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THE MINISTRY OF HEALTHCARE OF THE REPUBLIC OF KAZAKHSTAN

Ministry of Health of the Republic of Kazakhstan

Self-assessment of essential public health operations in Kazakhstan

April-September 2016
Astana 2018

ABSTRACT

This technical report presents the results of Kazakhstan's self-assessment of the essential public health operations (EPHOs). The EPHO self-assessment was initiated by the Ministry of Health of Kazakhstan and conducted under the biennial collaborative agreement between the WHO Regional Office for Europe and the Government of Kazakhstan for 2016–2017. In addition to describing the self-assessment process, this report presents the key recommendations put forth by the Steering Committee and specialized teams.

KEYWORDS

ESSENTIAL PUBLIC HEALTH OPERATIONS
HEALTH POLICY
PUBLIC HEALTH
HEALTH PROMOTION
DISEASE PREVENTION
HEALTH SYSTEM REFORM
HEALTH SYSTEM ASSESSMENT
HEALTH SYSTEM STRENGTHENING
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Foreword from the Minister of Health of Kazakhstan

Health is the key resource for social, economic and individual development, as well as an important aspect of the quality of life of the entire population. While we enjoy longer lives globally, challenges such as the growing burden of noncommunicable diseases and mental health needs; cross-border threats such as antimicrobial resistance, infectious diseases and low-quality medicines; the socioeconomic divide among societies; and ever-growing health-care costs are all undoubted arguments for appreciating public health systems and understanding how much we could gain from proper implementation of public health functions.

Taking into account that public health efforts, health promotion and health maintenance go beyond the provision of medical care, I consider it important to draw the attention of all stakeholders to the prioritization of health issues in the agendas of leaders of all sectors and at all levels, as first proclaimed in the legendary Declaration of Alma-Ata on primary health care in 1978. Forty years after the Declaration of Alma-Ata was signed, Kazakhstan again became the birthplace of global leaders' renewed commitment to advancing health for all. The Declaration of Astana on primary health care reinstates these leaders' role in health: it urges governments to make bold political commitments to health in their decision-making and to design primary health care around essential public health functions.

Kazakhstan made its clear commitment to public health at the highest political level in its 2016–2019 state health development programme, which defined the first direction as the advancement of public health services. Kazakhstan reformed its public health system in 2017 when we redefined our national public health model, created the National Center for Public Health, redesigned the Public Health Committee of the Ministry of Health and gave new impetus to the modernization of public health laboratory infrastructure. These efforts are based on interaction and collaboration among diverse agencies and stakeholders, including government agencies and nongovernmental and international organizations.

This assessment of 10 essential public health operations in Kazakhstan presents a country overview as of 2016. It provides a foundation for policy-making and the allocation of resources in support of public health. Health promotion, disease prevention, early interventions and health maintenance are reliable investments in the health and well-being of all people to which this work will contribute.

I express my appreciation to the experts of the WHO Regional Office for Europe and the national experts from the Republican Healthcare Development Centre and the National Centre for Public Health of the Ministry of Health, who in collaboration implemented this self-assessment work for Kazakhstan.

Dr Yelzhan Birtanov

Minister of Health of Kazakhstan

Foreword from the WHO Regional Director for Europe

I wish to sincerely congratulate Minister of Health of Kazakhstan Dr Yelzhan Birtanov and his colleagues for completing this EPHO self-assessment. The European Action Plan for Strengthening Public Health Capacities and Services and the associated EPHOs were adopted at the 62nd session of the WHO Regional Committee for Europe, on the same occasion as the adoption of the European health policy framework Health 2020. Since then, the Sustainable Development Goals have only reinforced our mandate to strengthen all public health services, inter alia.

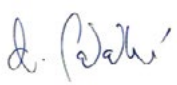
While life expectancy in the WHO European Region overall has increased by five years since the 1980s, profound health inequities persist, in particular between its western and eastern parts. The burden of disease has shifted over time to a predominance of noncommunicable diseases, which is creating immense pressure on health systems. If nothing is done, it is estimated that the cost of health care will double by 2050. To a certain extent, this cost could be mitigated by investing in public health interventions that address the underlying causes of ill health. World Health Assembly resolution WHA69.1 highlighted public health functions as one of the most cost-effective, comprehensive and sustainable ways of achieving universal health coverage and the Sustainable Development Goals.

Kazakhstan has initiated important public health reforms, and this self-assessment has helped to identify both strong and weak areas. The WHO Regional Office for Europe is actively supporting Kazakhstan in reforming its public health services.

Health is both an outcome and a prerequisite of successful development. After decades of focusing on curative services, it is truly exciting to witness the growing attention that the health policy community is placing on disease prevention and health protection and promotion services. Public health is a broad and intersectoral area that is not only the remit of the Ministry of Health – other key ministries must also be involved. Only by working together in a coalition will we be able to prevent diseases and protect population health.

I strongly believe that Kazakhstan will be able to achieve its targets related to Sustainable Development Goal 3 on health. This report identifies areas to work on, and the Regional Office is always ready to assist with technical support.

Sincerely,



Dr Zsuzsanna Jakab
WHO Regional Director for Europe

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The authors extend their gratitude to all colleagues and respondents who, in spite of their busy schedules, found time to participate in the EPHO self-assessment meetings and discussions and to contribute valuable information. We thank all colleagues at the Ministry of Health of Kazakhstan for their strong commitment to integrated public health services, and for the huge amount of work done within the context of the EPHO self-assessment and the completion of the joint report.

Special gratitude is reserved for Dr Melita Vujnovic, former WHO Representative for Kazakhstan (2011–2017), for initiating the process; Dr Martin Krayer Von Kraus, Senior Adviser, Public Health Services, Division of Health Systems and Public Health, WHO Regional Office for Europe; Dr Anna Cichowska Myrup, Programme Manager, Public Health Services, Division of Health Systems and Public Health, WHO Regional Office for Europe; and Dr Hans Kluge, Division of Health Systems and Public Health, WHO Regional Office for Europe, for input and support to the work captured here.

We would like to express our gratitude to WHO Country Office colleagues Dr Oleg Chestnov, WHO Representative for Kazakhstan, and Dr Saltanat Yegeubayeva, Public Health Officer, for their mentoring and continuous strong support during the EPHO self-assessment and development of the joint report.

Finally, thanks to all participants of the stakeholder consultation for their contribution to the discussion, their verification of the results of this document and their suggestions for the knowledge-translation platform.

Abbreviations

ARC SEEM	Applied Research Centre for Sanitary and Epidemiological Expertise and Monitoring
CDC	Centers for Disease Control and Prevention of the United States of America
CRC	Consumer Rights Committee
EAEC	Eurasian Economic Commission
EAP-PHS	European Action Plan for Strengthening Public Health Capacities and Services
EPHO	essential public health operation
EWARN	early warning and response network
EU	European Union
FCTC	WHO Framework Convention on Tobacco Control
GIS	geographic information system
HIA	health impact assessment
HR	human resources
HRH	human resources for health
ICD-10	International Classification of Diseases, 10th revision
ICT	information and communication technologies
IHR	International Health Regulations
MA	Ministry of Agriculture
MDG	Millennium Development Goals
MHSD	Ministry of Health and Social Development
MI	Ministry of Interior
MNE	Ministry of National Economy
NCD	noncommunicable disease
NCPHLS	National Centre for Problems of Healthy Lifestyle Development
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
TB	tuberculosis
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Executive summary

In April 2016, the Ministry of Health and Social Development of Kazakhstan initiated a comprehensive self-assessment of the following 10 essential public health operations (EPHOs), outlined in the WHO European Action Plan for Strengthening Public Health Capacities and Services.

EPHO 1: Surveillance of population health and well-being
EPHO 2: Monitoring and response to health hazards and emergencies
EPHO 3: Health protection, including environmental, occupational, food safety and others
EPHO 4: Disease prevention, including early detection of illness
EPHO 5: Health promotion, including action to address social determinants and health inequity
EPHO 6: Assuring governance for health and well-being
EPHO 7: Assuring a sufficient and competent public health workforce
EPHO 8: Assuring sustainable organizational structures and financing
EPHO 9: Advocacy, communication and social mobilization for health
EPHO 10: Advancing public health research to inform policy and practice

The Ministry took a leading role in coordinating this effort, which involved broad participation from leaders in multiple sectors and the active engagement of WHO experts. The findings offer a snapshot of the status of public health capacities and services in the country as of 2016.

The self-assessment scores indicate that functions related to the intelligence EPHOs (EPHOs 1 and 2) are generally well developed in Kazakhstan, as are most functions related to the first of the service-delivery EPHOs (EPHO 3). Exceptions in these operations include some functions related to antibiotic resistance, migrant health, monitoring of cross-border health, road safety and consumer product safety.

Most functions related to the other service-delivery EPHOs (EPHOs 4 and 5) are adequately developed, though some scores varied widely: the country's immunization programme, for example, is very well developed, while functions such as access to palliative and end-of-life care and support to caregivers must be strengthened to ensure the highest level of population health throughout the life course.

While most functions related to the enabler EPHOs (EPHOs 6–10) would benefit from further development, certain key areas, such as government commitment to health and health equity, are strong.

Overall, the self-assessment highlighted the need to:

- further develop mechanisms for implementing regulations as well as national and regional programmes;
- enhance cross-agency collaboration, coordination and the distribution of roles in public health activities;
- foster collaboration on disseminating consistent public health information among stakeholders; and
- strengthen the implementation of envisaged public health activities.

Notably, the self-assessment process itself also revealed the need to dismantle systemic and ideological barriers to data sharing, and to enhance access to information across sectors.

Based on these findings, the self-assessment team developed a list of recommendations for further action. Going forward, Kazakhstan's regulatory framework for health policy-making, its national and subnational health coordination councils, and strong governmental support will drive the ongoing development of its public health services.

Introduction

Recognizing the importance of a self-assessment of the 10 essential public health operations (EPHOs), the Ministry of Health of Kazakhstan (formerly the Ministry of Health and Social Development (MHSD)) undertook to publish this report. The findings of the report may be used as a baseline assessment – an analysis of the status of public health services in the country as of 2016. All names of organizations, operational documents, working group members and findings in this report are provided as of 2016.

However, the authors emphasize that many transformations in the public health system happened simultaneously with both the EPHO self-assessment and the preparation of this report. Notably, the MHSD was reorganized into the Ministry of Health, and the Consumer Rights Committee (CRC) under the Ministry of National Economy (MNE) was reorganized into the Public Health Committee under the Ministry of Health. Conceptual approaches to the development of integrated public health services were also discussed and adopted.

The development and implementation of certain activities within the framework of public health services development are now in progress, consistent with the recommendations of the EPHO self-assessment.

The authors would like to express gratitude to the WHO Regional Office for Europe and the WHO Country Office in Kazakhstan for their technical assistance with the self-assessment, and their advice during discussions of conceptual approaches to the development of public health services in Kazakhstan.

BACKGROUND AND OVERVIEW

In April 2016, the MHSD undertook a comprehensive EPHO self-assessment. Under the direction of Dr Yelzhan Birtanov, it took a leading role in the coordination of this effort in close collaboration with other agencies and institutions, including the CRC under the MNE, and with the guidance of the WHO Regional Office for Europe. The Health Services Department of the MHSD acted as Secretariat.

The MHSD and CRC identified key institutions responsible for each area of the EPHOs. However, as some EPHOs, such as EPHO 3 (health protection, including environmental, occupational and food safety), covered diverse topics, it was at times difficult to designate a single leading institution. In these cases, work proceeded in subgroups.

The self-assessment commenced in April 2016. It consisted of several phases, including an introductory workshop hosted by the MHSD and WHO; organizational procedures; training for specialized groups on the self-assessment tool; and the collection and analysis of information. Following the self-assessment, the team developed the recommendations summarized in this document.

RATIONALE AND SCOPE

People in the WHO European Region, including in Kazakhstan, live longer and healthier lives than ever before. The life expectancy gap among countries is narrowing, but the gap in terms of health status remains unacceptable. Variable behavioural determinants raise concerns, in particular tobacco and alcohol consumption and obesity rates; unless these reduce considerably in the future, life expectancy gains may be lost.

In 2012, the WHO Regional Committee for Europe endorsed the European Action Plan for Strengthening Public Health Capacities and Services (EAP-PHS) as a key pillar for implementing the overarching regional policy framework on health and well-being Health 2020. The EAP-PHS identified 10 EPHOs that all public health systems should implement. It views public health as:

- an outcome – equitable health and well-being improvement;
- a whole-of-government and whole-of-society approach – the engagement of the entire government system and all of society to embed health in all policies; and
- special functions within the framework of health services delivery – these are related to health promotion and protection and disease prevention in relation to primary and secondary care.

The implementation of many EPHOs goes beyond the responsibilities of ministries of health. In Kazakhstan, it involves collaboration with many ministries and agencies, such as the Ministry of Interior (emergencies, road safety), the Ministry of Agriculture (food safety), the Ministry of Culture and Sports (physical activity), the Ministry of Energy (environment and health), the Ministry of Education and Science (health behaviour among school-aged children), etc. Engaging more stakeholders and defining the functions of each is therefore critical. The need to analyse the current situation is clear, as is the need to develop options for the further development of public health services in the country.

The EPHO self-assessment tool developed by the Regional Office provides countries in Europe with a unified approach to enabling the development of more integrated and coherent public health policies. It has become a relevant and timely document for all those working to strengthen the health system of Kazakhstan.

ORGANIZATIONAL STRUCTURE AND METHODOLOGY

The self-assessment process in Kazakhstan was formally launched at a workshop hosted by the WHO Country Office in Astana on 21–22 April 2016. It included the participation of leadership of the MHSD and the CRC and subordinate institutions, and the active engagement of WHO experts including Dr Martin Krayer von Krauss (Technical Officer, WHO Regional Office for Europe) and Dr Melita Vujnovic (WHO Representative in Kazakhstan and Head of the WHO Country Office).

All participants agreed on the need for and timeliness of the EPHO self-assessment. They discussed the sequence of next steps and the engagement of agencies, institutions and experts. They also emphasized the need for an MHSD administrative order on the self-assessment, and the designation of responsible institutions and people. WHO assured its partners in Kazakhstan that it would provide all possible guidance. The WHO Country Office allocated resources to recruit a self-assessment coordinator who would be responsible for facilitating collaboration among all those involved.

As a result of intensive preparation and discussions among leading participants, the MHSD produced Administrative Order No. 441 "On certain issues of improvement of governmental policy in the field of public health" on 30 May 2016.

Administrative Order No. 441 also approved the Commission (Specialized Groups) and Working Body (Secretariat), and designated institutions for the collection of data for each EPHO (see Table 1).

Table 1. Institutions responsible for the collection of data according to EPHO

EPHO		Institution responsible for data collection
1.	Surveillance of population health and well-being	Republican E-Health Centre
2.	Monitoring and response to health hazards and emergencies	CRC under the MNE; Applied Research Centre for Sanitary and Epidemiological Expertise and Monitoring (ARC SEEM)
3.	Health protection, including environmental, occupational and food safety	3.A. Environmental health protection: ARC SEEM 3.B. Occupational health protection: National Centre for Occupational Health and Diseases 3.C. Food safety: Kazakh Academy of Nutrition 3.D. Patient safety: Committee for Quality Control of Medical and Pharmaceutical Performance under the MHSD 3.E. Road safety: Research Institute of Traumatology and Orthopaedics under the MHSD 3.F. Consumer product safety: ARC SEEM
4.	Health promotion, including action to address social determinants and health inequity	National Centre for Problems of Healthy Lifestyle Development (NCPHLS)
5.	Disease prevention, including early detection of illnesses:	NCPHLS
6.	Assuring governance for health and well-being:	Republican Healthcare Development Centre
7.	Assuring a competent and sufficient public health workforce:	Republican Healthcare Development Centre
8.	Assuring organizational structures and financing:	National Health Chamber
9.	Information, communication and social mobilization for health	NCPHLS
10.	Advancing public health research to inform policy and practice	Republican Healthcare Development Centre

Key findings of the self-assessment

EPHO 1: SURVEILLANCE OF POPULATION HEALTH AND WELL-BEING

Description of the EPHO

EPHO 1 covers the tools and means used to monitor population health, as well as basic performance standards and reporting systems.

Section A deals with health data sources and tools within and outside the health system. These include the civil registration and vital statistics system, health-related surveys, the health management information system and existing disease registries.

Section B covers the main areas of health information collected according to the elements described in the rest of the tool. Other areas that require specific information systems are also included, such as maternal and child health, immunization coverage and health inequalities.

Section C looks into countries' surveillance of health system performance, including aspects of financing, the workforce, user satisfaction, access to essential medicines and cross-border health trends (this is particularly relevant to European Union (EU) Member States).

Section D focuses on the treatment of health data, whether it is subject to global analysis and whether useful information is provided to decision-makers in a timely way.

Fig. 1. Summary of scores for EPHO 1

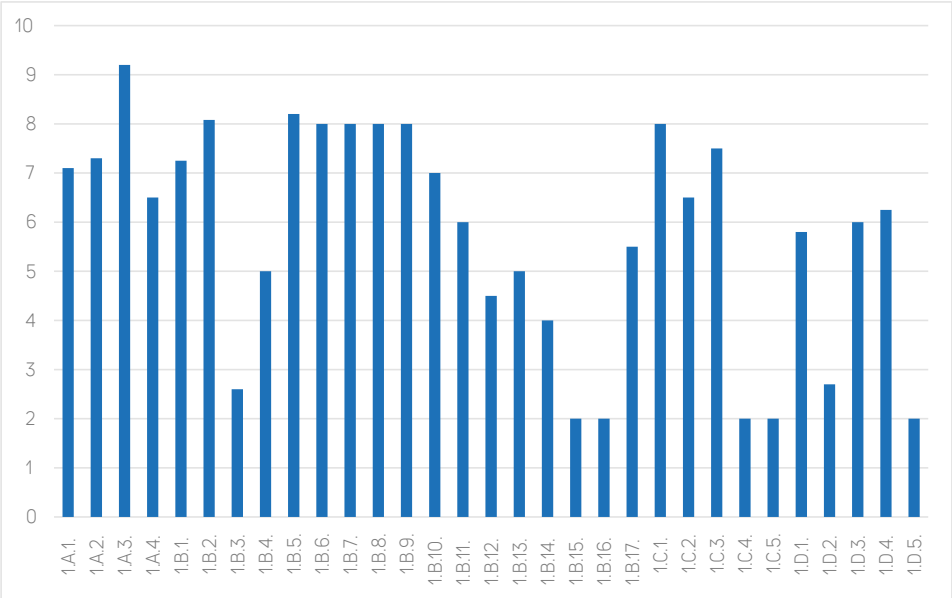

Table 2. Summary of strengths and weaknesses for EPHO 1

Strengths	Weaknesses
■ Strong legal framework in the form of the Marriage and Family Code, the Health Code and regulations of the Statistical Committee of the MNE and MHSD ■ Communicable disease monitoring ■ Health status assessment by existing information and communication technology (ICT) programmes ■ Infrastructure and resources for disease registration ■ Disease and cause-of-death coding according to the International Classification of Diseases, 10th revision (ICD-10) ■ Household surveys every 5 years ■ Health management information system based on health-care facilities ■ Disease registers for communicable diseases and major chronic conditions ■ National Health Accounts analyses with breakdown by expense item ■ Human resources (HR) monitoring ■ Assessment of affordability, availability and readiness to deliver health care	■ Incomplete ICT systems ■ Inadequate capacity in disease coding ■ Poor-quality statistical data ■ Absence of surveys on the state of health-care facilities ■ Absence of noncommunicable disease (NCD) surveillance according to the WHO STEPwise approach to surveillance ■ Absence of mental health screening ■ Absence of data on availability of 20 essential medicines in public and private health-care facilities ■ Absence of data on the share of laboratories participating in external quality control ■ Absence of International Health Regulations (IHR) (2005) data in ICT systems ■ Absence of systematic reporting on IHR implementation

Summary of findings

1.A. Health data sources and tools

1.A.1. Civil registration and vital statistics system

- A legal framework for civil registration and vital statistics is in place. This includes the Marriage and Family Code, Code No. 193-IV "On the health of the nation and the health-care system" of 18 September 2009 (the Health Code), and regulations of the Statistical Committee of the MNE and MHSD.
- The vital statistics system is organized and functioning.
- Certificate completion within and outside hospitals is consistent with ICD-10; causes of death are specified in death certificates in accordance with ICD-10 rules and procedures.

1.A.2. Health-related surveys

- In 2015, the country conducted a Multiple Indicator Cluster Survey with support from the United Nations Children's Fund (UNICEF). This will be conducted at 5-year intervals.

1.A.3. Disease registers

- The ICT systems for polyclinic health-care facilities, outpatient care and the outpatient care payment system are designed for: computerized entering and processing of outpatient statistical records; storage and obtainment of health-care facilities' documentation; and screening of the child and adult population.
- ICT support for primary health-care financing is based on integrated capitation rates and automated business processes at the outpatient level.
- The ICT system enables: internal and external referrals to counselling and diagnostic services; patient appointment scheduling; automated appointment scheduling; registration of house calls and emergency cases; maintenance of statistical records on visits and screening; automated primary reporting; optimization of business processes; and documentation for decision-making.
- The drug management ICT system serves as a reliable instrument for: providing ambulatory patients with free health care (medicines and medical devices) under the guaranteed health benefit package (approved by Government Resolution No. 2136 "On approval of the guaranteed health benefit package" of 15 December 2009); formulating a unified approach to prescription; and registration (reporting). Its key objectives include:
  - identifying needs and contracting for the procurement of medicines and medical devices to be provided for free at the outpatient level by health administrations and the MHSD (at local and national levels);
  - enabling electronic prescriptions (e-prescriptions) by doctors at the local level;
  - collaborating with health-care facilities that provide outpatient care and pharmacies that dispense medicines for free;
  - recording the free-of-charge provision of medicines and medical devices in pharmacies; and
  - ensuring capability for using data entered into the system for reporting.
- The Hospitalization Bureau provides information to parties involved in the hospitalization of scheduled patients on the availability of hospital beds, the waiting list for scheduled hospitalization, and hospitalized patients or patients rejected for hospitalization.
- Kazakh people's anonymous access to information in the Hospitalization Bureau enables them to review the availability of hospital beds and the status of the waiting list. To exercise their rights to health under the guaranteed health benefit package, citizens should be affiliated with a primary health-care organization.
- The electronic register (e-register) of hospital patients is designed for the automated collection of treated inpatient cases and hospital substitution cases according to statistical records of discharged cases and discharge reports. This facilitates the financing of hospitals and hospital substitution care from the republican budget, and the generation of statistical reporting on hospital performance, the structure of treated cases, and income and expense structures.
- The e-register of cancer patients is designed for storing and processing information about cancer case management, collecting statistical and analytical information, and preparing payment documents.

1.B. Surveillance of population health and disease programmes

1.B.1. Cause-specific mortality

- The Statistical Committee of the MNE and health-care organizations provide mortality data (registration, collection, processing). Health authorities use these data for benchmarking and operational management. Age-specific mortality rates are estimated for the overall population, and separately for men and women.
- The following indicators are estimated for in-depth analyses of prevalence and structure of mortality causes: crude mortality rate, mortality by cause in a given age group, and structure of mortality by cause, age and gender.
- Such information is available on the website of the Statistical Committee, at its *oblast*- and city-level offices, and in the annual statistical publication of the MHSD "Population health in Kazakhstan and performance of health-care facilities".

1.B.2. Selected morbidity

- Morbidity is registered in accordance with international requirements by appropriate institutions pursuant to regulations. The MHSD's annual statistical report contains morbidity data by cause in the regions according to 14 clinical groups under ICD-10. Detailed information is available on the website of the Statistical Committee and at its *oblast*-level offices. Operational information is available on the MHSD's website.

11.B.3–17. Public health surveillance

1.B.3. Risk factors and determinants

- The CRC includes the Surveillance Department, which is responsible for data recording, processing and analysis by risk factor and social determinant. Risk factors are conventionally divided into three groups: biological (genetic), physical (environmental) and social.

1.B.4. Child health and nutrition

- The MHSD's annual statistical report includes information on medical and preventive care to children, information on the performance of health-care facilities that provide paediatric care, and official data on infant mortality by disease classes.

1.B.5. Maternal and reproductive health

- The MHSD's annual statistical report includes information on antenatal, obstetric and postnatal care. Operational data on reproductive health can be obtained from the Register of Pregnant and Fertile Women.

1.B.6. Immunization

- The CRC's Surveillance Department is responsible for data recording, processing, analysis, planning and estimating in relation to vaccination. The CRC is also responsible for monitoring immunization complications and safety. Quantitative data on the implementation of the country's immunization plan are available on the CRC's website.

1.B.7. Communicable diseases

- The MHSD's annual statistical report includes comparative information on communicable disease morbidity for the last two years (in absolute terms and per 100 000 population) by region in accordance with 18 clinical groups under ICD-10. Tuberculosis (TB) morbidity is presented in a separate section. Data are available on the MHSD's website.

1.B.8. NCDs

- The MHSD's annual statistical report includes comparative information on the main NCD classes for the last two years by region, as well as NCD-related morbidity among women.

1.B.9. Social and mental health

- The MHSD's annual statistical report includes comparative information on mental and behavioural disorders, including disorders related to substance abuse, for the last two years.

1.B.10. Environmental health

- The CRC's Surveillance Department is responsible for data monitoring, recording, processing and analysis by environmental indicator (air, water, soil, etc.). Quantitative data on key indicators are available on the CRC's website.

1.B.11. Occupational health

- The CRC's Surveillance Department is responsible for data monitoring, recording, processing and analysis by occupational health indicator. Quantitative data on key indicators are available on the CRC's website.

1.B.12. Road safety

- At present, trauma and orthopaedic care related to traffic accidents is covered by the guaranteed health benefit package and MHSD Administrative Order No. 514 "On approval of traumatology and orthopaedic care standards" of 25 June 2015.
- The implementation of the unified orthopaedic standard will reduce complications and mortality. An organized system of injury prevention, emergency response and rehabilitation will improve public health status.
- The creation of road medical rescue posts to provide first aid in case of accidents is another important step in reducing harm.

1.B.13. Traumatism and violence

- Seeking health care for trauma and/or violence is registered in the country's health information systems. Each month, these data are provided to the Research Institute of Traumatology and Orthopaedics for analysis.

1.B.14. Nosocomial infections

- The CRC's Surveillance Department is responsible for data monitoring, recording, processing and analysis of nosocomial infection cases. Current data on the most prevalent nosocomial infections are available on the CRC's website. Type of nosocomial infections depends on hospital specialization, antimicrobial stewardship policy and patient cohort. Microbiological monitoring of antimicrobial resistance is a decisive factor in therapy choice in health-care facilities.

1.B.15. Antibiotic resistance

- All multidisciplinary hospitals have the capacity to undertake antibiotic sensitivity testing of biological samples through the CRC and its Surveillance Department.

1.B.16. Migrant health

- Migrants receive health services in accordance with MHSD Administrative Order No. 665 "On approval of regulations on immigrant health care" of 30 September 2011.

- Health care for immigrants is offered free of charge within the framework of the guaranteed health benefit package and in accordance with the scope of services guaranteed by the Regulations on Free Healthcare approved by Government Resolution No. 1887 of 19 November 2009.
- Under the guaranteed health benefit package, immigrants receive free health care for acute conditions that put others at risk (in accordance with the list of conditions approved by Resolution No. 2018), unless otherwise stipulated by international treaties ratified by Kazakhstan. In other cases, health services are offered on a paying basis.
- Immigrants coming to Kazakhstan to return to their historical homeland (ethnic Kazakhs and family members) receive free health services in the same manner as citizens of Kazakhstan.
- Patient-specific data on health services to migrants are available in ICT systems, and are protected for information security reasons.

1.B.17. Health inequalities

- Government policy aims to eliminate inequalities that give rise to the following:
  - growth of infant mortality;
  - growth of maternal mortality;
  - growth of TB morbidity;
  - increased prevalence of communicable disease;
  - lowered life expectancy; and
  - unequal access to health services.
- Over a lengthy period of country development, these indicators have shown a positive development trend.
- Due to low population density and significant distance from *oblast*- or republican-level centres, certain rural populations face difficulties in accessing emergency care. To address this, air ambulance services have been established and are improving.
- Data related to health inequality are available in the MHSD's annual statistical report.

1.C. Surveillance of health system performance

1.C.1. Monitoring of health system financing

- National Health Accounts indicates what resources are available from various sources for health care, and carefully monitors financial flows from one entity in the system to another (for example, how funding from the MHSD goes to different health-care providers for various health services). It covers all health expenditures in the country, including public, private and donor-funded.

1.C.2. Monitoring of health workforce

- The Human Resources for Health (HRH) Observatory supports the development of the health workforce through an efficient system for HR planning and forecasting; by monitoring the availability of HR in health-care facilities; and by efficiently managing decisions related to HRH.

1.C.3. Monitoring of health-care utilization, performance and user satisfaction

- Health-care providers keep primary records of visits and quality of health services in the polyclinic ICT system and the e-register of hospital patients, while operational data is updated on the MHSD's website each month.

- At the end of the year, official data are published in the MHSD's annual statistic report with comparisons for the last two years.
- User satisfaction is measured in surveys; data are available on the websites of authorized entities.

1.C.4. Monitoring of access to essential medicines

- The dispensing of subsidized medicines is recorded and monitored in the drug management ICT system. Operational data may be obtained for any period of time and used by health-care providers and health authorities for demand planning.

1.C.5.. Monitoring of cross-border health

- The MHSD keeps records of and monitors patients referred for treatment abroad and funded from the Government budget.

1.D. Data integration, analysis and reporting

1.D.1. Health sector analysis

- The Health System Observatory is established.
- Situation analyses are undertaken during preparations for sector development planning with the involvement of health system analysts. Independent studies are also reviewed.
- Epidemiological, socioeconomic, demographic and other data related to population needs for health services are recorded in the planning process.
- Main health policy directions, services and investments are analysed.

1.D.2. Provision of updates on compliance with the International Health Regulations (IHR)

- The strategic development, health services, and HR departments of the MHSD notify and update WHO on public health events of international concern.
- These departments also collaborate with neighbouring countries to strengthen cross-border surveillance and response, and with other countries for the purpose of upholding IHR commitments.

1.D.3. Participation in and compliance with NCD monitoring reports

- The strategic development, health services, and human resources departments of the MHSD are capable of collecting data by indicators specified in the WHO Global action plan for the prevention and control of NCDs 2013–2020.

1.D.4. Development of annual health statistical reports

- Sufficient health data are available for evaluation in the MHSD, as are financial resources for the production of annual health statistical reports. However, further expansion of these functions is limited by current budget constraints.

1.D.5. Monitoring and reporting on regional or global health and development movements, such as the Millennium Development Goals (MDGs), the Post-2015 Development Agenda and universal health coverage

- The accuracy and quality of reports are considered high.
- These reports are disseminated among various international organizations.
- Relevant offices and units of the MHSD use them for policy-making, and share relevant information for research with all those who need it.

EPHO 2: MONITORING AND RESPONSE TO HEALTH HAZARDS AND EMERGENCIES

Description of the EPHO

EPHO 2 is related to the systems and procedures that need to be in place to prepare for and respond to a public health emergency.

Section A focuses on the identification and monitoring of health hazards. It includes a list of the main hazards (natural, human-caused and technological) to include in a national risk assessment, as well as questions on supportive infrastructures and on national capacity to predict disasters before they occur.

Section B deals with the core capacities, systems and services needed to respond to an emergency, including the institutional framework, health sector emergency plan, coordination structures, warning systems and critical response services.

Section C specifically covers IHR implementation. It is based on the IHR implementation guidelines and conceived as a rapid assessment to help health authorities understand what major gaps may exist with regard to the IHR.

Fig. 2. Summary of scores for EPHO 2

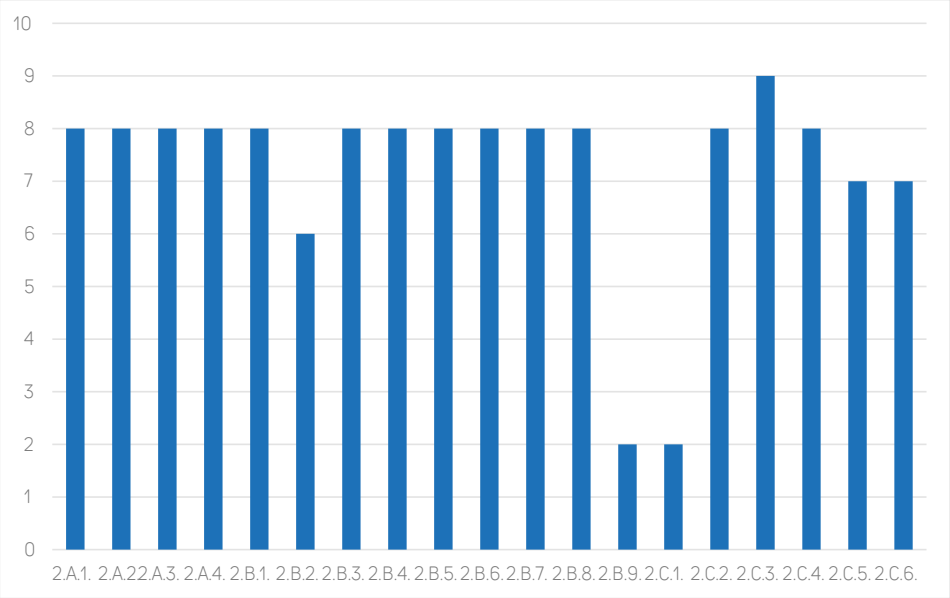

Table 3. Summary of strengths and weaknesses for EPHO 2

Strengths	Weaknesses
■ Special emergency response units available in regional and republican sanitary and epidemiological entities ■ Organizations to respond to natural and technological disasters and to participate (under general guidance from the Emergencies Committee of the MI) in investigations of and response to public health emergencies ■ Ongoing monitoring of: ▪ especially dangerous infections (plague, Crimean–Congo haemorrhagic fever, Korean haemorrhagic fever, tularaemia, etc.); ▪ iodine and iron deficiency in the population, and prophylaxis including salt iodization and flour fortification; ▪ botulism and food-borne diseases; ▪ toxicity of children's games and toys; ▪ sanitation of schools, preschools, and summer and school camps; ▪ air pollution in work zones; ▪ working conditions and occupational health at industrial sites; ▪ occupational pathologies and temporary disability at industrial sites; ▪ food facilities; ▪ air quality in residential settlements; ▪ acceptable risk in sanitary protected zones of large industrial sites ■ Accredited laboratories with capacity for expert and diagnostic testing and risk assessment of harmful environmental factors within subordinate organizations of the CRC ■ Control and monitoring of risk factors in emergencies	■ Absence of a national emergency response plan relevant for international public health ■ Inadequate interaction among stakeholders and other governmental bodies ■ Absence of a health sector emergency plan outlining distinct responsibilities

Summary of findings

2.A. Identification and monitoring of health hazards

2.A.1. Risk and vulnerability assessments in accordance with an all-hazard/whole-health approach

- Health hazards caused by chemical substances in air, drinking-water, water bodies, soil, food, and residential and public buildings (including during construction) are assessed. The combined influence of multiple environmental factors is also assessed.
- Additional financing is available for: procuring medicines (including bacteriophages, saline solutions and vaccines), laboratory inputs and disinfectants; engaging additional transport; organizing restrictive events; training personnel; and raising public awareness.
- Civil Protection Law No. 188-V ZRK (with amendments as of 22 April 2016) determines the procedure for prevention, detection and response to specified hazards.

2.A.2. Capacity to set up an early warning alert and response network (EWARN) to deal with challenges associated with displaced populations

- The MHSD and the Emergencies Committee of the MI are responsible for early warnings and updates on health data.
- The system of communicable disease surveillance in the local CRC offices has the capacity to conduct risk assessment in order to prioritize diseases to be included in the EWARN.
- Trained experts are in place to control outbreaks and conduct outbreak investigations using standard questionnaires and epidemiological maps.
- A rapid reporting system for suspected cases of communicable diseases is in place. The response following the receipt of a notification is regulated by MNE Administrative Order No. 451 "On approval of registration rules and record of cases of infectious, parasitic and occupational diseases and poisoning" of 24 June 2015, and by reporting rules.
- Nine national reference laboratories function under three ministries (MHSD, MA, MNE) to ensure standardized testing.
- Each governmental entity and organization of the CRC and MHSD has designated units with resources and professional skills for the rapid creation of an EWARN.
- The Emergencies Committee of the MI, as well as the MNE and the MHSD, perform official assessments of the EWARN. All capacities and conditions are in place to enable assessment in 36–48 hours.
- The EWARN is in place and functioning. Organizations responsible for the provision of information are equipped with computers, email and reliable telephone/fax communication; however, regular modernization of computer equipment is needed.

2.A.3. Laboratory support for investigation of health threats

- Nine national reference laboratories function under three ministries (MHSD, MA, MNE) to ensure standardized testing.
- The laboratories use informed consent forms for biological sample collection and testing. The results of each test are delivered to the health-care facility where the sample was collected, and exchanged between ministries when needed.
- A laboratory network is developed; however, the regular exchange of information among the laboratories of different ministries needs improvement.

2.A.4. Ability to predict public health emergencies

- The IHR National Focal Point is designated for the early communication of outbreaks to the WHO Contact Point and the exchange information on outbreaks in other countries.

- CRC Administrative Order No. 104-OD "On approval of the roadmap for risk assessment and management in the field of sanitary and epidemiological well-being of the population" of 24 June 2016 is in place. To predict communicable disease morbidity, mathematical models are used to estimate weekly and monthly reference levels and laboratory test results of environmental and biological samples (from cases or vectors) in certain instances. Laboratory testing of environmental samples is used to detect chemical and radiation emergencies.
- The prediction of communicable disease morbidity among risk groups is based on long-term morbidity data.
- A highly sensitive surveillance system with elements of detection, early alert and response to outbreaks is in place. Prediction takes place in relation to prioritized communicable diseases.
- The system to predict chemical and radiation emergencies is not adequately managed.

2.B. Preparedness and response to public health emergencies

2.B.1. Institutional framework for emergency preparedness

- The Constitution, the Health Code and Civil Protection Law No. 188-V ZRK (with amendments as of 22 April 2016) regulate the national policy and strategy on preparedness for emergencies.
- Kazakhstan has ratified nine international conventions on chemical and radiation safety.
- It is a member of the International Food Safety and Quality Network and the Food and Agriculture Organization of the United Nations/WHO Codex Coordinating Committee in Europe. Information exchange takes place in the event of global food-related problems (for example, of melamine, *Enterobacter sakazakii* and *Clostridium botulinum* in infant formulas; *Escherichia coli* in spinach; foreign particles in chocolate bars; etc.). For biosafety and biosecurity, Government Resolution No. 1194 of 6 December 2007 approved Law No. 43-IV "On the ratification of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity" of 17 June 2008.
- Involvement in the Global Outbreak Alert and Response Network is enacted through the IHR National Focal Point, as well as through participation in the WHO Global Influenza Surveillance Network, WHO Global Polio Eradication Initiative, and Global Measles and Rubella Eradication Strategic Plan 2012–2020.
- Kazakhstan is working to further implement the IHR and global health programme of the Centers for Disease Control and Prevention (CDC) of the United States of America, as well as Decision No. 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats (pandemic influenza, Ebola virus, Zika virus, malaria, TB, etc.).
- Civil Protection Law No. 188-V ZRK (with amendments as of 22 April 2016) designated a multisectoral committee for emergency preparedness and response. Government Resolution No. 99 of 4 September 2014 established the National Health Coordination Council.
- The MHSD does not have a special unit for emergency preparedness; however, an expert is responsible for issues related to emergencies.
- Pursuant to regulations, emergencies are the responsibility of the Emergencies Committee of the MI. The Inter-Agency Government Commission on Eradication of Emergencies and the country's emergency medicine centres also operate under the Emergencies Committee.

2.B.2. Health sector emergency plan

- There is no law, ministerial order or designated plan specifying response measures to be taken by the health sector in emergencies.

2.B.3. Ministry of health's emergency preparedness and response unit.

- The press offices of each governmental entity conduct awareness-raising activates related to risks and emergencies.
- The Emergencies Committee of the MI conducts simulations and trainings.
- Each governmental entity conducts analyses and examinations of previous events at site, *oblast* and national levels.
- Operating procedures for response to biological hazards (such as a series of cases or an outbreak) are developed according to disease.
- Multisectoral collaboration is secured in accordance with the Health Code and Civil Protection Law No. 188-V ZRK (with amendments as of 22 April 2016).
- Comprehensive plans approved by local *akims* (governors) define life support measures in emergencies.

2.B.4. Coordination structure in the event of a public health emergency

- National, regional and/or international surge mechanisms, including the IHR National Focal Point and other focal points, are in place to respond to emergencies, as are focal points to coordinate support in the event of an emergency. These are regulated by Civil Protection Law No. 188-V ZRK (with amendments as of 22 April 2016).
- Each ministry has a pool of expert advisers available for particular situations.
- An online system immediately alerts authorities from the site of case detection.
- The Inter-Agency Standing Committee coordinates United Nations humanitarian activity during humanitarian crises or severe emergencies, linking them with civil society organizations and the International Federation of Red Cross and Red Crescent Societies.

2.B.5. Public information, alert and communication system

- Credible contact points within television, radio and print media (Khabar, 31 Channel, Kazakhradio, etc.) are established.
- Ministers' blogs are available on the official websites of ministries. Instagram and other internet resources are used.
- Public alerts and notifications generate real-time data on health hazards.
- The public receives practical information at all phases of an emergency, including information on consequences.

2.B.6. Protection, maintenance and restoration of key systems and services in the event of a public health emergency

- Entities of the CRC exercise control over water and food safety.
- Private and public health-care facilities provide health services.
- The Ministry of Investments and Development oversees key non-health systems.
- Pursuant to the national health development programme *Salamatty Kazakhstan* 2011–2015, approved by Resolution of the President No. 1113 of 29 November 2010, the country established a total of 40 road medical rescue posts. This achieved the programme's target in less than one year. Teams provide 24-hour health care via mobile intensive care units to those affected by traffic accidents or who seek assistance within their zone of responsibility. Several measures increase the efficiency of the rescue posts: the approval of regulations, the establishment of an emergency phone service, the establishment of an alert scheme, and the collaboration of road posts with traffic police, road maintenance and health-care facilities.

- The Emergency Medicine Centre consists of 328 staff. Each of the 40 rescue posts has a team of 5 members (a doctor, a doctor's assistant, a dispatch officer, a rescuer and a driver) trained through a rescuer programme approved by MI Administrative Order No. 235 of 16 May 2015.
- Critical infrastructure (for example, dams, bridges, communication services, etc.) is under control of the Government and *akimats* (mayors).

2.B.7. Critical response services

- The Emergencies Committee of the MI conducts and coordinates the implementation of early response plans and the mobilization of necessary resources. It also conducts and coordinates critical transport operations to/from emergency sites (evacuation of people and animals, delivery of emergency service personnel and equipment, etc.), as well as resources for activities necessitated by fatalities (extraction and identification of bodies, arrangement of temporary morgues, interaction with services to support family reunification and delivery of remains, psychological support, etc).
- The MHSD provides emergency care and health services to affected populations (medicines, blood, medical equipment and materials, etc.) in order to prevent additional morbidity and injuries.

2.B.8. Mitigation actions to reduce long-term vulnerability to public health emergencies

- Biological, chemical and radiological threats as well as threats related to food safety are hazards identified by risk and vulnerability assessments.
- The Health Code and the national health development programme *Densaulyk* 2016–2019 determine the role of the MHSD.
- Surveillance systems identify the most vulnerable groups, and established measures mitigate risks through the immunization of high-risk groups, the regular screening of decreed groups, etc.
- Broad outreach and communication systems are in place to increase social mobilization; population and civil protection experts are engaged in building capacities and reinforcing learning in homes, schools and workplaces.
- National legislation on risk mitigation is in place. Regulations facilitate cross-sectoral interaction among authorities; these are regularly amended. International conventions are ratified and mitigation measures in response to potential biological, chemical, radiological and food safety emergencies are implemented.

2.B.9. Capacity for recovery and restoration of essential health services

- Resources are available for health services restoration in emergencies.

2.C. Implementation of IHR

2.C.1. Fostering of global partnerships for implementation of IHR

- The Emergencies Committee of the MI conducts regular emergency response training that engages interested ministries. Training also takes place at *oblast*, city and site levels. Pursuant to IHR implementation, six trainings took place in 2015 and 2016 for specialists from 10 ministries.
- At the legislative level, the Government determines measures to ensure the safety of the population (through the Constitution, the Health Code, and laws on civil protection, radiation safety, food safety, chemical safety, etc.). Border systems to prevent the importation and spread of communicable diseases, and for safe immunization, are in place. The Government

supports and assists the development of laboratories by supplying the most advanced equipment and by training specialists within the country and abroad.

- A unified system of crisis centres is established under the Emergencies Committee with sufficient financing from the republican budget. A national Crisis Control Centre as well as unified dispatch units at local emergencies departments are in place. All centres are equipped with a reliable power supply and communications (internet connection, email and telephone).
- In spite of these accomplishments, coordination among services is lacking.

2.C.2. Strengthening of national public health capacities for surveillance and response

- A surveillance system covering alert, investigation and response measures in the event of reported infectious cases, including outbreaks, is in place. Analysis of the epidemiological situation and epidemic control (prophylaxis) is conducted each month, each quarter and at the end of the year. Short- and long-term prediction of infectious disease morbidity is conducted and followed by corrective measures for the most probable events and for IHR requirements.
- MNE Administrative Order No. 267 "On approval of the Applied Research Centre for Sanitary and Epidemiological Expertise and Monitoring under the CRC" of 19 November 2015 approved an IHR National Focal Point. This designated expert is available at all times for communication with the WHO Contact Point. A national plan for IHR implementation, national focal point regulations, and regulations on the collaboration of governmental entities under the IHR are drafted.
- An established interagency working group conducted an internal assessment of IHR implementation using the WHO Joint External Evaluation tool. Plans are in place to develop a national strategic five-year plan (a roadmap) for further implementing the IHR and the CDC global health programme.
- The CRC oversees the control of radiation hazard sites and compliance with sanitary requirements for use, storage, transportation and disposal of sources of ionizing radiation. Comprehensive plans for the mitigation of risks for occupational and public health, as well as environmental protection, are in place.

2.C.3. Public health security in travel and transport

- The sanitary protection of Kazakhstan's borders follows the "Regulations on sanitary and quarantine control over the importation and spread of communicable and parasitic diseases on the national border of Kazakhstan coincident with the customs border of the Customs Union and sanitary protection of the border and territory of Kazakhstan" approved by MNE Administrative Order No. 107 of 18 February 2015.
- Specialists at public health posts exercise control over compliance with sanitary hygienic and epidemic control (prophylaxis).
- When a suspected case is detected, the officials in charge of public health control undertake immediate temporary case isolation onsite or in a designated facility. A doctor from a medical post is called to assess the suspected case. If needed, the patient is hospitalized in a facility that provides care for the period needed to exclude disease diagnosis or, if it is confirmed, until recovery.
- In June 2015, international WHO experts positively assessed core surveillance capacities for events related to points of entry.
- Surveillance at points of entry is integrated with the national surveillance system. Pursuant to near-border collaboration agreements, information exchange on epidemiological

situations involving quarantine and especially dangerous infections is organized and conducted between the CRC and the surveillance authorities of neighbouring *oblasts* in the Russian Federation on a monthly basis.

2.C.4. Management of specific risks

- The country's epidemiological control and surveillance system identifies risks and builds capacities for risk reduction by means of:
  - control of compliance with sanitary requirements;
  - laboratory testing of food, potable water, air, soil and bodies of water;
  - promotion of healthy lifestyles, good nutrition and timely vaccination;
  - the arrangement of safe health-care facilities;
  - public awareness-raising about potential risks; and
  - collaboration with the MA on the prevention of zoogenic infections.
- Kazakhstan plans to develop the One Health approach, linking the health of humans, animals and the environment.
- National plans are in place for eradicating poliomyelitis, measles and rubella; responding to pandemic influenza; maintaining malaria-free status; and implementing *Densaulyk* 2016–2019.
- In case of exceptional situations, a 25% stock of vaccines is ensured every year, as well as a strategic stock of antiviral medications for influenza cases (oseltamivir, zanamivir).
- Ministerial research institutions conduct research on risk identification and the development of diagnostic, clinical and preventive measures.
- In addition to implementing other international programmes, Kazakhstan is making efforts to further implement the IHR and the CDC global health programme.

2.C.5. Preservation of rights, procedures and obligations

- In 2016, an interagency working group organized and conducted 3 meetings with the participation of officials from the ministries of health and social development, agriculture, national economy, interior, investments and development, and energy, among others, to introduce key provisions of the IHR and discuss the country's capacity to fulfil IHR requirements. The IHR is incorporated into training programmes in various ministries.
- The designated IHR National Focal Point has the capacity to immediately report potential public health events of international concern to the WHO Contact Point, and continuously reports exhaustive information on biological events. The IHR Event Information Site is also used for exchanging information about potential public health events of international concern.
- Specialists at the national level (MHSD, CRC) have taken several trainings on the legal provisions of the IHR.
- Plans are in place to coordinate actions with WHO through the IHR National Focal Point and create a group of experts.

2.C.6. Performance of studies to track progress in the implementation of IHR

- An internal assessment of the country's IHR implementation status has been conducted using the WHO Joint External Evaluation tool. The National Focal Point receives advice on improvements when necessary.
- It plans to develop a monitoring system for IHR implementation.

EPHO 3: HEALTH PROTECTION, INCLUDING ENVIRONMENTAL, OCCUPATIONAL AND FOOD SAFETY

Description of the EPHO

EPHO 3 is the first of the service delivery operations.

Section A covers protection of environmental health, including air, water, soil and housing (specifically) and climate change mitigation and energy security (more generally). Evaluators are asked to state whether guideline values and targets exist on the main environmental contaminants, whether the country complies with international agreements and whether audits are carried out in a way that can give regulators an adequate picture of environmental health. Intersectoral capacities and the effectiveness of risk management and mitigation are also covered.

Section B deals with occupational health. On the regulatory side, the questions focus on the legal protections that exist for workers, as well as the effectiveness of the sanctioning and enforcement system. The section also contains suboperations relating to health promotion in the workplace, occupational health services and integrated policies on occupational health (for example, whether occupational health is considered in related policies such as those on the minimum wage, poverty reduction, etc.).

Sections C–F relate to food safety, patient safety, road safety and consumer product safety. Each section contains questions on the regulatory framework, technical capacity for risk assessment, enforcement procedures and risk management and mitigation. The questions have been specifically adapted to the suboperations in question, although certain features (such as an emphasis on prevention and guidance, multistakeholder involvement, etc.) are common to all the items.

Fig. 3. Summary of scores for EPHO 3

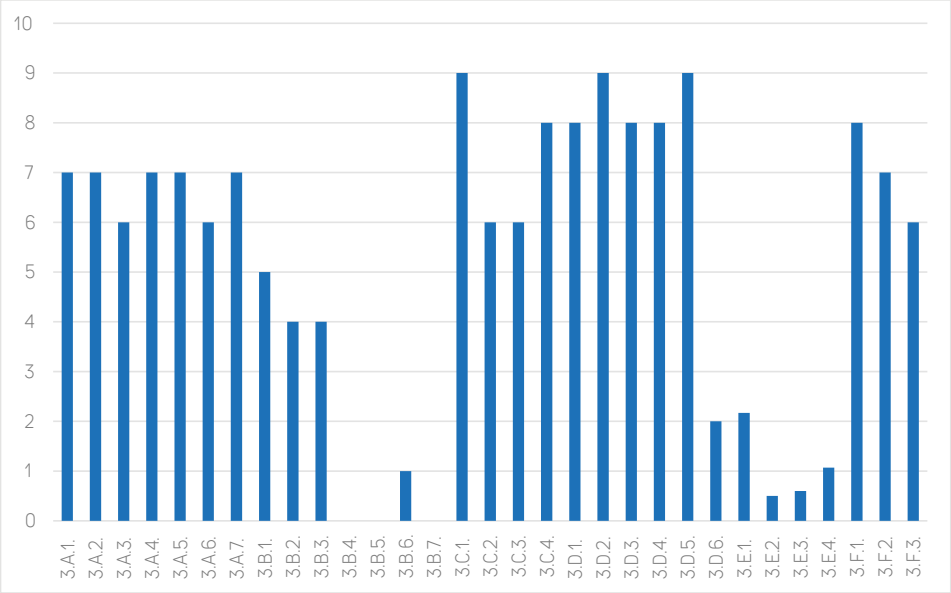

Table 4. Summary of strengths and weaknesses for EPHO 3

Strengths	Weaknesses
■ Existing national policy on food safety with specific goals and measurable indicators that uses a system of hazard analysis and critical control points ■ Access to research for evidence-based policy recommendations ■ Customs Union treaty on labelling, marketing and sales ■ Adequate regulatory framework (Customs Union technical regulations, Commonwealth of Independent States intergovernmental standards for food inspectors) ■ Inspections based on risk analysis ■ Impact assessment of hazardous factors and risks related to food based on a review of the prevalence of biological and chemical pollutants in the food chain ■ Collaboration and communication with key stakeholders	■ Absence of a single food authority with legitimate mandate and authority enabling action in all food production phases ■ Deficit of trained HR for inspections ■ Deficit of physical and administrative resources (equipment, computing capacities, laboratory capacities, etc.) ■ Insufficient financial resources ■ Insufficiently available risk-factor data from existing, reliable data flows ■ Inadequate monitoring and security checks of food at each stage of food production (harvesting, processing, transportation, storage and sale) ■ Inadequate coordination with other governmental entities ■ Inadequate use of tax incentives and disincentives ■ Inadequate governance, technical assistance and quality assurance for supporting key stakeholders

Summary of findings

3A. Environmental health protection

3.A.1. Legislative framework for environmental health protection in the areas of air, water and soil quality

- The following regulations are in place for each area of environmental health:
  - indoor air: sanitary and epidemiological requirements for the maintenance and operation of residential and other facilities and public buildings approved by the acting Minister of National Economy;
  - outdoor air: Health Standard No. 168 "On outdoor air in urban and rural settlements" of 28 February 2015, regulations on pollution prevention and control, and regulations on conventional pollutants, radiation and radioactive substances;
  - drinking-water: reference values and health-based targets for chemical, biological and radiological contaminants;
  - wastewater: regulations and controls of industrial wastewater treatment and discharge, regulations and controls of the reuse of treated wastewater in agriculture, and municipal wastewater treatment standards;
  - freshwater: standards protecting the quality of surface and ground water, and protecting wetlands, estuaries, drainage basins and coastal ecosystems from pollution; and
  - soil: a list of soil contaminants and permissible levels, per-unit standards covering the release of industrial and agricultural contaminants to the terrestrial environment, per-unit standards covering the integrated management of solid waste (municipal,

hazardous, medical) and per-unit standards covering remediation and the development of contaminated land for human use.

3.A.2. Technical capacity for risk assessment in the area of environmental health

- Kazakhstan has physical infrastructure, personnel, resources and technical capacity to perform the EPHOs related to environmental health.
- The 439 entities and organizations of the CRC consist of 12 872 full-time positions, including 6483.75 surveillance positions and 6388.25 expertise positions. Currently, 93% of positions are filled.
- At republican, *oblast* and city levels, laboratories are equipped with 80–100% of their needs; laboratories at the *rayon* level are equipped with 30–80%.
- Strengthening environmental risk assessment requires further improvements to legislation and all other aspects (financing, training, equipping) for providing a comprehensive package of public health services. Software for systematic data collection and risk analysis must be improved and followed up with biological monitoring of baseline data and geographic information system mapping linked to spatial and non-spatial data.

3.A.3. National legislation and international cooperation in the areas of climate change mitigation and energy security

- Pursuant to the Kazakhstan 2050 Strategy and the country's concept for its transition to a green economy, its overall governance structure is undergoing reform. National, sector-specific and regional development programmes have been significantly adjusted and new programmes have been approved, including the national programme for water resources management, Agribusiness 2020, Energy Savings 2020, and the Solid Waste Management Modernization Programme 2014–2050. They provide details of key areas for the development of environmental infrastructure at regional and local levels.
- Kazakhstan is largely lagging behind countries of the Organisation for Economic Co-operation and Development (OECD) in this field, exceeding several fold the energy intensity of other economies. This results in the limited competitiveness of Kazakhstan's industrial programmes and increased stress on the environment.

3.A.4. Environmental health protection in the area of housing

- Thermal insulation is measured at the commissioning stage.
- The presence of harmful agents (mould, lead, radon and other sources of radiation, asbestos, carbon monoxide, etc.) is measured at the commissioning stage and upon the request of residents.
- Building Code SNiP 3.01-02-2001 "Design and development of individual housing" regulates crowding.

3.A.5. Capacity to communicate and collaborate with key stakeholders in the area of environmental protection

- Relevant ministries, agencies and institutions are in place and joint documents are coordinated.
- The republican enterprise Kazgidromet conducts monitoring and provides data to the sanitary-epidemiological service of the CRC.
- The National Centre of Space Research and Technologies under the Air Space Committee at the Ministry of Investments and Development performs space monitoring (monitoring by satellite) of emergencies, including fires and floods.

- Public councils and nongovernmental organizations (NGOs) raise awareness of environmental protection through mass media networks.

3.A.6. Effectiveness of sanctions and measures implemented to prevent environmental harm

- Both national and international regulations are in place. National regulations are compulsory for organizations within the health sector, while international regulations are voluntary.
- Laboratories undergo an accreditation process harmonized with the International Organization for Standardization.
- Depending on the scale of harmful factors, a system of penalties is used along with measures such as suspensions and shutdowns.
- Risk information is disseminated among stakeholders through mass media networks and joint studies.

3.A.7. Institutional capacity to respond to hazards

- The Ministry of Energy is the main authority in the field of environmental protection. Its local offices report to the Committee for Environmental Regulation, Control and State Inspection of the Oil and Gas Sector, which has the appropriate mandate.
- Capacity exists to develop national strategies to respond to hazards.
- The enforcement of penalties for human health risks is poor; these mechanisms must be strengthened and made legally binding.

3.B. Occupational health protection

3.B.1. Occupational health and safety protections

- Programmes and measures related to occupational health and safety are established. Relevant documents are developed with the support of the Constitution and key stakeholders, including industry and worker representatives. Specific programmes and measures aim to promote occupational health equity and health care for workers, including workers in high-risk sectors and vulnerable groups such as migrants, women, disabled people, young workers and older workers.

3.B.2. Health promotion and protection in the workplace

- Following inspections and/or other processes, public sanitary and epidemiological authorities issue an appropriate expert opinion with regard to:
  - the operation of industrial and civil sites;
  - the location of sites of epidemiological significance;
  - estimates for new construction or reconstruction (expansions, upgrades and modernization) on sites of epidemiological significance;
  - urban planning projects;
  - draft regulations concerning maximum permissible emissions and the discharge of harmful substances and physical factors, sanitary protection zones, and raw materials and products; and
  - materials inflicting chemical, biological and/or radiological stress on soil, water and air.

3.B.3. Occupational health services for workers

- Occupational health services are integrated into *Densaulyk* 2016–2019.
- No specific occupational health programmes with the comprehensive involvement of governmental and nongovernmental sectors are developed and approved.

3.B.4. Cross-sectoral integration of occupational health into other national policies

- Workers' health is not specifically integrated into the areas of economic development, poverty reduction, immigration or trade policies, either through specific policies or measures mentioning worker health.
- The MHSD[1] is responsible for:
  - governmental policies on labour, safety and occupational health;
  - the definition of industries, shops, occupations, positions, heavy work and hazardous working conditions in which workers are eligible for shorter working hours, additional paid annual leave and raised salary;
  - appropriate procedures related to the previous point;
  - the creation of a commission to investigate group incidents in accordance with Labour Code 414-V of 23 November 2015 (and its update of 30 November 2017) and other regulations; and
  - the organization of health and safety monitoring and risk assessment.

3.B.5. Occupational hazard-reporting system and workplace inspections (see also 1.B.11)

- No registers of main occupational risks, including diseases, incidents and injuries, are in place.

3.B.6. Technical capacity for risk assessment in the area of occupational health and safety

- The lack of HR (particularly public health experts) in governmental consumer protection entities established on the basis of sanitary and epidemiological surveillance is acute. Postgraduate training should include legal and enforcement topics.
- Physical and administrative resources (equipment, ICT capacity, laboratory capacity, etc.) are inadequate.
- Coordination with other governmental agencies and financial resources is inadequate.

3.B.7. Management and mitigation of risks related to occupational health

- No collaboration or communication takes place with other ministries, laboratories, ICT systems, civil services, stakeholders represented by groups (such as industry or workers' groups), or the general public.
- Tax incentives and disincentives are not used to mitigate risks related to occupational health.
- Capacity exists for the development of national strategies for the improvement of target-based performance, but financing is not available.

3.C. Food safety

3.C.1. Food safety regulatory framework

- Several authorities and one nonprofit organization – the National Chamber of Commerce *Atameken* – are responsible for food safety.
- The following agencies have the legal mandate and authority to conduct interventions during various stages of food production:
  - the Technical Regulation and Measurement Committee of the Ministry of Investments and Development;
  - the CRC of the MNE;

1 The MHSD oversaw these functions until 2016. This responsibility was then transferred to the Ministry of Labour and Social Protection.

- the MA; and
- the National Chamber of Commerce *Atameken*.

- A national food safety policy with specific objectives and measurable targets using the Hazard Analysis and Critical Control Points system is in place.
- There is no single food agency with the legal mandate and authority to act at all stages of food production.

3.C.2. Technical capacity for risk assessment in the area of food safety

- Research on risk assessments in this area is accessible.
- Technical capacity for risk assessment, such as trained HR for inspections, physical and administrative resources, etc., is inadequate.

3.C.3. Monitoring and enforcement of food safety protection

- Partial process-based monitoring of food safety is in place; audits are conducted at every stage of food production (harvesting, processing, transport, storage and sales).
- Food inspectors have a high level of training and professional standards.
- Risk-based audits and assessments of the public health impact of food safety hazards and risks, based on the prevalence of biological and chemical contaminants in the food chain, are carried out.

3.C.4. Management and mitigation of risks with regard to food safety

- Collaboration and communication with key stakeholders take place
- The CRC's Surveillance Department has an independent mandate and the authority to halt dangerous practices, as well as the capacity to develop and implement national strategies to improve indicator-based outcomes.

3.D. Patient safety

3.D.1. Laws and institutional framework for protecting patient/provider safety

- Approved checklists of specific regulations, protocols and/or standards related to the assessment of safety and quality of institutions and health programmes (an audit operating procedure) are in place.
- The joint MHSD Administrative Order No. 1064 and MNE Administrative Order No. 831 "On approval of risk measurement and checklists related to quality of health services and the flow of medicines, medical devices and medical equipment" of 29 December 2015 is in place.
- MHSD Administrative Order No. 764 "On approval of diagnostic and clinical protocols, existing health standards and guidelines by specialty" of 28 December 2007 is in place.

3.D.2. Consumer protection with regard to health services

- If, after an audit, the CRC determines that death was preventable and a complaint against the quality of health services was legitimate, the audit materials are forwarded to the law enforcement authorities for a legal assessment of health-care workers' actions. This is in accordance with the Criminal Code of Kazakhstan No. 226-V ZRK of 3 July 2014, and with Medical Malpractice Article 317 "Malpractice by medical or pharmaceutical worker".
- Grievances may be filed at health-care facilities by:
  - submitting a paper-based complaint in a designated box;
  - communicating verbally with the chief manager of a health-care facility or a patient support service;
  - calling the helpline or call centre; or

- emailing a health-care facility via their website.
- In addition, an applicant may file a complaint against a health-care facility to higher authorities such as a health administration (via website or helpline) and the MHSD (via website, written communication, etc.). This procedure is regulated by Law No. 221 "On the procedure for reviewing complaints from individual and legal entities" of 12 January 2007 and Article 58 "Expertise of health service quality" of the Health Code.

3.D.3. Technical capacity for risk assessment in the area of patient and provider safety

- Staff of local committee offices in 16 regions (comprising almost 70 medical specialists at present) audit the quality of health services. Nine people are also engaged within the Office for Control of Medical Performance at the Pharmaceutical and Medical Activity Control Committee headquarters.
- Approximately 800 independent experts with different specialties are involved in audits, as are specialized experts from research centres and academic institutions. This improves audit practices.
- Risk assessment in health-care facilities determines the need for selective audits. The Republican Healthcare Development Centre measures all risks according to a 100-point score for each health-care facility. Subjective and objective risk assessment criteria are used based on the following sources:
  - the results of previous audits and other forms of control;
  - monitoring of reporting and data provided by the audited entity through the ICT system (such monitoring is performed by authorities, institutions and sectorial organizations);
  - analyses of information and reported data provided by authorities and organizations upon request; and
  - analyses of the official websites of authorities and mass media.

3.D.4. Monitoring and supervision of patient safety

- Patient support and quality control services are established in each health-care facility to address complaints in situ, perform systematic analysis and ensure quality improvement.
- The Office for Control over Medical Performance and local offices of the Committee for Control over Medical and Pharmaceutical Performance at the MHSD perform external quality control. The Committee relies on the Committee Charter, the Constitution, the Health Code, and laws, presidential and governmental decrees, and administrative orders of the MHSD and other regulations.
- Unified regional call centres, established in 16 *oblasts* and the cities of Almaty and Astana, empower patients to address patient safety. Their tasks include:
  - conducting timely and high-quality reviews of people's requests;
  - providing efficient feedback and advice on all topics relevant to health care; and
  - raising awareness on citizens' rights and shared responsibility for health, the guaranteed health benefit package, subsidized medicines, procedures and quality of health care, treatments covered under and procedures for accessing mandatory health and social insurance, etc.

3.D.5. Management and mitigation of risks with regard to patient and provider safety

- If health-care facilities, officials or health-care workers fail to comply with regulations, the Pharmaceutical and Medical Activity Control Committee acts according to Administrative Offence Code No. 235-V ZRK of 5 July 2014, specifically Article 80 "Incompliance with the

Procedure, Standards and Unsatisfactory Quality of Health Services" and articles 81, 82, 424 and 464.

3.D.6. National contribution to the development of and compliance with minimum standards regulating cross-border health care

- Citizens with diseases requiring advanced treatments unavailable in Kazakhstan receive treatment in foreign health-care facilities. According to the Regulations for Reference of Patients for Treatment Abroad, patients may be eligible to receive treatment at the expense of the national budget.
- Children, pregnant women and those receiving organ/bone marrow transplantation (if a donor is available) are prioritized in accordance with the waiting list for each disease.
- Children and adults who require caregivers are referred to foreign health-care facilities with an accompanying person. The MHSD covers transportation costs.
- Members of the military and police force who have been severely injured on duty are eligible for reference to foreign clinics if local doctors are unable to help them.

3.E. Road safety

3.E.1. Road safety framework

- Roads in cities and highways are repaired, although road signs are not installed everywhere. The Western Europe–Western China Highway is currently under construction.
- Driving licences are issued and differentiated by medical indications only.
- Road safety is also addressed in *Densaulyk* 2016–2019 and the national plan for road safety and trauma prevention for 2011–2020.
- A road safety coordination council operates as a working body of the Research Institute of Traumatology and Orthopaedics, and via communication with the MHSD.

3.E.2. Technical capacity for risk assessment in the area of road safety

- The lack of trained HR to carry out audits and of physical and administrative resources (equipment, ICT capacity, laboratory capacity, etc.) is a problem.
- Financial resources and access to research in this area are inadequate. This limits the development of knowledge platforms and evidence-based policy recommendations.

3.E.3. Supervision and enforcement of road safety legislation and control

- The MI's efforts to enforce road safety regulations, including proper coordination between police and other law enforcement services, are weak.
- No national multisectoral (integrated) information system on road safety or system to ensure safety and operability of both new (prior to sale) and functioning (currently in use) vehicles is in place.

3.E.4. Management and mitigation of risks with regard to road safety

- No collaboration or communication with national services and stakeholders represented by communities (local authorities, urban planners) takes place.
- Governmental entities and mass media networks promote risk awareness among stakeholders.

3.F. Consumer product safety

3.F.1. Safety regulations with regard to consumer products

- Laboratory testing is used to determine risks related to consumer products and their withdrawal or recall from the market. Penalties are imposed in the event of failure to follow product safety standards.
- Practical knowledge about international safety standards with regard to exports is needed.
- Consumer protection law is in place.

3.F.2. Technical capacity for risk assessment in the area of consumer safety

- Physical and administrative resources (equipment, ICT capacity, laboratory capacity, etc.) are available.
- Financial resources are allocated according to government contract.
- Additional training is needed for assessing risks to human health.
- Risk assessments are carried out on an ad hoc basis in particular areas. Information on risk assessment in the area of consumer safety is lacking.

3.F.3. Enforcement and risk mitigation with regard to consumer safety norms

- Collaboration with other ministries, departmental laboratories and civil services is needed.
- The CRC enforces risk mitigation with regards to consumer safety norms through inspections and the management of complaints.

EPHO 4: HEALTH PROMOTION, INCLUDING ACTION TO ADDRESS SOCIAL DETERMINANTS AND HEALTH INEQUITY

Description of the EPHO

EPHO 4 The suboperations under the health promotion EPHO were chosen specifically for their intersectoral nature. They include some of the most important and complex threats to public health, including exposure to the main behavioural risk factors for disease and the underlying social determinants.

Section A specifically deals with intersectoral and interdisciplinary capacity. The three suboperations focus on gauging the ministry of health's ability to influence and work with different stakeholders in government, in communities and in the private sector.

Section B covers the government and health system responses to the main risk factors and determinants of health, whether these are behavioural, environmental, social or a mix.

Fig. 4. Summary of scores for EPHO 4

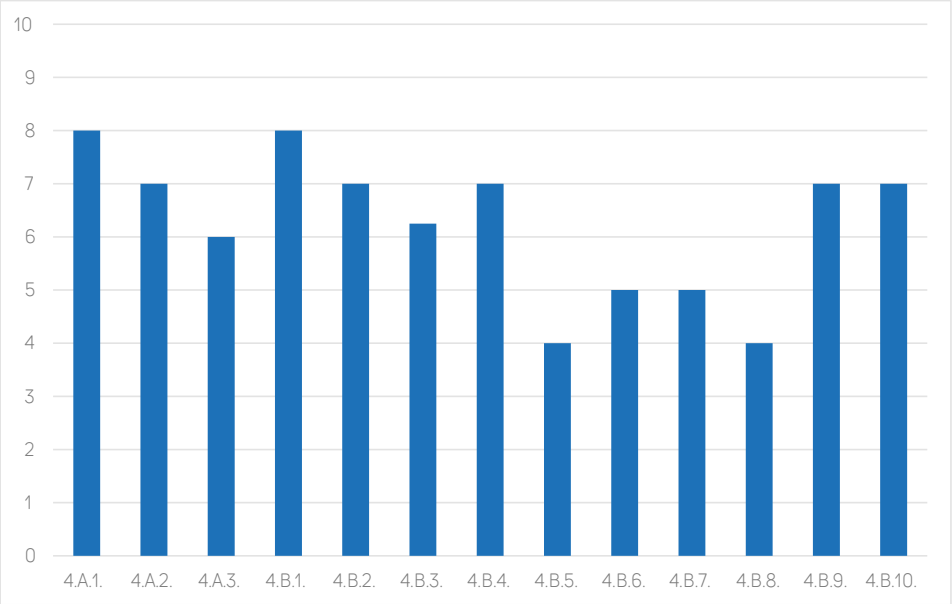

Table 5. Summary of strengths and weaknesses for EPHO 4

Strengths	Weaknesses
■ *Densaulyk* 2016–2019 and associated action plans ■ Memorandums of understanding ■ The WHO FCTC ■ Systematic outreach conducted by the NCPHLS through prevention programmes for target groups throughout the life course	■ Inadequate interagency coordination for information exchange ■ Inadequate study of social and environmental determinants of health ■ Inadequate interagency partnerships to impact health determinants ■ Inadequate sexual and reproductive health programmes and policies ■ Inadequate resources to address psychoactive substance abuse ■ Inadequate mental health policies and practices ■ Inadequate legislation to control domestic violence and violence against children and women ■ Inadequate life-course nutrition policy ■ Insufficient number of hours dedicated to healthy lifestyles in school curricula ■ Inadequate life-skills education in schools ■ Absence of a ban on the production, importation and circulation of smokeless tobacco ■ Prohibitive advertising costs for awareness-raising on central television ■ Inconsistently conducted public health research

Summary of findings

4.A. Intersectoral and interdisciplinary capacity

4.A.1. Structures, mechanisms and processes within government to enable decision-making and action, using a health-in-all-policies approach

- The following structures and mechanisms are in place:
  - *Salamatty Kazakhstan* 2011–2015;
  - *Densaulyk* 2016–2019;
  - the National Health Coordination Council under the Government;
  - subnational health coordination councils under the *akimats* of *oblasts* and the cities of Almaty and Astana; and
  - joint interdepartmental administrative orders (for example, on physical exercise and the promotion of healthy lifestyles by the Ministry of Education and Science, the MHSD and the Ministry of Culture and Sports).
- Within the framework of implementing *Densaulyk* 2016–2019 and the strategic plan of the Ministry of Health (formerly the MHSD) for 2017–2021, collegiate meetings engage the participation of local governments, the *Majilis* (the lower house) and Parliament, NGOs and businesses. Press conferences and meetings chaired by the MHSD are also held as necessary.
- Resources from central and local budgets, as well as other available and allowed resources, are allocated to the implementation of *Densaulyk* 2016–2019.
- Health impact assessments (HIAs) are performed on a full range of national policies.
- Subnational plans for multisector collaboration are developed each year. Local governments arrange events to promote healthy lifestyles and the prevention of dangerous infections.

4.A.2. Ministry of health engagement and involvement of local communities and civil society in the area of health promotion

- Regional coordination councils involve all stakeholders. Awareness-raising campaigns to promote healthy lifestyles disseminate information and educational materials via national and local television and radio stations, mass media networks, websites, social media and outdoor advertising in public places.
- Within the framework of the *Densaulyk* action plan and MHSD administrative orders, programmes are in place in the following areas:
  - the reduction of behavioural risk factors such as tobacco smoking, alcohol abuse, physical inactivity and unhealthy diet;
  - the prevention and treatment of socially significant diseases, NCDs and other diseases that impact country demographics;
  - immunization;
  - integrated management of childhood diseases;
  - integrated obstetric and postnatal care;
  - acute myocardial infarction;
  - acute cerebrovascular events (stroke);
  - malignant neoplasms; and
  - the disease management programme.
- Coordination councils operate at the local level with the participation of members of *Maslikhats* (city and regional councils), management staff, public figures, athletes, business communities, etc. Activities are performed in the regions by state authorities, the Assembly of People of Kazakhstan, the Nur Otan party, etc.

- The MHSD and health administrations in the *oblasts* and cities of Almaty and Astana oversee the implementation of social projects by NGOs.
- Programmes addressing reproductive health, the support and promotion of breastfeeding, the integrated management of childhood diseases, and the control and prevention of HIV/AIDS and TB are in progress.

4.A.3. Intersectoral capacity with regard to key national stakeholders in the private sector (industry, agriculture, communication, construction, etc.)

- The *Densaulyk* action plan is approved, and memorandums of understanding have been concluded between state authorities, the Assembly of People of Kazakhstan and the Nur Otan party. These memorandums address:
  - the development of a unified national policy on multisector and interdepartmental collaboration in the field of public health among central and local governmental authorities;
  - the development of collaboration mechanisms at the local level that build social responsibility among businesses and engage NGOs;
  - collaboration between Government, civil society and businesses to strengthen and improve safety (including workplace safety) and public health through multisector programmes on healthy lifestyles and the reduction of socially significant diseases caused by behavioural factors;
  - the health of schoolchildren and adolescents;
  - traffic safety;
  - emergency care and rescue;
  - TB and HIV/AIDS control;
  - the prevention of especially dangerous infections;
  - the development of sector-specific programmes for physical exercise and sports; and
  - the development of a system to monitor and evaluate the efficiency of the implementation of all programmes to improve public health.
- Regulations and contractual obligations are within the framework of legislation.
- Contracts and terms of references are in line with key directives of governmental policy. Oversight authorities monitor sanitary regulations.
- Public–private partnerships within the health system are implemented within the framework of Step 81 under the five presidential reforms.
- Kazakhstan is implementing the WHO projects Health Promoting Universities, Health Promoting Schools and Healthy Workplaces to raise awareness among the private sector on public health issues.

4.B. Addressing behavioural, social and environmental determinants of health through a whole-of-government, whole-of-society approach

4.B.1. Tobacco policy in line with the requirements of the WHO Framework Convention on Tobacco Control (FCTC)

- In addition to signing the WHO FCTC in 2006, Kazakhstan has put in place the following policies:
  - *Densaulyk* 2016–2019;
  - Article 159 of the Health Code (forbidding smoking in public places, such as health-care and education facilities, museums, lobbies in apartment blocks, cinemas, etc.);
  - Article 280 of Tax Code No. 99-II of 10 December 2008 (regarding excise tax and pricing measures);

- MNE Administrative Order No. 424 "On approval of the maximum permissible nicotine and tar content in tobacco products" of 9 June 2015;
- Resolution of the Council of the Eurasian Economic Commission No. 107 "On the technical regulation of the Customs Union Technical Regulation for Tobacco Products'" of 12 November 2014;
- MNE Administrative Order No. 387 "On approval of regulations for the disclosure of information on tar, nicotine and systemic poison content and carcinogenic and mutagenic substances" of 26 May 2015 (regarding tobacco packaging); and
- Resolution of the Council of the Eurasian Economic Commission No. 18 "On approval of the design of health warnings against tobacco use and the specification of their placement on tobacco packs" of 17 March 2016.

- In addition to the above policies, the following anti-tobacco initiatives and programmes are underway:
  - World No Tobacco Day campaigns involving countrywide dissemination of information and educational materials via national and local television and radio stations, mass media networks, websites, social media, and posters and banners in public places, and through training workshops for health-care workers;
  - active promotion of healthy lifestyles via websites, social media, etc.;
  - anti-tobacco centres to support people wishing to quit smoking;
  - health schools in primary health-care settings on preventing behavioural risk factors and supporting smoking cessation;
  - joint work with the National Coalition for a Smoke-free Kazakhstan to engage interested private and public organizations unaffiliated with the tobacco industry; and
  - national surveys of the prevalence of behavioural risk factors (1998, 2001, 2004, 2007, 2012, 2015), the Global Adult Tobacco Survey (2014) and the Global Youth Tobacco Survey (2014).

4.B.2. Alcohol control policy, in line with the WHO global strategy to reduce the harmful use of alcohol

- Within the framework of *Salamatty Kazakhstan* 2011–2015, the MHSD developed and implemented alcohol and substance abuse prevention programmes (video aids) in educational facilities.
- Multisector plans, memorandums of understanding, etc. related to alcohol control are included in the *Densaulyk* 2016–2019 framework. The National Health Coordination Council under the Government is operationally involved in planning and implementation.
- Annual large-scale campaigns within the framework of National No Alcohol Day take place in accordance with an administrative order of the MHSD. Stakeholders in each *oblast*, *rayon* and settlement are engaged in public awareness-raising campaigns. Information and educational materials are disseminated via national and local television and radio stations, mass media networks, websites and social media.
- In 2011, psychologists and social workers were introduced within primary health care to provide psychological and social aid, and to support the development of skills for reducing alcohol consumption.
- Health schools educate citizens on behavioural risk factors, including alcohol consumption.
- The Republican Applied Research Centre for Health and Social Problems of Substance Use in Pavlodar, the Republican Scientific and Practical Centre for Psychiatry, Psychotherapy and Substance Use in Almaty, and 18 regional substance dispensaries provide specialized care.

- The Health Code forbids the sale of alcohol to people under 21 years of age, the sale of alcohol from 23:00 to 08:00 (except for restaurants, bars and cafes), and the sale of alcohol with an ethyl alcohol content above 30% from 21:00 to 12:00.

4.B.3. Nutrition policy from a life-course perspective

Part 1. National nutrition policy framework

- Area 5.1.2. of the *Densaulyk* action plan outlines the development of healthy diets through awareness-raising on nutrition among children.
- Customs Union technical regulations on food safety and on food products labelling became effective on 1 July 2013. Planned activities include a 0.5% health tax on tobacco and alcohol, as well as a ban on advertising food with a high sugar, salt and fat content, food containing trans fats, and breastfeeding substitutes.
- Obesity prevalence surveys are conducted.

Part 2. Infant and early childhood nutrition

- Pursuant to MHSD Administrative Order No. 113 "On the protection, encouragement and support of breastfeeding" of 25 June 1997, hospitals are regularly certified for baby-friendly practices according to specific criteria.
- Counselling on breastfeeding, including for mothers of infants with low birth weights and HIV-positive mothers, is available. Health schools on family planning and preparation for childbirth and young motherhood, as well as designated healthy child rooms within public health-care facilities, provide education and counselling.
- Iodine supplementation is recommended when <20% of households have access to iodized salt. Government Resolution No. 1283 "On the elimination and prevention of iodine deficiency disorders" of 5 October 2001 and Law No. 489 "On the prevention of iodine deficiency diseases" of 14 October 2003 address iodine deficiency. Kazakhstan was certified as achieving universal salt iodization in 2007.
- Women from territories where the prevalence of anaemia among non-pregnant women of reproductive age is more that 20% could be eligible for free or heavily discounted medication and special nutrition in accordance with MHSD Administrative Order No. 637 "On approval of types of diseases and certain categories of the population eligible for free-of-charge and subsidized drug prescription and special clinical nutrition in outpatient treatment" of 23 December 2005.
- For population groups with a prevalence of night blindness of 5% or more in pregnant women or children aged 24–59 months, the following programmes are implemented:
  - supplementation with iodine, iron and folic acid to all pregnant women;
  - supplementation with iron and folic acid to women and children under 5 years of age with low haemoglobin;
  - fortification of first and superior grade flour with six micronutrients;
  - salt iodization;
  - supplementation with vitamin A to children aged 6–59 months (since 2012); and
  - initiatives to develop healthy diets and food safety skills within the population.
- In 2011, the MHSD undertook biological monitoring of micronutrients in 14 *oblasts* and the cities of Almaty and Astana. It examined a total of 1338 children aged 6–59 months and 1303 women of reproductive age (the mothers of the examined children). Further monitoring of micronutrients took place in 2012–2014 in 3 new *oblasts* each year: in East Kazakhstan, South Kazakhstan and Akmola *oblasts* in 2012; in Aktobe, Pavlodar and North Kazakhstan *oblasts* in 2012; and in Mangistau and Jambyl *oblasts* and the city of Almaty in 2014. Cross-country

comparisons of biological monitoring data from all *oblasts* in 2011, and from some *oblasts* in 2012–2014, indicated the prevalence of micronutrient deficiencies and informed the implementation of prevention programmes.

Part 3. Childhood and adolescent nutrition

- MNE Administrative Order No. 234 "On approval of sanitary regulations concerning sanitary and epidemiological requirements for public catering" of 19 March 2015, registered in Ministry of Justice Order No. 10982 of 8 May 2015, outlines all rules and requirements for childhood nutrition, including requirements for school lunch programmes.
- Life skills education, which includes information on nutrition, is optional in school curricula.

Part 4. Nutrition for healthy ageing

- No national recommendations on nutrition are developed; however, WHO principles on nutrition and healthy diets are used. Information and educational materials on increasing intake of fruits and vegetables are disseminated on national and local television and radio stations and through other mass media networks.
- Kazakhstan contributed to the development of the WHO Global strategy on diet, physical activity and health at the European regional consultation in Copenhagen, Denmark, in 2003.
- Health schools offer nutrition education.

4.B.4. National policy (strategies) on physical activity

- The following policies on physical activity are in place:
  - *Densaulyk* 2016–2019;
  - the Strategic Plan of the Ministry of Culture and Sports 2014–2018;
  - the Physical Exercises and Sports Development Concept until 2025; and
  - the 2015 National Plan "100 concrete steps to implement the 5 institutional reforms", which outlines specific measures for the development of the governmental policy on mass sports.
- Kazakhstan's Olympic games for health-care workers, national sports competitions and its large-scale Health Festival all promote mass sports in collaboration with the Ministry of Education and Science, the Ministry of Culture and Sports, and the Federation of Trade Unions. Awareness-raising campaigns for global, international and national days to promote physical activity are supported by sports events that engage various stakeholders.
- Almaty's sustainable transport strategy for 2013–2023 aims to improve the quality of public transport, integrate transport and urban planning, improve parking and traffic management, promote cycling and walking, promote low-emission vehicles and low-emission zones, integrate suburban and urban transport networks, and modernize roads to prioritize public and active transport.
- Comprehensive schools also incorporate an additional class of physical education and morning exercises, as well as national physical education standards and tests. Companies also promote 10-minute gymnastics sessions.
- Awareness-raising campaigns within the framework of global, international and national days to promote physical activity include the dissemination of information and educational materials via national and local television and radio stations, mass media networks, websites and social media.

4.B.5. Programmes and policies to promote sexual and reproductive health

- In Kazakhstan, hormonal contraception (oral, injectable and via vaginal ring) is sold by prescription only, as is emergency contraception.
- Health schools cover topics related to family planning and preparation for childbirth and young motherhood. Healthy child rooms and youth health centres also provide educational resources.
- Social projects promote sexual health.
- Within the framework of the country programme with the United Nations Population Fund, numerous activities have been jointly conducted since 2012. These have involved collaboration with the National Committee on Family and Women's Affairs, the Family and Demographic Policy under the President of Kazakhstan, the Kazakh Association on Sexual and Reproductive Health, and the Women's League of Creative Initiative. Initiatives for Islamic and Orthodox Christian organizations in the East Kazakhstan *oblast* have included workshops and the distribution of informational materials on mother and child health, reproductive health, and the prevention of gender-based violence and early marriage. Religious leaders advocate for these topics in sermons.
- Awareness-raising initiatives take place within the framework of international and national family days, World AIDS Day, International Day for Protection of Children, etc.

4.B.6. Activities to address substance abuse

- Opioid substitution therapy is conducted within harm reduction programmes (for example, needle-exchange programmes).
- Activities to address substance abuse are also conducted within the framework of campaigns for World No Tobacco Day, International Day Against Drug Abuse and Illicit Trafficking, and National No Alcohol Day.

4.B.7. Policies and practices related to mental health

- MHSD Administrative Order No. 479 "On amendments to Administrative Order of the Acting Minister of Health No. 7 of 5 January 2011 'On approval of regulations for health-care facilities providing outpatient polyclinic care'" of 17 August 2013 addresses mental health.
- Health schools provide education on behavioural risk factors related to mental health.

4.B.8. Legislation to control domestic violence and violence against children and women

- Kazakhstan's Constitution and its Marriage and Family Code provide equal legal rights with regard to ownership, access to divorce procedures and trusteeship rights after the separation of spouses.
- Activities within the framework of implementing Presidential Resolution No. 560 "On the National Commission on Family and Gender Policy under the President of Kazakhstan" of 1 February 2006 raise public awareness in order to end the tolerance of violence.

4.B.9. Policies and programmes related to injury prevention

- Injury prevention programmes are available through the Health Services Department of the MHSD and the Research Institute of Traumatology and Orthopaedics.
- A sector-specific programme to ensure traffic safety in 2012–2014 achieved targets to mitigate the severity of the consequences of traffic accidents.
- A national plan for traffic safety and the prevention of trauma for 2011–2020 is in place. Annual public awareness-raising campaigns within the framework of the national plan

include the dissemination information and educational materials via national and local television and radio stations, mass media networks, websites and social media.
- Budgetary Programme No. 005 "Skills development and job retraining of workers in public health facilities" builds capacity among employees in several areas, including injury prevention.
- Public informational campaigns on injury prevention are provided on an annual basis.

4.B.10. Addressing the social determinants of health
- National programmes and action plans are developed on a cross-agency and cross-sector basis. Memorandums of understanding have been signed for health promotion in relation to *Salamatty Kazakhstan* 2011–2015 and *Densaulyk* 2016–2019, the WHO FCTC, etc.
- The 1997 presidential address "Prosperity, security and ever-growing welfare of all Kazakhstanis", the Kazakhstan 2030 Strategy, *Densaulyk* 2016–2019 and the Kazakhstan 2050 Strategy all address the social determinants of health.
- Health schools raise awareness on disease prevention with a life-course perspective, covering topics ranging from family planning to healthy ageing.
- Awareness-raising campaigns within the framework of global, international and national days disseminate information and educational materials via national and local television and radio stations, mass media networks, websites and social media.

EPHO 5: DISEASE PREVENTION, INCLUDING EARLY DETECTION OF ILLNESS

Description of the EPHO

EPHO 5 narrows in specifically on the public health services based within the health and health-care systems that prevent disease, detect it as early as possible, and ensure that patients can live with and manage morbidity, maintaining the highest-possible quality of life.

Section A deals with primary prevention, including the provision of vaccinations and health counselling on key risk factors. It also deals with specific health services aimed at preventing illness, such as maternal and neonatal health programmes, smoking cessation services and other health services.

Section B covers secondary prevention. It asks evaluators to list the population-based disease screening programmes in place, as well as a few basic quality criteria.

Section C focuses on tertiary and quaternary prevention, asking what services are in place to foster good quality of life for those living with disease, including support for patient groups and for rehabilitation, survivorship and disease-management programmes.

Section D relates to social support systems that create a supportive environment for behaviour change and assist caregivers at a psychosocial level.

Fig. 5. Summary of scores for EPHO 5

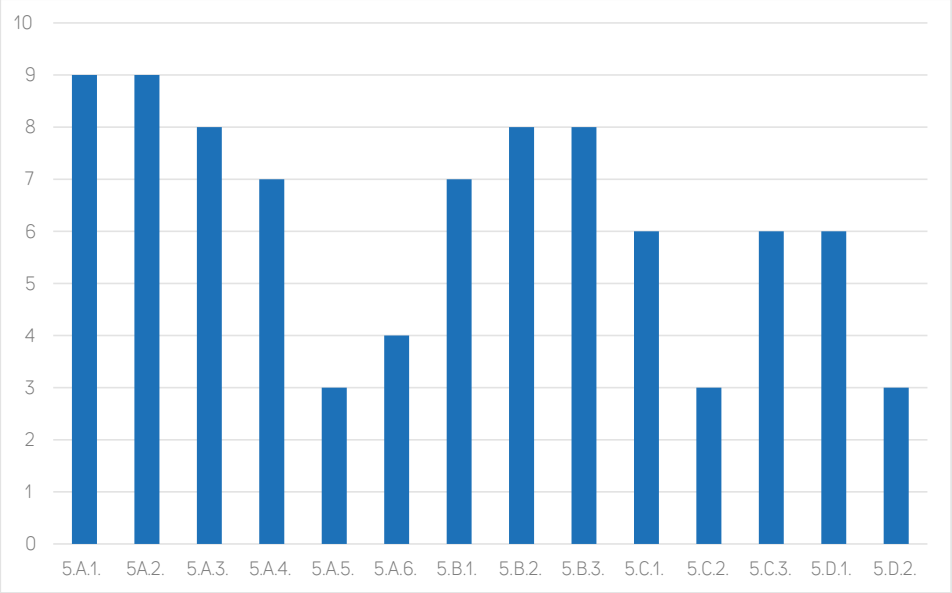

Table 6. Summary of strengths and weaknesses for EPHO 5

Strengths	Weaknesses
■ Government support to all types of primary and secondary prevention ■ Programmes and services for establishing and maintaining healthy lifestyles ■ Awareness-raising efforts in primary health-care settings related to prevention and early detection ■ National screening programme for early detection of diseases ■ National immunization programme ■ Maternal and neonatal care programmes	■ Lack of responsibility among employers for employee health ■ Poor involvement of the general public in the protection of health ■ Inadequate legislation on health care in prisons ■ Inadequate development of tertiary prevention programmes, including for outpatient rehabilitation, disease management and chronic pain management ■ Poor access to palliative and end-of-life care ■ No support for informal caregivers at home ■ Inadequate support for home care, including paediatric palliative care ■ Lack of systematic activity and solidarity among NGOs to achieve strategic targets of *Densaulyk* 2016–2019

Summary of findings

5.A. Primary prevention

5.A.1. Immunization programme

- The Health Code and Government Resolution No. 2295 "On approval of diseases subject to immunization; performance of immunization and groups of the population subject to routine vaccination" of 30 December 2009 address immunization.
- Health-care facilities are staffed with vaccination nurses, general practitioners, midwives and other qualified personnel according to MNE Administrative Order No. 194 "On approval of sanitary and epidemiological requirements for the arrangement and performance of activities related to the prevention of communicable diseases" of 12 March 2015.
- Immunization is free of charge. Access to vaccination is open to all target groups. Coverage of target groups is at least 95% per year.
- Administrative data on vaccination coverage is consistent with the results of coverage surveys. Special groups and hard-to-reach populations are on record and targeted with activities to raise awareness on and ensure immunization.

5.A.2. Provision of information on behavioural and medical health risks in health-care settings

- Within the framework of *Densaulyk* 2016–2019, ongoing activities to raise public awareness within primary health-care settings take place with the participation of stakeholders.
- MHSD Administrative Order No. 89 "On approval of the operating procedure for primary health-care workers in the promotion of healthy lifestyles and prevention of risk factors for socially significant diseases" of 17 February 2012 approves operating procedures for primary health-care workers to promote healthy lifestyles and the prevention of risk factors for socially significant diseases.
- Primary health-care settings also offer:
  - prevention counselling and social and psychological counselling through dedicated psychologists and social workers;
  - youth health centres;
  - health schools covering topics throughout the life course;
  - anti-tobacco centres;
  - public awareness-raising within the framework of global, international and national days on the prevention of communicable diseases and NCDs; and
  - a disease management programme.
- Outreach programmes raise awareness among patients on the medical and behavioural risks associated with their particular conditions. They include individual prophylaxis counselling (including during screening) and group-based prophylaxis counselling (including through health schools).

5.A.3. Disease prevention programmes at primary and specialized health-care levels

- In accordance with MHSD Administrative Order No. 479 of 17 August 2013, health schools offer education on the prevention of behavioural risk factors, diabetes, asthma, hypertension, family planning, preparation for childbirth and young motherhood, healthy childhood and healthy ageing. Youth health centres and anti-tobacco centres also offer education and support.
- MHSD Administrative Order No. 89 of 17 February 2012 approved the regulation of prevention activities.
- Screening takes place in accordance with the following regulations:

- MHSD Administrative Order No. 685 "On approval of regulations for screening target groups of the population" of 10 November 2009 (with amendments as of 16 March 2011 and 29 December 2014);
- MHSD Administrative Order No. 452 "On improvement of care delivery to pregnant women, women in labour and women of reproductive age" of 3 July 2012;
- MHSD Administrative Order No. 350 "On amendments to Minister of Health Administrative Order No. 166 of 20 March 2013 'On approval of regulations for the performance of medical examinations of persons qualifying for a driving licence and the re-examination of drivers of motor vehicles'" of 26 June 2014;
- MNE Administrative Order No. 128 "On approval of regulations for the performance of mandatory medical examinations" of 24 February 2015; and
- MHSD Administrative Order No. 647 "On approval of regulations for health-care facilities providing cardiologic, interventional cardiologic and cardio-surgery care" of 22 September 2011.

- Diagnostic and treatment guidelines approved by a protocol of the Expert Committee on Healthcare Development on 28 June 2013 recommend the use of acetylsalicylic acid (with a dosage of 75–100 mg/day long term) to people diagnosed with coronary heart disease.

5.A.4. Provision of maternal and neonatal care programmes

- Maternal and neonatal care is provided in urban and rural areas within the framework of the guaranteed health benefit package. Care provided to newborns includes regular check-ups and preventive services, including in the healthy child rooms at public health-care facilities. These services focus on the whole child, using the UNICEF/WHO Integrated Management of Childhood Illness approach.
- An integrated model of obstetric and postnatal care is in place. Within the framework of this model the availability of HR and equipment has been assessed; additional capacity-building activities and increased equipment supply are planned.
- Kazakhstan collaborates closely with UNICEF on the improvement of national standards in accordance with international ones.

5.A.5. Provision of health services to migrants, homeless people and ethnic minority populations

- The rights of foreign citizens to health care are regulated by:
  - Law No. 2337 "On the legal status of foreign citizens" of 19 January 1995 (with additions from 1 January 2018);
  - the Health Code;
  - Government Resolution No. 320 "On approval of the agreement for the delivery of health services to citizens of member countries of the Commonwealth of Independent States" of 29 February 2000 and its protocol for implementation; and
  - MHSD Administrative Order No. 665 "On approval of rules for the delivery of health services to immigrants" of 30 September 2011.
- Government Resolution No. 330 "On approval of the list of guaranteed special social services" of 14 March 2009 and No. 1222 "On approval of standards for the delivery of special social services in the field of social security of the population" of 28 October 2011 regulate the delivery of health services to homeless people.

5.A.6. National approach to prison health

- The Penal Code and the National Action Plan on Human Rights 2017–2021 regulate the national approach to health in prisons.

5.B. Secondary prevention

5.B.1. Secondary prevention (screening) programmes for the early detection of disease

- Screening is conducted for population-based samples of target groups according to MHSD Administrative Order No. 685 of 10 November 2009 (with amendments as of 16 March 2011 and 29 December 2014).
- Responsibilities for coordination and service delivery are distributed as follows:
  - the Research Institute of Cardiology and Internal Diseases oversees early detection of circulatory system diseases (hypertension, coronary heart disease) and diabetes;
  - the Research Institute of Eye Diseases oversees early detection of glaucoma;
  - the Research Institute of Oncology and Radiology oversees early detection of precancerous lesions and cancers of the cervix, bowel, colon, oesophagus, stomach, liver, prostate and breast;
  - the NCPHLS oversees early detection and follow-up of behavioural risk factors;
  - the University Clinic Aksai oversees hearing impairment in children aged 0–17 years; and
  - the Scientific Centre of Paediatrics and Paediatric Surgery oversees pathologies in children aged 0–17 years.
- Polyclinica, the automated information system of health-care facilities, is established.
- *Densaulyk* 2016–2019 also addresses screening activities.

5.B.2. Awareness programmes related to early detection of pathologies

- Awareness programmes include:
  - audio and video clips, posters, booklets and leaflets on risk factors and prevention of NCDs, communicable diseases and trauma;
  - individual and group prophylaxis counselling in health schools;
  - mass media campaigns using print media and the internet; and
  - outdoor advertising with banners and billboards.
- Pursuant to MHSD Administrative Order No. 325 "On approval of the Action Plan for the Development of Healthy Lifestyles and Prevention of Diseases in 2016" of 25 April 2016, Kazakhstan conducts annual countrywide information campaigns associated with global, international and national days on the prevention of communicable diseases, NCDs and risk factors.
- WHO projects such as Health Promoting Schools, Health Promoting Universities, Healthy Workplaces and Healthy Cities are being implemented.

5.B.3. Provision of chemoprophylactic agents to control risk factors for disease

- Prescription medication is provided to those who are willing to quit smoking.

5.C. Tertiary/quaternary prevention

5.C.1. Rehabilitation, survivorship and chronic pain-management programmes

- Individual patient rehabilitation plans are developed.
- MHSD Administrative Order No. 452 "On approval of oncological care standards – explicit pathways to link health care with psychosocial services" of 2 August 2013 addresses the provision of psychosocial services in tertiary/quaternary care.
- Pursuant to MHSD Administrative Order No. 479 of 17 August 2013, health schools provide education on topics related to tertiary/quaternary prevention.

5.C.2 Access to palliative and end-of-life care

- Tertiary-level medical education or specialty training on new methods of communication with patients and the delivery of psychological support and palliative care is offered within the framework of graduate and postgraduate medical education.
- The WHO-recommended 10 palliative care beds per 100 000 population are not fully established; beds are set aside according to estimated need.
- Psychologists and social workers are on staff in primary health-care facilities.

5.C.3. Capacity to establish patient support groups

- While collaboration takes place with associations such as the Social Fund for Cancer Patients "Healthy Asia", the Diabetic Education Fund and the Diabetic Association of Kazakhstan, resources are currently unavailable for patient support groups.
- Specialized services develop materials within their respective mandates. These include the Research Institute of Oncology and Radiology, municipal- and *oblast*-level oncological dispensaries, social funds, etc.

5.D. Social support

5.D.1. Programmes aimed at creating and maintaining supportive environments for healthy behavioural change

- Specialized services and NGOs collaborate on the development of prophylaxis programmes.
- Evidence-based interventions are targeted to specific groups.

5.D.2. Support for caregivers

- MHSD Administrative Order No. 630 "On approval of special social health services standards" of 30 October 2009 and MHSD Administrative Order No. 907 "On approval of a methodology for the position of social workers in the health sector" of 20 December 2011 address standards for caregivers.
- Patient support groups, home care (including paediatric palliative care) and tertiary prevention (including rehabilitation programmes) are not adequately developed.
- NGOs' activities are not systematic, and shared responsibility and solidarity for achieving the strategic targets of *Densaulyk* 2016–2019 are absent.

EPHO 6: ASSURING GOVERNANCE FOR HEALTH AND WELL-BEING

Description of the EPHO

EPHO 6 on governance is cross-cutting; it deals with issues such as leadership, management, accountability, planning, implementation, monitoring and evaluation. These are essential ingredients for the success of any vertically designed programme.

Section A is devoted to leadership for a whole-of-government and whole-of-society approach to public health. Suboperations deal with two aspects of leadership: the commitment of the national government and of its executive branch to improve population health and the capacity of the ministry of health to lead public health efforts both within and outside the health system.

Section B focuses on the effectiveness of the health policy cycle, covering aspects including stakeholder participation, situational analysis, planning, implementation, monitoring and evaluation as they relate to health policy formulation.

Section C deals with regulation and control. Specific areas of regulation and control are covered in detail in EPHO 3, so this section deals primarily with the ministry of health's capacity to influence government policy. It contains questions on the capacity to develop public health legislation.

Fig. 6. Summary of scores for EPHO 6

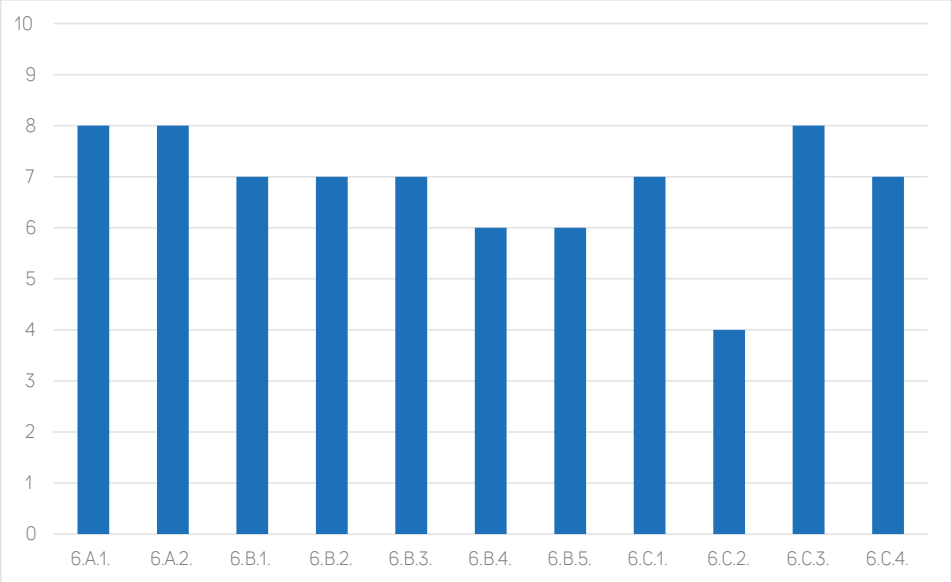

Table 7. Summary of strengths and weaknesses for EPHO 6

Strengths	Weaknesses
■ Good legal framework (Article 29 of the Constitution on the right to health, the Health Code) ■ Strategy for the Development of the Republic of Kazakhstan until 2020 ■ *Densaulyk* 2016–2019 and its action plan ■ Roadmaps for progress ■ Participation in European or international health initiatives at the highest level, including the IHR, MDGs, Eurasian Economic Union, etc. ■ A network of health authorities and facilities	■ Inadequate implementation of existing programmes, plans and regulations ■ Poor mechanisms for joint governance ■ Inadequate citizen engagement and empowerment ■ Weak governmental regulation ■ Lack of programmes for individual ethnic groups ■ Lack of information on migrants

Summary of findings

6.A. Leadership for a whole-of-government and whole-of-society approach to health and well-being

6.A.1. National government's commitment to health and health equity as an explicit priority in national policy

- Explicit political commitment to population health as a national priority is reflected in Article 29 of the Constitution on the right to health and in the Health Code.
- To achieve the key objectives of the Kazakhstan 2050 Strategy, the MHSD has committed to creating an up-to-date and efficient health system.
- Detailed consideration of health in the development agenda is reflected in *Densaulyk* 2016–2019, the strategic plan of the Ministry of Health (formerly the MHSD) for 2017–2021, the roadmap for public health services development and the development of multisectoral collaboration.
- No individual programmes for specific ethnic groups are currently in place; ethnic minorities are covered as members of the general population. In accordance with the Health Code, citizens of Kazakhstan and repatriates are covered under the guaranteed health benefit package. Labour migrants in Kazakhstan receive only emergency care for free. Foreign citizens receive all other services in health-care facilities on a paying basis.
- MHSD Administrative Order No. 7 "On approval of regulation No. 230 for health-care facilities delivering outpatient polyclinic care" of 5 January 2011 (with amendments as of 5 May 2014) outlines a clear national strategy to support universal coverage for primary health care.

6.A.2. Governance for health

- Health authorities in Kazakhstan include the MHSD, the CRC, medical care facilities at different levels, and national research and medical education institutions focused on public health and health provision.
- Smart governance strategies are systematically employed for public health challenges, including collaborative governance, citizen participation and empowerment, and balancing regulation with persuasion.
- The MHSD is actively involved in and leads on international health initiatives, such as the development of a common medicines market in the Eurasian Economic Union.
- The Strategy for the Development of the Republic of Kazakhstan until 2020 specifies long-term priorities for public health. It was developed in consultation with all political parties, leaders of the health sector, regional and local authorities and other major stakeholders.
- The role and performance of the private sector and NGOs in the country have both expanded. The Public Council under the MHSD includes the participation of NGOs.

6.B. Health policy cycle

6.B.1. Mechanisms for stakeholder participation in the health policy cycle

- The engagement of cross-sectoral structures and NGOs in designing and implementing public health policies is now one of the functions of the public health service.
- Stakeholders from the nongovernmental sector are represented in the National Health Chamber. One of their objectives is to assess projects and existing regulations relative to legislation in Kazakhstan.
- The private sector, the National Chamber of Commerce *Atameken* and the above-mentioned Public Council participate in health policy-making.

6.B.2. Situation analysis prior to formulating plans or strategies

- In considering contextual factors related to health strategy implementation, decision-makers place an emphasis on existing structures and systems, national health strategies and goals, and health priorities.
- Quantitative and qualitative information from research briefs, green papers, the contributions of scientific advisers and other sources is insufficient.
- Kazakhstan pays significant attention to international health developments in line with broad global processes and/or objectives such as the MDGs, the WHO NCD Global Monitoring Framework, etc.

6.B.3. Planning of national, regional and local strategies, policies and plans for public health

- Despite the availability and financing of public health support, regular strategic planning of services is inadequate.
- Multisectoral collaboration on promoting healthy lifestyles and reducing socially significant diseases caused by behavioural factors is underway.
- The roadmap for public health services development clearly defines responsible entities, including local governments.
- All health services around patient needs are integrated based on a commitment to modernization and the prioritized development of primary health care.

6.B.4. Implementation of strategies, policies and plans for public health

- Health authorities and local governments perform oversight, though the involvement of stakeholders should be expanded.
- Capacity and mechanisms for the adaptation of resources, timetables and interventions based on progress and emerging evidence should also be expanded.
- Full-time staff are responsible for project implementation. Project managers are designated in the CRC and its departments, the Department of Strategic Development and Public Health and public health units at health administrations in *oblasts* and the cities of Almaty and Astana. However, project management training for experts from the CRC and the Department of Strategic Development and Public Health is inadequate.

6.B.5. Monitoring and evaluation activities embedded in strategies and policies on public health

- The MHSD and the Republican Healthcare Development Centre have developed guidelines on monitoring the implementation of *Densaulyk* 2016–2019.
- Further integration of existing ICT systems is needed to increase interoperability.
- The periodicity of progress reports on national programmes is satisfactory.
- Explicit mechanisms for transparency and accountability within public health services, including indicators, are inadequate.
- Progress on public health service development is reported twice per month to the Deputy Minister of Health and once per month to the Minister of Health.

6.C. Regulation and control

6.C.1. Ministry of health's capacity to develop, enact and implement appropriate national legislation to improve public health and the promotion of healthy environments and behaviours aligned with regional and global commitments

- *Densaulyk* 2016–2019 was developed in accordance with key strategic documents, including Presidential Decree No. 922 "On the strategic development plan of Kazakhstan until 2020" of 1 February 2010; the Kazakhstan 2050 Strategy; the 2014 presidential address "Nurly Zhol

– the path to the future"; and the 2015 national plan of President Nazarbayev "100 concrete steps to implement the 5 institutional reforms".

- According to the *Global Competitiveness Report 2015–2016*, Kazakhstan ranks 42nd out of 140 countries; this represents an increase of eight points since the previous reporting period. In the indicator on health and primary education, Kazakhstan ranks 93rd. According to the *Human Development Report 2014*, Kazakhstan has high human development. It ranked 70th out of 187 countries.
- Pursuant to the United Nations Millennium Declaration, signed by world leaders, including President Nazarbayev, Kazakhstan has worked on areas such as poverty reduction, mother and child health, gender equality, disease prevention and control, access to primary education and environmental sustainability. As Kazakhstan has achieved certain MDGs – such as poverty reduction, access to primary education and the promotion of women's rights – the Government has committed to the MDG+ agenda. The MDG+ goals are adapted for Kazakhstan based on analyses of national priorities, national statistics, respective governmental programmes and the experience of other countries.

6.C.2. Performance of HIAs

- HIAs assess factors influencing quality of life according to criteria that reflect improvement or deterioration. Some of the key criteria include:
  - life expectancy;
  - mortality (also by causes of death);
  - morbidity; and
  - maternal and infant mortality.
- The implementation of *Densaulyk* 2016–2019 has led to improvement in all major health indicators. The programme aims to achieve the following targets.
  - Increased life expectancy. In 2015, life expectancy was 71.95 years – 0.33 years longer than in 2014. Life expectancy for 2016 will be summarized in April 2017.
  - Reduced mortality from key classes of causes of death. This includes infant and child mortality, suicide among young people aged 15–17 years and TB (including among prisoners).
  - Reduced maternal and perinatal mortality and improved quality of mother and child care. To this end, confidential enquiries are regularly performed in accordance with MHSD Administrative Order No. 344 "On the organization of confidential enquiries into maternal and perinatal mortality and critical cases in obstetric care" of 29 April 2016.
  - Reduced mortality from major socially significant and communicable diseases and conditions. This includes myocardial infarction, stroke, injuries, and obstetric and postnatal complications. Efforts in this area fall within the framework of implementing an integrated model of health care. The National Health Coordination Council works under the MHSD, while regional councils work under health administrations in *oblasts* and the cities of Almaty and Astana.

6.C.3. Performance of health technology assessment (HTA)

- Pursuant to Article 180 of the Health Code, the MHSD's mandate includes approval of the procedure for application of new diagnostic, treatment and medical rehabilitation methods. The definition of HTA and its role in management decision-making in the health sector is specified in MHSD Administrative Order No. 272 "On approval of the procedure for the application of new diagnostic, treatment and medical rehabilitation methods" of 20 May 2014.

- *Densaulyk* 2016–2019 aims to both improve local clinical guidelines and implement international ones based on HTAs in order to assess the viability of introducing and applying certain health technologies and medicines.

6.C.4. (for EU Member States only) Short-, medium- and long-term strategies to comply with an EU community health services system

- In 2016, based on OECD experience and recommendations from WHO and the World Bank, Kazakhstan took its first steps to develop public health services that merge functions related to communicable diseases and NCDs, healthy lifestyle development, and sanitary and epidemiological surveillance. This work includes the development of:
  - a public health service model with multisectoral collaboration;
  - a roadmap for public health services development;
  - proposals for amendments to the Health Code in areas such as the definition of public health services, mandates, objectives and functions; training; prevention of behavioural risk factors; and IHR implementation;
  - a National Public Health Centre, formed by merging 3 existing institutes;
  - units in health administrations of *oblasts* and the cities of Almaty and Astana tasked with the implementation of public health policy;
  - A multisectoral operating procedure on strengthening public health at national and *oblast* levels;
  - a roadmap for implementing the IHR and the CDC global health programme; and
  - regulations on the status and performance of national focal points for the implementation of the IHR and CDC global health programme.

EPHO 7: ASSURING A COMPETENT AND SUFFICIENT PUBLIC HEALTH WORKFORCE

Description of the EPHO

EPHO 7 concerns Member States' capacities to plan for, manage, educate and govern the public health workforce.

Section A follows the policy cycle for HR planning. It evaluates the degree to which countries understand the makeup of their workforce and how well they can anticipate and plan for future needs, implement their HR plan, and monitor and evaluate the roll-out, adapting actions as needed.

Section B relates to the management of public health HR, including organization and HR policies, recruitment and retention strategies, HR development and financing.

Section C covers three areas of public health education: institutional strength, rigour and innovation; the degree to which the educational system succeeds in preparing an adequate workforce to implement national health strategies; and the appropriateness of the curricula in public health at all levels of the educational sphere (undergraduate, graduate, postgraduate, continuing education and multidisciplinary curricula).

Section D deals with governance of public health HR, homing in on two essential aspects: leadership and partnerships.

Fig. 7. Summary of scores for EPHO 7

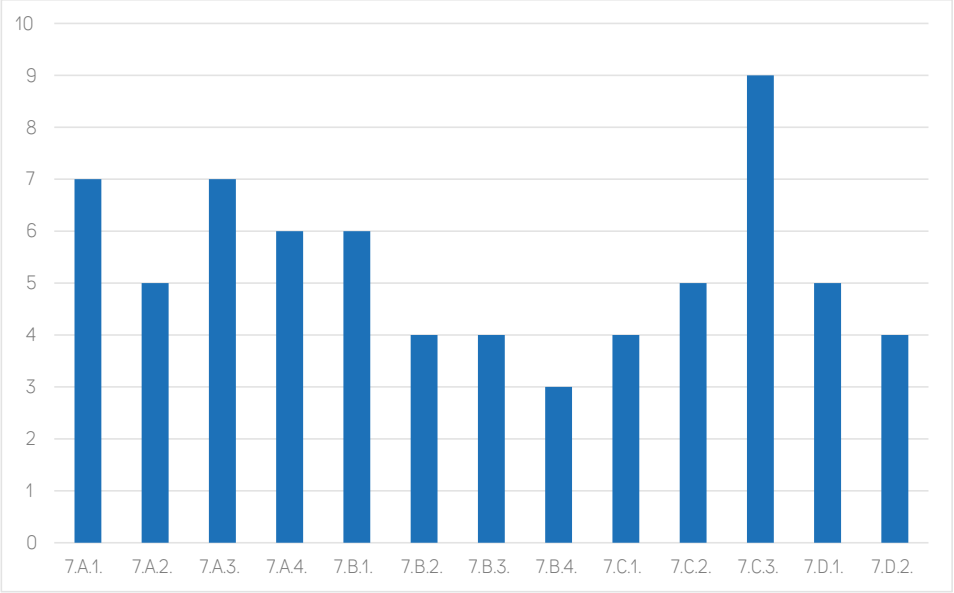

Table 8. Summary of strengths and weaknesses for EPHO 7

Strengths	Weaknesses
■ HR capacity-building and retention reflected in national strategies and policies ■ HR databases that enable the analysis of HRH distribution ■ HRH Observatory's use of advanced tools for prognosticating demand ■ Divisions responsible for HRH strategic planning ■ Resources and infrastructure for implementing the HRH development strategy ■ Monitoring and evaluation of the HRH development strategy ■ Job descriptions for public health professionals ■ Extra payment for work-related stress, difficult working conditions, etc. ■ Network of organizations providing public health training ■ Government contracts for public health graduate and postgraduate training	■ Insufficient HRH data collection system ■ Fragmented and incomplete databases ■ Absence of integrated HRH register ■ Inadequate capacity for HRH analysis and prognostication, including at the regional level ■ Inadequate involvement of other stakeholders (such as professional associations) into HRH strategic planning ■ Inadequate efficiency of HRH planning (due to lack of evidence) ■ Inadequate resources for implementing the HRH development strategy ■ Insufficient financial resources ■ Incomplete stakeholder involvement in monitoring and evaluating the implementation of the HRH development strategy ■ Inadequate HR management in health-care facilities ■ Absence of occupational standards for public health professionals ■ Uncompetitive salaries for public health professionals ■ Inadequate efficiency and quality of curricula for training the public health workforce ■ Inadequate training and skills development for professionals ■ High attrition of professionals ■ Inefficient cross-sectoral and sectoral collaboration ■ Inert professional associations in the field of public health ■ No systematic approach to conducting studies ■ Few joint research programmes between health and other sectors ■ Inadequate access of researchers to health data ■ Inadequate international exchange of data and evidence

Summary of findings

7.A. HRH development cycle

7.A.1. Situational analysis phase in HRH development strategy

- Data on the supply of HRH are available but quality is poor. The workforce is trained in a variety of medical specialties, including public health, at the undergraduate, graduate and postgraduate levels and through residencies by clinical specialty. However, poor-quality HRH training remains a problem and curricula are inconsistent with practical needs.
- Data on HRH distribution by region and on retention and attrition are available through the HRH information system and agency-specific statistical forms, but the quality and completeness of these data are inadequate. The data collection system, including the HRH information system, must be improved.
- Data on staff productivity, needs for services and service delivery outcomes are satisfactory. Improving labour efficiency in the sector requires increasing HRH and raising income rates (internal added value) by improving management at all governance levels, developing infrastructure and strengthening HRH capacity.
- Data on the private health sector are limited and quality is low. Data in health information systems (including for HRH) are entered only by those organizations that work under government-funded contracts (that is, those that provide health services under the guaranteed health benefit package).
- Material and technical resources and infrastructure in health-care facilities must be further improved, including in facilities that provide training to the health-care workforce. Technical resources for processing and analysing HRH data are insufficient.
- A system of standards (including HRH training), legal regulations and methodological approaches (approved and covering all areas, including registration, planning and training) is available in the health system. However, the quality of these tools and the capacities of people who use them are underdeveloped. As a result, they are underutilized for determining HRH demand.

7.A.2. Planning phase in HRH development strategy

- In addition to the MHSD, the planning process for the HRH development strategy engaged other major stakeholders including: the ministries of finance, education and science, labour and social security; professional associations; and educational facilities.
- Structures responsible for planning and implementing HRH plans at the level of the MHSD and local governments are in place. Dialogue platforms for health-care development, including HR development (annual health-care conferences involving all stakeholders) are also established.
- The HRH Observatory supports HRH development based on regular planning and prognostication, and the implementation of efficient HRH management.

7.A.3. Implementation phase in HRH development strategy

- Sufficient resources are available to implement the HRH development strategy; however, capacity-building for the people involved in implementation is needed.
- The responsibilities of major actors are clearly defined. The responsibilities of major stakeholders are specified in sector-specific regulations, strategies and policies.
- Clear indicators are established for evaluating the implementation of the HRH development strategy; sufficient data are available for evaluation.

7.A.4. Monitoring and evaluation plan in HRH development strategy

- Monitoring and evaluation are adequate, and evaluation indicators are in place.
- A database for monitoring and evaluation is maintained and regularly updated.

7.B. HR management

7.B.1. HR management systems in the field of public health

- The HR management system is moderately developed. It covers regulation of employee relations, occupational safety, gender equality, job satisfaction and career development. Efficient HR management policies need to be implemented at regional and corporate levels.
- HR management is reflected in national and regional strategic plans and programmes. However, financing and HR management in public health are inefficient.

7.B.2. Recruitment and retention practices with regard to HRH

- Practices for searching for, attracting and employing HRH, including among the foreign workforce, are moderate.
- Attitudes towards migrant health-care workers are moderate.
- A strategy for public health education targeted towards improving health workforce capacity in underserved settings is developed but not yet efficient.
- A strategy for a legal framework, including requirements and incentives related to public health practices in underserved settings, is developed but not yet efficient.
- A strategy for offering financial incentives to the public health workforce in underserved settings is developed but not very efficient.

7.B.3. Policies pertaining to development of HRH

- No specific occupational standards, licensing or accreditation systems of HRH are in place.
- Labour legislation and rules for civil service and other employers are adequate, considering the current state of HRH policy.

7.B.4. Financing of HRH

- Salaries of public health professionals are not competitive.
- The payroll budget, motivation and incentives, and capacity-building initiatives for public health professionals are all inadequate.

7.C. Public health education

7.C.1. Educational institutions for public health (including epidemiology, community or social medicine and other units with similar mandate)

- The network of educational institutions provides training for public health professionals. However, the competency of teaching staff must be improved.
- The system of accreditation and licensing of educational facilities and the accreditation of curricula are efficient.
- Opportunities to study abroad are not adequately taken.

7.C.2. General educational issues as they pertain to core public health professions

- The number of graduates trained in public health exceeds anticipated demand. Further employment of graduates remains a challenge.
- Public health curricula are not regularly updated.
- Mechanisms for coordinating and evaluating the performance of continuous professional development programmes are not quite efficient.

7.C.3. Public health curricula

- The standard curriculum covers the required knowledge, skills and values for public health professionals at the undergraduate (Bachelor of Public Health) and postgraduate (Master and PhD of Public Health) levels.
- Curricula for doctors, nurses and other key health-care professionals do not sufficiently integrate a public health component to cover the EPHOs.

7.D. Governance of HRH

7.D.1. Leadership and management of HRH

- Support to key policy-makers and officials responsible for strengthening HRH is sufficient.
- Leadership programmes for public health managers at all levels are efficient.
- Public health objectives and functions are well clarified to health-care workers.
- Collaboration among major stakeholders on HRH management is effective.
- The capacity of public health institutions and professional associations to take a leading role among partners and allies is moderate.

7.D.2. Structures and agreements for strategic partnerships in the development of HRH

- Collaboration among academic institutions and the Government to generate and conduct research on HRH is moderate.
- A mechanism to promote community involvement in the governance and provision of public health services exists, but is inefficient.
- Collaboration on the development of HRH at an international level takes place, but should increase.

EPHO 8: ASSURING ORGANIZATIONAL STRUCTURES AND FINANCING

Description of the EPHO

EPHO 8 deals with the appropriateness of the main organizational structures needed to carry out the EPHOs and the coordination mechanisms linking them. It also covers the systematization and adequacy of financing structures that support implementation of the EPHOs.

Section A relates to the different organizational structures and mechanisms necessary for an effective health system. It contains criteria for evaluating the organization of the ministry of health, the quality assurance mechanisms of health-care centres, the public health laboratory system, the national public health institute(s), the enforcement agencies responsible for health protection operations, the coordination mechanisms in place for services provided outside the government sector and oversight of all of the above.

Section B is concerned with financing public health services. It focuses on the budget for public health services in all areas needed to provide them, including outside the government, and asks the assessment team to describe the decision-making criteria used to allocate resources.

Fig. 8. Summary of scores for EPHO 8

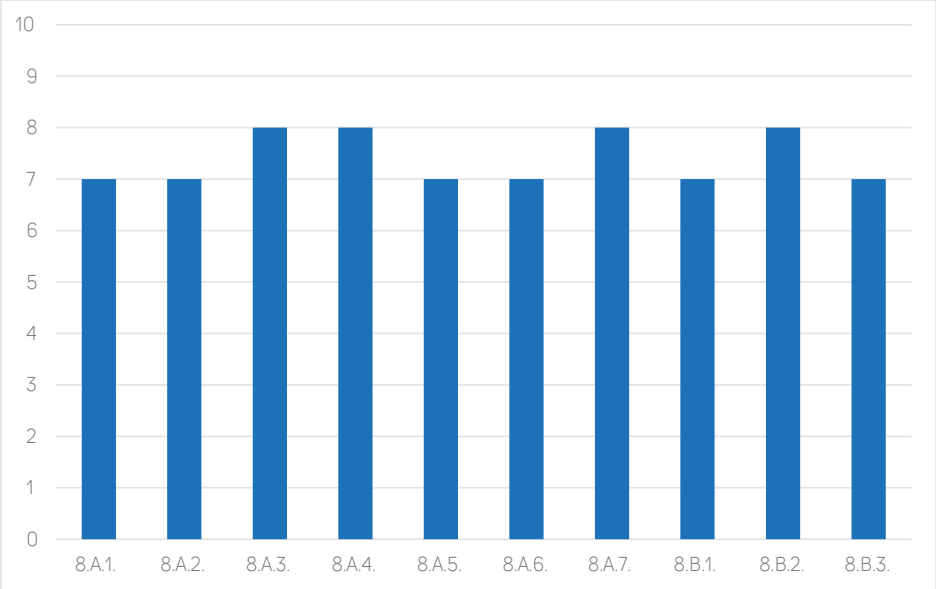

Table 9. Summary of strengths and weaknesses for EPHO 8

Strengths	Weaknesses
■ Appropriate legal framework for efficient health-care development ■ System to ensure the quality of health services delivery ■ Structures to take action at local, subnational and national levels ■ Various types and levels of public health laboratories ■ Enforcement structures for appropriate protection of public health ■ Oversight of systems and organizations that perform EPHOs	■ Merged ministries of health and social development ■ Absence of a sanitary and epidemiological service in the MHSD ■ Absence of a ministry of environment and coordination of environmental services ■ Ineffective systems for improving the quality of health services ■ Inadequate availability of health services ■ Inadequate administration and management of laboratories ■ Insufficient financial resources ■ Absence of an independent expert in the public health service ■ Insufficient continuity of organizational structures ■ Incorrect distribution of resources according to the service delivery strategy ■ Inadequate oversight of health services by entities outside the public sector

Summary of findings

8.A. Ensure appropriate organizational structures to deliver EPHOs

8.A.1. Clarity and coherence of the organizational structure of the ministry of health (or equivalent) and its linkage to all independent public agencies on health

- The MHSD lacks a clear organigram with lines of responsibility and accountability.
- The existing structures/mechanisms to coordinate action at local, subnational and national levels are inadequate.
- A structure is in place to manage and plan primary and specialized health care, but coordination between these areas is inadequate.
- A public health care perspective is not yet explicitly articulated, and public health functions are not yet clearly integrated into health-care and social systems.

8.A.2. Basic quality criteria for health-care centres that deliver EPHOs (primary health care facilities, specialized health centres and hospitals)

- Family physicians, disease screening, paediatric care, community health care, nursing, disease prevention counselling and gynaecological care are all available in primary care.
- The average length of stay in all hospitals is decreasing year to year. The hospital bed occupancy rate is decreasing due to the introduction of new payment methods, and hospitals are encouraged to reduce the number of beds or reorganize them according to specific bed profiles.

8.A.3. Public health laboratory system for routine diagnostic services

- A national laboratory policy that defines the roles and responsibilities of laboratories at different levels is in place.
- A licensing, registration, accreditation and monitoring system in general public health laboratories, environmental public health laboratories and other types of laboratories (hospitals, universities, private centres, etc.) is in place.

8.A.4. National public health institutes and/or schools of public health

- A sufficient legal framework exists for efficient health-care development.
- Public health institutions have a national scope of influence.
- The existing HRH training system meets sectorial demand for the number of health-care professionals. However, the quality of training is poor.
- The availability of health services is inadequate.

8.A.5. Enforcement structures in place to ensure proper public health protection

- A list of agencies responsible for enforcing public health regulations (by EPHO or through another explicit methodology) is defined.
- Information systems for monitoring and evaluation are adequate, but lack the engagement of independent experts.

8.A.6. Coordination of services delivered outside governmental bodies

- A list of nongovernmental actors delivering EPHOs (NGOs, private health-care facilities, international organizations, etc.) exists.
- A focal point is designated within the MHSD for coordinating services.
- A white paper or other technical document laying out principles and ground rules for collaboration between the Government and other actors is needed.

- Oversight for health services delivered outside governmental bodies (accreditation, evaluation, etc.) is inadequate.

8.A.7. Oversight of the systems and organizational structures that perform EPHOs
- The characteristics of the public health system (how different actors work together and interact) are explicitly defined.
- Gender, race, poverty, history, migration and culture are considered in the design of interventions within public health systems.
- The consequences of moving the Surveillance Department from the MHSD to the CRC under the MNE have been identified; these include a lack of coordination and fewer opportunities for managing public health issues.

8.B. Financing public health services

8.B.1. Public health budget within the health system
- A budget line is dedicated to public health; contingency clauses or flexible budget lines are in place in case of changing circumstances or inaccurate resource allocation. Service delivery strategies are also established.
- The public health budget is appropriate.

8.B.2. Mechanisms to fund public health services delivered outside the health system
- Public health expenditures are available in the national budget; additional resources are allocated in the event of emergencies.
- Mixed methods for funding public health programmes between two or more sectors are employed.

8.B.3. Decision-making criteria on resource allocation for public health
- Burden of disease is a key criterion for resource allocation.
- The allocation of resources for training and salaries is in line with strategies to retain staff.

EPHO 9: INFORMATION, COMMUNICATION AND SOCIAL MOBILIZATION FOR HEALTH

Description of the EPHO

EPHO 9 concerns the manner in which public health communication campaigns are conducted in countries. It also has a brief section evaluating the evidence-based integration of innovative ICT tools within communication and information programmes.

Section A deals with the planning, implementation and evaluation of health communication programmes. Suboperations examine how health communication is fostered from within the ministry of health, as well as how programmes are organized, planned, implemented and evaluated.

Section B covers the use of ICT in the health system. Given the rapid pace of development in this field, as well as the limited evidence base available for many interventions proposed, suboperations are not concerned with the implementation of any specific tools. Rather, the aim is to confirm that these developments are being gradually integrated into the health system in accordance with solid, evidence-based criteria.

Fig. 9. Summary of scores for EPHO 9

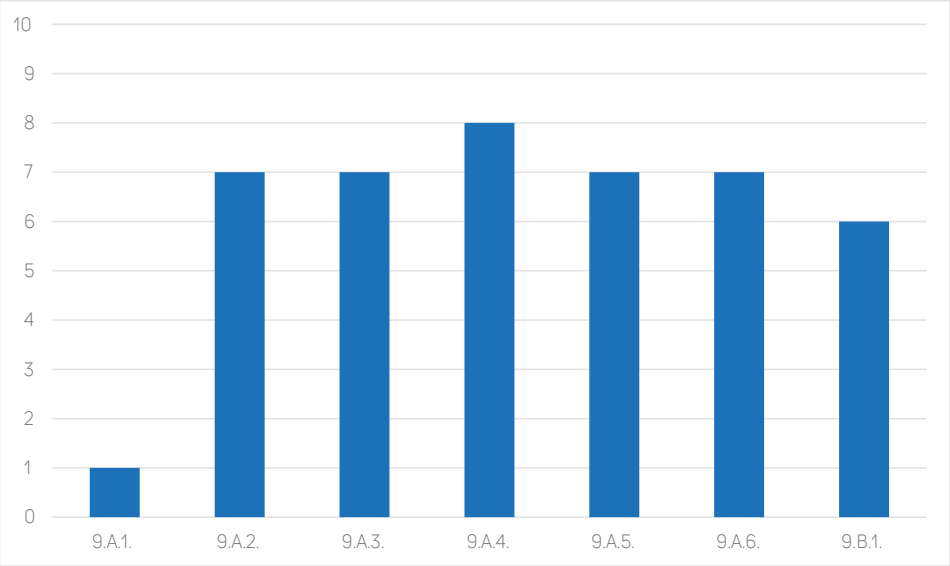

Table 10. Summary of strengths and weaknesses for EPHO 9

Strengths	Weaknesses
■ Public relations division within the NCPHLS and health administrations ■ Promotional and educational materials within the framework of *Densaulyk* 2016–2019 ■ Awareness-raising within the framework of global, international and national days focused on specific health issues ■ Capacity to implement smart systems, including an e-health record ■ National surveys conducted since 1998	■ No dedicated health programme on prime-time national television for raising public awareness on healthy lifestyles ■ Lack of training among health-care leaders and managers at different levels in communication technologies for public speaking and communication with journalists ■ Lack of capacity for reporting on health issues among public relations professionals, journalists and press secretaries

Summary of findings

9.A. Strategic and systematic approach to public health communication

9.A.1. Communications concepts within the ministry of health

- Press offices of the MHSD, the NCPHLS, and the health administrations of *oblasts* and the cities of Almaty and Astana have specific staff or unit dedicated to health communication, including a press liaison officer or department.
- Information is regularly made available via printed media, the internet, television and radio, though no prime-time programme on health is aired on a national station.
- Media activities are monitored each month.

9.A.2. Organization of health communication

- The MHSD, the NCPHLS, and the health administrations in *oblasts* and the cities of Almaty and Astana have integrated media plans.
- Public–private partnerships exist for the creation of audio and video materials for activities to raise awareness on health issues.
- Social projects are implemented with the involvement of community leaders and local issue-driven groups.
- The joint MHSD–World Bank investment project Health Sector Technology Transfer and Institutional Reform is underway. Kazakhstan also interacts with international organizations for benchmarking, integration with international communication campaigns and sector-wide approaches.

9.A.3. Integration of communication strategies within priority public health programmes

- Messages, materials, concepts and media are adapted to target audiences identified according to a life-course approach: children, adolescents, pregnant women, adults and older people.
- Feedback from the population on public health programmes is gathered via the blogs of top managers, health-care facility websites and call centres.
- Communication is also conducted via national and subnational television and radio stations, print media, health-care facility websites, internet portals, text messaging and social media (including Facebook, Vkontakte, YouTube, Instagram and WhatsApp).

9.A.4. Implementation of risk communication activities

- More work is needed to develop a negative social image of behavioural risk factors such as substance abuse and to foster responsible attitudes towards health.

9.A.5. Use of resources in communication and social mobilization efforts

- Audio and video materials on healthy lifestyles, disease prevention and other relevant topics are distributed via the above-mentioned platforms.
- WhatsApp and text messaging are employed to optimize resource use.

9.A.6. Capacity to monitor and evaluate public health communication campaign

- Periodic evaluations of communication campaigns are conducted and inform further improvements to the communication strategy. This also informs the planning and delivery of national surveys, which have been conducted since 1998.

9.B. ICT for health

9.B.1. Ministry of health's approach to ICT for health

- E-health records (in pilot regions) and e-prescription systems (the drug management ICT system) are available for research purposes and for the periodic generation of policy briefs or reports describing advances or existing evidence on the use of ICT in health.
- The following 20 smart systems are also established or under development:
  - an electronic register of outpatient services under the outpatient polyclinic care information system;
  - a payment system of outpatient polyclinic care under the unified payment information system;
  - an automated information system of health-care facilities;
  - the Hospitalization Bureau information system;

- an additional component to the primary health-care tariff;
- an automated information system of health-care facilities
- a register of pregnant women and women of reproductive age;
- a population register;
- a health services quality-management system;
- a drug management system;
- a medical equipment management system;
- a resource management system,
- an e-register of dispensary patients;
- a subsystem on patients with chronic renal disease;
- a subsystem on patients with diabetes;
- a subsystem on patients with TB;
- a subsystem on patients with mental illness;
- a subsystem on patients with substance abuse disorders;
- an e-register of oncological patients; and
- an e-register of hospital patients.

- Public relations offices are available in the MHSD, the NCPHLS and the health administrations of *oblasts* and the cities of Almaty and Astana.
- Educational materials including video and audio content are created within the framework of *Densaulyk* 2016–2019.
- Awareness-raising campaigns are organized within the framework of global, international and national health days in accordance with MHSD administrative orders.
- National surveys have been conducted since 1998.

EPHO 10: ADVANCING PUBLIC HEALTH RESEARCH TO INFORM POLICY AND PRACTICE

Description of the EPHO

EPHO 10 is concerned with the development of public health research as a means to improve health policy and public health practice.

Section A focuses on setting a national research agenda.

Section B includes suboperations on capacity-building for public health research. These cover questions on data access for researchers, the integration of research in educational activities and public health practice, the capacity to foster innovation and the maintenance of scientific and ethical standards.

Section C has a single but important item relating to the coordination of research activities. It deals with how well countries are able to understand what research is taking place in their territory and how the ministry of health can shape the research agenda of other stakeholders through collaborations, partnerships and clear guidance on national priorities.

Section D has to do with dissemination of evidence and knowledge-brokering.

Fig. 10. Summary of scores for EPHO 10

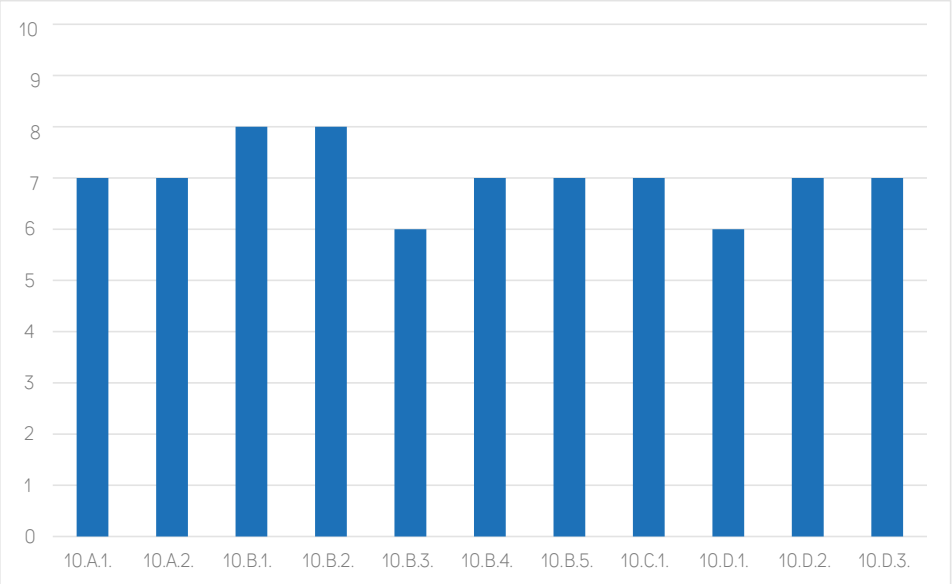

Table 11. Summary of strengths and weaknesses for EPHO 10

Strengths	Weaknesses
■ Process for setting research priorities at national and sector levels ■ Prioritization of life and health sciences ■ Legal and regulatory framework specifying strategic areas for health policy-making ■ Governmental support and financing for research on social determinants of health ■ Resources and ICT systems containing health information ■ Governmental financing and coordination of research ■ Support for the country's integration into the international research community, and for the creation of national and international networks	■ Weak involvement of stakeholders in the development of prioritized areas ■ No systematic approach to existing research ■ Limited number of joint research programmes between health and other sectors ■ Inadequate access of researchers to health data ■ Inadequate international data and evidence exchange ■ Absence of clear public health research strategy in academia ■ Inadequate financing for research ■ Inadequate involvement of almost all public health professionals in research ■ Absence of centralized source of data to assess/quantify health research activity ■ Inadequate dissemination of research results among public health peers ■ Inadequate knowledge of English ■ Inadequate capacity of policy-makers and health-care workers for putting knowledge and evidence into practice ■ Inadequately regulated implementation of public health technology

Summary of findings

10.A. Setting a national research agenda

10.A.1. Identification of national public health research priorities

- The process of setting national public health research priorities is transparent and participatory. It includes national public health institutes and centres; schools of public health; academia and researchers; scientific societies; patient representatives; ministerial representatives from outside of the MHSD; and industry representatives. It also engages regional or international networks and organizations for consultation and advice.
- ICT systems are not used optimally for planning public health research.
- Public health research is supported through dedicated and grant financing by various governmental sources. The life and health sciences are among the national priorities for research.

10.A.2. Alignment of public health research agenda with Health 2020

- Research programmes on the social determinants of health exist, but lack a systematic approach.
- Health systems research aimed at increasing citizen participation, equity and performance takes place, but lacks a systematic approach.
- Despite dedicated financing for health research by the MHSD, the overall level of investment is quite low: expenditures on medical science are less than 0.006% of gross domestic product (average expenditures in OECD countries are 0.3%).

10.B. Capacity-building

10.B.1. Researchers' access to data on health indicators

- Mechanisms for cross-border data and evidence exchange are not quite efficient due to limited partnerships between Kazakh researchers and foreign scientific centres.
- Online resources with information on public health research are available but scattered; there is no single, exhaustive resource.
- Health indicator data (global and disaggregated) are available and comparable at subnational, national, regional and international levels (see also EPHO 1), but are still not adequate.

10.B.2. Integration of research activities in public health education and continuous training

- No strategy for developing public health research is currently in place, although this agenda is partially addressed in *Densaulyk* 2016–2019 and other strategic plans.
- Financing for public health research from national and international sources is inadequate.
- Health authorities allocate resources to research in this area, but financing is insufficient. Researchers attract very little financing from outside of this budget.

10.B.3. Performance of research in public health practice

- Motivation and incentives to undertake research are low for public health professionals and researchers.
- Almost no collaboration to conduct research occurs between public health professionals and researchers at academic institutes or research centres.
- Professionals in public health services delivery lack resources for undertaking research (including access to necessary information and data).

- For those working in academic institutes and research centres, where research is a priority, involvement in research can lead to additional payment, publications, participation in conferences, etc.

10.B.4. Capacity for innovation in public health

- While strategies and policies define public health innovation as a priority, investments are insufficient. Public health education is not systematic, and programme efficiency is low.
- Investments have been made for the development of an integrated health information system; however, due to the current fragmentation of information systems and their inadequate content, these investments remain insufficient.
- The recent implementation of international standards and approaches has necessitated essential changes to legislation on traditional medicine. Standards and evidence-based research and practice have been developed. However, the existing legislation is still not quite efficient and requires further improvement.

10.B.5. Maintenance of scientific and ethical standards in research

- Kazakhstan lacks a specific code of conduct or similar document for research activity to ensure its integrity and accuracy. Scientific and ethical standards in research are partially addressed in separate regulations.
- Steering councils exist in many organizations, but do not exercise these functions. Ethics committees are present in scientific institutions and universities, but do not review public health research.
- The regulation of research ethics and adherence to common rules and standards is covered by national legislation. This mostly applies to clinical research.

10.C. Coordination of research activities

10.C.1. Research coordination

- Health research coordination mechanisms are financed by various sources, including assistance programmes of international health organizations such as the International Agency for Research on Cancer, WHO and the World Bank; public and private universities or other national research centres; and ministries (of health, science, research and development, industry, etc.). However, these mechanisms are not efficient enough.
- Partnerships exist between health research centres and academic institutions, but not in all organizations. These partnerships are generally related to a specific area of research.

10.D. Dissemination and knowledge brokering

10.D.1. Mechanisms and structures to disseminate research findings to public health colleagues

- Kazakhstan is in the process of joining the Evidence-informed Policy Network, but a national network is not yet in place.
- Nationally published public health journals received support, but usually by founders only (such as scientific organizations and universities).
- Key stakeholders support Kazakhstan's integration into the international research community, and the need to create national and international networks.

10.D.2. Mechanisms to translate evidence into policy and practice

- Written materials for policy-makers (such as policy briefs) intended to increase understanding of current research and policy options are generated, but not systematically. Those who generate these resources often lack adequate capacity and tools to generate high-quality products.
- Health authorities have recently begun to involve researchers in policy-making, and have held policy dialogues and discussions.
- Researchers, policy-makers and health-care professionals lack capacity for using evidence.

10.D.3. Effectiveness of policy-makers in communicating their needs to the research community, including health technology firms

- The direct involvement of policy-makers in the development of national health priorities, as well as national and sectoral research priorities, allows them to communicate their needs to the scientific community and health technology firms.
- The application of new technologies in medical practice is regulated by a set of rules approved by the MHSD that employs international principles for HTA. However, the implementation of new technologies in public health is not regulated.

Outcomes and recommendations

KEY FINDINGS OF THE EPHO SELF-ASSESSMENT

In general, the findings of Kazakhstan's EPHO self-assessment are consistent with those of the WHO Regional Office for Europe. Below is a brief list of key insights.

- Functions related to the surveillance of communicable diseases and environmental health threats, and to immunization and health care (EPHOs 1–3) are adequately developed overall, with exceptions in areas such as antibiotic resistance, migrant health, cross-border health, road safety and consumer product safety.
- Functions related to NCD prevention and treatment and to the broad determinants of health (EPHOs 4–5) require strengthening.
- Systemic functions (EPHOs 6–10) are less developed in Kazakhstan than in countries of the EU. These include:
  - governance for health and well-being;
  - training and availability of sufficient qualified HRH services;
  - organizational structures and adequate financing to public health activities;
  - information, communication and social mobilization for health; and
  - support for public health research to develop evidence-based policy and practice.

CHALLENGES FACED DURING THE EPHO SELF-ASSESSMENT

The self-assessment process presented several challenges, many of which were related to access to information. These included:

- difficulty accessing data from other agencies and ministries due to lack of understanding of their importance for the self-assessment and/or their classification as restricted;
- lack of awareness of the need to provide data for the self-assessment;
- lack of access to information due to the absence of an integrated public health information system;
- the delegation of aspects of the self-assessment process to incompetent staff; and
- problems with data collection from the private health sector.

EXISTING RESOURCES

The self-assessment affirmed that the following resources are available for the ongoing development of public health services:

- a sufficient regulatory framework that specifies strategic areas for health policy-making;
- an action plan for the implementation of the regulatory framework, approved at national and subnational levels;
- functioning national and subnational health coordination councils;

- governmental financing and coordination of activities;
- governmental support to prevention activities; and
- resources and information systems with health indicators.

AREAS FOR IMPROVEMENT

The self-assessment revealed that the following areas are not yet fully developed or effective:

- mechanisms to implement regulations as well as national and regional programmes;
- cross-agency collaboration, coordination and distribution of roles in public health activities;
- plans for collaboration on, and consistency and communication of, public health information among stakeholders; and
- implementation of envisaged public health activities due to:
  - the absence of necessary organizational structures to achieve set public health goals and objectives;
  - inadequate capacity of the public health workforce;
  - low motivation of professionals for implementation;
  - inadequate software and absence of certain public health data for management decision-making;
  - underfinancing or absence of financing to public health activities; and
  - poor involvement of the private and nongovernmental sectors and civil society in addressing public health.

RECOMMENDATIONS

Based on these findings, the self-assessment team developed the following list of recommendations and areas of focus for the work ahead.

- Create a vertical institutional structure for reporting on public health services to the MHSD.
- Develop a long-term strategy for public health services.
- Identify a single manager for the public health budget programme, and centralize public health expenditures to ensure flexibility in budget redistribution.
- Revise existing and elaborate additional regulations related to public health, and monitor factors affecting it.
- Strengthen cross-sectoral collaboration to address public health, and improve the collaboration of the health sector with other sectors. Develop national and international partnerships.
- Enhance the role of NGOs and professional associations, involving them in discussions of public health problems and activities to overcome them.
- Develop capacity within the public health workforce and among policy-makers through professional training at all levels.
- Revise existing public health curricula, and clearly define their linkage to professional standards for public health. Determine the place and role of public health professionals in the health system. Create an integrated professional roster of public health professionals.
- Develop and conduct public health research. Promote joint research programmes between health and other sectors. Elevate the quality and accessibility of existing databases, and

improve access to international evidence. Systematize research projects and create a platform to apply public health knowledge. Centralize research sources and data.

- Strengthen and develop e-health through the automation of clinical and laboratory processes; the centralization of disease coding and cause-of-death recording; and the improvement of registers for communicable diseases, NCDs and their determinants. Develop capacity for analysis of health indicators.
- Revise and strengthen policies and regulations on environmental risk factors. Improve monitoring and response processes related to chemical, biological and radiation risks. Implement and improve systematic data collection and risk analysis, including biological monitoring of initial data (health, environmental, demographic and socioeconomic). Strengthen and develop the reference laboratory system.
- Develop an integrated national plan consistent with the IHR (2005) and the CDC global health programme. Upgrade alert and communication systems. Address external assessments and prioritize further IHR implementation.
- Strengthen disease prevention and health promotion programmes for women and children, and for the protection of health in the workplace. Use advanced technologies to inform the public on health issues. Develop home-care services, palliative care, nursing, and programmes for reproductive health and family planning.

Annex 1. Supportive and guidance materials

SELF-ASSESSMENT TOOL FOR THE EVALUATION OF ESSENTIAL PUBLIC HEALTH OPERATIONS FOR THE WHO EUROPEAN REGION

Instructions for completing the self-assessment

Where a box (☐) exists, the answer should be limited to a yes (☒) or no (☐) response. Otherwise, the answer should be a brief description of the item in question, with pertinent details as required. Whenever possible, quantitative data should be provided, but qualitative responses are also possible.

Other ways to answer the questions are as follows:
"IDU": I don't understand the question

"IDK": I understand the question but don't know the answer

"N/A": not applicable to the national context

Scoring system
Each sub-operation contained in the list of EPHOs contains one or more scoring fields, in which evaluators can note the score achieved and recommend areas for improvement; this appears as follows:

Score (0–10):	Areas for improvement: G, F, RG, SD

The scores should be assigned from 0 to 10 based on the following criteria.

0. We are unable to evaluate the performance of this operation based on the information currently available.
1. No activity: this operation/service is completely undeveloped at this time.
2. Rudimentary work has been performed to improve the effectiveness of this operation, but a stronger framework and/or mandate is necessary to develop the basic foundations and to implement the program or activity effectively.
3. There is an explicit commitment in a formal strategy document expressing the will to further develop this operation, but no practical developments have been carried out yet.
4. There are some antecedents for actions to improve this operation but they have been inconsistent and require a better approach.
5. There is a conceptual framework to improve this operation, with some actions that can be considered adequate, but these are preliminary and still require development.
6. We have specific experience and evidence that allows us to identify a few strong points, as well as other areas in need of improvement.

7. The performance of this operation is reasonably acceptable, based on accumulated experience, but there are still some areas in need of particular work.
8. The performance of this operation is solid and well developed within the area of public health, although there are isolated areas that could still be improved.
9. A body of evidence shows that this operation is particularly effective; no significant problems need correction as performance is quite positive.
10. The development of this operation is excellent, based on independent and objective evidence. We believe that it could be a useful model for other countries; there may be international benchmarking studies that support its status to be proposed as a best practice for the WHO European Region.

Areas for improvement

The designated areas **for improvement** are based on the four health system framework functions, but may be further broken down into the following building blocks:

"G": governance
"F": financing
"RG": resource generation, including human resources, medicines and technology and/or information and technological research
"SD": service delivery.

This field is included to spark a preliminary reflection on which areas are most in need of concerted action to improve performance of the operation. The item is systematically included under all sub-operations, with the understanding that all these functions may play a role, even in operations that initially seem to be concentrated under only one function (for example, one challenge related to governance may be that the ministry of health does not receive enough funding to carry out its duties).

Prior to the assessment, the core secretariat or evaluation team manager should establish a uniform way to mark the areas in need of improvement and specify whether more details should be provided and in what way. If no specific instructions in this regard are circulated prior to distribution of the questionnaire, evaluators should simply delete or cross through the abbreviations that do not apply. For example, if the areas in most need of improvement are human resources and governance, evaluators should mark:

Areas for improvement: G, RG

or

Areas for improvement: G, F, RG, SD

Complementary material and instruments

The EPHO self-assessment tool should be considered just one of several instruments used to evaluate public health services in Member States. An entry point into the body of WHO's work in public health, the tool contains references to a number of other WHO guidelines, assessment tools and policy papers, each of which can be downloaded for a more detailed evaluation of specific areas.

The WHO Regional Office for Europe envisions several other developments that will help to complement the current tool, including an interactive computer-based tool that will enable users to narrow the focus of the assessment, educational materials for public health students and professionals and a growing list of references to help policy-makers act on weaknesses identified in their self-assessments.

Annex 2. Participating experts[2] and institutions

Table A1.1. Members of the Steering Committee

No.	Name	Ministry/institution
1	Yelzhan Birtanov	Minister of Health
2	Zhandarbek Bekshin	Chief Medical Officer, Chair of the Public Health Committee, Ministry of Health
3	Bauyirzhan Baiserkin	Director, Republican Centre for HIV/AIDS Prevention and Control (Director of the Health Services Department at the time of EPHO self-assessment), Ministry of Health
4	Melita Vujnovic	WHO Representative in the Russian Federation, Head of the WHO Country Office in the Russian Federation (WHO Representative in Kazakhstan at the time of EPHO self-assessment)

Table A1.2. Members of the Advisory Council

No.	Name	Ministry/institution
1	Valikhan Akhmetov	Head of Health Administration, Almaty
2	Yerkin Durumbetov	Director, Applied Science Centre for Sanitary and Epidemiological Expertise and Monitoring
3	Kenes Ospanov	Adviser, Applied Science Centre for Sanitary and Epidemiological Expertise and Monitoring
4	Maryam Omarova	Director, Kazakh Scientific Centre of Hygiene and Epidemiology
5	Almaz Sharman	Director, Academy of Preventive Medicine
6	Gulnara Kulkayeva	Director on Management of Health Services Procurement, Health and Social Insurance Fund
7	Aizhan Yesmagambetova	Director, Department of Strategic Development and Public Health, Ministry of Health

2 Titles of members of the Steering Committee and Advisory Council are specified as of the time of report preparation.

Table A1.3. Members of working groups by EPHO

No.	Name	Ministry/institution
EPHO 1: Surveillance and evaluation of population health and well-being		
1	Daniyar Makashev	Director, Department of Health Information Analysis, Republican E-Health Centre
2	Ainagul Kuatbayeva	Deputy Director, Department of Epidemiological Monitoring of Communicable and Parasitic Diseases at the Applied Research Centre for Sanitary and Epidemiological Expertise and Monitoring (ARC SEEM), Consumer Rights Committee (CRC), Ministry of National Economy
3	Manara Smagul	Director, Department of Epidemiological Monitoring of Communicable and Parasitic Diseases, ARC SEEM
4	Stanislav Kazakov	Director, Department of Information Support and Sanitary and Epidemiological Monitoring, ARC SEEM
No.	**Name**	**Ministry/institution**
EPHO 2: Monitoring and response to health hazards and emergencies		
1	Yerkin Durumbetov	Director General, Applied Science Centre for Sanitary and Epidemiological Expertise and Monitoring
2	Zhanar Urazalina	Specialist, Department of Health Information Analysis, Republican E-Health Centre
3	Nurzhan Otarbayev	Director, Republican Centre for Medical Aviation
4	Manara Smagul	Director, Department of Epidemiological Monitoring of Communicable and Parasitic Diseases, ASC SEEM
5	Akan Tuleuov	Director, Department of Monitoring of Especially Dangerous Diseases and Quarantine Infections, ARC SEEM
6	Seitkarim Tastanbayev	Deputy Director, Department of Sanitary and Hygienic Monitoring and Risk Assessment, ARC SEEM
7	Nyssangali Kozhakhmetov	Medical Officer, Department of Sanitary and Hygienic Monitoring and Risk Assessment, ARC SEEM
8	Raikhan Mussagaliyeva	Senior Associate, Laboratory of Zoonotic and Viral Infections
9	Yerlan Sansyzbayev	Chief, Laboratory of Zoonotic and Viral Infections, Kazakh Research Centre for Quarantine and Zoonotic Infections named after M. Aikimbayev, CRC

No.	Name	Ministry/institution
EPHO 2: Monitoring and response to health hazards and emergencies		
10	Zabida Aushakhmetova	First Deputy to Director General, National Expertise Centre, CRC
11	Lyazzat Kiyanbekova	Expertise Specialist, Department of Operations, National Expertise Centre, CRC
12	Anna Zhantenova	Specialist on Monitoring of Technical Regulations and International Cooperation, Department of Methodology, National Expertise Centre, CRC
13	Zeinegul Shakenova	Chief, Reference Laboratory of Bacterial Infections, ARC SEEM
14	Gulnara Omasheva	Chief, Reference Laboratory of Especially Dangerous Diseases, ARC SEEM
15	Gaukhar Nusupbayeva	Chief, Reference Laboratory of Viral Infections, ARC SEEM
16	Gulnar Bimuratova	Medical Officer, Office for Science and Postgraduate Education, ARC SEEM
17	Ainagul Kuatbayeva	Deputy Director, Department of Epidemiological Monitoring of Communicable and Parasitic Diseases, ARC SEEM
18	Gulnara Terlikbayeva	Head of Public Health Unit at the State Border, Consumer Rights Department (Transport), CRC
19	Malik Aznabakiyev	Head of Consulting and Methodology Assistance Unit

No.	Name	Ministry/institution
EPHO 3: Health protection, including environmental, occupational and food safety		
1	Seitkarim Tastanbayev	Deputy Director, Department of Sanitary and Hygienic Monitoring and Risk Assessment, ARC SEEM
2	Lyazat Ibrayeva	Deputy Director on Science, National Occupational Health and Occupational Diseases Centre, Ministry of Health and Social Development
3	Shamil Tazhibayev	Vice President, Kazakh Academy of Nutrition
4	Yerzhan Iskakov	Deputy Director on Regions, Science and Research Institute of Traumatology and Orthopaedics
5	Gulnara Kakimova	Medical Officer, Department of Sanitary and Hygienic Monitoring and Risk Assessment, ARC SEEM

No.	Name	Ministry/institution
EPHO 3: Health protection, including environmental, occupational and food safety		
6	Aigerim Sadubayeva	Chief Expert, Office for Control over Compliance with Technical Regulations and Sanitary Measures, CRC
7	Marzhan Apsemetova	Medical Officer, Department of Sanitary and Hygienic Monitoring and Risk Assessment, ARC SEEM
8	Yelena Lavlinskaya	Chief, Office of Monitoring of Infection Control and Disinfectology, ARC SEEM

No.	Name	Ministry/institution
EPHO 4: Health promotion, including action to address social determinants and inequality		
1	Zhamilya Battakova	Director, National Centre for Problems of Healthy Lifestyle Development (NCPHLS)
2	Saltanat Mukasheva	Deputy Director, NCPHLS
3	Akmaral Seraliyeva	Head of Outpatient Care Office, Health Services Department, Ministry of Health and Social Development
4	Manara Smagul	Director, Department of Epidemiological Monitoring of Communicable and Parasitic Diseases, ARC SEEM

No.	Name	Ministry/institution
EPHO 5: Disease prevention, including early detection of illness		
1	Zhamilya Battakova	Director, NCPHLS
2	Saltanat Mukasheva	Deputy Director, NCPHLS
3	Salim Berkinbayev	Director, Science and Research Centre for Cardiology and Internal Diseases
4	Zhanar Urazalina	Specialist, Department of Health Information Analysis, Republican E-Health Centre

No.	Name	Ministry/institution
EPHO 6: Assuring governance for health and well-being		
1	Ainur Aiypkhanova	Director General, Republican Healthcare Development Centre
2	Aiman Iskakova	Deputy Director General, Republican Healthcare Development Centre
3	Zhaniya Nurgaliyeva	Head of Centre for Strategic Development and Public Health, Republican Healthcare Development Centre

No.	Name	Ministry/institution
EPHO 6: Assuring governance for health and well-being		
4	Kamila Gayitova	Head of Unit, Health Technology Assessment, Centre for Good Clinical Practice, Republican Healthcare Development Centre
5	Ayauylym Sagynbayeva	Head of Health Statistics Unit, Centre for Strategic Development and Public Health, Republican Healthcare Development Centre
6	Malika Turganova	Chief Specialist, Public Health Development Office, Centre for Strategic Development and Public Health, Republican Healthcare Development Centre
7	Kuanysh Alimbetov	Lead Specialist, Centre for Strategic Development and Public Health, Republican Healthcare Development Centre

No.	Name	Ministry/institution
EPHO 7: Assuring a competent and sufficient public health workforce		
1	Aiman Iskakova	Deputy Director General, Republican Healthcare Development Centre
2	Vitaliy Koikov	Head of Centre for Human Resources Development and Science, Republican Healthcare Development Centre
3	Maksut Kulzhanov	Chairman of the Republican Medical Chamber, Member of the WHO Executive Board
4	Gulnara Tokmurziyeva	President, High School of Public Health

No.	Name	Ministry/institution
EPHO 8: Assuring organizational structures and financing		
1	Dauletkhan Yessimov	Chief Executive Officer, National Health Chamber
2	Almagul Kauiysheva	Deputy Chief Executive Officer, National Health Chamber

No.	Name	Ministry/institution
EPHO 9: Information, communication and social mobilization for health		
1	Zhamilya Battakova	Director, NCPHLS
2	Saule Sharipova	Deputy Director, ARC SEEM
3	Saltanat Mukasheva	Deputy Director, NCPHLS

No.	Name	Ministry/institution
EPHO 10: Advancing public health research to inform policy and practice		
1	Aiman Iskakova	Deputy Director General, Republican Healthcare Development Centre
2	Vitaliy Koikov	Head of Centre for Human Resources Development and Science, Republican Healthcare Development Centre
3	Saule Sharipova	Deputy Director, ARC SEEM
4	Gulnar Bimuratova	Medical Officer, Science and Postgraduate Education, ARC SEEM
5	Pavel Deryabin	Deputy Director, Kazakh Science Centre for Quarantine and Zoonotic Infections
6	Andrei Kuznetsov	Senior Associate, Laboratory of Zoonotic and Bacterial Infections, Kazakh Science Centre for Quarantine and Zoonotic Infections
7	Lyazat Orakbai	Deputy Director of Science, Scientific Centre for Hygiene and Epidemiology named after H. Zhumatov

Table A1.4. List of experts invited to discuss and make recommendations for the EPHO self-assessment

No.	Name	Ministry/institution
1	Arman Zhumanov	Head of Medical Office, Department of Logistics, Ministry of Interior
2	Kalken Zhakhin	Chief Expert, Office of Educational Work and Extended Education, Department of Preschool and Secondary Education, Ministry of Education and Science
3	Alexander Razzarenov	Head of Office of Food Safety and Movable Objects, Veterinary Control and Surveillance Committee, Ministry of Agriculture
4	Daniyar Kapezov	Action Head of Office for Public Relations and Coordination of Governmental Bodies, Information Committee, Ministry of Information and Communication
5	Serikzhan Omarkhanov	Head of Office on the Development of Mass and Non-Olympic Sports, Committee on Sports and Physical Education, Ministry of Culture and Sports
6	Lyazzat Tokmagambetova	Head of Office for Licensing and Certification, Committee of Atomic and Energy Control and Supervision, Ministry of Energy

Table A1.5. WHO representatives

No.	Name	Ministry/institution
1	Richard Alderslade	Adviser, WHO Regional Office for Europe
2	Martin Krayer von Krauss	Technical Officer, WHO Regional Office for Europe
3	Saltanat Yegeubayeva	Public Health Officer, WHO Country Office in Kazakhstan
4	Kanat Shakenov	Invited expert

Annex 3. Self-assessment scores

Table A2.1. Self-assessment scores for EPHO 1

EPHO 1: Surveillance of population health and well-being	Score	G[3]	F[4]	RG[5]	SD[6]
1.A. Health data sources and tools					
1.A.1. Civil registration and vital statistics system	7.1	x	x	x	x
1.A.2. Health-related surveys	7.3	x	x	x	x
1.A.3. Disease registries	6.5	x	x	x	x
1.B. Surveillance of population health and disease programmes					
1.B.1. Cause-specific mortality	7.3	x		x	
1.B.2. Selected morbidity	8.1	x		x	
1.B.3. Risk factors and determinants	2.6	x	x	x	x
1.B.4. Child health and nutrition	5.0	x	x	x	x
1.B.5. Maternal and reproductive health	8.2	x		x	
1.B.6. Immunizations	8.0	x		x	
1.B.7. Communicable diseases	8.0	x		x	
1.B.8. Noncommunicable diseases (NCDs)	8.0	x		x	
1.B.9. Social and mental health	8.0	x		x	
1.B.10. Environmental health	7.0	x	x	x	x
1.B.11. Occupational health	6.0	x		x	
1.B.12. Road safety	4.5	x	x	x	x
1.B.13. Injuries and violence	5.0	x		x	
1.B.14. Nosocomial infections	4.0	x		x	
1.B.15. Antibiotic resistance	2.0	x		x	
1.B.16. Migrant health	2.0	x	x	x	x
1.B.17. Health inequalities	5.5	x		x	

3 Governance
4 Financing
5 Resource generation
6 Service delivery

EPHO 1: Surveillance of population health and well-being	Score	G[3]	F[4]	RG[5]	SD[6]
1.C. Surveillance of health system performance					
1.C.1. Monitoring of health system financing	8.0	x	x	x	x
1.C.2. Monitoring of health workforce	6.5	x	x	x	x
1.C.3. Monitoring of health care utilization, performance and user satisfaction	7.5	x	x	x	x
1.C.4. Monitoring of access to essential medicines	2.0	x		x	
1.C.5. Monitoring of cross-border health	2.0	x	x	x	x
1.D. Data integration, analysis and reporting					
1.D.1. Health sector analysis	5.8	x	x	x	x
1.D.2. Provision of updates and compliance with International Health Regulations (IHR)	2.7	x	x	x	x
1.D.3. Participation and compliance with regard to NCD monitoring reports	6.0	x	x	x	x
1.D.4. Development of annual health statistical reports	6.3	x	x	x	x
1.D.5. Monitoring and reporting on regional or global health and development movements, such as the Millennium Development Goals (MDGs), the Post-2015 Development Agenda and universal health coverage	2.0	x	x	x	x

Table A2.2. Self-assessment scores for EPHO 2

EPHO 2: Monitoring and response to health hazards and emergencies	Score	G	F	RG	SD
2.A. Identification and monitoring of health hazards					
2.A.1. Risk and vulnerability assessment, in accordance with an all hazard/whole health approach	8.0	x	x	x	x
2.A.2. Capacity to set up an early warning alert and response network (EWARN) to deal with challenges associated with displaced populations	8.0		x	x	
2.A.3. Laboratory support for investigation of health threats	8.0	x	x	x	x
2.A.4. Ability to predict public health emergencies	8.0	x	x	x	x
2.B. Preparedness and response to public health emergencies					
2.B.1. Institutional framework for emergency preparedness	8.0	x	x	x	x
2.B.2. Health sector emergency plan	6.0	x	x	x	x

EPHO 2: Monitoring and response to health hazards and emergencies	Score	G	F	RG	SD
2.B.3. Ministry of health's emergency preparedness and response unit	8.0		x	x	x
2.B.4. Coordination structure in the event of a public health emergency	8.0	x	x	x	x
2.B.5. Public information, alert and communication system	8.0	x	x	x	x
2.B.6. Protection, maintenance and restoration of key systems and services in the event of a public health emergency	8.0	x	x	x	x
2.B.7. Critical response services	8.0	x	x	x	x
2.B.8. Mitigation actions to reduce long-term vulnerability to public health emergencies	8.0	x	x	x	x
2.B.9. Capacity for recovery and restoration of essential health services	2.0	x	x	x	x
2.C. Implementation of IHR					
2.C.1. Fostering of global partnerships with regard to the implementation of IHR	2.0	x	x	x	x
2.C.2. Strengthening of national public health capacities for surveillance and response	8.0	x	x	x	x
2.C.3. Public health security in travel and transport	9.0	x	x	x	x
2.C.4. Management of specific risks	8.0	x	x	x	x
2.C.5. Preservation of rights, procedures and obligations	7.0	x	x	x	x
2.C.6. Performance of studies to track progress in the implementation of IHR	7.0	x	x	x	x

Table A2.3. Self-assessment scores for EPHO 3

EPHO 3: Health protection, including environmental, occupational and food safety	Score	G	F	RG	SD
3.A. Environmental health protection					
3.A.1. Legislative framework with regard to environmental health protection, in the areas of air quality, water and soil quality	7.0	x	x	x	x
3.A.2. Technical capacity for risk assessment in the area of environmental health	7.0	x	x	x	x

EPHO 3: Health protection, including environmental, occupational and food safety	Score	G	F	RG	SD
3.A.3. National legislation and international cooperation in the area of climate change mitigation and energy security	6.0	x	x	x	x
3.A.4. Environmental health protection in the area of housing	7.0	x		x	x
3.A.5. Capacity to communicate and collaborate with key stakeholders in the area of environmental protection	7.0	x		x	x
3.A.6. Effectiveness of sanctions and measures implemented to prevent environmental harm	6.0	x		x	x
3.A.7. Institutional capacity to respond to hazards	7.0	x		x	x
3.B. Occupational health protection					
3.B.1. Occupational health and safety	5.0	x		x	
3.B.2. Health promotion and protection in the workplace	4.0	x		x	
3.B.3. Occupational health services for workers in the country	4.0	x	x		
3.B.4. Cross-sectoral integration of occupational health into other national policies	0.0	x	x		
3.B.5. Occupational hazard-reporting system and workplace inspection (see also 1.B.11)	0.0	x	x	x	
3.B.6. Technical capacity for risk assessment in the area of occupational health and safety	1.0		x	x	
3.B.7. Management and mitigation of risks related to occupational health	0.0	x	x		
3.C. Food safety					
3.C.1. Food safety regulatory framework	9.0			x	x
3.C.2. Technical capacity for risk assessment in the area of food safety	6.0	x	x	x	x
3.C.3. Monitoring and enforcement of food safety protections	6.0	x	x	x	x
3.C.4. Management and mitigation of risks with regard to food safety	8.0	x			x
3.D. Patient safety					
3.D.1. Laws and institutional framework for protecting patient and provider safety	8.0	x	x	x	
3.D.2. Consumer protections with regard to health services	9.0		x	x	

EPHO 3: Health protection, including environmental, occupational and food safety	Score	G	F	RG	SD
3.D.3. Technical capacity for risk assessment in the area of patient and provider safety	8.0		x	x	
3.D.4. Monitoring and supervision of patient safety	8.0		x	x	x
3.D.5. Management and mitigation of risks with regard to patient and provider safety	9.0	x		x	
3.D.6. Contribution to minimum standards regulating cross-border health care	2.0	x	x	x	x
3.E. Road safety					
3.E.1. Road safety framework	2.2	x	x	x	
3.E.2. Technical capacity for risk assessment in the area of road safety	0.5	x	x	x	x
3.E.3. Supervision and enforcement of road safety legislation and control	0.6	x	x	x	x
3.E.4. Management and mitigation of risks with regard to road safety	1.1	x		x	
3.F. Consumer product safety					
3.F.1. Safety regulations with regard to consumer products	2.0	x	x	x	x
3.F.2. Technical capacity for risk assessment in the area of consumer safety	2.0	x	x	x	x
3.F.3. Enforcement and risk mitigation with regard to consumer safety norms	2.0	x	x	x	x

Table A2.4. Self-assessment scores for EPHO 4

EPHO 4: Health promotion, including action to address social determinants and health inequity	Score	G	F	RG	SD
4.A. Intersectoral and interdisciplinary activity					
4.A.1. Structures, mechanisms and processes within government to enable intersectoral decision-making and action, using a health-in-all-policies approach	8.0	x		x	
4.A.2. Ministry of health's engagement and involvement of local communities and civil society in the area of health promotion	7.0	x	x	x	
4.A.3. Intersectoral capacity with regard to key national stakeholders in the private sector (industry, agriculture, communication, construction, etc.)	6.0	x	x	x	x

EPHO 4: Health promotion, including action to address social determinants and health inequity	Score	G	F	RG	SD
4.B. Addressing behavioural, social and environmental determinants of health through a whole-of-government, whole-of-society approach					
4.B.1. Tobacco policy in line with the requirements of the WHO Framework Convention on Tobacco Control	8.0	x		x	
4.B.2. Alcohol control policy in line with the WHO Global Strategy to reduce the harmful use of alcohol	7.0	x	x	x	x
4.B.3. Nutrition policy from a life-course perspective	6.3	x	x	x	x
4.B.4. National policy(s) on physical activity	7.0	x	x	x	
4.B.5. Programmes and policies to promote sexual and reproductive health	4.0	x	x	x	x
4.B.6. Activities to address substance abuse	5.0	x	x	x	x
4.B.7. Policies and practices related to mental health	5.0	x	x	x	x
4.B.8. Policies to control domestic violence and violence against children and women	4.0	x	x	x	x
4.B.9. Policies and programmes related to injury prevention	7.0			x	x
4.B.10. Addressing the social determinants of health	7.0	x		x	

Table A2.5. Self-assessment scores for EPHO 5

EPHO 5: Disease prevention, including early detection of disease	Score	G	F	RG	SD
5.A. Primary prevention					
5.A.1. Immunization programme	9.0			x	
5.A.2. Provision of information on behavioural and medical health risks in health-care settings	9.0	x	x		
5.A.3. Disease prevention programmes at primary and specialized health-care levels	8.0	x	x		
5.A.4. Provision of maternal and neonatal care programmes	7.0	x	x		
5.A.5. Provision of health services to migrants, homeless people and ethnic minority populations	3.0	x	x	x	x
5.A.6. National approach to prison health	4.0	x	x	x	x
5.B. Secondary prevention					
5.B.1. Secondary prevention (screening) programmes for early detection of disease	7.0	x	x		

EPHO 5: Disease prevention, including early detection of disease	Score	G	F	RG	SD
5.B.2. Awareness programmes related to early detection of disease	8.0	x			x
5.B.3. Provision of chemoprophylactic agents to control risk factors for disease	8.0	x			
5.C. Tertiary/quaternary prevention					
5.C.1. Rehabilitation, survivorship and chronic pain-management programmes	6.0	x	x	x	x
5.C.2. Access to palliative and end-of-life care	3.0	x	x	x	x
5.C.3. Capacity to establish patient support groups	6.0	x	x	x	x
5.D. Social support					
5.D.1. Programmes aimed at creating and maintaining supportive environments for healthy behavioural change	6.0	x			
5.D.2. Support to caregivers	3.0	x	x	x	x

Table A2.6. Self-assessment scores for EPHO 6

EPHO 6: Assuring governance for health and well-being	Score	G	F	RG	SD
6.A. Leadership for whole-of-government, whole-of-society approach to health and well-being					
6.A.1. Government commitment to health and health equity as a priority in national policy	8.0		x	x	
6.A.2. Governance for health	8.0		x	x	x
6.B. Health policy cycle					
6.B.1. Mechanisms for stakeholder participation included in the health policy cycle	7.0		x		x
6.B.2. Situational analysis prior to formulating plans or strategies	7.0		x	x	
6.B.3. Planning of national, regional and local strategies, policies and plans for public health	7.0		x	x	
6.B.4. Implementation of strategies, policies and plans for public health	6.0	x	x	x	x
6.B.5. Monitoring and evaluation activities embedded in public health strategies and policies	6.0	x	x	x	

EPHO 6: Assuring governance for health and well-being	Score	G	F	RG	SD
6.C. Regulation and control					
6.C.1. Ministry of health's capacity to develop, enact and implement appropriate national legislation to improve public health and promotion of healthy environments and behaviours aligned with regional and global commitments	7.0	x	x	x	x
6.C.2. Performance of health impact assessment (HIA)	4.0	x	x	x	x
6.C.3. Performance of health technology assessment (HTA)	8.0	x		x	
6.C.4. (For European Union Member States only) Short-, medium and long-term strategies to comply with a European Union community health-services system	7.0	x	x	x	x

Table A2.7. Self-assessment scores for EPHO 7

EPHO 7: Assuring a competent and sufficient public health workforce	Score	G	F	RG	SD
7.A. Human resources development cycle					
7.A.1. Situation analysis phase in human resources development strategy	7.0	x		x	
7.A.2. Planning phase in human resources development strategy	5.0		x	x	
7.A.3. Implementation phase in human resources development strategy	7.0	x		x	
7.A.4. Monitoring and evaluation phase in human resources development strategy	6.0		x		
7.B. Human resources management					
7.B.1. Human resources management systems in the field of public health	6.0	x			x
7.B.2. Recruitment and retention practices with regard to human resources for public health	4.0	x		x	x
7.B.3. Policies pertaining to human resources development in public health	4.0	x		x	x
7.B.4. Financing of human resources for public health	3.0	x	x	x	x

EPHO 7: Assuring a competent and sufficient public health workforce	Score	G	F	RG	SD
7.C. Public health education					
7.C.1. Educational institutions for public health (including epidemiology, community or social medicine and other units with similar mandates)	4.0	x		x	
7.C.2. General educational issues, as they pertain to core public health professionals	5.0	x	x	x	x
7.C.3. Public health curricula	9.0	x			x
7.D. Governance of public health human resources					
7.D.1. Leadership and management of human resources for public health	5.0	x		x	x
7.D.2. Structures and agreements for strategic partnerships in the development of human resources for public health	4.0	x		x	

Table A2.8. Self-assessment scores for EPHO 8

EPHO 8: Assuring organizational structures and financing	Score	G	F	RG	SD
8.A. Ensuring appropriate organizational structures to deliver EPHOs					
8.A.1. Clarity and coherence of the organizational structure of the ministry of health (or equivalent) and its linkage to all independent public agencies on health	7.0	x	x	x	x
8.A.2. Basic quality criteria for health-care centres that deliver EPHOs (primary health care, specialized health centres and hospitals)	7.0	x	x	x	x
8.A.3. Public health laboratory system for routine diagnostic services	8.0	x	x	x	x
8.A.4. National public health institute and/or schools for public health	8.0	x	x	x	x
8.A.5. Availability of enforcement structures for appropriate public health protection	7.0	x	x	x	x
8.A.6. Coordination of services delivered outside of governmental bodies	7.0	x	x	x	x
8.A.7. Oversight of the systems and organizational structures that perform EPHOs	8.0	x	x	x	x

EPHO 8: Assuring organizational structures and financing	Score	G	F	RG	SD
8.B. Financing public health services					
8.B.1. Public health budget within the health system	7.0	x	x	x	x
8.B.2. Mechanisms to fund public health services delivered outside the health system	8.0	x	x	x	x
8.B.3. Decision-making criteria on resource allocation for public health	7.0	x	x	x	x

Table A2.9. Self-assessment scores for EPHO 9

EPHO 9: Information, communication and social mobilization for health	Score	G	F	RG	SD
9.A. Strategic and systemic approach to public health communication					
9.A.1. Communication concepts within the ministry of health	1.0	x	x	x	x
9.A.2. Organization of health communication	7.0	x	x	x	x
9.A.3. Integration of communication strategies within priority public health programmes	7.0	x	x	x	x
9.A.4. Implementation of risk communication activities	8.0	x	x	x	x
9.A.5. Use of resources in communication and social mobilization efforts	7.0	x	x	x	x
9.A.6. Capacity to monitor and evaluate public health communication campaigns	7.0	x	x	x	x
9.B. Use of information and communication technologies (ICT) for health					
9.B.1. Ministry of health's approaches to ICT for health	6.0	x	x	x	x

Table A2.10. Self-assessment scores for EPHO 10

EPHO 10: Advancing public health research to inform policy and practice	Score	G	F	RG	SD
10.A. Setting a national research agenda					
10.A.1. Identification of national public health research priorities	7.0	x	x	x	
10.A.2. Alignment of public health research agenda with Health 2020	7.0	x	x	x	

EPHO 10: Advancing public health research to inform policy and practice	Score	G	F	RG	SD
10.B. Capacity-building					
10.B.1. Researchers' access to data on health indicators	8.0	x		x	x
10.B.2. Integration of research activities in public health education and continuous training	8.0	x	x	x	
10.B.3. Performance of research in public health practice	6.0	x	x	x	
10.B.4. Capacity for innovation in public health	7.0	x	x	x	
10.B.5. Maintenance of scientific and ethical standards in research	7.0	x		x	x
10.C. Coordination of research activities					
10.C.1. Research coordination	7.0	x	x	x	
10.D. Dissemination and knowledge-brokering					
10.D.1. Mechanisms and structures to disseminate research findings to public health colleagues	6.0	x	x	x	
10.D.2. Mechanisms to translate evidence into policy and practice	7.0	x	x	x	x
10.D.3. Effectiveness of policy-makers in communicating their needs to the research community, including health technology firms	7.0	x		x	x

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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