

REPORT FIRST MEETING OF THE EUROPEAN REGION LABORATORY TASK FORCE FOR HIGH THREAT PATHOGENS



Vienna, Austria 26–27 February 2020 Address requests about publications of the WHO Regional Office for Europe to:

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Contents

List of abbreviations	. 2
Executive summary	. 3
Background	. 4
Objectives of the meeting	. 5
COVID-19 updates and response	. 5
National capacities: assessment and way forward	. 6
Bridging the gaps and needs with expertise	. 9
Conclusions and next steps	11
Agreed Action Plan until the next meeting of the European Region Lab Task Force	12
References	13
Annex 1: List of participants	14
Annex 2: Agenda	16

List of abbreviations

Better Labs	Better Labs for Better Health
CCHF	Crimean–Congo haemorrhagic fever
COVID-19	Coronavirus Disease 2019
EQA	External quality assurance
ERLI-Net	European Reference Laboratory Network for Human Influenza
EU	European Union
EVD-LabNet	Emerging Viral Diseases – Expert Laboratory Network
FAO	Food and Agriculture Organization of the United Nations
FLI	Friedrich-Loeffler-Institute
HTP	High Threat Pathogens
IHR	International Health Regulations (2005)
ISO	International Organization for Standardization
JEE	Joint external evaluation
Lab Task Force	European Regional Laboratory Task Force for High Threat Pathogens
МоН	Ministry of Health
NLP	National laboratory focal point
NRL	National reference laboratory
OIE	World Organisation for Animal Health
PPE	Personal protective equipment
RKI	Robert Koch Institute
RIVM	National Institute for Public Health and the Environment
SARS	Severe Acute Respiratory Syndrome
SIMEX	Simulation exercise
ToR	Terms of reference
WHE	WHO Health Emergencies Programme
WHO	World Health Organization
WHO CC	WHO collaborating centre
WP	Work package

Executive summary

International networks for laboratory surveillance, preparedness and response are an important tool for laboratory strengthening, because they can serve both as a platform for sharing information and expertise, and as a system for the referral of diagnostic specimens for primary and confirmatory testing. Among the European Region priority countries of the WHO Health Emergencies Programme a number do not participate in international laboratory preparedness and response networks for High Threat Pathogens (HTPs), which represents a key gap. To address this gap, the WHO Regional Office for Europe is establishing the European Regional Laboratory Task Force for High Threat Pathogens (Lab Task Force).

The Lab Task Force was launched following a preparatory meeting held in Istanbul in January 2019 where the Terms of Reference (ToR) for the Lab Task Force were agreed upon and a laboratory tool to assess national laboratory diagnostic capacities for HTPs was reviewed. The meeting also identified a list of priority HTPs for the Lab Task Force to support in the WHE priority countries, e.g. through the organization of external quality assurance (EQA). Prioritized HTPs were orthohanta viruses, flaviviruses, Crimean–Congo haemorrhagic fever virus (CCHF), *Brucella spp., Leptospira spp., Coxiella burnetti, Francisella tularensis, Bacillus anthracis,* and *Mycobacterium tuberculosis*.

This was the first official meeting of the Lab Task Force's members and partners and the opportunity to provide information on COVID-19 virus globally and in the Region, including laboratory readiness, was taken. The progress of the Lab Task force in its first year and the results of the first assessments on national laboratory capacities for HPT were additionally presented. Furthermore, activities of existing international laboratory networks and WHO collaborating centres (WHO CC) in HTPs were discussed to enable liaison with these networks for the Lab Task Force to achieve its goals. Finally, activities were identified for the Lab Task Force to improve countries' preparedness and capacity for laboratory response to HTP outbreaks.

Participants at the meeting included 22 experts in HTP diagnostics from 16 WHE priority countries and three other countries in the European Region. In addition, representatives of five WHO CC and five international laboratory networks were present.

The ongoing COVID-19 outbreak was seen as a test for existing networks and a strong affirmation for the need of HTP capacities and capabilities in the Region. The meeting provided a fruitful platform to discuss the way forward for the successful improvement of the WHE priority countries' laboratory preparedness and response to HTPs. Among the identified challenges were EQAs, sample shipment and procurement. The participants agreed that these areas should be addressed in the roadmap.

The following next steps were agreed upon:

- Finalize the country assessments of national HTP laboratory diagnostic capacities
- Finalize the mapping exercise on existing EQAs
- Ask for nominations from the veterinary laboratory sector for the Lab Task Force, to ensure a more One Health approach
- Countries have been are asked to share their legislation on sample transport and shipment
- Investigate how to set up joint procurement
- Investigate how to develop a 5-year roadmap with a clear vision amongst other elements this proposal should allow WHE priority countries to obtain funding for EQAs.

Background

In 2012 the WHO Regional Office for Europe launched the Better Labs for Better Health (Better Labs) initiative that focuses on strengthening the country core laboratory capacities required under the International Health Regulations (2005) (IHR). Laboratory services are essential for a country's security as they are critical to infectious hazard detection and characterization; risk-assessment; clinical and public health responses; notification; monitoring of risk-management effectiveness; and general monitoring of infectious hazards to public health.

Better Labs focuses on 4 areas¹:

- Area 1: Development of national laboratory policies and strategic plans.
- Area 2: Improve national training programmes and implement laboratory quality management systems.
- Area 3: Establish networks for emergency preparedness and response.
- Area 4: Advocacy, partnership and leadership.

Area 3 includes strengthening national public health laboratories in preparedness and response to HTPs and supporting the development and implementation of strategies for the control and prevention of high threat pathogens HTPs (including those requiring a One Health approach). Among the WHO Health Emergencies Programme (WHE) priority countries in the WHO European Region², a number do not participate in international laboratory preparedness and response networks for HTPs, which represents a key gap.

To address this gap, the WHO Regional Office for Europe, through the Better Labs initiative, established the European Regional Laboratory Task Force for High Threat Pathogens (Lab Task Force), following the preparatory meeting held in Istanbul in January 2019. The ToR were agreed upon³ and a laboratory tool to assess national laboratory diagnostic capacities for HTP was reviewed. The preparatory meeting also identified a list of priority HTPs for the Lab Task Force to support in the WHE priority countries, e.g. through the organization of external quality assurance (EQA). Prioritized HTPs were orthohanta viruses, flaviviruses, Crimean–Congo haemorrhagic fever (CCHF), *Brucella spp., Leptospira spp., Coxiella burnetti, Francisella tularensis, Bacillus anthracis,* and *Mycobacterium tuberculosis*⁴.

As immediate next steps to follow this preparatory meeting, official requests for nomination of national laboratory focal points (NLP) were made to all WHE priority countries and the first assessments for national laboratory diagnostic capacities were conducted in six countries.

To discuss preliminary results and further steps, all nominated NLPs and WHO CC were invited to the first meeting of the Lab Task Force, organized in Vienna, 26–27 February 2020.

Participants in this meeting included 22 experts in HTP diagnostics from 16 WHE priority countries and three other countries in the European Region. In addition, representatives of five WHO CC and five international laboratory networks were present. The list of participants and the agenda can be found in <u>Annex 1</u> and <u>Annex 2</u> respectively.

¹ Better Labs for Better Health initiative <u>http://www.euro.who.int/en/health-topics/Health-systems/laboratory-</u> services/publications/better-labs-for-better-health-strengthening-laboratory-systems-in-the-who-european-region-2018

² WHE priority countries in the European Region: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, North Macedonia, Republic of Moldova, Serbia, Tajikistan, Turkey, Ukraine and Uzbekistan. ³ Lab Task Force Terms of Reference <u>http://www.euro.who.int/ data/assets/pdf file/0017/404270/Lab-task-force-ToR eng.pdf</u>

Objectives of the meeting

Specifically, the objectives of the meeting were to:

- Inform about COVID-19 virus globally and in the Region, including laboratory readiness;
- present progress of the Lab Task force in its first year and the results of the first assessments on national laboratory capacities for HPT;
- discuss activities of existing international laboratory networks and WHO CC in HTPs to enable liaison with those networks for the Lab Task Force to achieve its goals;
- identify how the Lab Task Force can improve countries preparedness and capacity for laboratory response to HTP outbreaks.

COVID-19 updates and response

The WHO Regional Office for Europe provided an update on the CoVID-19 situation globally and in the Region. At the time of the meeting, there were close to 80 000 cases and more than 2 300 deaths linked to COVID-19 globally⁵. Five regions in 29 countries had reported cases, including nine countries in the European Region, which had reported 62 cases and one death. Most of these cases were linked with travel from China, and there was limited local transmission reported from Germany and France. WHO has been supporting the priority countries with provision of reagents and consumables for the detection of COVID-19 virus. In addition, three consultants in the Hubs (Central Asia, Caucasus and Balkans) and also has been providing technical support to the National Reference Laboratories (NRLs) for COVID-19.

In response to COVID-19 countries quickly appointed NRLs for the new virus. These labs were typically the National Influenza Centers (NIC) or HTP laboratories. NRLs play an important role in the context of national contingency plans, as they spearhead the upscaling of operational diagnostics.



⁵ WHO situation reports can be found using this link <u>https://www.who.int/emergencies/diseases/novel-coronavirus-</u> <u>2019/situation-reports/</u> the WHO Dashboard can be found using these links: English <u>https://experience.arcgis.com/experience/685d0ace521648f8a5beeeee1b9125cd</u> and Russian <u>https://who.maps.arcgis.com/apps/opsdashboard/index.html#/a19d5d1f86ee4d99b013eed5f637232d</u> The outbreak of the COVID-19 virus proves the importance of laboratory readiness and preparedness for rapid implementation of laboratory diagnostic and countermeasures because this is the basis for the confirmation or ruling out of cases quickly. In addition, Emerging Viral Diseases – Expert Laboratory Network (EVD-LabNet) and European Reference Laboratory Network for Human Influenza (ERLI-Net) surveys were carried out to determine the level of readiness, and the majority of laboratories had established COVID-19 virus assays by the end of January 2020 or planned to do so by mid-February 2020. However, 23 of 38 laboratories reported that they did not have a positive control. While possible sources for such controls were pointed out, the need for EQA was also emphasized here. Establishing adequate EQA-panels in a short time frame and in insufficient quantity was identified as one of the main issues from NRLs and countries. In addition to the timely detection of infection, laboratories play a vital role in answering research questions such as the kinetics of viral shedding; antibody response; viral load in different body compartments; limit of detection for different specimens in the different phases of disease; and studying the performance of commercial or in-house assays.

Project SHARP⁶ is an example of a network aiming at strengthening the implementation of the International Health Regulations (IHR), as well as increasing preparedness in the European Union (EU) Member States. The 30 participating countries cover close to 95% of the EU population. In addition to partners from the EU-Member States, there are four associated countries⁷ and four collaborating partner countries⁸. One of the ten Work Packages (WPs), WP 7, focuses on laboratory preparedness and responsiveness. This WP is led by the Robert Koch Institute (RKI), and one of their main goals is to implement EQAs for HTPs in the region. Their list of targeted bacteria and viruses includes *Bacillus anthracis, Francisella tularensis, Yersinia pestis, Burkholderia mallei, Brucella spp. Coxiella burnetii,* filoviruses, arenaviruses, bunyaviruses, orthopoxviruses, paramyxoviruses, as well as novel pathogens.

National capacities: assessment and way forward

Well-functioning, robust and sustainable laboratory services, operating according to international principles of quality and safety are an essential part of strong health systems and are crucial to securing and improving Public Health. Better Labs, under its Area 3, supports laboratory capacity and capability building in WHE priority countries to prepare for and respond to HTPs. National gaps and needs in laboratory preparedness and response must be identified and addressed, therefore, the priority countries are being assessed for their national laboratory diagnostic capacities. To perform these assessments, countries are being visited by laboratory experts following a questionnaire revised by the Lab Task Force at the last meeting in Istanbul in January 2020⁹. The tool is pathogenbased and set up to provide an in-depth analysis of national laboratories' expertise regarding HTP diagnostic capacities, capabilities, quality assurance and (inter)national laboratory network involvement. Outcomes of the questionnaire will inform the development of country-specific action plans, including EQA needs.

⁶ Strengthened International Health Regulations and Preparedness in the EU, based on Decision 1082/2013/EU on serious cross-border threats to health

⁷ Norway, Bosnia and Herzegovina, Serbia and Moldova

⁸ Belgium, Bulgaria, Iceland and Switzerland

⁹ Report on preparatory workshop for establishment of the European Lab Task force for HTP

http://www.euro.who.int/ data/assets/pdf file/0016/406330/HTP-network-meeting-IST-Jan-2019-meeting-report-EN.pdf?ua=1

To facilitate the implementation of Area 3 of Better Labs, all 21 participating countries had been asked to nominate National Laboratory Focal Points (NLPs), with currently 16 NLP nominated.

In 2019 and early 2020 six countries went through the assessment process. The questionnaire was modified during the first assessment, which took place in Kyrgyzstan, with the support of several experts from the Lab Task Force. The assessments in all six countries indicated very little to no diagnostic capacity for several pathogens included in the questionnaire. Preliminary results show four out of the six countries are not performing diagnostics for Ebola virus, Omsk virus, Lassa virus, Marburg virus and SARS virus. No country currently performs diagnostics for transmissible spongiform encephalopathies (Prion disease). For those pathogens that countries can diagnose, manual methods are used more frequently, often due to funding issues. All reagents are not always available through local vendors or may be available at high price due to the small quantity requested. Concerns regarding the lack of maintenance of equipment also emerged from the assessments, especially regarding biosafety cabinets. In addition, results also highlighted that often there is no regular transport of samples between regional and reference laboratories, international shipment can take up to 90 days, with administration being cited as the main source of delay (particularly in Central Asian countries), and material transfer agreements for sharing samples with other laboratories are not in place. Regarding human resources, it was clear that staff knowledge and expertise are present for the tests being performed, although in most places staff retention is difficult resulting in a high staff turnover in the laboratories.

All six countries expressed their appreciation for the assessments carried out and shared their experiences.

ALBANIA will continue to develop an action plan to fulfil identified gaps, including in the national food safety & veterinary services.

GEORGIA had the assessments carried out not only in Tbilisi, but also in the Western Region, and the national veterinary laboratories were included. The assessment of equipment was encouraging, showing that the laboratories are well equipped. Biosafety and biosecurity measures are in place. They hold several international accreditations for bacteriology and virology. However, the workload is unbalanced. Furthermore, samples are usually sent by mail, and some shipping containers might not be suitable, e.g. the three-layer container for HTP.

KYRGYZSTAN was the initial country to go through this assessment and received two visits. They are currently in the process of implementing International Organization for Standardization 15189 (ISO 15189). They have guidelines on transportation and licensing in place.

TAJIKISTAN performed the assessment both at central and regional levels, and in public health and animal health laboratories. Issues such as unclear transport mechanisms and a lack of regulation for procurement were identified. The developed standard operating procedures (SOPs) are not yet implemented in all laboratories. There is no clear system for collecting and delivering samples to the National Laboratory.

UKRAINE The assessment helped to identify gaps in performance. The public health laboratory is well equipped, and in the process of being accredited for ISO 15189. The veterinary laboratory is accredited according to ISO 17025. There is no manufacturer of culture media in Ukraine, thus it

needs to be imported. This is sometimes hampered by the fact that some manufacturers refuse to sell relatively small quantities. **REPUBLIC OF MOLDOVA** reshaped and reorganized their public health system. The National Public Health Agency and Veterinary Republican Centre were assessed. In 2019, the Republic of Moldova went through a Joint External Evaluation (JEE) for IHR. Implementing Sanitary Rules and licensing laboratories are still an issue. They would like to have a registry of laboratories that deal with pathogens. They cooperate with Norway to develop algorithms for HTP testing. When buying consumables and reagents, they must go through tender processes and companies are not always willing to participate and sell small quantities. There is a lack of funding. There are not enough maintenance experts, therefore not everything is properly maintained.



The experts who performed the assessments provided their perspective on the missions. They appreciated the changes made to the initial questionnaire, making it more concise. They described good organizational structures and sometimes observed the need for improving infrastructure. Procurement and shipping particularly were observed to pose challenges, with varying degrees for different labs. Laboratories in the veterinary sector often have different procurement options and the experts suggested an exchange between them and the public health laboratories. The dependency on commercially available kits, which are not only expensive but might be in short supply, was pointed out as a weakness that could be overcome by targeted capacity building on using in-house methods.

The information gathered with the actual assessment tool was compared with information gathered on the laboratory sector through the JEE IHR. The JEE IHR has been pointed out as an extremely valuable assessment tool, but it does not provide the technical aspects that the Lab Task Force is concerned about for strengthening the laboratory capacities in HTP. The Lab Task Force, being focused on these technical issues, appreciates the additional assessments and exchanges provided during this meeting. To validate the capacities as well as identify further gaps, simulation exercises (SIMEX) are highly recommended. On the other hand, there seems to be a somewhat over assessment in some areas, which calls for improved coordination and information sharing.

Areas that need assessment and possibly strengthening are biosafety and biosecurity, especially when it comes to dealing with HTPs. The basic rationale was given in combination with reference to

international health security and non-proliferation instruments such as the Biological Weapons Convention (BWC) or the International Health Regulations (2005) (IHR).

The development of global WHO terms of reference for NRLs for HTPs, along with a WHO recognition scheme was proposed during the meeting. As WHO already has ToRs and accreditation or recognition programmes for certain diseases or programmes, such as vaccine preventable diseases (e.g. polio, measles), HIV drug resistance, tuberculosis, antimicrobial resistance and influenza, which has been a proven approach for specific diseases, it was suggested that adaptations should be considered regarding HTP laboratories in order to complement the existing mechanisms, probably using the National Influenza Centre's ToRs and designation process as a basis. Discussions revolved around reviewing the existing criteria for NRLs and around which diseases should be prioritized for the region. The present focal points were highly interested in setting up ToR with a broader scope. This would include defining the characteristics of pathogens they are concerned with rather than identifying specific pathogens. A regional approach, building on existing laboratory networks, was suggested as being able to facilitate this through a stepwise approach. Strategically, the recommendation is to start with a limited number of one or two HTP Reference Laboratories per region and expand. Support for this should be based on a clear vision of one global scheme instead of regional approaches. In addition, it was made clear that the first priority is for countries to have designated reference laboratories for pathogens of national interest and it was pointed out that the portfolio of the NRLs should be taken into account by a WHO recognition mechanism.

The Netherlands National Institute for Public Health and the Environment (RIVM) emphasized the importance of strengthening biosafety and biosecurity and provided the participants with new resources and practical tools to enhance their national biosecurity. The toolbox is categorized into six different themes: guidance and best practices; legislation policy and codes; awareness raising; self-assessment; biosafety and biosecurity training; and risk and threat assessment management. In close partnership with the WHO Regional Office for Europe, a two-year framework was proposed to map additional biosafety and biosecurity needs in the Region, provide support by facilitating national inventories of HTPs, support national biosecurity assessments, and overall help strengthen biosafety in the Region through supporting the implementation of IHR biosafety and biosecurity capacities.

Bridging the gaps and needs with expertise

During the meeting several WHO Collaborating Centres provided insights into their ToRs, their structures and responsibilities.

WHO Collaborating Centre for Emerging Infections and Biological Threats at the Robert Koch Institute (RKI), Berlin, Germany

RKI aims to support WHO in its function to prepare for alert and response operations to outbreaks of international importance by building laboratory capacities and to provide expertise in event investigation; outbreak response and preparedness, including laboratory diagnostics; epidemiology; infection control measures; and clinical management. RKI is the national consultant laboratory for poxviruses since 2005. Part of their work is to provide training for public health institutions and to support research on the identification of new poxviruses. RKI is also the national consultant

laboratory for several highly pathogenic bacteria such as *Bacillus anthracis* and *Francisella tularensis* as well as the reference laboratory for *Vibrio cholerae*.

WHO Collaborating Centre for Rabies Surveillance and Research at the Friedrich-Loeffler-Institute (FLI), Insel Riems, Germany

FLI is comprised of 12 institutes in five locations and is focused on farm animal health and welfare and on the protection of humans from zoonoses. As a WHO-CC, FLI supports WHO through conducting and coordinating research on rabies as well as collecting and analysing rabies surveillance data and distributing the information to collaborating institutes. The data gathered will further develop the European database for rabies, a platform that can be used as an example for other regions as a knowledge source on rabies surveillance. FLI is also the World Organisation for Animal Health (OIE) Collaborating Center for Zoonoses in Europe and the Food and Agriculture Organization (FAO) reference center for Animal Influenza, Newcastle Disease of Poultry and Classical Swine Fever.

Department of Global Health, the Laboratory for Urgent Response to Biological Threats, Institut Pasteur, Paris, France

The Department of Global Health, Institute Pasteur, focuses on three main areas of research: resistance of human pathogens in the environment; identification and characterization of human pathogens; and arboviruses. In addition, they are also the national reference centre for hantaviruses and an OIE collaborating centre for the detection and identification of emerging animal pathogens in humans and development of tools for their diagnostics. The presentation provided insight on different types of laboratory urgent response mechanisms to special biological threats. The department's direct mode response includes an independent laboratory upstream of national reference centres, conducting training, outbreak interventions, consulting and research while the indirect mode consists of logistical support to other laboratories when overloaded with work. Under the MediLabSecure project, Institute Pasteur aims to increase the health security in the Mediterranean Area and south-east European Black Sea Region through creating a framework for collaboration in order to improve the surveillance and monitoring of arboviruses; providing training and technical support in participating countries; and promoting knowledge development and disseminating best laboratory practices in biosafety.

Former WHO Collaborating Centre for Reference and Research on Brucellosis, Animal and Plant Health Agency (APHA), Weybridge, United Kingdom

APHA is responsible for identifying, managing, and eradicating incidences and outbreaks of endemic and exotic diseases and pests in animals, plants and bees and provides expertise in the following fields: testing and diagnosis; epidemiology; surveillance; identification; containment; and post outbreak recovery and advice. APHA is also a recognized OIE reference laboratory for numerous pathogens. One of the main roles of APHA is to keep Great Britain free from brucellosis. In addition to providing bacteriological capability for confirmation of human brucellosis cases, they support this aim also through surveillance, import testing, efficiently identifying and resolving outbreaks, restricting routes of entry or re-entry to prevent re-emergence, and supporting applied research programmes.

Erasmus University Medical Center Viroscience Reference Lab, Rotterdam, Netherlands

Erasmus MC collaborates with WHO in its function of alert and response to outbreaks of Emerging and Dangerous Pathogens of international importance, including outbreaks of arboviruses, viral haemorrhagic fevers and novel and emerging infectious diseases. Erasmus MC provides not only onsite laboratory support, but also support in the rapid identification and characterization of highrisk pathogens. During response operations to outbreaks, Erasmus MC assists with epidemiological surveys in providing personal protective equipment (PPE) where possible in addition to providing technical support. A timely example of technical support is a tool put online by the Erasmus MC Viroscience Reference laboratory¹⁰. This tool is comprised of a list of the available COVID-19 virus sequences that is constantly updated and a search algorithm that aligns them with known primers and probes. Thus, mismatches of primers and probes can be identified, possibly preventing false negative test results.

The presentations showed the exemplary benefits of such Collaborating Centres, as they perform crucial basic research on HTP, while at the same time supporting countries and partners in terms of diagnostic testing, but also training and providing EQAs.

Conclusions and next steps

No country needs – or can implement – all possible diagnostic capacities and capabilities. Instead, countries must rely on networking, particularly for rare or new diseases. The ongoing COVID-19 outbreak could be seen as a test for existing networks and as a strong affirmation for the need of HTP capacities and capabilities in the Region. The current willingness among countries and international partners to move forward in laboratory preparedness and response should be leveraged to the fullest possible extent with a clear aim towards sustainability. The meeting provided a fruitful platform to discuss the way forward for a successful improvement of the WHE priority countries' laboratory preparedness and response to HTPs.

Among the identified challenges: EQAs, sample shipment and procurement were highlighted. The participants agreed that these areas should be addressed in a roadmap to further develop the European Region Lab Task force.

- It was pointed out that laboratories often perform more testing related to EQAs than on actual samples when it comes to rare diseases. Thus, the cost and effort related to these EQAs can make it infeasible to participate. It was recommended that a strategic approach is developed in order to determine the best suitable laboratories to participate in different EQAs and to identify twinning options between reference laboratories and national laboratories.
- There are several aspects of sample shipment that need to be addressed, which could be done as a joint effort based on information exchange and provision of funding. It is often not clear where to send the samples, this can be addressed by building and making accessible a list of relevant reference laboratories. Funding is needed to certify more shippers of infectious substances, to procure the shipping material and to pay for international shipping.

¹⁰ https://viroscience-emc.shinyapps.io/primer-check/

- Almost all laboratories face procurement challenges. These include the purchasing of small quantities of reagent for rare diseases, which is sometimes declined by companies without local agents. It should be examined whether a joint, centralized procurement system could be put in place to address this issue. Additionally, reagents for such diseases are likely to expire and it is difficult to keep stock of them. In this regard, the implementation of in-house assays using independent primers and probes was suggested, which would allow for the use of a standard set of reagents that are routinely used in other diagnostic processes and will thus not expire.
- In close collaboration with the WHO country offices, the national authorities (ministries of health - MoH) of those countries that have not yet nominated a HTP laboratory focal point to represent the country in the Lab Task Force will be invited to do so. This contributes to ensuring country commitment and access to the activities of the Lab Task Force in general.
- With the support of external experts, the remaining nine priority countries will use the assessment tool to assess HTP preparedness and response capacities and capabilities.
- A five-year road map is intended as a strategic tool for targeted capacity building including funding proposals.

Agreed Action Plan until the next meeting of the European Region Lab Task Force

- Finalize the country assessments of national HTP laboratory diagnostic capacities
- Finalize the mapping exercise on existing EQAs
- Ask for nominations from the veterinary laboratory sector for the Lab Task Force, to ensure a more One Health approach
- Countries have been asked to share their legislation on sample transport and shipment
- Investigate how to set up joint procurement
- Investigate how to develop a five-year roadmap with a clear vision amongst other elements this proposal should allow WHE priority countries to obtain funding for EQAs.

References

- 1. WHO, Seventieth World Health Assembly, April 2017. Proposed programme budget 2018– 2019. <u>http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_7-en.pdf</u>
- WHO, Sixty-eighth Regional Committee for Europe, September 2018. Action plan to improve public health preparedness and response in the WHO European Region. <u>http://www.euro.who.int/______data/assets/pdf__file/0006/378168/68wd14e_ActionPlanPrepar______dness__180516.pdf?ua=1</u>
- 3. WHO, Seventy-first World Health Assembly, April 2018. Thirteenth General Programme of Work. <u>http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_4-en.pdf?ua=1</u>
- WHO Regional Office for Europe, November 2017. Report on the status of laboratory networks for high threat pathogens in south-eastern European countries. <u>http://www.euro.who.int/______data/assets/pdf__file/0003/364116/report-htp-see-eng.pdf</u>
- 5. WHO. International Health Regulations (2005). https://www.who.int/ihr/9789241596664/en/
- 6. WHO. Research and Development Blueprint. <u>https://www.who.int/blueprint/about/en/</u>
- 7. WHO. Laboratory Quality Management Systems. <u>https://extranet.who.int/lqsi/sites/default/files/attachedfiles/LQMS%2010.%20Assessment</u> <u>%20-%20EQA.pdf</u>

Annex 1: List of participants

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European Centre for Disease Prevention and Control	Katrin Leitmeyer
Erasmus University Hospital, Netherlands	Richard Molenkamp
Friedrich-Loeffler-Institut, Federal Research Institute for Animal	Markus Keller
Institut Pasteur	Jean-Claude Manuguerra
National Institute for Public Health and the Environment (RIVM)	Chantal Reusken
National Institute for Public Health and the Environment (RIVM)	Iris Vennis
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Robert Koch Institute, Germany	Iris Andernach
Robert Koch Institute, Germany	Janine Michel
Robert Koch Institute, Germany	Eva Krause
Robert Koch Institute, Germany	Roland Grunow
South East European Center of Infectious Diseases Surveillance	Silvia Bino

and Control	
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Annex 2: Agenda

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR EUROPE



ORGANISATION MONDIALE DE LA SANTÉ

BUREAU RÉGIONAL DE L'EUROPE

WELTGESUNDHEITSORGANISATION

ВСЕМИРНАЯ ОРГАНИЗАЦИЯ ЗДРАВООХРАНЕНИЯ

ЕВРОПЕЙСКОЕ РЕГИОНАЛЬНОЕ БЮРО

First meeting of the	1/3	4 December 2019
European Region Laboratory Task		Original: English
Force for High		
Threat Pathogens		
Vienna, Austria	19 February 2020	
26–27 February 2020	Original: English	

Agenda

Wednesday, 26 February 2020

09:00 - 09:30	Registration
09:30 - 09:45	Official opening of the meeting and Introduction to the meeting agenda Caroline Brown, WHO Regional Office for Europe
	Session 1: 2019 nCoV updates and response
09:45 - 10:45	2019-nCoV situation update and global response Caroline Brown, WHO Regional Office for Europe Presentation and discussion
10:45 - 11:15	Coffee Break Group Photo

11:15 - 11:45	Laboratory readiness to 2019-nCoV Chantal Reusken - EVD-LabNet	
11:45 - 12:15	SHARP – WP 7 laboratory preparedness and responsiveness <i>Roland Grunow, RKI</i>	
12:15 - 13:00	Discussion on getting countries' laboratories ready	
13:00 - 14:00	Lunch	
	Session 2: Gaps in national capacities	
14:00 - 14:30	Status of the laboratory task force for high threat pathogens and results of the first assessments on national lab capacities for high threat pathogens Joanna Zwetyenga, WHO Regional Office for Europe	
14:30 - 15:00	Panel discussion on the NLPs' experience of the national assessments Albania, Georgia, Kyrgyzstan, Tajikistan, Ukraine and Moldova	
15:00 - 15:30	Panel discussion on the experts' experience of the national assessments	
15:30 - 16:00	Coffee Break	
16:00 - 17:00	Criteria of reference laboratories Sebastien Cognat, WHO headquarters Presentation and discussion	
17:00 - 17:45	Strengthening Biosecurity, what does this imply for your country Iris Vennis, NIPH and ECIDC Netherlands Presentation and discussion	
17:45 - 18:00 18:30	Closing session Reception	
Thursday, 27 February 2020		
09:00 - 09:30	Recap of day 1	
	Session 3: Bridging the gaps and needs with expertise	
09:30 - 10:15	CCHF lab diagnostic and treatment development Pierre Formenty, WHO headquarters Presentation and discussion	

10:15 - 10:30	RKI, WHO Collaborating Center specific expertise Lars Schaade, Robert Koch Institute
10:30 - 11:45 <i>10:45 - 11:15</i>	Institut Pasteur, WHO Collaborating Center specific expertise Jean-Claude Manuguerra, Institut Pasteur
11:15 - 11:30	Coffee Break
11:30 - 11:45	Animal and Plant Health Agency, WHO Collaborating Center specific expertise Adrian Whatmore, Animal and Plant Health Agency
	Bernhard Nocht-Institute for Tropical Medicine, WHO Collaborating Center specific expertise Jonas Schmidt-Chanasit, Bernhard Nocht-Institute for Tropical Medicine
	Erasmus MC Viroscience Reference Lab, Rotterdam, Netherlands Richard Molenkamp
11:45 - 12:00	Plenary discussion: Which diagnostic capacities should be available in country? Which can be fulfilled by international networks? How do we bridge with expertise of WHO CC
12:00 - 13:00	Plenary discussion: which activities should be the next priorities to bridge needs and expertise Agreement on steps moving forward Closure of the meeting
13:00 - 14:00	Lunch

The WHO Regional Office for Europe

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