testing during emergency response situations.

Challenges
- There is no database to facilitate the sharing and analysis of results of laboratory testing.
- Significant issue with retention of staff due to poor pay and conditions.
- Lack of awareness of the need to report chemical incidents
- No toxicology centre.
- Lack of chemical testing capability which will be further burdened as mining activities increase.

CE2. Enabling environment in place for management of chemical events: score 3

A chemical event response plan is in place that defines the roles and responsibilities of relevant agencies and considers all major hazard sites and facilities.

Strengths
- Agreed lead government department is designated for chemical safety.
- A mechanism for the coordination of response to chemical incidents is established.
- Rotterdam, Stockholm and Basel conventions have been ratified.

Challenges
- There has been no recent revision of the national chemical profile.
- The Minamata and ILO conventions 170 and 174 need to be ratified/ implemented.
- There is a lack of coordination with, and utilization of, of the operations centres of DoDP and the MES systems with respect to chemical incidents.

Recommendations for priority actions
- Urgently develop and implement a chemical laboratory report and incident database, to allow better analysis and communication of laboratory data at SSES with partner agencies in Kyrgyzstan.
- Update the current National Chemicals Profile within the next 18 months.
- Integrate the Operations Centre of the SSES with response activities in relation to chemical incidents and threats and conduct, at least yearly, simulation exercises with partner agencies to test the emergency response plan.
- The SSES should work with MES, State administrations and local governments, and other interested Ministries and Departments (Ministry of Natural Resources, etc.) to ensure that the Minamata Convention on transboundary impacts of industrial accidents and the ILO Convention 174 and 170 are ratified and implemented by Kyrgyzstan.
- Equip the laboratories of the SSES with up-to-date diagnostic equipment to conduct more in-depth scientific research on the impact of chemicals on public health.

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

Currently, there are 92 facilities producing toxic and radioactive waste from mining (tailings and waste disposal sites) within the territory of the Kyrgyz Republic. There are preserved uranium mining tailings in five administrative regions of the Republic, which may potentially create a risk of possible environmental disasters for the population and territory of the Republic, as well as for neighbouring countries of central Asia.

In addition to the ratification of the International Convention on Physical Protection of Nuclear Material and of the Treaty on the Non-Proliferation of Nuclear Weapons, Kyrgyzstan has a well-developed legal basis for radiation protection and safe use of radioactive sources, consisting of numerous laws, by-laws, decrees and regulations. All radioactive sources in the country are inventoried and their use is regulated. All permitted radiation threshold values are defined and regulated by law.

Order No. 60 designated the MES as the coordinator for the national radiation safety plan and the regulatory body for radiation safety; it also designated the MES as responsible for preparedness and response to radiation emergencies. The national plan for response to radiation emergencies is developed and maintained by the MES, but was not available for review at the time of the external evaluation visit due to national security restrictions.

In addition to acting as a regulatory body, the State Inspectorate for Environmental and Technical Safety is also responsible for licensing and control of the industrial use of radioactive sources such as mining, construction and agriculture. This agency oversees and is responsible for radioactive tailing sites at abandoned uranium mines and conducts inspections of radiation safety in various settings.

Within the Ministry of Health, the Department of Radiation Safety is responsible for radiation safety in health-care settings, as well as for the occupational safety of all users of radioactive sources – and maintains the individual dosimetry database for all users. It is responsible for control over diagnostic and radiotherapy equipment and monitors radioactivity in food and drinking-water. The Department also deals with licensing of radioactive sources and practices in the health-care sector. In addition, the Department works closely with the State Agency for Architecture, Construction, Housing and Communal Services to ensure the safety of building materials.

Clinical management of patients with radiation injuries is delegated to the Department of Haematology at the National Centre for Oncology, which has been conducting medical follow-ups of the Chernobyl clean-up workers residing in Kyrgyzstan. However, there is a pressing need for strengthening capacity of the personnel of this and other hospitals in the country with regard to preparedness and response to radiation emergencies, provision of treatment protocols and developing a national stockpile for medical countermeasures.

Kyrgyzstan is benefiting from the international cooperation with the International Atomic Energy Agency (IAEA) and several development and cooperation projects are ongoing with the purpose of strengthening the country's national capacities pertaining to radiation safety and security and radiological monitoring, Belarus and the Russian Federation. Recently, Kyrgyzstan and the Russian Federation signed an agreement for cooperation towards future development of nuclear technology in Kyrgyzstan.

Indicators and scores

RE1. Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies: score 2

National policies, strategies or plans for detection, assessment and response to radiation emergencies are established and there are radiation monitoring mechanisms for radiation emergencies that may constitute a PHEIC. Technical guidelines and SOPs for reporting and investigation, as well as systematic exchange of data among relevant stakeholders, are lacking.

Strengths
- There is an established national database of all radioactive sources in the country.
- Adequate laboratory capacity for environmental (including monitoring of food and drinking-water, air, consumer products and construction materials) and occupational exposure monitoring.
- Adequate radiological monitoring capacity for cargo crossing borders.

Challenges
- Interagency coordination procedures and crisis communication protocols are not in place.
- There is a lack of protocols, guides, SOPs for prehospital and hospital response in case of a radiation emergency.
- There is lack of a national stockpile of medical countermeasures.
- Regular education and training programmes are not available for emergency responders within the health sector (EMS, hospital emergency rooms, specialized services), whose skills should be maintained and tested in regular exercises.
- There are no arrangements for accessing foreign assistance.

RE2. Enabling environment in place for management of radiological and nuclear emergencies: score 1

No coordination and communication mechanisms are arranged between national authorities responsible for radiological and nuclear events with health ministries and/or NFPs.

Strengths
- A strong regulatory and legal framework is in place to ensure safety and security or radioactive sources.
- National stakeholders have been identified and their roles clearly defined.
- Ongoing international cooperation with IAEA.
- Bilateral agreements for cooperation with the Russian Federation.

Challenges

- A national cross-sector coordination mechanism has not been operationalized.
- There is a lack of a functional and systematic communication mechanism for each participation agency's point of contact with the NFP at the Ministry of Health. The role and place of the IHR (2005), as an international law, should be clearly communicated and understood by non-health partners.

Recommendations for priority actions

- Ratify the International Convention on Notification and Convention on Assistance in case of a radiological or nuclear emergency.
- Review and update national response plans to ensure incorporation of clear mechanisms for cross-sector coordination, sharing of resources and communication through regular information exchange and joint activities, such as regular joint exercises, workshops, etc.
- Develop detailed practical arrangements (regional, local plans and SOPs) for detection, assessment and monitoring of radiation exposure and response to radiation emergencies to complement existing national all-hazard emergencies plans.
- Allocate resources for strengthening the public health sector's capacity with regard to emergency medical services (ambulances, hospital emergency rooms and specialized departments) and implementation of urgent protective actions, including sheltering, evacuation and pre-hospital response (decontamination and triage, transportation of patients) and long-term recovery.
- Allocate resources for efficient hospital response and clinical management of radiation injuries, including developing national stockpiles for medical countermeasures, provision of protocols for clinical management of radiation injuries, reinforcing relevant laboratory capacities and provision of regular training and education to health workers.

Annex: JEE background

Mission place and dates

Bishkek, Kyrgyzstan: 3–7 July 2023

Mission team members

- Christopher Perdue (team lead), United States Department of Health and Human Services (HHS)
- Joy Caminade (team co-lead), WHO, Afghanistan
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- Olha Izhyk, WHO Regional Office for Europe
- Jerker Jonsson, Public Health Agency of Sweden
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- Francesca Latronico, Food and Agriculture Organization
- Inessa Markus, Robert Koch Institute
- Mohamed Moussif, Ministry of Health of Morocco
- Paolo Parente, Università Cattolica del Sacro Cuore, Rome
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- John Simpson, Independent consultant, adviser to United Kingdom Health Security Agency
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Objective

To assess Kyrgyzstan's capacities and capabilities relevant to the 19 technical areas of the JEE tool for providing baseline data to support Kyrgyzstan's efforts to reform and improve their public health security.

The JEE process

The JEE process is a peer-to-peer review using the Third Edition of the JEE tool. The entire external evaluation, including discussions around the priority actions, the strengths, the areas that need strengthening, best practices, challenges and scoring, are collaborative with JEE team members and host country experts. Together a full agreement on all aspects of the final report findings and recommendations is sought. Should there be significant and irreconcilable differences between 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

- Manas International airport
- District-level SSES
- District-level hospital
- Veterinarian Inspectorate (epi + lab) under Ministry of Agriculture

- Republican Infectious Disease Hospital (tertiary)
- Republican SES (epi + lab); Republican Immunoprophylaxis Center
- Republican Center for Quarantine and High Threat Infections (epi + lab)
- Specialized training centre of State customs service (radiation safety)
- EOC under MES
- PHEOC under the Ministry of health

Key participants and institutions

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Supporting documentation provided by the Kyrgyz Republic

P1. Legal instruments
- Constitutional Law No. 135 On the state of emergency.
- Constitutional Law No. 54 of 24 May 2018 on Civil Protection.
- Decree of the President of the Kyrgyz Republic No. 26, "On the inventory of legislation of the Kyrgyz Republic", 08.02.2021.

P2. Financing
- Kyrgyz Republic Resolution No. 194 dated April 3, 2020 "On approval of the Regulations on the procedure for spending funds received for the implementation of measures to prevent and combat epidemics".
- Kyrgyz Republic Resolution No. 221 dated May 13, 2019 "On measures to introduce regulatory financing in public health organizations of the Kyrgyz Republic".
- Kyrgyz Republic Decree No. 221 dated May 13, 2019 "On Measures to Implement Normative Funding Public Health Organizations".

P3. IHR coordination, NFP functions and advocacy
- Law of The Kyrgyz Republic dated May 24, 2018 No. 54 "on Civil Protection".

P4. AMR
- Kyrgyz Republic Law No. 165 On Circulation of Medicines from August 2, 2017 (the No. 44 in the amendment from May 3, 2018 and the No. 144 in the amendment from August 25, 2020.
- Strategy to reduce the spread of AMRs – The Reduction of Antimicrobial Resistance in the Kyrgyz Republic in 2022–2025. (Ministry of Health Order No. 411 from April 5, 2022 and Ministry of Health Order No. 102–7111 from April 5, 2022).
- The national and subnational reference laboratory for AMR establishment (Ministry of Health order No. 1715 from December 23, 2021).
- EUCAST implementation (Ministry of Health order No. 139 from 2016 and Ministry of Health order No. 729 from 2018).
- The development of the Atlas on Bacteriology Fundamentals (Ministry of Health Order No. 650 from July 20, 2017) and SOPs on clinical sampling for high-risk departments (Ministry of Health order No. 716 from August 15, 2017).
- Order of the Government of the Russian Federation "On conducting activities to strengthen national laboratories in eastern Europe, Transcaucasia and central Asia to combat the spread of AMRs; the monitoring on training in the circulation of AMRs.
- The WHO AWaRE Handbook on antibiotics https://www.who.int/publications/i/item/WHO-MHP-HPS-EML-2022.02.

P5. Zoonotic disease
- Memorandum of Collaboration to Reduce the Risk of Zoonotic Diseases, signed on October 10, 2018 between the Republican Center for Quarantine and Especially Dangerous Infections and the Veterinary Service.
- Memorandum of Collaboration signed on June 24, 2021 between the Republican Center for Quarantine and Especially Dangerous Infections and the Duisheev Kyrgyz Research Institute of Veterinary Medicine.
- Ministry of Health Order 1446 from December 14, 2022 "On Measures to Improve Epidemiological Surveillance of Anthrax in the Country".
- Ministry of Health Order 1458 from December 16, 2022 "On Epidemiological Surveillance of Human Rabies in the Kyrgyz Republic".
- Ministry of Health Order 1445 from December 14, 2022 "On Epidemiological and Entomological surveillance of Congo-Crimean Viral Haemorrhagic Fever in the Kyrgyz Republic".

- Governmental Decree No 197 from April 9, 2020 On Approval of the Procedure for Implementation of Restrictive/Quarantine Measures in Public Health Sector in the Kyrgyz Republic.
- On approval of the Guidelines for recording infectious diseases in the Kyrgyz Republic, 23 September 2011 No. 583 (list of prioritized dangerous diseases including zoonosis for human sector).
- Resolution No. 297 from 10 June 2011 "On enhancing collaboration among ministries and agencies to combat quarantine and highly dangerous infections as well as parasitic diseases".
- Resolution No. 691 from 23 October 2017 "On Approving the Rules for Sanitary Protection of the Territory of the Kyrgyz Republic".
- Resolution of the Government of the Kyrgyz Republic No. 374 from 23 May 2006 (list of prioritized dangerous diseases including zoonosis for animal sector).
- Guidelines for investigating and responding to infectious diseases from 2019 (included both sectors, maintained by the Ministries of Agriculture and Health.

P6. Food safety
- Governmental Decree No. 583, 23 September 2011 on approval of the Guidelines for recording of Infectious diseases in Kyrgyz Republic.
- Government Decree No. 225, 16 May 2011 on approval of regulatory legal acts of the Kyrgyz Republic in the field of public health: http://cbd.minjust.gov.kg/act/view/ru-ru/92 585?cl=ru-ru
- Order of the Ministry of Health No. 1102, 16 September 2022 on approval of the Instructions on the procedure for investigating food poisoning and the use of methods for isolating and identifying pathogens in bacterial food poisoning.
- Decree of the Government No. 352, 26 June 2014 on the Coordinating Council for Public Health under the Government of the Kyrgyz Republic http://cbd.minjust.gov.kg/act/view/ru-ru/96 605/20?cl=ru-ru
- Guidelines for investigating and responding to infectious diseases, 2019.

P7. Biosafety and biosecurity
- SOP on "Disinfection, cleaning and disinfection after leaks".
- Regulation, Annex 13 "Sanitary and epidemiological rules and regulations to medical and preventive organizations".
- Resolution "On approval of the Action Plan of the Kyrgyz Republic for the implementation of United Nations Security Council Resolution 1540 for 2022–2025" No. 340 from 2021.
- Resolution "Instructions for infection control in health care organizations of the Kyrgyz Republic" No. 32 from 2012.
- Resolution "On approval of the National Control List of the Kyrgyz Republic of Controlled Products" No. 63 from 2023.
- Decree "On the procedure for exercising export control over controlled products in the Kyrgyz Republic" No. 257 from 2010.
- Decree "On approval of the Guidelines for the registration of infectious diseases in the Kyrgyz Republic" No. 583 from 2011.
- Law "On Export Control" No. 30 from 2003.
- Law "On the licensing and permitting system in the Kyrgyz Republic" No. 195 from 2013.

P8. Immunization
- Monthly Reporting Form No. 5 "On the status of Immunization Activity/work", approved by the Decree of the National Statistical Committee.
- Order of the Ministry of Health of the Kyrgyz Republic No. 184 dated April 11, 2014 "On approval of Standard Operating Procedures for Effective Management of Vaccines in Health Care organizations".
- Order of the Ministry of Health of the Kyrgyz Republic No. 757 dated November 1, 2018 "On approval of the Regulations on mobile and outreach immunization teams, immunization related supervisory visits"

- Law of the Kyrgyz Republic "On Circulation of Drugs", Decree of the Government of the Kyrgyz Republic No. 405 dated 28.08.2018 "On some issues related to state registration (market authorization) in the field of circulation of drugs".
- Resolution of the Kyrgyz Republic No. 64 of February 19, 2019 "On some issues related to developing the Special List of Drugs and Forming of the List of Medical Devices".
- Joint National–International Review of the National Immunization Program in Kyrgyzstan 25 July – 3 August 2016: Ministry of Health, UNICEF, WHO, Gavi, US Centers for Disease Control and Prevention (CDC).
- Resolution of the Government of the Kyrgyz Republic No. 609 dated 16.12. 2020.
- Order of the Ministry of Health of the Kyrgyz Republic No. 1137 dated December 31, 2020 "On implementation of the Decree of the Government of the Kyrgyz Republic 'On approving the Immunoprophylaxis Program for 2020–2024'".
- Order of the Ministry of Health of the Kyrgyz Republic No. 1541 dated November 15, 2021 "On updating the Guidelines for organizing immunization against coronavirus infection, caused by SARS-CoV-2 in the Kyrgyz Republic".
- Memorandum between Gavi and the Ministry of Health of the Kyrgyz Republic.
- Order of the Ministry of Health of the Kyrgyz Republic No. 1455 dated December 15, 2022 "On approval of the Guidelines for the use of the Costing tool for calculating vaccine need and financial resources".
- Ministry of Health of the Kyrgyz Republic, Drug Regulatory Authority under the Ministry of Health of the Kyrgyz Republic, RCI, DDP-SSES.
- National Pharmacovigilance System for Drugs, AEFI Surveillance, VigiBase Global System, VigiFlow.
- National COVID-19 Vaccination Deployment Plan (NVDP).
- Order of the Ministry of Health of the Kyrgyz Republic No. 277dated 04.03.2022.
- Order of the Ministry of Health of the Kyrgyz Republic No. 226 dated February 24, 2021 "On organization and conduct of immunization against coronavirus infection".
- COVID-19 Vaccination Managing System Assessment in Kyrgyzstan, WHO Assessment Report July 2022.

D1. National laboratory system
- Decree on the "Rules for the organization of freight transportation by motor vehicle in the Kyrgyz Republic" No. 480 from 2016.
- Decree on "Rules for transportation of dangerous goods by road" No. 198 from 2016.
- SOP on "Transporting medical waste outside the health care organization".
- Order about "Strengthening the system epidemiological surveillance for measles, rubella and CRS" in the Kyrgyz Republic. No. 841 from 2009.

D2. Surveillance
- Monthly bulletin of the SSES and ZN, Department of Prevention of Infectious, Parasitic Diseases and Epidemiological Surveillance (https://dgsen.kg/category/deyatelnost/upravlenie-profilaktiki-infekcionnY/ezhemesYachnYj-bjulleten-sjesizn; 06.07.2023).
- Governmental Decree No. 583 "On approval of the Guidelines for recording of infectious diseases in Kyrgyz Republic" from September 23, 2011.
- Governmental Decree/Ministry of Health Decree No. 610 "On improvement of epidemiological surveillance system for infectious and parasitic diseases" from November 26, 2008.
- Reporting Form No.1 (monthly, annual) approved by Decision No. 3 of the National Statistical Committee in 2022.
- The previous AIS programme for registration of infectious and parasitic infections has been upgraded to the epidemiological platform IS (iEPID)
- The Order of the Cabinet of Ministers of the Kyrgyz Republic No. 2 "On upgrade of AIS-programme for registration of infectious and parasitic infections" has been upgraded to the epidemiological platform IS (iEPID) from January 12, 2022.
- Ministry of Health Decree No. 1039 "On regulation of the PHEOC", 2022.

- Governmental Decree No. 139 "On measures to reduce the incidence of typhoid fever and paratyphoid in the country", 1989.
- Cabinet Decision No. 2 of 12 January 2022.

D3. Human resources

- Decree of the Government of the Kyrgyz Republic No. 600 dated December 20, 2018 "On the Program of the Kyrgyz Republic Government for public health protection and health system development for 2019–2030 "Healthy person – prosperous country".
- Order of the Ministry of Health of the Kyrgyz Republic No. 755 dated June 8, 2021 "On approval of the regulations on certification and registration of medical and pharmaceutical workers, permit to medical or pharmaceutical work for the people with completed medical, pharmaceutical or higher biological education".
- Order of the Ministry of Health of the Kyrgyz Republic No.6 dated January 11, 2023 "On approval of the Regulations on additional continuous medical education and the accumulative system of credit hours in the Kyrgyz Republic".
- Order of the Ministry of Health of the Kyrgyz Republic No. 27 dated January 17, 2020 "On approval of the catalogue of competencies for postgraduate medical education in the specialty "Physician in hygiene of children and adolescents".
- Order of the Ministry of Health of the Kyrgyz Republic No. 30 dated January 21, 2020, "On approval of the catalogue of competencies for postgraduate medical education in the specialty 'General hygienist'".
- Order of the Ministry of Health of the Kyrgyz Republic No. 1167 dated December 30, 2019 "On approval of the catalogue of competencies for postgraduate medical education in the specialty "Doctor of Communal Hygiene".
- Order of the Ministry of Health of the Kyrgyz Republic No. 1166 dated December 30, 2019 "On approval of the catalogue of competencies for postgraduate medical education in the specialty 'Physician in Radiation Hygiene'".
- Order of the Ministry of Health of the Kyrgyz Republic No. 950 dated October 8, 2019 "On approval of the catalogue of competencies for postgraduate medical education in the specialty 'Physician in Nutritional Hygiene'".
- Order of the Ministry of Health of the Kyrgyz Republic No. 664 dated September 20, 2018 "On approval of requirements (catalogue of competencies) for postgraduate medical education in the specialty 'Epidemiologist'".
- Order of the Ministry of Health of the Kyrgyz Republic No. 665 dated September 20, 2018 "On approval of the catalogue of competencies for postgraduate medical education in the specialty 'Bacteriologist/Microbiologist'".

R1. Health emergency management

- Law of the Government of the Kyrgyz Republic No. 54 from May 24, 2018 "On Civil Protection".
- Law of the Government of the Kyrgyz Republic No. 135 from October 24, 1998 "On the state of emergency".
- Decree of the Ministry of Health of the Kyrgyz Republic No. 1039 "Approving the Regulations of the Public Health Emergency Operations Centre".
- Order of the Ministry of Health of the Kyrgyz Republic No. 405 from March 31, 2022 "Establishment of the Department of Emergency Medicine and Provision of the Emergency Consultative Medical Care".
- Order of the Ministry of Health of the Kyrgyz Republic No. 74 from June 06, 2022.
- Resolution of the Government of the Kyrgyz Republic No. 569 from October 23, 2019 "On the Unified System for Comprehensive Monitoring and Forecasting of Emergencies in the Kyrgyz Republic".
- Decree of the Government of the Kyrgyz Republic No. 597 from November 11, 2019 "On approval of the Procedure for assessing damage, caused by emergencies".

R3. Health services provision
- Order of the Ministry of Health of the Kyrgyz Republic No. 647 dated 31.05.2019. "On Response Measures in Sexual and Reproductive Health Issues in Emergency Situations".

R4. IPC
- Results of monitoring and evaluation of IPC control status in health care organizations of the Kyrgyz Republic, Bishkek 2021.
- Order of the Ministry of Health of the Kyrgyz Republic No. 486 dated April 19, 2022 "On Approval of SOPs for Safety of Decentralized Water Supply of Healthcare in the Republic" (collection of SOPs on HCV).
- Order of the Ministry of Health of the Kyrgyz Republic No. 833 dated 12.07.2022 "On Approval of the Practical Guidelines for Infection Control in Health Care of the Kyrgyz Republic and Standard Operating Procedures in the Context of COVID-19 Epidemic".
- Order of the Ministry of Health of the Kyrgyz Republic No. 214 dated March 16, 2018 "On Approval of Standard Operating Procedures (SOPs) for Health Waste Management (HWM) in HCOs".
- "Guidelines for Monitoring and Evaluation of the HWM System in HCOs of the Kyrgyz Republic".
- Order of the Ministry of Health of the Kyrgyz Republic No. 379 dated 04.07.2014 "On approval of Clinical Protocols and SOPs for family planning, obstetrics and neonatology".
- Order of the Ministry of Health of the Kyrgyz Republic No. 34 dated January 29, 2008: "Standard sample collection and transportation of biological material to the bacteriology laboratory".
- Order No. 114 dated 13.03.2015 "Guidelines for epidemiological surveillance of viral blood-borne infections in health care organizations of the Kyrgyz Republic".

R5. RCCE
- Government of the Kyrgyz Republic Resolution January 29.2018 No. 58 "On Comprehensive Public Protection from Emergencies".
- Order of the Ministry of Health of the Kyrgyz Republic No. 226 09.04.2020 On composition of COVID-19 response Task Force.
- Order of the Ministry of Health of the Kyrgyz Republic No. 226 24.02.21 ''On Organization and Conducting COVID-19 Vaccination".
- Prime Minister's Order 20 March 2020 No. 171 on COVID-19.
- Law on Civil Protection.
- COVID-19 Communication Plan.
- Memorandum of cooperation between the Republican Center for Health Promotion and Mass Communication of the Ministry of Health of the Kyrgyz Republic and the public association "Resource Centre for Elderly People" to raise public awareness on the protection and promotion of the health of elderly people population of the Kyrgyz Republic within the framework of the "Active Longevity" programme.
- Order of the Ministry of Health of the Kyrgyz Republic No. 494 dated April 21, 2022 "On approval of the communication strategy to improve the health of the population of the Kyrgyz Republic for the period 2022–2026".
- Communication strategy for improving the health of the population of the Kyrgyz Republic for the period 2022–2026.
- Community Health Action Program.
- Memorandum of cooperation in the implementation of the international McGovern-Dole Programme "Food for Education and Baby Nutrition" between the Mercy Corps and the Republican Center for Health Promotion and Mass Communication of the Ministry of Health of the Kyrgyz Republic.
- Memorandum of Cooperation between the nongovernmental organization "Kyrgyz Cambi Planning Alliance" and the Republican Center for Health Promotion to raise awareness of the population on women's health in the antenatal period in the framework of the programme "Promotion of Perinatal Health".
- Review of COVID-19 Key Messages – Red Crescent.

PoE. PoEs and border health
- Decree of the Government of the Kyrgyz Republic No.580: Decision of the Commission of the Customs Union No. 299.
- Order of the Ministry of Health of the Kyrgyz Republic No. 356 dated 30.03.2023.
- Decree of the Government of the Kyrgyz Republic No. 691, dated October 23, 2017, "On approval of the Rules for Sanitary Protection of the Territory of the Kyrgyz Republic and the 2018–2022 Comprehensive Plan of Anti-epidemic Measures for Sanitary Protection of the Territory of the Kyrgyz Republic from the Importation/Introduction and Spread of Quarantine and High Pathogenic Infections, endangering Public Health and Population Health".
- Decree of the Government of the Kyrgyz Republic No. 580, dated October 7, 2014 and Operational plan for organization and implementation of primary anti-epidemic measures at PoEs.
- Decree of the Government of the Kyrgyz Republic No.315691580.
- Decree of the Government of the Kyrgyz Republic No. 691, dated October 23, 2017, "On approval of the Rules for Sanitary Protection of the Territory of the Kyrgyz Republic and the 2018–2022 Comprehensive Plan of Anti-epidemic Measures for Sanitary Protection of the Territory of the Kyrgyz Republic from the Importation/Introduction and Spread of Quarantine and High Pathogenic Infections, endangering Public Health and Population Health".

CE. Chemical events
- The Minamata convention.
- ILO conventions 170 and 174.
- TR TS 0021/2011 "On food safety".
- EAEU chemical legislation.

RE. Radiation emergencies
- 2016 JEE Kyrgyzstan report, WHO.
- Comprehensive plan for support of nuclear safety and radiological protection of the Kyrgyz Republic for the period of 2021–2024.
- Law of the Kyrgyz Republic No. 224, dated 29 Nov 2011: technical regulations on radiation safety.
- Intergovernmental targeted programme on mitigation of the uranium mining tailings and radioactive waste depositions on affected territories of the Eurasian Economic Union (2011).
- Resolution No. 58 of the Government of the Kyrgyz Republic, dated January 29, 2018 "On the Concept of comprehensive protection of the population and territory of the Kyrgyz Republic from emergency situations for 2018–2030".
- Resolution No. 558 of the Government of the Kyrgyz Republic, dated August 5, 2015 "On approval of guidelines in the field of handling radioactive substances and sources of ionizing radiation".
- Kazybayev N. Briefing on the activities of the Department of Radiation Protection and Safety/ Division of Disease Prevention and SSES/Ministry of Health (personal communication, 05 July 2023).
- https://www.world-nuclear-news.org/Articles/Kyrgyzstan-and-Rosatom-agree-nuclear-healthcare-co
- https://www.iaea.org/newscenter/news/kyrgyzstan-signs-a-country-programme-framework-cpf-for-2018-2023