7th world one health CONGRESS

7 – 11 November 2022

SINGAPORE

ABSTRACT BOOK

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Oral Abstracts

Topic: One Health Science (OHS): Pandemic Preparedness: detect, prevent and respond: Improving outbreak response
Abstract
No: 14874

MEDILABSECURE, ONE HEALTH NETWORK FOR THE PREVENTION OF VECTOR-BORNE DISEASES, THE SAHEL EXPERIENCE

Guillain Mikaty[1]; Jean-Claude MANUGUERRA [1] ; Mohamed Abdellahi Bollahi[2] ; Miguel Angel Jiménez [3] ; Vincent Robert[4] ; Maria Grazia Dente[5] ; Guy Hendrickx[6] ; Oriana Rossi[7] ; Vanessa Lagal[*7] ; Maud Seguy[7]

1Cellule d'Intervention Biologique d'Urgence/ Institut Pasteur/ France, 2Institut National de Recherche et Santé Publique/ Institut National de Recherche et Santé Publique/ Mauritania (3 ,ايناتيروم) Centro de Investigación en Sanidad Animal/ Instituto Nacional de Tecnologia Agraria y Alimentaria / Spain (España), 4Infectious Diseases and Vectors : Ecology, Genetics, Evolution and Control/ French National Research Institute for Sustainable Development/ France, 5National Center for Global Health / Italian National Institute of Health / Italy (Italia), 6AVIA-GIS/ AVIA-GIS/ Belgium, 7Direction Internationale/ Institut Pasteur/ France

Introduction and Objectives or Purpose

MediLabSecure (MLS) is a capacity-building project funded by the European Commission, coordinated by Institut Pasteur and implemented by European organisations for the benefit of 22 countries in the Mediterranean, Black Sea and Sahel regions. MLS gathers 114 multidisciplinary laboratories and health institutions to prevent and control vector-borne diseases.

Methods

MLS strategy is based on the evidence and experience gained in these years of activities, which support the integration of One Health in preparedness, surveillance and response against zoonotic arboviruses. Experts in human and animal virology, medical entomology, public and animal health, and geo-spatial modelling collaborate to provide trainings and guidance, conduct operational studies, to support the beneficiaries' countries in case of local or cross-border outbreaks.

Results or Focus

Since its start in 2014, the project trained 1000 professionals through 29 workshops, 16 trainings and regional and global networking events. Sahel joined the network in 2018. Here, MLS focused on the Rift Valley Fever (RVF) that may cause human and animal health burden and severe economic loss. In 2020, Mauritania was hit by a large outbreak of RVF in animals and humans. The National Institute for Public Health Research of Nouakchott (INRSP), member of MLS, contacted the experts of the network for assistance. MLS contributed to the outbreak response with multisectoral technical and logistical support, providing reagents for molecular and serological diagnostics, and assistance in sequencing of the epidemic strains in human and animals. The experts, medical entomologists and human and animal virologists, advised on the decision flowchart for INRSP and on the risk mapping of the epidemic. MLS also helped to improve the sensibilization of breeding farmers on RVF risks and to activate the support of the World Organisation for Animal Health in North Africa.

Conclusion or Scope

This experience, as others carried out by MLS, provides guidance and strategies for One Health preparedness against arbovirus infections.

Acknowledgement

This abstract was produced with the financial support of the European Union. Its contents are the sole responsibility of the MediLabSecure network and do not necessarily reflect the views of the European Union.

Keywords: One Health; vector-borne diseases; arboviruses; outbreak

Topic: One Health Science (OHS): Pandemic Preparedness: detect, prevent and respond: Improving outbreak response
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Enhancing preparedness through the integration of One Health approaches: the Anthrax case in Armenia

Claudia Robbiati[1] ; Alessia Milano[1] ; Silvia Declich[1] ; Paolo Calistri[2] ; Ombretta Pediconi[2] ; Laura Amato[2] ; Lusine Paronyan[3] ; Georgi Avetisyan[4] ; Maria Grazia Dente[*1]
[1]Center for Global Health/ Istituto Superiore di Sanità/ Italy (Italia), [2]COVEPI/ Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale"/ Italy (Italia), [3]Zoonotic and Parasitic Diseases Epidemiology / National Center for Disease Control and Prevention/ Armenia (ববববববব), [4]Veterinary inspectorate/ Food Safety Inspection Body / Armenia (ববববববব)

Introduction and Objectives or Purpose

Anthrax is endemic to Armenia and the country recently experienced two outbreaks of the cutaneous form. Ecosystems change, excessive exploitation of the territory, intermittent vaccination campaigns, weak health and animal surveillance systems, are among the most important drivers of Anthrax, which can exacerbate poverty and inequalities. Thus, One Health (OH), which promotes the collaboration among different sectors, can be a strategic approach especially in low resources settings. This study explored to what extent the OH approach was integrated within the response actions during the last Anthrax outbreak in Armenia.

Methods

We identified and discussed the priority areas to enhance OH preparedness in the Policy Brief "OH-based conceptual frameworks (OHCF) for comprehensive and coordinated prevention and preparedness plans addressing global health threats" and we developed a OHCF to address these priorities at national and international level.

We used the OHCF to assess, with a bottom-up process, aspects of the response to the Anthrax outbreak in Armenia that could have been enhanced by OH integration. Around 15 national stakeholders from Armenian ministries, research institutions, and laboratories from several relevant sectors were engaged over three participatory workshops from March to May 2022.

Results or Focus

The analysis pointed out the following aspects, which would have enhanced the response: greater involvement of the WHO-IHR national capacities; the availability of a multi-sectoral Anthrax preparedness plan and an integrated database; risk assessments involving the relevant sectors; multi-sectoral training and ad hoc research studies addressing also the socio-environmental drivers.

Conclusion or Scope

The OHCF is a useful tool to highlight weak aspects in the local preparedness system that could benefit from the integration of OH and it can be used to review actions taken at national level to reinforce preparedness capacity.

Acknowledgement
Study supported by MediLabSecure (European Commission/DEVCO: IFS/2018/402-247)

Keywords: One Health Preparedness; Anthrax; Armenia

Topic: One Health Science (OHS): Pandemic Preparedness: detect, prevent and respond: Improving outbreak response
Abstract No: 15038

HOW ARE ONE HEALTH PLANS FOR ZOONOSES ADDRESSING THEIR DRIVERS?

Alessia Milano[*1] ; Claudia Robbiati[1] ; Silvia Declich[1] ; Kevin Di Domenico[2] ; Laura Mancini[2] ; Flavia Riccardo[3] ; Gaia Scavia[4] ; Maria Grazia Dente[1]

[1]National center for global health/ Istituto Superiore di Sanità/ Italy (Italia), [2]Ecosystem and Health/ Istituto Superiore di Sanità/ Italy (Italia), [3]Infectious diseases/ Istituto Superiore di Sanità/ Italy (Italia), [4]Food safety, nutrition and veterinary public health/ Istituto Superiore di Sanità/ Italy (Italia)

Introduction and Objectives or Purpose

Drivers of zoonotic diseases, like improper animal husbandry and environmental transformations, need to be tackled to prevent, prepare, and respond to these threats. The One Health (OH) approach could support national and international strategies to address these drivers by involving different disciplines and stakeholders. We carried out a scoping review to investigate existing preparedness, response, and prevention plans with a OH approach, and we identified the plans and strategies that include drivers for zoonoses.

Methods

The methodology included five steps: elaboration of the research question; identification of peer-reviewed articles and grey literature documents published from January 1st, 2010, to June 14th, 2021; definition of criteria for the inclusion and analysis; charting of the information obtained; summarize and report the results. A framework consisting of three strategy areas was created to analyse the results related to drivers.

Results or Focus

A total of 1692 articles and 178 documents were identified from the peer-reviewed and the grey literature, while 95 articles and 118 documents met the inclusion criteria. 10 documents addressed zoonoses drivers. At governance level, sectors involved in an integrated approach for drivers surveillance and detection have to be actively engaged. At capacity building level, national and international plans highlight the importance of adequate zoonoses risk communication to inform the population. The need for training to recognize the drivers at the human-animal-environment interface is also emphasized. Data to identify drivers, including human behaviours and practices, potentially associated with spillovers and vulnerable hotspots need to be routinely collected.

Conclusion or Scope

The results obtained with this analysis underline the need to deepen and strengthen the operationalisation of activities to contrast potential drivers of zoonoses and include them in prevention and preparedness plans and strategies with a OH approach.

Acknowledgement

Study supported by Istituto Superiore di Sanità (ISS) research funds (2020-22_ ISS20-d955b07fd1e4).

Keywords: Drivers; Zoonoses; Plans; One Health

Poster Abstracts

Topic: One Health Science (OHS): Pandemic Preparedness: detect, prevent and respond: Improving outbreak response
Abstract No: 14989

Improving prevention and preparedness to arboviral infections: a community-based One Health model

Claudia Robbiati*1 ; Alessia Milano1 ; Silvia Declich1 ; Maria Grazia Dente1

[1]Global Health/ Italian National Institute of Health/ Italy (Italia)

Introduction and Objectives or Purpose

The past five decades have seen an unprecedented emergence of epidemic arboviral diseases, a type of vector-borne diseases caused by viruses transmitted by infected arthropods. Communities are main actors in vector prevention and control strategies, and they could play a major role in preparedness activities (including surveillance and early warning). However, they are rarely considered integral part of a coherent strategy at institutional level. In the last years it became clearer how critical it is to develop preparedness plans with a One Health (OH) perspective, enhancing prevention-preparedness synergic systems which should involve all the relevant stakeholders, including communities. Evidence about the design, processes and outcomes of these inclusive systems need to be gathered and shared with decision-makers.

Methods

A rapid literature review about community-based surveillance and early warning systems for Arbovirus infections is being carried out according to three domains: design (steps, stakeholders, indicators, tools etc), processes (procedures, costs, challenges etc) and outcomes (effectiveness, sustainability, scalability, integration within the institutional systems, acceptability etc). To consolidate the results, an online consultation process with stakeholders of the MediLabSecure Network (www.medilabsecure.com) will be performed to explore existing or planned community-based surveillance and early warning systems for Arbovirus infections with a OH perspective.

Results or Focus

A OH model describing design, processes and outcomes of community-based surveillance and early warning systems for Arbovirus infections will be elaborated to guide the development and implementation of these systems and their integration within institutional plans and preparedness systems.

Conclusion or Scope

The OH model will guide disease control programmes and relevant stakeholders to plan and pilot integrated community-based surveillance and early warning systems for Arbovirus infections. A set of practical and actionable evidence-based recommendations will support MediLabSecure country institutions and other countries, to integrate OH community-based systems in institutional prevention and preparedness systems.

Acknowledgement

MediLabSecure is funded by the European Commission (DEVCO: IFS/2018/402-247)

Keywords: Arboviruses; One Health; Community; Preparedness; Model