

GLOBAL HEALTH SECURITY AGENDA ASSESSMENT OF UKRAINE

November 2-6, 2015



Global Health Security Agenda

GHSA External Country Assessment of Ukraine

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Executive Summary

The Global Health Security Agenda (GHSA) is an effort by nations, international organizations, and civil society to accelerate progress toward a world safe and secure from infectious disease threats; to promote global health security as an international priority; and to spur progress toward full implementation of the World Health Organization (WHO) International Health Regulations 2005 (IHR), the World Organization for Animal Health (OIE) Performance of Veterinary Services (PVS) pathway, and other relevant global health security frameworks. Assessments are performed in Global Health Security Agenda participating countries for the purpose of identifying the baseline of the country preparedness capacity and to indicate areas most in need of further development in the 11 Action Package areas of the GHSA.

The GHSA Steering Group and Action Package Leaders, with the help of expert review, have developed draft targets and indicators for the GHSA Action Packages. These targets and indicators served as the basis for five countries that initially volunteered to serve as pilot nations for external evaluation and assessment of GHSA capabilities. These assessments were performed in the beginning of 2015. Based on experiences from the pilot assessments, a revised version of the Assessment tool was adopted. Ukraine is now the sixth country to be assessed, and the first to host a formal assessment.

The results of the assessment and observations on Ukraine's Health Security preparedness were presented to Deputy Minister of Health Dr. Ihor Perehinets at the Ministry of Health in Kiev on November 6, 2015. In conjunction with Ukrainian officials, the assessment team identified a number of areas where improvements in health service delivery could be made and efficiencies increased. The assessment team stresses the urgent need for consolidation of resources as a key priority. The creation of a National Public Health Center and a National Food Safety Center (which incorporates the Veterinary Services) would facilitate this process. A second priority is to streamline legislative measures and practices to facilitate licensing and procurement of essential vaccines, laboratory reagents and other medical supplies from a variety of new and existing sources. Additional suggestions for Ukraine's consideration are provided under the Action Package sections of this report. Given that the health security sector is currently evolving and Ukraine is in the process of making substantive changes to its public health infrastructure, Ukraine might benefit from a follow-up assessment within the next year. The team applauds Ukraine for its commitment to global health security, the GHSA process and providing world class health care to the citizens of Ukraine.

Mission Details

The assessment was a highly collaborative process between Ukraine representatives and the assessment team. The assessment team would like to both note and express its appreciation for the considerable work and effort Ukraine dedicated to this process. The leadership and professionalism of the Ukrainian experts who participated in the assessment are a testament to one of the key strengths of the Ukrainian system—the outstanding cadre of professionally trained scientists who care deeply about their country, the advancement of science, and providing the best possible health care to the citizens of Ukraine. Their transparency and willingness to seek solutions together have been instrumental to the success of this mission as we worked together toward the goal of improving Ukraine’s capacities in health security.

Mission place and date:

Kiev, Ukraine, November 2-6, 2015

Mission team members:

1. Simo Nikkari (FI/ team lead)
2. Karen Sliter (US/ co-lead)
3. Susan Weekly (US)
4. Paolo Parente (IT)
5. Oleg Bilukha (CDC)
6. Khalid Abuhaimed (KSA)
7. Pier Giuseppe Facelli (OIE/ advisor)
8. Vasily Esenamanov (WHO/ advisor)
9. Geoff Bieger (Deloitte Consulting/ observer)

Objective

To assess Ukraine’s capacities and capabilities relevant for the 11 Action Packages of the GHSA Action Packages document in order to provide baseline data to support Ukraine’s efforts to reform and improve their public health security.

Preparation and Implementation of the Mission

- Ukraine is a member of the GHSA and requested an assessment as part of their commitment to this effort.
- Ukraine is redesigning its national health system and food safety/veterinary infrastructure and plans to implement changes according to GHSA and EU recommendations. Ukraine’s goals for this assessment are to receive feedback about its public health, food safety and veterinary systems and to be advised of priority actions to meet Ukraine’s health security goals.

Limitations and Assumptions

- Ukraine requested that the assessment and report be completed by the end of November, 2015. Ideally, the recipient country completes an internal assessment prior to the assessment mission. In this case, given the compressed time frame, this was not possible.
- The assessment was limited to one week’s time which limited the amount and depth of information which could be managed.
- It is assumed that the results of this assessment will be made publically available as all five pilot assessments have been.

- The assessment is not an audit and information provided by Ukraine will not be independently verified. Information provided by Ukraine will be discussed and an assessment rating will be mutually agreed to by the host country and assessment team. This is a peer to peer review.
- Ukraine is in the middle of restructuring its public health system and creating a National Food Safety Center. As a result, the assessment team is partially assessing structures which do not yet exist but rather are envisioned as part of the reform. Certain groups and responsibilities have not yet been transferred to the new structure. The previous system is not fully functional and the new system has not been fully implemented.

Structure of the Assessment

The assessment part of the report is organized by each of the 11 GHSA Action Packages, consisting of key findings made in Ukraine that are relevant for scoring the 'Level of capability' according to the Assessment tool criteria.

The assessment and scoring by Assessment tool was based on the state of the structure or function at the time of the mission, regardless of possible plans or prospects of establishing the structure or function in the near future.

Documents and presentations acquired, as well notes from interactive sessions are separately provided as a collection of supporting documents, covering in more detail the functions in Ukraine relevant for the GHSA Action Packages.

Key Ukrainian Participants and Institutions

Ukrainian Lead Representative:

Dr. Ihor Perehinets, Deputy Minister of Health, Ministry of Health, Ukraine

Participating Institutions:

Ukrainian Ministry of Health Public Health Department

Ukrainian State Sanitary Epidemiology Service

Ukrainian State Medical Department

Ukrainian State Emergency Department

Ukrainian State Veterinary Service

Ukrainian State Food Safety Service

Ukrainian State Penitentiary Service

Ukrainian State Security Service

Ukrainian State Border Service

Ukrainian State Emergency Service

Ukrainian Center for Disaster Medicine

Ukrainian Center for Medical Statistics

UCDCM-Ukrainian Center for Diseases Control and Monitoring

UCDC-Ukrainian Center of Socially Dangerous Diseases

Lviv Epidemiology Institute

Epidemiology Institute Gromashevskogo AMSU (Academy of Medical Sciences)

Epidemiology Institute Gromashevskogo AMSU

Antiplague institute (Odesa)

I. Mechnikov Institute of Microbiology and Immunology of National Academy of Medical Sciences of Ukraine

Institute of Biochemistry named after Palladin of the National Academy of Science of Ukraine

Post-graduate Medical Academy named by Shupika

NGO “Infectious Control”

Supporting Documentation Provided by Ukraine:

Presentation on Zoonotic Diseases

Presentation on Antimicrobial Resistance

Presentation on Surveillance

Presentation on Biosafety and Biosecurity

Presentation on Immunization

Presentation on National Laboratories

Video on Sample Transportation

Mission Conclusions:

Overarching Issues and Priority Actions:

Ukraine’s Association agreement with EU is the driver behind current efforts to reform the current structure and create a consolidated Public Health Institute and Food Safety Center. The timing of the mission was excellent as Ukraine is committed to this reform and reorganization process with the goal of creating a world class public health security system for the citizens of Ukraine.

The streamlining of efforts which are taking place in the process of this reorganization are absolutely necessary and will significantly improve efficiencies and recapture funds currently required to maintain the expensive and partially out of date infrastructure.

An extensive regulatory base exists. However, much of the legislation and regulatory acts urgently require updating to bring them to the forefront of current global standards.

Ukraine’s current organization is not structured to facilitate cross-sectoral communication between public health, security, and veterinary health sectors. Duplication of effort is an issue with a sub optimal level of coordination between a large number of institutions. Consolidation of these institutions into a coherent structure which facilitates cross-sectoral communication-a “One Health” approach-will be a key element for Ukraine’s success.

Ukrainian experts expressed their desire for more integration into the “world environment.” The current system is not optimally responsive to new challenges; for example, antimicrobial resistance. Many aspects of the system (for example, paper-based surveillance reporting) are outdated and would have difficulty responding to emerging challenges to health security. To reach this goal, the assessment team strongly recommends that Ukraine request a joint IHR/PVS (International Health Regulations/Performance of Veterinary Services) assessment and GAP analysis, carried out by WHO and

OIE experts. In addition, the assessment team recommends that Ukraine consider requesting a Crisis Management Center (CMC) Mission and Good Emergency Management Practices (GEMP) training from the Food and Agriculture Organization (FAO).

Summary of Recommended Priority Actions:

1. Ukraine must continue with structural and legislative reform, streamlining and institutional consolidation-these actions are absolutely essential for meeting Ukraine’s goal of creating a world class public health security system for the citizens of Ukraine.
2. Ukraine should seek new and reliable sources and mechanisms for expeditious procurement of essential vaccines, medical countermeasure supplies, high quality laboratory reagents, and other laboratory products. New legislation should be developed to support these efforts.
3. Ukraine consider seeking international assistance with updating legislative and regulatory base.
4. Ukraine request a joint IHR/PVS assessment by WHO and OIE, followed by a GAP analysis and in order to more specifically define current public health and veterinary infrastructure needs.
5. Ukraine request a FAO Crisis Management Center (CMC) visit for African Swine Fever or Highly Pathogenic Avian Influenza (HPAI) to support management of these priority diseases in Ukraine.
6. Ukraine request Good Emergency Management Practices (GEMP) training from FAO to strengthen animal health emergency response system.
7. Ukraine request One Health Systems Mapping Analysis Tool (OH-SMART) training to facilitate cross sectoral coordination.
8. Ukraine make the GHSA assessment publicly available for possible donor support and to contribute to the overall GHSA process.

GHSA Antimicrobial Resistance

(GHSA Action Package Prevent-1)

Introduction

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, the problem was manageable as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics. Over the past decade, however, this problem has become a crisis. The evolution of antimicrobial resistance (AMR) is occurring at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security, and national security.

Ukraine Level of Capabilities

- Ukraine has made significant effort on AMR. At the national level there has been progress toward development of legislation which supports AMR surveillance, detection, and control.
- Regulations on AMR were approved at the national level. They addressed prevention of nosocomial infections in certain areas such as maternity wards and post-operative. In addition, legislation on appropriate antimicrobial use has existed since 2000. This legislation, however, needs to be updated. A list of priority organisms exists.
- Efforts have been fragmented because funding has been based on projects versus having an overarching strategy. Ukraine's investment has produced significant capacity which can be enhanced and combined with additional components to develop a clinically sound and cost effective system that is measurable.
- Resistance problems have been caused by lack of appropriate controls and inefficiencies in the system. Antibiotics are freely available without a medical prescription. One-quarter of the drugs sold without a prescription in Ukraine are antimicrobials and no regulations exist for the sale of antimicrobials in private pharmacies.
- A commission to develop a national AMR strategy was formed in 2002. However, to date the strategy has not been approved at the national level.
- Efforts to establish inter-institutional coordination mechanisms, such as with the Ordinance of Health Ministry 2007, have not been fully implemented. For example, Ukraine has yet to follow through on their intention to install WHONET in hospitals throughout Ukraine. Fewer than 40% of hospitals can monitor AMR electronically.
- Ukraine currently monitors AMR via three systems which operate independently but share some information. One priority area for monitoring is TB control where 23.3% of newly diagnosed cases tested have multi-drug resistant tuberculosis (MDR TB)

- Ukraine is able to complete 400 tests per year for AMR in HIV. Thus patients who have failed anti-retroviral therapy (ART) are tested. Until 2012 Ukraine used outside labs for this testing. At the beginning of 2012 there were 26,000 ARV patients; at the beginning of 2013 40,000 and at the beginning of 2015 the figure was 66,000.
- AMR is addressed by a number of laboratories. Thus, fragmentation of information exists. Over 1 million tests have been completed. However, many labs do not have freezers to keep up reference strains and only 35% of labs have computers. Some tests, such as minimum inhibitive concentration, are too expensive to run on a regular basis. All hospitals have the ability to test for AMR. All clinics which don't have their own lab have somewhere to refer samples to. The quality of testing varies.
- At the national level there is no prohibition on the use of antimicrobials for growth promotion in animals. Modern antibiotics are being used in the veterinary industry. However, the testing list for antimicrobials in food is 10 years old. The Veterinary Service is required to report AMR cases to the Ministry of Health. However, in practice this rarely happens.
- Negative incentives exist for the reporting of AMR. Hospitals report concern over being punished for reporting the development of AMR in their institutions. In addition, payment to hospitals is made based on the number of beds occupied. Therefore, incentive exists for hospitals to keep patients in the hospital longer than absolutely necessary.
- Ukrainian health professionals are concerned about AMR. However, structural elements work against making substantive progress in this area.

Scoring for Ukraine Using the Assessment Tool

- *NOTE: Competent veterinary authority was not present for this discussion.*

• P.1.1 Antimicrobial Resistance (AMR) detection: score 3

○ Joint Ukraine/Assessment Team Recommendations for Priority Actions:

- Ukraine lacks modern consumables for identification of microorganisms and modern methods/protocols for determining antimicrobial resistance which correspond to international/European standards (EUCAST) and which are needed for Ukraine to be able to implement the CAESAR project and European AMR surveillance system (EARS-Net).
- Ukraine has some reference cultures for antibiotic resistant pathogens but needs additional strains.
- Staff of microbiology laboratories need international training and professional development opportunities in modern techniques for antimicrobial resistance

testing, primarily for molecular methods (for reference-labs and scientific institutes) such as PCR (as opposed to culturing organisms).

- Key steps include: efficient streamlining and facilitation of the supply and demand chain, integration of laboratory results and patient data, and effective resource management. The creation of an authorized designated monitoring and quality improvement body and system with the appropriate key performance and financial indicators which is integrated with research and training and development programs to sustain capacity and performance are key requirements.
- Unification of the GHSA AMR targets among the different stakeholders with streamlining of the vision, missions, objectives and processes with the national health strategy is essential for improving AMR surveillance and detection.

- **P.1.2 Surveillance of infections caused by AMR pathogens Score: 3**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Ukraine needs reagents at the local and oblast level. Certain labs need more equipment.
- Surveillance system (WHONET) cannot be fully implemented because labs need computers and internet access.

- **P.1.3 Healthcare associated infection prevention and control programs: Score: 3.**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Some hospitals lack updated equipment to follow through on the hospital infection control guidelines (e.g., equipment for sterilization).
- Ukraine needs to improve the system of positive incentives in addition to monitoring visits to create an atmosphere where facilities are encouraged to report AMR cases and no longer fear they might be “punished” for doing so.
- The development and implementation of a continuing education program for current physicians and veterinarians (postgraduate education) as well as medical and veterinary students on issues of AMR and infection control is recommended.
- The development of a pilot “twinning” program with international organizations, professional associations, institutes of postgraduate education, and a U.S. or European hospital which has excellent hospital epidemiology and a successful program for decreasing infections is recommended.

- Based on the above, appropriate business planning can help ensure ongoing financial sustainability.

- **P.1.4 Antimicrobial stewardship activities Score: 1**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Development of a national inter-ministerial plan for epidemiological surveillance of AMR and controls to ensure appropriate antimicrobial use.
- Development of a survey on proper administration of antibiotics.
- Establishment of a technical exchange program with CDC or EU CDC or another facility.
- Establishment of an inter-ministerial working group for development of the national inter-ministerial plan and support for the development of guidance documents.
- Development of an electronic surveillance system.
- Assistance for obtaining AMR guidance documents that exist in Europe and the U.S. and support for ensuring their adoption in Ukraine.

GHSA Zoonotic Disease

(GHSA Action Package Prevent-2)

Introduction

Zoonotic diseases are communicable diseases and microbes spreading between animals and humans. These diseases are caused by bacteria, viruses, parasites, and fungi that are carried by animals, and insect or inanimate vectors may be needed to transfer the microbe. Approximately 75% of recently emerging infectious diseases affecting humans are diseases of animal origin; approximately 60% of all human pathogens are zoonotic.

Ukraine Level of Capabilities

- Ukraine's public health system has broad surveillance system for zoonotic diseases which concentrates on diseases which represent the greatest public health concern within the country (rabies, leptospirosis, salmonellosis, trichinellosis, anthrax and toxoplasmosis.) 32 zoonotic diseases are under the surveillance system of the Ministry of Health.
- The zoonotic diseases of greatest public health concern within the country are: rabies, leptospirosis, salmonellosis, trichinellosis, and anthrax. Both public health and veterinary officials concur that these are the priority diseases.
- Ukraine's Veterinary Service has sound mechanisms in place to identify priority zoonotic diseases and is effectively monitoring the animal population in spite of the lack of an animal identification system for the most important animal species
- Ukraine does not have a formal policy for "One Health" in the country. However, public health and veterinary services officials are in touch "all the time" telephonically.
- Coordination between public health officials and the veterinary services is minimal at the national level. Local coordination occurs as needed; for example with rabies cases or during salmonella outbreaks.
- Ukraine has a 3 tier epidemiological system: local, regional, national. There is a need for better coordination among agencies responsible for collecting information.
- Ukraine's Veterinary Service noted their limited ability to fight zoonotic disease outbreaks due to their inability to pay indemnity for animals and birds which must be culled. The absence of appropriate compensation led to resistance reporting disease and lack of access to households with susceptible animals.

Scoring for Ukraine Using the Assessment Tool

P.2.1 Surveillance systems in place for priority zoonotic diseases/pathogens: Score: 3

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:
 - Joint action programs between public health and veterinary services officials are needed, particularly at the national level. Ukraine would benefit from joint emergency response training.
 - Training of staff in emergency management and incident response.
 - There is a shortage of consumables such as test kits, reagents, and vaccines and some laboratories need additional equipment.
 - A biosafety center which encompasses both veterinary and public health should be established.
 - Technical exchange with EU and other countries should be actively pursued, particularly in the areas of laboratory training, epidemiology, and risk analysis.
 - Training for In vitro techniques for testing veterinary products and drugs would allow Ukraine to use fewer animals in research.
 - Ukraine would benefit from “One Health” training-joint training programs for veterinarians and public health officials.

P.2.2 Veterinarians: Score: 3

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:
 - The Assessment Team highly recommends Ukraine update their PVS analysis (ideally in conjunction with an IHR assessment) followed by a GAP analysis. In addition, the team recommends Ukraine consider availing themselves of the opportunities for laboratory or educational twinning projects, Good Emergency Management Practices (GEMP) training, and/or a Crisis Management Center (CMC) visit.

References:

OIE PVS Tool (2007)

GHSA Biosafety and Biosecurity

(GHSA Action Package Prevent-3)

Introduction

Working with pathogens in the laboratory is vital to ensuring that the global community possess a robust set of tools—such as drugs, diagnostics, and vaccines—to counter the ever evolving threat of infectious diseases.

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

Ukraine Level of Capabilities

- Ukraine is a country with a wide diversity of naturally-occurring infectious diseases, including Crimean-Congo Haemorrhagic Fever, Typhus, Dengue Fever, and West Nile virus. In addition, the risk of infectious diseases exposure is increased since Ukraine is a center for international activity and transit.
- Ukraine has performed an assessment of biosafety and biosecurity threats to the country and have worked to ensure that mitigation plans are in place to address these risks.
- Ukraine has had Biosafety and Biosecurity regulations in place since the 1990s. There is currently a regulatory reform process taking place in order to harmonize existing Ukrainian legislation on biosafety and biosecurity with international standards.
- Ukraine has WHO laboratory networks with proficiency in polio, measles, rubella, rotovirus, influenza, diphtheria and invasive bacterial diseases.
- Processes are in place for outbreak response from the local, regional and national levels from the human and veterinary health organizations.
- Ukraine has identified a number of collections of pathogens and is working to consolidate them to a minimum number of laboratories.
- Ukraine has a historic training program for Biosafety and Biosecurity which has been in place for many years. In addition, Ukraine has an active Biosafety Association, which works to bring biosafety professionals together to share expertise and training.

Scoring for the Ukraine Using the Assessment Tool

P.3.1 Whole-of-Government biosafety and biosecurity system is in place for human, animal, and agriculture facilities—Score: 3

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**
 - Ukraine has challenges obtaining consumables. There is an absence of development and manufacture of domestic diagnostic preparations and nutrient media for laboratory use.
 - Currently, no effective system for forecasting of epidemics and biological risks exists.
 - There is a need for the development and introduction of modern methods of research and biotechnology which could reduce the risk of biohazard exposure to personnel.

P.3.2 Biosafety and biosecurity training and practices—Score: 4

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**
 - Biosafety and biosecurity training would be beneficial for Institutes which have experienced staff turnover.
 - Additional funding should be provided to ensure the availability of personnel protective equipment and for the maintenance and monitoring of existing physical security systems for veterinary and human health.

GHSA Immunization

(GHSA Action Package Prevent-4)

Introduction

Immunization is one of the most successful global health interventions and one of the most cost-effective ways to save lives and prevent disease. Immunizations prevent greater than two-million deaths a year globally.

Ukraine Level of Capabilities

- Ukraine started a national immunization program in 1996. The schedule of prophylactic immunization has changed four times. The most recent National Immunization Plan (NIP) was drafted in 2009 (Law of Ukraine of October 21, 2009 No. 1658-VI “On Approval of the National Programme of Immunization and Protection Against Infectious Diseases for 2009-2015).
- As of April 2015, the Ukraine immunization program includes 10 vaccines/diseases (tuberculosis, diphtheria, tetanus, whooping-cough, poliomyelitis, Haemophilus influenzae type b, hepatitis B, measles, epidemic parotitis, rubella) of which 6 are considered mandatory (tuberculosis, poliomyelitis, diphtheria, whooping-cough, tetanus and measles). Additional vaccines for children could be introduced (pneumococcus, Group C meningococcal, rotavirus).
- Prophylactic and anti-epidemic measures are funded from the State budget of Ukraine as well as local budgets. The overall budget has been increasing the past six years although it still does not fully cover all costs associated with the National Immunization Plan. For example, allocations for 2012 cover roughly 72.9% of medicinal immune-biologic preparations.
- National Immunization Program (NIP) vaccines are centrally purchased and are provided free of charge. However, procurement issues have limited access to these vaccines. There is also a private market which is not very well developed as NIP vaccines are legally supposed to be free.
- Vaccination is a voluntary in spite of the existence of Article 15 “Prevention of Infectious Diseases in Children’s Institutions” which stipulates that only vaccinated children can attend public school or participate in other institutional activities. This law is not enforced and thus has not achieved the desired result.
- In the past 10-15 years, anti-vaccination sentiment has complicated efforts to ensure vaccination coverage for priority diseases. In 2010, Ukraine introduced informed written consent for vaccination.
- Among vaccine-preventable diseases, the number of rubella and mumps cases was decreasing until 2012 when more than 12,000 cases of measles were detected. Decreasing levels of vaccination coverage have resulted in an increased number of cases of clinical disease.
- Currently only 50% of children are fully immunized against polio and other vaccine-preventable diseases.
- Two cases of vaccine-derived poliovirus type 1 (cVDPV1) have been confirmed in the Zakarpatskaya oblast. The dates of onset of paralysis on June 30, 2015 and July 7, 2015.
- An information system, UkraVac, is used for registering individual vaccination records by local vaccination teams in each health center or unit. The data are stored in an electronic database.

- Every month a report is produced in order to calculate vaccination coverage by data from health centers/units and district levels.
- There is national centralized vaccine storage and 25 regional storage sites. The Ministry of Health ensures distribution of vaccines to local officials.
- In the vast majority of cases, Immunization sites (offices) are sufficiently equipped with refrigeration facilities. However, there are still several Oblasts of Ukraine where it is very difficult to provide vaccines due to inadequate equipment.
- There is a lack of public confidence in health care providers as a source of information about immunization. Therefore the population is not very aware of the importance of immunization as a social responsibility. In the past 10-15 years, the media spread false messages about vaccination which strengthened anti-vaccination sentiment.
- Lack of funding and inefficiencies in the licensing system have led to significant challenges in the procurement of NIP vaccines.
- For some pathogens, only a very limited number of national or international vaccine licenses exist for non-Russian sourced vaccines. This is one of the critical barriers to securing funding from Western countries for Ukraine's vaccination system.

Scoring for Ukraine Using the Assessment Tool

- **P.4.1 Vaccine coverage (measles) as part of national program: Score: 2**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Achievement of high immunization coverage is the top priority. Ukraine should maintain homogeneous high routine immunization coverage, particularly at the Oblast level, to avoid or nullify the consequences of pathogen introduction or circulation.
- Ukraine needs to update the normative legislation in concordance with current WHO guidance for outbreak response and population strategies.
- Immediate competency based training at both the human and the animal level is needed to achieve better outcomes in the immunization process.
- Hard to reach population groups must be identified in order to target them for specific interventions to ensure vaccine coverage.
- The National Immunization Plan should be updated according to international standards.

- Surveillance for cases of syndromic vaccine preventable disease (VPD) should be strengthened in order to rapidly detect and respond to disease outbreaks.
- Outbreak response measures must be implemented. An outbreak response plan should be developed in accordance with international standards customized to the current epidemiologic situation in Ukraine.

- **P.4.2 National vaccine access and delivery Score: 3**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- National drug/vaccine accreditation and licensing processes should be simplified. Drugs and vaccines already approved by the EU or U.S. should be granted expedited approval and facilitated entry. Ukraine should work to attract vaccine producers to the Ukrainian market through actions such as reform of procurement legislation which would allow for multiple year contracts.
- Ukraine should seek to expand strategic, financial and political support during the process of health care reform to ensure a more effective vaccine delivery system, higher vaccine coverage levels, and greater awareness among the general population of the importance of vaccination.
- Ukraine needs UN and GHSAs advocacy to support international vaccine procurement of high quality vaccine at reasonable prices.
- The procurement system should be restructured to reduce the number of local vaccine storage areas.
- It is recommended that Ukraine recover national production of some immunological diagnostic reagents for the purpose of monitoring and preventing infectious disease epidemics.

GHSA National Laboratory System

(GHSA Action Package Detect-1)

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

Ukraine Level of Capabilities

- Ukraine performs 9 of the 10 core tests identified by the International Health Regulations including:
 - Microscopy for Mycobacterium tuberculosis
 - Polymerase chain reaction (PCR) testing for Influenza virus
 - Virus culture for Poliovirus
 - Serology for HIV
 - Bacterial culture for Salmonella enteritidis serotype Typhi
 - In addition, the remaining four tests have been selected by Ukraine on the basis of major national public health concerns.
- A fully functional system exists for transportation of samples from remote regions of Ukraine to national laboratories for testing. Resource constraints (such as ability to package samples) can affect functionality of system.
- Currently, there are 3 certified institutions and 17 certified laboratories in 2014 (post reform).
- Ukraine is a member in global and European lab networks of WHO on polio, measles, rubella, rotavirus, influenza, diphtheria, invasive bacterial diseases.
- Ukraine has research projects with U.S. and Canadian collaborators and participates in international conferences.
- The Ukrainian laboratory system submitted 14,790 forms to WHO from 2010-2014. In 2014, they submitted 2574.
- Every year the Ukrainian laboratory system diagnoses 5 to 6 cases of rabies in humans.
- Laboratories are active participants of international programs of external quality testing, participating in about 80 per year.
- Laboratories produce a weekly bulletin for each district which reports how many people were hospitalized, etc.
- The Ukrainian National Laboratory System is proficient in classical diagnostic techniques and Ukraine performs 9 of the 10 core tests identified by the International Health Regulations.

- Rapid tests for diphtheria, meningococcus, etc. are not registered with the Ukrainian government. In addition, it is very costly to register and license human and veterinary products in Ukraine.

Scoring for Ukraine Using the Assessment Tool

- **D.1.1 Laboratory testing for detection of priority diseases Score: 4**

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:

- Barriers to the procurement of consumables should be eliminated. The absence of development and manufacturing of domestic diagnostic preparations and nutrient media for laboratory use should be addressed.
- It is recommended that the public health and veterinary laboratory networks be assessed for opportunities to optimize coordination and collaboration between central and local laboratories as well as between and public health laboratories and laboratory networks of other authorities, particularly veterinary services; to strengthen capacities of infrastructure and staff; and to improve connections between public health laboratories and clinical laboratories.

- **D.1.2 Specimen referral and transport system Score: 4**

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:

- Resources need to be available to ensure that samples can be shipped in a timely manner.

- **D.1.3 Effective modern point of care and laboratory based diagnostics Score: 3**

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:

- The Ukrainian National Laboratory System would benefit from additional investment in rapid diagnostic testing technology and support.
- Hospitals and clinicians do some initial point of care testing. Additional support and training would improve their ability to detect and respond to disease outbreaks more rapidly and effectively.

GHSA Real-Time Surveillance

(GHSA Action Package Detect-2/3)

Introduction

The purpose of real-time surveillance to advance the safety, security, and resilience of the Nation by leading an integrated biosurveillance effort that facilitates early warning and situational awareness of biological events.

Ukraine Level of Capabilities

- Ukraine has functional real-time surveillance for priority communicable diseases.
- Real-time surveillance is mandated by legislation. The list of 67 diseases under surveillance was last revised by the Decree of the Cabinet of Ministers No. 157 in 2001. This list is currently being revised.
- The main body responsible for implementing surveillance is the State Sanitary Epidemiologic Service (SES). The functions of central data compilation, analysis and reporting are with the Ukrainian Center of Diseases Control and Monitoring (UCDCM)
- Parallel surveillance systems for HIV and TB are carried out by the Ukrainian Center for Control of Socially Important Diseases (UCDC).
- Enhanced surveillance in collaboration with WHO and other international bodies exists for a few pathogens, including poliomyelitis, measles, rubella, rotavirus and influenza.
- Reporting of diseases under surveillance from health facilities is paper-based (form 058 and register 060), but immediate reporting is by phone. A separate paper form must be filled out for each case. Reporting from district (Rayon) to regional (Oblast) to central level is aggregated (rather than line-listing of cases) and normally email-based using dedicated surveillance software using forms 1 and 2.
- Analysis by CDCM at the central level is largely basic and descriptive, with monthly summary tables available for internal use and fed back to regional level. However, surveillance summaries are not open for public access or published at the MoH website.
- Each reported case of disease under surveillance automatically and mandatorily triggers field investigation by district SES staff, with involvement of the regional and central staff as needed. With 50,000-70,000 cases reported monthly and limited resources currently available it is unclear whether field investigation of each case is feasible as mandated.
- An event based surveillance function which would capture events of public health significance which are not reported through health system is not formally developed. Some monitoring of health events/rumors in media sources occurs.
- Indicator based surveillance exists, although it is fragmented among several agencies (e.g., SES, UCDCM, UCDC).
- There is inadequate funding which covers salaries but is not enough to procure equipment which would allow Ukraine to respond to outbreaks more promptly.

- Ukraine has an obsolete regulatory base.
- A real-time electronic reporting system does not exist. The current system of paper-based reporting is cumbersome and time consuming. Additionally, it is likely to decrease the quality of data and hamper rapid response functions.
- Basic descriptive statistical analysis aggregating reported disease counts from the regions and calculating incidence rates is conducted routinely. Some ad hoc analysis in special circumstances (e.g., ongoing outbreak) is possible
- The organization responsible for summary analysis and reporting (CDCM) is separate from the organization implementing surveillance on the ground (SES).
- Analysis is basic and relies on Excel software. This system does not permit advanced functions such as trend analysis, forecasting, and assessment of risk factors.
- Syndromic surveillance for acute flaccid paralysis (AFP) is conducted with WHO support. Therefore, surveillance for at least one syndrome (AFP) exists with proven recent capacity to detect cases of vaccine-associated poliomyelitis.

Scoring for Ukraine Using the Assessment Tool

- **D.2.1. Indicator and event based surveillance systems-Score: 3**
 - **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**
 - Ukraine needs to update their normative/legislative base to include recently emerging priority diseases and eliminate those of low national priority. Daily reporting of over 60 conditions is very costly and brings little benefit.
 - Further development of the event-based component of surveillance is recommended.
 - Strengthening epidemiologic-laboratory links through implementation of linked electronic reporting of epidemiologic surveillance and laboratory systems is recommended.
- **D.2.2. Inter-operable, interconnected, electronic real-time reporting system: Score: 1**
 - **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Ukraine needs assistance with developing a modern real-time web-based reporting system preferable capable of conducting basic quality checks and analytic functions as well as generating and following up on key system alerts. The system used in Georgia could be used as a basic model. This activity is a priority in this action package.
- There are shortages of staff relative to current staffing schedules, and lack of funding for conducting comprehensive field investigations.
- Ukraine needs to develop an electronic disease reporting system and database which are fully interoperable between the public health and veterinary medical communities.
- Ukraine needs to develop a single computerized system for reporting infectious diseases starting at the hospital level.
- In some districts and a regional levels, staffing shortages exist and should be addressed.
- Additional funding should be sought. Current funding levels are adequate for covering salaries but insufficient for procuring equipment which would allow Ukraine to rapidly respond to outbreaks and emerging disease events.
- Ukraine’s regulatory base needs to be consolidated and streamlined.

- **D.2.3. Analysis of surveillance data: Score 3**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Ukraine needs to develop advanced modern analytic capacities which are capable of analyzing trends, determining risk factors, etc. Advanced training and apprenticeship of key analytical epidemiologists in Western institutions would be of significant benefit.
- Training in data analysis techniques should include both public health and veterinary epidemiologists.
- Computer equipment needs to be updated and licensed statistical software to support advanced analytic tasks should be procured.

- **D.2.4. Syndromic surveillance systems: Score: 3**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Surveillance for syndromes of priority public health importance (e.g., suspected measles/rubella, influenza-like illness, etc.) should be further strengthened and maintained.

GHSA Reporting

(GHSA Action Package Detect-4)

Introduction

Health threats at the human–animal–ecosystem interface have increased over the past decades, as pathogens continue to evolve and adapt to new hosts and environments, imposing a burden on human and animal health systems. Collaborative multidisciplinary reporting on the health of humans, animals, and ecosystems reduces the risk of diseases at the interfaces between them.

Ukraine Level of Capabilities

Appointed by the Order #503 of the Ministry of Health to act as the IHR National Focal Point (NFP), the IHR Expert Group has been established. However, its functionality is constrained by several serious legal and procedural challenges, including:

- The IHR Expert Group has no terms of reference which would indicate the group’s function, working modality, periodicity of assembly (“if needed”), and the roles of the individual members.
- The Order defines a limited number of functions for a limited number of IHR Expert Group members. The functions which are defined are mainly administrative in nature (i.e. involvement of participants, external experts, organization of meetings).
- The Order does not define the purpose or decision-making process of the IHR Expert Group.
- The Order does not assign the IHR Expert Group responsibility for notifying WHO of public health events of potential international concern; nor does it require subsequent participation in risk assessment and investigation activities.
- The Annex 2 decision-making instrument is not being properly utilized. This tool aids decision-makers in determining whether or not WHO notification is necessary for a particular event. In the case of Ukraine, the IHR Expert Group should use the tool in plenary to decide which public health events should be reported by Ukraine to the WHO. However, in reality the tool is being used by stakeholders to determine whether or not a particular event should be notified to the IHR Expert Group.
- As a result, to date no events have been communicated to the IHR Expert group and group members are unaware of significant events occurring within the relevant sectors.
- The Order obliges the Acting Head of Section for Public Health to “*hold further meetings, if needed*” However, the international expectation is that meetings are held on a regular basis.
- The Order defines a Member List of the IHR Expert Group. This list consists of 16 heads and deputy heads of different institutions and agencies within the health system of Ukraine. The result is a structure which is unwieldy and cumbersome. Gathering the group in a timely manner

is a significant challenge as official letters are required and some of the members are not physically present in Kiev.

- The Order assigns responsibility for 24-hour communication with the WHO to the Ukrainian Center for Disease Control and Monitoring. However, in reality it is the Department of Public Health of the Ministry of Health and the UCDCM who are the contact points for WHO on a 24/7 basis. It is important to note that the member list attached to the Order identifies these two persons as Secretaries of the Expert Group, not as contact points for WHO.
 - The functions of the other appointed members within the Expert Group are not specified.
 - The Expert Group is not multisectoral, it is comprised exclusively of representatives of institutions and agencies within the Ukrainian health sector.
- The IHR National Focal Point (NFP) in each country should receive necessary international training related to communication and coordination with the WHO. In the case of Ukraine, the large number of members in the IHR Expert Group creates significant barriers to the provision of this training. WHO has provided trainings and exposure to the appointed Secretary of the Expert Group – however, this person has no decision-making authority within the Group.
- The IHR Expert Group lacks legal standing to address non-health sectors. According to the Article 7 of the *Regulation of the Cabinet of Ministers #893, of 22 August 2011, “On the rules of the sanitary protection of Ukraine”*, the National Focal Point is to be appointed by the Ministry of Health. Thus, this individual lacks the legal authority to address non-health sectors relevant to IHR implementation.
- Current legislation does not incorporate a multi-hazard approach to IHR-the focus is restricted to communicable diseases. Article 7 of the *Regulation of the Cabinet of Ministers #893, of 22 August 2011, “On the rules of the sanitary protection of Ukraine”* states that in case the national sanitary-epidemiological surveillance system receives evidence of “a person or group of persons suspected to be carriers of infection which may be of international concern”, the IHR National Focal Point (NFP) must be immediately informed.
- Article 7 does not take into account any other public health risks that should be communicated to the NFP under IHR.
- There is no communication between the Ukrainian NFP and other NFPs.
- The provision in Article 8 for “Consultation” on IHR related matters has not been utilized to date.
- Ukraine’s Veterinary Service regularly reports to the OIE through the WAHIS System. The most recent notification was submitted on 28th October 2015 for African swine fever. According to the OIE rules, an immediate notification has to be done in 24 hours.

Scoring for Ukraine Using the Assessment Tool

D.4.1. System for efficient reporting for to WHO, FAO, and OIE: Score: 1 and 3

The score is 1 for the Medical Services and 3 for the Veterinary Services.

D.4.2 Reporting Network and protocols in country: Score 2

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:
 - The current health system reform effort should be continued. A key component of this reform effort should be addressing the challenges faced by Ukraine in the area of reporting to WHO through Ukraine's IHR National Focal Point (currently the IHR Expert Group.) This will enable Ukraine to fulfill its international obligations under the International Health Regulations (2005).
 - The Center of Public Health to be established under the Ministry of Health could theoretically be in a good position to act as an NFP in the country if necessary provisions related to its multisectoral function are established and supported with the necessary degree of authority. The NFP must have the authority to request information from both health and non-health sectors relevant to the IHR and use this information to make relevant decisions.
 - Ukraine would benefit from guided technical support when revising the NFP functions and information sharing and reporting mechanisms and procedures.
 - Ukraine could also benefit from bilateral technical support from the countries with developed NFP capacities.
 - The Chief Veterinary Officer would benefit from participating in OIE training for new national Delegates

GHSA Workforce Development

(GHSA Action Package Detect-5)

Introduction

Workforce development is important in order to develop a sustainable public health system over time by developing and maintaining the highly qualified public health workforce with appropriate technical training, scientific skill, and subject-matter expertise.

Ukraine Level of Capabilities

- Ukraine's field epidemiology capacity is adequate based on number of personnel. The Public Health epidemiology work force focuses on communicable diseases. The functions related to Scope of Practice (SOP) competencies, monitoring and measuring the effectiveness and efficiency of performance, and the means for updating and further system development through research in other areas of Public Health are lacking.
- More than one university provides primary education and several specialized training courses on Public Health. Basic, intermediate and advanced training is available, including a Masters of Public Health focused on infectious disease field work. Veterinarians as well as human health practitioners participate in these Public Health courses.
- There is no defined international integration or collaboration in the area of public health training, including infectious diseases.
- There is no training emphasis or focus on non-communicable diseases as part of the epidemiological function of the health sector. The role of epidemiology as a relevant and cost effective component of a public health system needs to be more broadly communicated and highlighted.
- Ukraine's reform process, which includes necessary streamlining measures and an updated public health workforce strategy, will create challenges related to maintaining capacity for all stated objectives and priorities, including GHSA.
- Low salaries in the public health sector cause significant staffing turnover. There is a need to assess public health epidemiological and field resources and implement performance-based incentives to help motivate and retain employees.
- Note: This assessment covered only public health professionals. Information regarding the animal health workforce (veterinarians; farming/livestock professionals; etc.) was not obtained.

Scoring for Ukraine Using the Assessment Tool

- D.5.1 Field epidemiology capacity: Score: 3
- D.5.2 Field Epidemiology Training program or other applied epidemiology training program in place Score: 3
- D.5.3 Workforce Strategy Score: 2
 - Joint Ukraine/Assessment Team Recommendations for Priority Actions:
 - A comprehensive workforce strategy should be a key component of Ukraine's national health care reform. Without this, in spite of current capacity and the availability of training programs, it will be difficult for Ukraine to sustain best practice public health services for non-communicable and communicable disease response.
 - The reform strategy should be revisited in order to more clearly assess its probable impact on public health goals and objectives in the areas of management, training, performance, and quality improvement.
- Recommended Road Map to support revisiting the National Health Reform to address GHSA and the overall PH and Emergency Response:
 - ✓ Define a common strategy that streamlines Ukraine's goals and objectives for non-communicable and communicable diseases
 - ✓ Revisit the feasibility study and business plan, incorporating a customer oriented approach that is balanced and integrated with all stakeholders:
 - Beneficiary and users including other industrial and economic firms
 - Providers & providers technical support
 - All other non-technical support services
 - National and International allied businesses and health services organizations including the private sector
 - Universities, academic, and other training and education related sectors
 - Community and public representatives
 - ✓ Define and develop the following requirements:
 - Define financial and non-financial priorities for each customer/stakeholder
 - Define the scope of work and role of each customer/stakeholder including clarification of accountability, responsibility, and standard operating procedures.

- Ensure that legislation defines authority, accountability, and responsibility in an integrated manner.
- Develop internal and integrated policies, procedures and protocols to regulate SOP processes.
- Establish key performance and financial indicators which measure the productivity of the overall system and each customer within the system based on their scope of work, the set goal and objectives, and the internal and integrated role within the Standard Operating Procedures.
- This effort should include the organizations which are able to positively effect and support performance and ensure its sustainability and development based on each objectives including:
 - ✓ System auditing, monitoring, evaluating and continuous quality improvement
 - ✓ System scientific support required including research, education, training, carrier development and competency maintenance
 - ✓ System resources management and engagement support program to minimize valuable resources attrition and facilitate its retention, and ensure system sustainability and development
- Select the best feasible practiced benchmark (UK, Georgia) for the reform process based on Ukraine's financial and other resources. A visit to the chosen system by Ukrainian authorities is strongly recommended in order to have direct exposure to both the strengths and weaknesses inherent in any system.
- Produce an Executive Summary in order to seek high level concurrence for the required budget for reform system review and its business development and project planning.
- ✓ Based on the above the following specific actions are recommended:
 - Re-conduct the feasibility study and SWOT analysis.
 - Conduct a gap analysis and define the gaps based on strict utilization of existing resources to avoid unnecessary additional cost by minimizing capacity cutting and rehabilitating of the existing system.
 - Define the required additional new services and resources to close the gap.
 - Conduct a detailed financial plan to establish the required investment and/or operating budget.
 - Define all feasible financial resources including privatization, corporate transformation, and insurance system implementation as concepts for public private partnership.
 - Re-write the implementation business plan actions and its project management based on the detailed approved financial analysis and selected resources.

GHSA Emergency Operations Centers

(GHSA Action Package Respond-1)

Introduction

A Public Health emergency operations centers (PHEOC) is a central location for coordinating operational information and resources for strategic management of Public Health (PH) emergencies and events. It can be located in a designated facility or part of a National Emergency Operation Center (NEOC) integrating with other NEOC response functions where PH play a key role in addressing all associated Medical, biological and infectious diseases, and other environmental risks.

PHEOCs independent or as part of NEOC provide communication and information tools and services and a management system during a response to any emergency or event to ensure that it is safe and secure from infectious disease or any other biological or environmental of PH threats They also provide other essential functions to support decision-making and implementation, coordination, and collaboration in that regard.

Ukraine Level of Capabilities

- The PHEOC in Ukraine operates from within the National and Regional Comprehensive Civil Protection Code and Response Plan. It reflected a significant stock of experience and track record supported by solid general and specific national legislation.
- The code includes goals and objectives for maintenance of human and animal health, disease prevention, sanitary and epidemiology well-being of the public, addressing environmental hazards, and providing emergency and emergency medical response.
- An independently functioning PHEOC body is in its development phase and includes systems and subsystems of civil health protection functions. Within capacity, those functions provide the feasible required medical, biological and psychological response support for the sanitary and epidemiology well-being of the nation. In addition, it intersects with the NEOC objective components.
- However, the functions fall short of the required comprehensive platforms, structures, resources, and resource management and support tools. A comprehensive ability to plan, regulate, support, maintain, develop, evaluate, and sustain performance is needed.
- The system functions are managed and coordinated by the State Commission on Manmade and National Disasters where the emergency event and response is coded and classified. Those codes and classification escalate from local or district to regional, national and/or international response.
- Such a classification is built on a capacity linked incident coding system that ascends through and is managed by a defined organizational structure. If the response is beyond the local capacity the escalation process is activated through the local government level to the regional and national level as needed.

- The NEOC led by the State Commission is assembled in crises to contain, control and prevent the crisis from spreading.
- The commission is led by the Ukrainian Prime Minister and supported by the Cabinet; including all relevant ministries in addition to local and regional governments.
- The District and Regional Sanitary and Epidemiology Departments are the bodies which, together with the MOH, represent the health sector at large. Both coordinate PH requirements within the local and regional government and other concerned organizations.
- The District and Regional bodies provide a central MOH location for coordination and executive support to incident response and serve as point of coordination with on-scene partners. It is designated to receive, analyze, evaluate, and disseminate PH emergency information.
- The NEOC is linked with the district and regional departments, local health services, national reference laboratories and international points of contact.

Scoring for Ukraine Using the Assessment Tool

- **R.1.1 Capacity to Activate Emergency Operations: Score 3**
- **R.1.2 Emergency Operations Center Operating Procedures and Plans: Score 2**
- **R.1.3 Emergency Operations Program: Score 3**

○ Joint Ukraine/Assessment Team Recommendations for Priority Actions:

- Improve timely decision making and response by addressing vertical and horizontal fragmentation and duplication. Establish reliable, effective and efficient vertical and horizontal communication channels within the system to collect and disseminate information.
- Two way dissemination and sharing of information between Ukraine and international organizations would improve Ukraine's emergency response capability. A working system of mutual integration and collaboration to build capacity, standard operation procedures, and key performance and financial indicators should be developed.
- Additional support is needed to upgrade the system of management, development, training, and operations support. This will help address missing system components, platforms, processes, resources, resources management, and system operation in order to help ensure sustainability.

GHSA Linking PH with Law and Multi-sectorial Rapid Response

(GHSA Action Package Respond-2)

Introduction

PH emergencies pose special challenges for law enforcement, whether the threat is manmade (e.g., the anthrax terrorist attacks) or naturally occurring (e.g., flu pandemics). In a PH emergency, law enforcement will need to quickly coordinate its response with PH and medical officials.

Ukraine Level of Capabilities

- Law enforcement interactions with PH in case of manmade terrorist attacks, biological threats, or pandemics beyond the context of health services and activities are regulated at a higher level within the district, regional, and or nation in accordance with the national civil protection and the regional comprehensive emergency plans.
- During these events the nation's safety and security is ensured by the designated law enforcement body.
- There is a comprehensive national plan which generally describes the actions for what should happen if a multi-sectoral response is needed. This plan describes point of contact, triggers, etc.
- There is also a document which describes the relationship between health and legal authorities. However, this is not a Memorandum of Understanding (MOU) and no MOU or other agreement exists between public health and security authorities.
- Joint trainings have been randomly conducted including both PH and law enforcement officials at the border entry points for health screening and also for Pandemic Preparedness
- Identification of potential biological or other PH events that may have deliberate motives are identified with limited capacity. Management and response capability is at the district and regional government and the National State Civil Protection Commission. Capabilities include counter-terrorism, HAZMAT response to investigate, and the ability to contain and control potential and/or actual biological threat incidents.
- The Government of Ukraine is internationally connected to Interpol through the Ministry of Internal Affairs and forms the link with INTERPOL's global network. This enables Ukraine to participate in cross-border investigations.
- The PH link with law enforcement operates from within the National and Regional Comprehensive Civil Protection Code and Response Plan.
- The system functions are managed and coordinated by the State Commission on Manmade and National Disasters where the emergency event and response is coded and classified and escalate from within the national to international response and vice versa.

- The NEOC led by the state commission is always assembled in such crises and where PH at the human and animal level interact.
- The NEOC is structured and equipped to provide all required linkages with members of the national civil protection plan, districts and regional departments, national reference laboratories, and international points of contact.

Scoring for Ukraine Using the Assessment Tool

- **R.2.1 Public Health and Security Authorities (e.g. Law Enforcement, Border Control, and Customs) are linked during a suspect or confirmed biological event. Score: 2**

- **Joint Ukraine/Assessment Team Recommendations for Priority Actions:**

- Improvement of cooperation among representatives of health sector and law-enforcement bodies in case of anthropogenic terrorist attacks, biological threats or pandemics would help ensure faster and more effective response. One way to operationalize this “One Health’ concept is OH-Smart training (One Health Systems Mapping Analysis), which is highly recommended.
- A reliable, effective and efficient vertical and horizontal communication system to collect and disseminate information should be established.
- The system limitations of dissemination of information and support to and from international organizations represented by WHO, OIE, and other NGO needs to be addressed by establishing a working system of mutual integration and collaboration to build capacity and standard operation procedures endorsed by mutually set benchmarks.
- Support the overall PHEOC operation within the NEOC roles with high level management, development, training, and operation support to upgrade the system capability with mutual risk assessment that define key players and stakeholders within the multi-sectorial response and close the gap and ensure sustainability within the national health identified risks including the GHSA objectives.
- Expand the financial and political support within the upcoming health care legislation and reform to ensure the following:
 - MOU between Medical, Security and Civil sectors
 - Shared national and international Standard Operating Procedures
 - Primary and contingency communication and informatics system operation and plan
 - Prevent loss of ability to ensure safe and secured national response to detect, prevent, and respond to the evolving biological threats

**GHSA Medical Countermeasures and
Personnel Deployment**
(GHSA Action Package Respond-3)

Introduction

Medical Countermeasures (MCM) are vital to national security and protect nations from potentially catastrophic infectious disease threats. Investments in the MCM create opportunities to improve overall public health. In addition, it is important to have trained personnel would can deploy in case of a public health emergency for response.

Ukraine Level of Capabilities

- Ukraine has experience working with International organizations, such as WHO and UNICEF to procure MCM during times of emergency.
- In addition, Ukraine has experience responding to public health emergencies domestically and internationally.
- All of the Ukrainian experts the assessment team met are passionate about health security and want to protect the people and animals of Ukraine.
- Ukraine has experience responding to public health emergencies domestically and internationally.
- Ukraine has the ability to gain government approval quickly when there is a request for assistance from other countries for health personnel during a public health emergency.

Scoring for Ukraine Using the Assessment Tool

R.3.1 System is in place for sending and receiving medical countermeasures during a public health emergency. Score: 3

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:
 - Simplify procurement process.
 - Streamline the procurement process by allowing all human and veterinary drugs already registered in the EU and the U.S. automatic approval in Ukraine since they have already been tested and approved.

R.3.2 System is in place for sending and receiving health personnel during a public health emergency. Score: 3

- Joint Ukraine/Assessment Team Recommendations for Priority Actions:
 - Ukraine would benefit from expertise exchange with foreign partners that have existing MCM and personnel deployment programs.
 - Joint training for all of the Ministries who respond to public health emergencies is recommended.

Attachments

Presentation on Zoonotic Diseases
Presentation on Antimicrobial Resistance
Presentation on Surveillance

Presentation on Biosafety
Presentation on Immunization
Presentation on National Laboratories
Video on Sample Transportation