

# Croatia

This document is a compilation of all questions, justifications, and sources used to determine the 2021 Global Health Security Index scores for Croatia. For a category and indicator-level summary, please see the Country Profile for Croatia.

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## Category 1: Preventing the emergence or release of pathogens with potential for international concern

### 1.1 ANTIMICROBIAL RESISTANCE (AMR)

#### 1.1.1 AMR surveillance, detection, and reporting

##### 1.1.1a

**Is there a national AMR plan for the surveillance, detection, and reporting of priority AMR pathogens?**

Yes, there is evidence of an AMR plan, and it covers surveillance, detection, and reporting = 2, Yes, there is evidence of an AMR plan, but there is insufficient evidence that it covers surveillance, detection, and reporting = 1, No evidence of an AMR plan = 0

**Current Year Score: 1**

Croatia has a national antimicrobial resistance (AMR) plan for the surveillance and detection of priority AMR pathogens encompassing the period 2017-2021 but there is insufficient evidence of reporting. The following are the main objectives of the national program for the control of antibiotic resistant bacteria: 1. To monitor the consumption of antimicrobial drugs and the resistance of bacteria to antibiotics in the field of human and veterinary medicine to detect negative or positive trends and to enable a comparison with other European Union countries; 2. Raise awareness of the harmfulness of excessive use of antibiotics in those who prescribe, release, and consume antibiotics; 3. Prevent the occurrence and control the spread of infections; 4. Optimize the use of antimicrobial drugs in human and veterinary medicine; 5. Maintain good international cooperation with institutions dealing with the problem of antibiotic resistance [1, 2]. A document has been prepared by the Intersectoral Coordination Mechanism for the Control of Antimicrobial Resistance (ISKRA) [3].

AMR surveillance is a core activity that enables the implementation of additional activities of the national program, such as the development of national guidelines on the prudent use of antibiotics, as well as organizing national campaigns and scientific meetings. The antibiotic sensitivity testing methodology is regularly updated according to international standards and isolates of rare and unusual phenotypes are sent to the reference center for retesting and further characterization. Laboratories send forms with data for each isolate to the Reference Center for Antimicrobial Resistance Surveillance at the University Hospital for Infectious Diseases to be analyzed. The Croatian Academy of Medical Science, University Hospital for Infectious Diseases "Dr. F. Mihaljevic" as the Reference Center for Antibiotic Resistance Surveillance of the Ministry of Health and Croatian Society for Clinical Microbiology of the Croatian Medical Association prepares annual reports entitled "Antibiotic Resistance in Croatia". [4]

[1] European Center for Disease Prevention and Control. 2017. "National Program for the Control of Antibiotic-resistant Bacteria 2017–2021 (Nacionalni program za kontrolu otpornosti bakterija na antibiotike 2017–2021.) (Ministry of Health, 2017)". [<https://ecdc.europa.eu/en/publications-data/directory-guidance-prevention-and-control/antimicrobial-resistance-strategies>]. Accessed 09 September 2020.

[2] Ministry of Health. 2017. "National Program for the Control of Antibiotic-resistant Bacteria 2017–2021 (Nacionalni program za kontrolu otpornosti bakterija na antibiotike 2017–2021)". [<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjg3uaYuqvcAhWEyKYKHxRABMQFggpMAA&url=https%3A%2F%2Fzdravlje.gov.hr%2FUserDocsImages%2F%2F2017%2520dokumenti%2520razni%2F%2FNACRT%2520NP%2520za%2520kontrolu%2520otpornosti%2520bakterija%25202017-2021%2520DSP.DOCX&usg=AOvVaw2i3NHalpnjuP9JYzq0XMtW>]. 09 September 2020.

[3] Intersectoral Coordination Mechanism for the Control of Antimicrobial Resistance (ISKRA). [<http://iskra.bfm.hr/eng/>]. Accessed 09 September 2020.

[4] Croatian Academy of Medical Sciences. 2016. "Antibiotic Resistance in Croatia, 2015 (Osjetljivost i rezistencija bakterija na antibiotike u Republici Hrvatskoj u 2015.g.)".

[<http://iskra.bfm.hr/upload/Izvjestaj%20rezistencija%202015%20za%20web.pdf>]. Accessed 09 September 2020.

### 1.1.1b

#### Is there a national laboratory/laboratory system which tests for priority AMR pathogens?

All 7 + 1 priority pathogens = 2 , Yes, but not all 7+1 pathogens = 1 , No = 0

**Current Year Score: 1**

Croatia has a national laboratory system which tests for most, but not all, priority AMR pathogens. Since 2003, the University Hospital for Infectious Diseases "Dr. Fran Mihaljevic" has been functioning as a reference center for AMR surveillance [1]. The laboratory in this hospital is supported by the Institute of Public Health's network of laboratories. Based on available information, the laboratory system has testing capacities for the following priority antimicrobial resistance (AMR) pathogens: E.coli, Salmonella spp, K. pneumonia, S. aureus, S. pneumoniae, and Mycobacterium tuberculosis [2, 3, 4].

[1] University Hospital for Infectious Diseases "Dr. Fran Mihaljevic". "Reference Center for AMR Surveillance".

[[http://www.bfm.hr/en\\_GB/page/referentni-centar-za-pracenje-rezistencije-bakterij](http://www.bfm.hr/en_GB/page/referentni-centar-za-pracenje-rezistencije-bakterij)]. Accessed 09 September 2020.

[2] Croatian Institute of Public Health. "Department for Microbiology". [<https://www.hzjz.hr/sluzba-mikrobiologija/>].

Accessed 09 September 2020.

[3] Croatian Institute of Public Health. "List of Microbiological Searches". [<https://www.hzjz.hr/sluzba-mikrobiologija/popis-mikrobioloskih-pretraga/#virologija>]. Accessed 09 September 2020.

[4] Croatian Institute of Public Health. 2019. "Croatian Health Statistical Yearbook for 2018--table data-- sensitivity of bacterial isolates to antibiotics in Croatia". [<https://www.hzjz.hr/hrvatski-zdravstveno-statisticki-ljetopis/hrvatski-zdravstveno-statisticki-ljetopis-za-2018-tablicni-podaci/>]. Accessed 09 September 2020.

### 1.1.1c

#### Does the government conduct environmental detection or surveillance activities (e.g., in soil, waterways) for antimicrobial residues or AMR organisms?

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that Croatia conducts detection or surveillance activities (e.g. in soil, waterways, etc.) for antimicrobial residues or AMR organisms. The Croatian Institute for Public Health conducts monitoring and evaluation of waterways, air and soil; however, it does not specifically indicate that it conducts AMR surveillance or detection in these media. [1] On the websites of the Ministry of Environmental Protection and Energy and the Agency for Environment and Nature, there is no information about their responsibilities related to surveillance activities. [2, 3]

[1] Croatian Institute for Public Health. "Department for Health Ecology". [<https://www.hzjz.hr/sluzba-zdravstvena-ekologija/>] Accessed 09 September 2020.

[2] Ministry of Economy and Sustainable Development. "Environment". [<https://mzoe.gov.hr/o-ministarstvu-1065/djelokrug-4925/okolis/1306>] Accessed 09 September 2020.

[3] Agency for Environment and Nature. "About us". [<http://www.haop.hr/hr/o-nama>] Accessed 09 September 2020.

## 1.1.2 Antimicrobial control

### 1.1.2a

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for humans?**

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

**Current Year Score: 2**

Croatia has national legislation or regulation in place requiring prescriptions for antibiotic use for humans. The Croatian Health Insurance Fund was established in 1993 and the responsibilities of the fund are determined by the Compulsory Health Insurance Act (Official Gazette 80/13 and 137/13), which has been in force since 1 January 2009 and the Croatian Health Insurance Fund Statute. [1] A decision on establishment of the basic list of medicines given by the Croatian Fund for Health Insurance contains a list of medicines that patients can use as well as a reference for which medicines, including antibiotics, require a prescription [2]. In addition, the ordinance on the method of prescription and disposal of medicines on the prescription determines the manner of prescribing and issuing medicines, including antibiotics [3]. Based on the review of the websites of the Ministry of Health, Croatian Health Insurance Fund and media outlets, there is no evidence of weaknesses in enforcement of the above-mentioned legislation. [1, 4]

[1] Croatian Health Insurance Fund. [<https://www.hzzo.hr/o-zavodu/pravni-okvir/>]. Accessed 09 September 2020.

[2] Croatian Health Insurance Fund. 2018. "Decision on Establishment of the Basic List of Medicines (Odluka o utvrđivanju osnovne liste lijekova hrvatskog Zavoda za zdravstveno osiguranje, NN 14/2018)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2018\\_02\\_14\\_306.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2018_02_14_306.html)]. Accessed 09 September 2020.

[3] Croatian Health Insurance Fund. 2011. "Ordinance on the Method of Prescribing and Dispensing of Prescription Drugs (Pravilnik o načinu propisivanja i izdavanja lijekova na recept, NN 16/11)". [[http://www.hzzo-net.hr/dload/pravilnici/interni\\_05\\_08.pdf](http://www.hzzo-net.hr/dload/pravilnici/interni_05_08.pdf)]. Accessed 09 September 2020.

[4] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

### 1.1.2b

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for animals?**

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

**Current Year Score: 2**

Croatia has national legislation in place that requires prescriptions for antibiotic use for animals. Article 19 of the Ordinance on the Determination of Medicines and Prescribing Medicines on Prescriptions, which was adopted in 2013 most recently amended in 2016, defines that prescriptions for antibiotics are valid for three days [1]. Article 7 of the Law on Veterinary-Medicinal Products, adopted in 2008 and last amended in 2019, refers to veterinary-medical products issued on a veterinary prescription [2]. Based on the Law on Veterinary Medicinal Products, the Ministry of Agriculture has adopted an ordinance on veterinary-medical products, which further elaborates the procedure for placing veterinary-medical products on the market, including prescriptions for antibiotic use [3]. Based on a review of the websites of the Ministry of Health, Ministry of Agriculture and media outlets, there is no evidence of weaknesses in enforcement of the above-mentioned legislation. [4, 5]

[1] Ministry of Health. 2013. "Ordinance on the Determination of Medicines and Prescribing Medicines on Prescriptions (Pravilnik o mjerilima za razvrstavanje lijekova te o propisivanju i izdavanju lijekova na recept, NN 86/13, 90/13, 102/14, 107/15 i 72/16)". [<http://www.propisi.hr/print.php?id=4790>]. Accessed 09 September 2020.

[2] Croatian Parliament. 2008. "Law on Veterinary-Medicinal Products (Zakon o veterinarsko- medicinskim proizvodima, NN 84/08, 56/13, 94/13, 15/15, 32/19)". [<https://www.zakon.hr/z/598/Zakon-o-veterinarsko-medicinskim-proizvodima>].

Accessed 09 September 2020.

[3] Ministry of Agriculture. Directorate for Veterinary and Food Safety. 2009. "Ordinance on Veterinary-Medicinal Products (Pravilnik o veterinarsko-medicinskim proizvodima, NN 30/09, 73/09, 14/10, 146/10, 32/11, 67/13)".

[<http://www.veterinarstvo.hr/default.aspx?id=151>] Accessed 09 September 2020.

[4] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[5] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

## 1.2 ZONOTIC DISEASE

### 1.2.1 National planning for zoonotic diseases/pathogens

#### 1.2.1a

**Is there national legislation, plans, or equivalent strategy documents on zoonotic disease?**

Yes = 1 , No = 0

**Current Year Score: 1**

Croatia has a national law on zoonotic disease called the Veterinary Law. The law does not specify specific zoonoses, but envisages a program for monitoring, controlling, and eradicating animal diseases and zoonosis [1]. Based on the Veterinary Law, the ordinance on the surveillance of zoonosis and causes of zoonosis was adopted in 2013. The purpose of this ordinance is to ensure appropriate monitoring of zoonosis, zoonotic agents and their resistance to antimicrobials as well as the proper epidemiological investigation of the outbreaks of foodborne diseases in order to ensure the collection of data necessary for the assessment of their trends and sources. The ordinance defines two groups of zoonotic diseases: "A. Zoonoses and zoonotic agents involved in monitoring: brucellosis; campylobacteriosis; listeriosis; salmonellosis (zoonotic salmonellosis); trichinellosis; echinococcosis; tuberculosis caused by mycobacterium bovis; escherichia coli that secretes verotoxin and B. A list of zoonoses and zoonotic agents that are monitored in accordance with the epidemiological situation: 1. Viral zoonoses: infection with calicivirus; hepatitis A virus; influenza virus; rabies; - infections of viruses transmitted by arthropods; 2. Bacterial zoonoses: borreliosis; botulism; leptospirosis; chlamydia; Mycobacteriosis other than tuberculosis caused by mycobacterium bovis; Vibriosis; jersinia; 3. Parasitic zoonoses: Anemia; Cryptosporidiosis; cysticercosis; toxoplasmosis; 4. Other zoonoses and zoonotic agents" [2].

[1] Croatian Parliament. 2013. "Law on Veterinary (Zakon o veterinarstvu, NN 82/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_06\\_82\\_1734.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_06_82_1734.html)]. Accessed 09 September 2020.

[2] Croatian Food Agency. 2013. "Ordinance on Surveillance of Zoonoses and Causes of Zoonoses (Pravilnik o nacinu pracenja zoonoza i uzrocnika zoonoza, NN 42/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_04\\_42\\_797.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_04_42_797.html)]. Accessed 09 September 2020.

#### 1.2.1b

**Is there national legislation, plans or equivalent strategy document(s) which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Croatia has legislation, plans or equivalent strategy document(s) that include measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. According to Article 4 of the Ordinance on Surveillance of Zoonoses and Causes of Zoonoses, competent authorities collect appropriate and comparable

data to identify and describe hazards, assess exposures and identify risks of zoonoses and zoonotic agents. Directorate for Veterinary and Food Safety defines measures for early detection and prevention, control, surveillance, monitoring, investigation of outbreaks of dangerous animal diseases, including zoonoses. However, the Ordinance and website of the Directorate for Veterinary and Food Safety do not define measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. [1, 2] Websites of the Ministry of Health, Ministry of Agriculture and Institute for Public Health do not have additional information about measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. [3, 4, 5]

[1] Croatian Food Agency. 2013. "Ordinance on Surveillance of Zoonoses and Causes of Zoonoses (Pravilnik o nacinu pracenja zoonoza i uzrocnika zoonoza, NN 42/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_04\\_42\\_797.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_04_42_797.html)]. Accessed 09 September 2020.

[2] Directorate for Veterinary and Food Safety. [<http://www.veterinarstvo.hr/default.aspx?id=17>]. Accessed 09 September 2020.

[3] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[4] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[5] Institute for Public Health. [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/godisnje-izvjesce-o-zoonozama-u-hrvatskoj/>]. Accessed 09 September 2020.

### 1.2.1c

**Is there national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern?**

Yes = 1, No = 0

**Current Year Score: 1**

Croatia has relevant legislation that accounts for the surveillance and control of multiple zoonotic pathogens of public health concern. The Ordinance on surveillance of zoonosis and causes of zoonosis, which was adopted in 2013 based on the Veterinary Law defines two major and several sub-groups of zoonotic diseases: "A. Zoonosis and zoonotic agents involved in monitoring: brucellosis; Campylobacteriosis; listeriosis; Salmonellosis (zoonotic salmonellosis); Trichinellosis; echinococcosis; tuberculosis caused by Mycobacterium bovis; Escherichia coli that secretes verotoxin and B. A list of zoonoses and zoonotic agents that are monitored in accordance with the epidemiological situation: 1. Viral zoonoses: infection with calicivirus; hepatitis A virus; Influenza virus; rabies; infections of viruses transmitted by arthropods; 2. Bacterial zoonoses: borreliosis; Botulism; leptospirosis; Chlamydia; Mycobacteriosis other than tuberculosis caused by Mycobacterium bovis; Vibriosis; jersinia; 3. Parasitic zoonoses: Anemia; Cryptosporidiosis; cysticercosis; toxoplasmosis; 4. Other zoonoses and zoonotic agents." "The Ministry of Health and Veterinary Directorate of the Ministry of Agriculture are the main bodies responsible for the monitoring of zoonotic diseases. The ordinance also envisages that reporting for each zoonoses and zoonotic agent must include, among other information such as their consequences, the control mechanisms implemented that can be used to prevent or reduce the transmission of zoonotic agents to humans [1].

[1] Croatian Food Agency. 2013. "Ordinance on Surveillance of Zoonoses and Causes of Zoonoses (Pravilnik o nacinu pracenja zoonoza i uzrocnika zoonoza, NN 42/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_04\\_42\\_797.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_04_42_797.html)]. Accessed 09 September 2020.

### 1.2.1d

**Is there a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence of a unit dedicated to zoonotic disease that functions across ministries in Croatia.

According to Article 2 of the Ordinance on Surveillance of Zoonoses and Causes of Zoonoses, the Ministry of Health and Veterinary Directorate of the Ministry of Agriculture are the main bodies responsible for the monitoring of zoonotic diseases. According to Article 3, these authorities must ensure the permanent functioning of services and activities related to the surveillance of zoonoses. [1] In addition, in order to establish an appropriate structure that functions across multiple ministries, in line with national legislation, a Working Group for Zoonoses was established in 2014 within the Croatian Food Agency. The Ministry of Agriculture, Ministry of Health, Croatian Food Agency, Croatian Institute of Public Health, Croatian Veterinary Institute, and Veterinary Faculty are all members of this Working Group. [2]

[1] Croatian Food Agency. 2013. "Ordinance on Surveillance of Zoonoses and Causes of Zoonoses (Pravilnik o nacinu pracenja zoonoza i uzrocnika zoonoza, NN 42/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_04\\_42\\_797.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_04_42_797.html)]. Accessed 09 September 2020.

[2] Croatian Food Agency. "Working Group for Zoonosis". [<https://www.hah.hr/en/o-hah-u/radna-grupa-za-zoonoze/>]. Accessed 09 September 2020.

## 1.2.2 Surveillance systems for zoonotic diseases/pathogens

### 1.2.2a

**Does the country have a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency?**

Yes = 1, No = 0

**Current Year Score: 1**

Croatia has a national mandatory mechanism for owners of livestock to conduct and report on disease surveillance to a central government agency. According to Article 3 of the Ordinance on the Method of Reporting Animal Diseases issued by the Directorate for Veterinary and Food Safety of the Ministry of Agriculture, "In the event of signs of illness and/or death of the animal, the owner of the animal must notify the veterinarian immediately and without delay." The ordinance applies to all livestock and does not specify information on how the owner must report a case to a veterinarian. According to Article 4, the veterinarian is obliged to conduct a clinical examination of the animal. If the veterinarian suspects animal disease, pending confirmation on the type of disease, he/she is obliged to inform the competent veterinary organization and/or Veterinary Directorate within 24 hours. [1]

[1] Ministry of Agriculture. Directorate for Veterinary and Food Safety. 2014. Ordinance on the Method of Reporting Animal Diseases (Pravilnik o nacinu pracenja, prijavi i izvjecavanju o pojavi bolesti životinja, NN 135/2014)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2014\\_11\\_135\\_2573.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2014_11_135_2573.html)]. Accessed 09 September 2020.

### 1.2.2b

**Is there legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners)?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that Croatia has a law that safeguards the confidentiality of information generated through surveillance activities for animals (for owners). According to Article 140 (4) of the Veterinary Law, "no information related to the business of legal entities and natural persons whose work is subject to the supervision of a veterinary inspector may be disclosed without the written consent of the persons deprived, except: when this is necessary for the implementation of this law and when it is approved by the minister; when necessary for the conduct of a proceeding following a filed criminal complaint or a request for initiation of a misdemeanor proceeding, after the conducted inspection supervision." There is no evidence that this law is directly related to the protection of surveillance data collected from owners of livestock. [1] Websites of the Ministry of Agriculture, Ministry of Health and Directorate for Veterinary and Food Safety do not have information about the confidentiality of information generated through surveillance activities for animals (for owners). [2, 3, 4]

[1] Croatian Parliament. 2013. "Law on Veterinary (Zakon o veterinarstvu, NN 82/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_06\\_82\\_1734.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_06_82_1734.html)]. Accessed 09 September 2020.

[2] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[3] Directorate for Veterinary and Food Safety. [<http://www.veterinarstvo.hr/default.aspx?id=17>]. Accessed 09 September 2020.

[4] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

### 1.2.2c

**Does the country conduct surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors)?**

Yes = 1, No = 0

**Current Year Score: 1**

Croatia conducts surveillance of zoonotic disease in wildlife. The Directorate for Veterinary and Food Safety of the Ministry of Agriculture is responsible for implementing Croatia's animal health strategy as well as measures for early detection and prevention of disease emergence. In addition, the directorate also controls, monitors, and investigates the emergence of dangerous animal diseases including zoonoses. [1] A few diseases in wildlife reported in the latest Report on Zoonosis for 2015/16 are M. tuberculosis in badgers, wild boars, and wild birds and Rabies in wolves, bears, etc. [2] During 2018, 5,403 cases of African swine fever in wild boars were reported, as well as 600 new cases of African swine fever in wild boars in 2019. [3]

[1] Croatian Food Agency. 2013. "Ordinance on Surveillance of Zoonoses and Causes of Zoonoses (Pravilnik o nacinu pracenja zoonoza i uzročnika zoonoza, NN 42/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_04\\_42\\_797.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_04_42_797.html)]. Accessed 09 September 2020.

[2] Croatian Food Agency. 2017. "Annual Report on Zoonosis in Croatia for 2015/16 (Godišnje izvješće o zoonozama u Hrvatskoj za period 2015/16. godinu)". [[https://www.hah.hr/wp-content/uploads/2017/11/Godi%C5%A1nje-izvje%C5%A1%C4%87e-o-zoonozama-2015\\_16.pdf](https://www.hah.hr/wp-content/uploads/2017/11/Godi%C5%A1nje-izvje%C5%A1%C4%87e-o-zoonozama-2015_16.pdf)]. Accessed 09 September 2020.

[3] Ministry of Agriculture. "African swine fever". [<https://poljoprivreda.gov.hr/print.aspx?id=898&url=print>]. Accessed 09 September 2020.

## 1.2.3 International reporting of animal disease outbreaks

### 1.2.3a

**Has the country submitted a report to OIE on the incidence of human cases of zoonotic disease for the last calendar year?**

Yes = 1, No = 0

Current Year Score: 0

2019

OIE WAHIS database

## 1.2.4 Animal health workforce

### 1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: 54.04

2018

OIE WAHIS database

### 1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: -

No data available

OIE WAHIS database

## 1.2.5 Private sector and zoonotic

### 1.2.5a

Does the national plan on zoonotic disease or other legislation, regulations, or plans include mechanisms for working with the private sector in controlling or responding to zoonoses?

Yes = 1, No = 0

Current Year Score: 0

Relevant legislation and existing mechanisms of cooperation do not include mechanisms for working with the private sector in controlling or responding to zoonoses in Croatia. Representatives of the private sector are not members of the Working Group for Zoonoses, an inter-ministerial agency to address zoonotic disease in the country. In addition, the mandate of the Working Group does not regulate cooperation with the private sector. [1] The last Annual Report on Zoonoses, for the period 2015/16, does not have evidence of mechanisms for cooperation with the private sector. [2] Finally, the Ordinance on Surveillance of Zoonosis and Causes of Zoonosis, adopted in 2013, does not envisage cooperation with the private sector in controlling or responding to zoonoses. [3] Websites of the Ministry of Agriculture and Ministry of Health do not have additional information about mechanisms for working with the private sector in controlling or responding to zoonoses. [4, 5]

[1] The Croatian Food Agency. "Working group for Zoonosis". [<https://www.hah.hr/en/o-hah-u-radna-grupa-za-zoonoze/>]. Accessed 09 September 2020.

[2] Croatian Food Agency. 2017. "Annual Report on Zoonosis in Croatia for 2015/16 (Godišnje izvješće o zoonozama u Hrvatskoj za period 2015/16. godinu)". [[https://www.hah.hr/wp-content/uploads/2017/11/Godi%C5%A1nje-izvje%C5%A1%C4%87e-o-zoonozama-2015\\_16.pdf](https://www.hah.hr/wp-content/uploads/2017/11/Godi%C5%A1nje-izvje%C5%A1%C4%87e-o-zoonozama-2015_16.pdf)]. Accessed 09 September 2020.

[3] Croatian Food Agency. 2013. "Ordinance on Surveillance of Zoonoses and Causes of Zoonoses (Pravilnik o načinu praćenja zoonoza i uzročnika zoonoza, NN 42/2013)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_04\\_42\\_797.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2013_04_42_797.html)]. Accessed 09 September 2020.

[4] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[5] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

## 1.3 BIOSECURITY

### 1.3.1 Whole-of- government biosecurity systems

#### 1.3.1a

**Does the country have in place a record, updated within the past five years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that Croatia has in place a record, updated within the past five years of facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities. Croatia's Confidence Building Measure forms discuss the capacity of laboratories to safely handle dangerous pathogens, but it does not mention inventories. [1] The Croatian Company Directory and Ministry of Justice – Business Register do not have any publicly available information regarding facilities with dangerous pathogens. [2, 3] The Ministries of Agriculture, Defense, Health, Science and the Croatian Institute for Toxicology and Antidoping and VERTIC database do not have any additional information on monitoring facilities that have dangerous pathogens and toxins. [4, 5, 6, 7, 8, 9]

[1] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

[2] Croatian Company Directory. [<http://www.biznet.hr/>]. Accessed 09 September 2020.

[3] Ministry of Justice. "Court Register". [<https://sudreg.pravosudje.hr/registar/f?p=150:1>]. Accessed 09 September 2020.

[4] Ministry of Agriculture. [<http://www.mps.hr/>]. Accessed 09 September 2020.

[5] Ministry of Defense. [<https://www.morh.hr/hr/>]. Accessed 09 September 2020.

[6] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[7] Ministry of Science and Education. [<https://mzo.hr/>]. Accessed 09 September 2020.

[8] Croatian Institute for Toxicology and Antidoping. "About Institute". [<http://www.hzt.hr/o-nama/o-zavodu.html>]. Accessed 09 September 2020.

[9] Verification Research, Training and Information Center (VERTIC) database.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

### 1.3.1b

**Does the country have in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Croatia has in place legislation and/or regulations related to biosecurity and which address requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed. The Ministries of Agriculture, Defense, Health, Science and Education, Croatian Accreditation Agency (as a body responsible for accreditation of different facilities and laboratories), VERTIC data base, and the 2018 Confidence Building Measures (CBM) under the Biological Weapons Convention (the 2017 CBM report being inaccessible) do not have any information which addresses requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed. [1, 2, 3, 4, 5, 6, 7]

[1] Ministry of Agriculture. "Legislation". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[2] Ministry of Defense. "Laws". [<https://www.morh.hr/kategorija/zakoni/>]. Accessed 09 September 2020.

[3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[4] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.

[5] Croatian Accreditation Agency. [<http://www.akreditacija.hr/>]. Accessed 09 September 2020.

[6] Verification Research, Training and Information Center (VERTIC) Database.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

[7] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

### 1.3.1c

**Is there an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Croatia has in place legislation and/or regulations related to biosecurity and, therefore, it does not have an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations. The Ministries of Agriculture, Defense, Health, Science and Education, Croatian Accreditation Agency (as a body responsible for accreditation of different facilities and laboratories), the VERTIC database, and the Biological Weapons Convention 2018 Confidence Building Measures (CBM) (the 2017 CBM report is inaccessible) do not provide any information on biosecurity legislation and related enforcement agencies [1, 2, 3, 4, 5, 6, 7].

[1] Ministry of Agriculture. "Legislation". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[2] Ministry of Defense. "Laws". [<https://www.morh.hr/kategorija/zakoni/>]. Accessed 09 September 2020.

[3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[4] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.

[5] Croatian Accreditation Agency. [<http://www.akreditacija.hr/>]. Accessed 09 September 2020.

[6] Verification Research, Training and Information Center (VERTIC) Database.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

[7] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

### 1.3.1d

**Is there public evidence that shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that shows that Croatia has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. The Ministries of Agriculture, Defense, Health and Science and Education do not have public evidence that shows that Croatia has taken actions to consolidate its inventory of dangerous pathogens into a minimum number of facilities [1, 2, 3, 4]. UNOG's nine 2018 Confidence-Building Measures (CBM) contain information on the facilities handling biological agents, but there is no confirmation that dangerous pathogens and toxins are consolidated into a minimum number of facilities. The 2017 CBM report is inaccessible [5]. The Verification, Research, Training and Information Center (VERTIC) database does not have information about actions to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. [6]

[1] Ministry of Agriculture. "Legislation". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[2] Ministry of Defense. "Laws". [<https://www.morh.hr/kategorija/zakoni/>]. Accessed 09 September 2020.

[3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[4] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.

[5] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

[6] Verification Research, Training and Information Center (VERTIC) Database.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

### 1.3.1e

**Is there public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for Ebola, but not anthrax. The Department of Bacteriology, Hospital Infections and Sterilization of the Clinic for Infectious Diseases "Dr. Fran Mihaljevic" is conducting diagnostic testing for B.antracis, but it does not specify PCR testing. However, the same clinic served as an external quality assurance reviewer for Ebola PCR testing [1, 2]. The Public Health Institute is conducting bacteriological, virological, parasitological, and mycological testing, including PCR-based diagnostics. However, based on the list of bacteriological, virological, parasitological and mycological testing provided by the Croatian Public Health Institute, PCR-based diagnostics does not explicitly refer to anthrax and/or Ebola. It only mentions that "If bacteria such as ...Bacillus anthracis... and others are suspected, please specify on the request form" [3].

- [1] Clinic for Infective Diseases "Dr. Fran Mihaljevic". "Department of Bacteriology, Hospital Infections and Sterilization". [<http://bfm.hr/page/odjel-za-bakteriologiju-bolnicke-infekcije-i-steri>]. Accessed 09 September 2020.
- [2] Ellerbrok, H. et al. 2017 "External quality assessment study for ebolavirus PCR-diagnostic promotes international preparedness during the 2014 – 2016 Ebola outbreak in West Africa". PLoS neglected tropical disease Vol 11 [<https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0005570&rev=2>]. Accessed 09 September 2020.
- [3] Croatian Institute of Public Health. "Diagnostic Tests". [<https://www.hzjz.hr/en/diagnostic-tests/>]. Accessed 09 September 2020.

## 1.3.2 Biosecurity training and practices

### 1.3.2a

**Does the country require biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Croatia requires biosecurity training using a standardized required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. According to the National Program of Protection of Health and Safety of Employees in Activities of Health Care 2015-2020, "In schools, at polytechnics or at faculties where pupils and students are learning for work in the field of health care, there are no compulsory education programs for working in a safe way" [1]. The Croatian Institute for Health Protection and Safety at Work periodically organizes different trainings and programs, but those trainings are organized on an ad hoc basis without a common curriculum or a train-the-trainer-program [2]. The second Croatian congress on biosecurity and bioprotection is planned for November 2020. [3] The websites of the Ministry of Defense, Ministry of Agriculture, Croatian Society for Biosafety and Biosecurity, Verification, Research, Training and Information Center (VERTIC) database, and United Nations Office at Geneva (UNOG)'s 2018 Confidence-Building Measures (CBM) (the 2017 CBM report is inaccessible) do not contain information on biosecurity training [4, 5, 6, 7, 8].

- [1] Ministry of Health. 2015. "National Program of Protection of Health and Safety of Employees in Activities of Health Care 2015-2020 (Nacionalni program zaštite zdravlja i sigurnosti na radu osoba zaposlenih u djelatnosti zdravstvene zaštite za razdoblje 2015-2020)". [<https://zdravlje.gov.hr/UserDocsImages//Programi%20i%20projekti%20-%20Ostali%20programi//Nacionalni%20program%20za%20za%C5%A1tite%20zdravlja%20i%20sigurnosti%20na%20radu%20osoba%20zaposlenih%20u%20djelatnosti%20zdravstvene%20za%C5%A1tite%20za%20razdoblje%202015.-2020..pdf>]. Accessed 09 September 2020.
- [2] Croatian Institute for Health Protection and Safety at Work. "Professional Seminars". [<http://hzzsr.hr/index.php/izobrazba-i-skupovi/hzzsr/strucni-seminari/>]. Accessed 09 September 2020.
- [3] Croatian Medical Association. "Second Croatian Congress on Biosecurity and Bioprotection". [<https://www.hlz.hr/strucna-drustva/drugi-hrvatski-kongres-o-biosigurnosti-i-biozastiti-s-medunarodnim-sudjelovanjem/>]. Accessed 09 September 2020.
- [4] Ministry of Defense. [<https://www.morh.hr/hr/>]. Accessed 09 September 2020.
- [5] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.
- [6] Croatian Society for Biosafety and Biosecurity. [[http://hdbib.hr/index\\_en.html](http://hdbib.hr/index_en.html)]. Accessed 09 September 2020.
- [7] Verification Research, Training and Information Center (VERTIC) Database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

[8] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

### 1.3.3 Personnel vetting: regulating access to sensitive locations

#### 1.3.3a

**Do regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks?**

Personnel are subject to all three of these checks = 3, Personnel are subject to two of these checks = 2, Personnel are subject to one of these checks = 1, Personnel are not subject to any of these checks = 0

**Current Year Score: 0**

There is insufficient public evidence that Croatia has regulations that mandate that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential be subject to checks. Relevant regulations mandate that health personnel must undergo background checks and psychological or mental fitness checks, but do not specifically refer to security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential. According to Article 9 of the "Ordinance of the Croatian Institute for Public Health," special conditions for employing all health personnel are professional qualifications, approval for independent work, special skills and competencies necessary for successful work, work experience in jobs for which a contract of employment is concluded, and special medical fitness. In addition, according to Article 10 of the "Ordinance for Jobs with Special Working Conditions," a worker must be referred to a medical examination. For other jobs, workers may be referred for a medical examination for the purpose of determining general health and psycho-physical abilities. Drug testing is not specifically mentioned by these articles [1]. The Confidence-building Measures (CBMs) under the Biological Weapons Convention (BWC) for Croatia from 2018 do not make reference to security and whether other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to checks. The 2017 CBM report is inaccessible. [2] No further evidence was found on the websites of the Ministry of Agriculture, Ministry of Defense, Ministry of Health or in the Verification, Research, Training and Information Center (VERTIC) database [3, 4, 5, 6].

[1] Croatian Institute for Public Health. 2015. "Ordinance of the Institute (Pravilnik o radu)". [[https://www.hzjz.hr/wp-content/uploads/2016/12/Pravilnik\\_o\\_radu\\_2015.pdf](https://www.hzjz.hr/wp-content/uploads/2016/12/Pravilnik_o_radu_2015.pdf)]. Accessed 09 September 2020.

[2] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

[3] Ministry of Agriculture. "Legislation". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[4] Ministry of Defense. "Laws". [<https://www.morh.hr/kategorija/zakoni/>]. Accessed 09 September 2020.

[5] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[6] Verification Research, Training and Information Center (VERTIC) Database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

### 1.3.4 Transportation security

#### 1.3.4a

**Does the country have publicly available information on national regulations on the safe and secure transport of infectious substances (specifically including Categories A and B)?**

Yes = 1 , No = 0

**Current Year Score: 1**

Croatia has publicly available information on national regulations on the safe and secure transport of infectious substances (Categories A and B). The Law on the Transport of Dangerous Goods (NN 79/07, 2007) regulates all modes of transportation (Article 2). According to Article 4 of the law, dangerous goods also include infectious substances. Article 3 of the law refers to international agreements that regulate transportation of dangerous goods and which are directly applicable in Croatia (e.g. European Agreement on the International Carriage of Dangerous Goods by Road (ADR), listing infectious substances of Categories A and B and its annexes). The Law on the Transport of Dangerous Goods prescribes the conditions for the transport of dangerous goods, the obligations of persons involved in the transport, the conditions for packaging and vehicles, the conditions for appointing security advisers and the rights and duties, the competence and conditions for conducting training of persons involved in the transport, state bodies in connection with this transport, and supervision of law enforcement. By aligning this law with European Union (EU) law, the safe and secure transport of infectious substances (Categories A and B) is also covered by this law [1]. The Confidence-building Measures (CBMs) under the Biological Weapons Convention (BWC) for Croatia from 2018 do not refer to national regulations on the safe and secure transport of infectious substances (Categories A and B) [2].

[1] Croatian Parliament. 2007. "Law on the Transport of Dangerous Goods (Zakon o prijevozu opasnih tvari)".

[<https://www.zakon.hr/z/246/Zakon-o-prijevozu-opasnih-tvari>]. Accessed 09 September 2020.

[2] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

### 1.3.5 Cross-border transfer and end-user screening

#### 1.3.5a

**Is there legislation and/or regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins, and pathogens with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 1**

For Croatia, end-user screening is mandated by the European Union's (EU) Regulation No 428/2009 Setting up a Community Regime for the Control of Exports, Transfer, Brokering and Transit of Dual-Use Items. In its list of items covered by the term "dual-use", the regulation includes 91 pathogens and toxins: 32 human viruses, 17 animal viruses, 4 rickettsiae, 15 bacteria, 19 toxins, 2 fungi, and 2 mycoplasmas [1]. Among others, this includes the pathogens and toxins associated with plague, cholera, encephalitis, Ebola, dengue fever, anthrax, salmonellosis, brucellosis, shigellosis, yellow fever, and botulism. However, the list omits toxins and pathogens associated with some major infectious diseases, such as influenza and tuberculosis. The regulation states that export authorization is subject to identification of the end-user and intended use [1]. It further states that dual-use items may not be exported when the exporter is informed by member state authorities that they are intended for the production of weapons of mass destruction or for military use more broadly, where the destination country is subject to an arms embargo imposed by the Organization for Security and Co-operation in Europe (OSCE) or the United Nations Security Council [1]. Moreover, regulations issued by the European Council are legally binding legislative acts in all EU member states [2].

[1] European Council. 2009. Council Regulation (EC) No 428/2009 of 5 May 2009. "Setting up a Community Regime for the Control of Exports, Transfer, Brokering and Transit of Dual-use Items" [<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32009R0428>]. Accessed 09 September 2020.

[2] European Union. "Regulations, Directives and Other Acts." [[https://europa.eu/european-union/eu-law/legal-acts\\_en](https://europa.eu/european-union/eu-law/legal-acts_en)]. Accessed 09 September 2020.

## 1.4 BIOSAFETY

### 1.4.1 Whole-of-government biosafety systems

#### 1.4.1a

**Does the country have in place national biosafety legislation and/or regulations?**

Yes = 1 , No = 0

**Current Year Score: 1**

Croatia has national biosafety legislation in place. The Law on Safety at Work, that was adopted in 2014, also regulates protection of people who work with biological substances (or are present in the working environment), such as biological agents or microorganisms including genetically modified, cell cultures and endoparasites of human and animal origin, which can cause infection, allergy, or poisoning. The Law regulates preventive measures, risk assessment, specific protection measures, safety signs, written notices, instructions, etc. [1] The Confidence-building Measures (CBMs) under the Biological Weapons Convention for Croatia from 2018 do not make reference to national biosafety legislation but note that the country follows the biosafety manual of the World Health Organization (WHO) [2].

[1] Croatian Parliament. 2014. "Law on Safety at Work (Zakon o zaštiti na radu, NN 71/2014)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2014\\_06\\_71\\_1334.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2014_06_71_1334.html)]. Accessed 09 September 2020.

[2] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

#### 1.4.1b

**Is there an established agency responsible for the enforcement of biosafety legislation and regulations?**

Yes = 1 , No = 0

**Current Year Score: 1**

In Croatia, there is an established agency responsible for the enforcement of biosafety legislation. The Labor Inspectorate of the Ministry of Labor and Health Inspectorate are responsible for the enforcement of biosafety legislation in the country. The Law on Safety at Work, that was adopted in 2014, regulates preventive measures, risk assessment, specific protection measures, safety signs, written notices and instructions, etc. According to Article 90 of the Law on Safety at Work, the Labor Inspectorate is responsible for enforcement of the law, except for health institutions [1]. The enforcement of biosafety legislation in health institutions is the responsibility of the Health Inspectorate [2]. The Confidence-building Measures (CBMs) under the Biological Weapons Convention for Croatia from 2018 do not refer to national biosafety legislation or any agency, but note that the country follows the biosafety manual of the World Health Organization (WHO) [3].

[1] Croatian Parliament. 2014. "Law on Safety at Work (Zakon o zaštiti na radu, NN 71/2014)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2014\\_06\\_71\\_1334.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2014_06_71_1334.html)]. Accessed 09 September 2020.

[2] Ministry of Health. "Health Inspectorate". [<https://zdravstvo.gov.hr/o-ministarstvu/djelokrug-1297/zdravstvena-inspekcija/1352>]. Accessed 09 September 2020.

[3] United Nations Office at Geneva (UNOG). 2018. "Confidence-building Measures". [<https://bwc->

ecbm.unog.ch/system/files/form-pdf/bwc\_cbm\_2018\_croatia\_rev.pdf]. Accessed 09 September 2020.

## 1.4.2 Biosafety training and practices

### 1.4.2a

**Does the country require biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that Croatia requires biosafety training, using a required standardized approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. The Institute for Safety and Croatian Institute for Public Health do not have publicly available information about organized trainings [1,2]. Croatia is a member of the European Network Education and Training in Occupational Safety and Health, but there is no specific information about a common curriculum or a train-the-trainer program for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential [3]. Further, the websites of the Ministries of Health, Agriculture, Science and Education and the Verification, Research, Training and Information Center (VERTIC) database do not have information on biosafety training [4, 5, 6, 7]. The Confidence-building Measures (CBMs) under the Biological Weapons Convention (BWC) for Croatia from 2018 do not make reference to biosafety training. The 2019 CBM report is inaccessible [8].

[1] Institute for Safety. "Training". [<http://institutzasigurnost.hr/usluge/osposobljavanja/>]. Accessed 09 September 2020.

[2] Croatian Institute for Public Health. "Department of Occupational Health - Training".

[<http://www.hzzsr.hr/index.php/edukacija-i-smjernice/>]. Accessed 09 September 2020.

[3] European Network Education and Training in Occupational Safety and Health. "Good Practice".

[[http://www.enetosh.net/webcom/show\\_page.php/\\_c-39/\\_nr-1/i.html](http://www.enetosh.net/webcom/show_page.php/_c-39/_nr-1/i.html)]. Accessed 09 September 2020.

[4] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[5] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[6] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.

[7] Verification Research, Training and Information Center (VERTIC) Database.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

[8] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

## 1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

### 1.5.1 Oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

#### 1.5.1a

**Is there publicly available evidence that the country has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that Croatia has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential, and/or other dual-use research. There is no information on the websites of the Ministries of Agriculture, Defense, Health, and Science, the Croatian Institute for Public Health and the Verification, Research, Training and Information Center (VERTIC) database regarding an assessment to determine whether there is ongoing research on especially dangerous pathogens, toxins, or pathogens with pandemic potential and/or other dual-use research [1, 2, 3, 4, 5, 6]. However, in June 2018, The National Academies of Sciences, Engineering, and Medicine (NASEM)—in cooperation with the InterAcademy Partnership (IAP), the Croatian Academy of Sciences and Arts, and the Croatian Society for Biosafety and Biosecurity—convened an international workshop to discuss strategies to promote sustained global dialogue and increased common understanding of the essential elements of governance for research in the life sciences that raises potential biosecurity concerns and dual-use issues [7]. There was no evidence of any follow-up to this workshop. However, the second Croatian congress on biosecurity and bioprotection is planned for November 2020. [8] The Confidence-building Measures (CBMs) under the Biological Weapons Convention (BWC) for Croatia from 2018 do not refer to information on the assessment of dual-use research. The 2019 CBM report is inaccessible [9].

[1] Ministry of Agriculture. "Documents". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[2] Ministry of Defense. "Publications". [<https://www.morh.hr/kategorija/dokumenti/>]. Accessed 09 September 2020.

[3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[4] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.

[5] Croatian Institute for Public Health. "National Publications". [<https://www.hzjz.hr/cat/nacionalna-istrazivanja/>]. Accessed 09 September 2020.

[6] Verification Research, Training and Information Center (VERTIC) Database.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

[7] The National Academies of Sciences, Engineering, and Medicine. "Governance of Dual-Use Research in the Life Sciences: An International Workshop". [<http://nas-sites.org/dels/events/dual-use-governance/>]. Accessed 09 September 2020.

[8] Croatian Medical Association. "Second Croatian Congress on Biosecurity and Bioprotection". [<https://www.hlz.hr/strucna-drustva/drugi-hrvatski-kongres-o-biosigurnosti-i-biozastiti-s-medunarodnim-sudjelovanjem/>]. Accessed 09 September 2020.

[9] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

### 1.5.1b

**Is there legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1, No = 0

**Current Year Score: 0**

Croatia does not have a national policy that requires oversight of dual-use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential. There is no information on the websites of the Ministries of Agriculture, Defense, Health and Science and the Verification, Research, Training and Information Center (VERTIC) database regarding the oversight of dual-use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential [1, 2, 3, 4, 5]. At the European Union (EU)-level Council Regulation (EC) No. 428/2009, setting up an EU regime for the control of exports, transfer, brokering and transit of dual-use items is directly applicable in all EU countries, including Croatia, but this regulation does not cover oversight of dual-use research. [6] In

addition, at the EU level, there are policy discussions from the perspective of dual-use research, including revision of the dual-use research regulation. [7]. In June 2018, the National Academies of Sciences, Engineering, and Medicine (NASEM)—in cooperation with the InterAcademy Partnership (IAP), the Croatian Academy of Sciences and Arts, and the Croatian Society for Biosafety and Biosecurity—convened an international workshop to discuss strategies to promote sustained global dialogue and increased common understanding of the essential elements of governance for research in the life sciences that raises potential biosecurity concerns and dual-use issues [8]. No evidence of any follow-up to this workshop was found. However, the second Croatian congress on biosecurity and bioprotection is planned for November 2020. [9] Further, the Confidence-building Measures (CBMs) under the Biological Weapons Convention (BWC) for Croatia from 2018 do not make reference to assessment of dual-use research. Moreover, the 2019 CBM report is inaccessible [10].

[1] Ministry of Agriculture. "Documents". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[2] Ministry of Defense. "Publications". [<https://www.morh.hr/kategorija/dokumenti/>]. Accessed 09 September 2020.

[3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[4] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.

[5] Verification Research, Training and Information Center (VERTIC) Database.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

[6] European Commission. 2009. Council Regulation (EC) No 428/2009. "Setting up a European Union Regime for the Control of Exports, Transfer, Brokering and Transit of Dual-use Items".

[[https://trade.ec.europa.eu/doclib/docs/2009/june/tradoc\\_143390.pdf](https://trade.ec.europa.eu/doclib/docs/2009/june/tradoc_143390.pdf)]. Accessed 09 September 2020.

[7] European Commission. "Dual-use Research and Trade Controls: Opportunities and Controversies".

[<https://ec.europa.eu/jrc/en/publication/dual-use-research-and-trade-controls-opportunities-and-controversies>]. Accessed 09 September 2020.

[8] National Academies of Sciences, Engineering, and Medicine. "Governance of Dual-Use Research in the Life Sciences: An International Workshop". [<http://nas-sites.org/dels/events/dual-use-governance/>]. Accessed 09 September 2020.

[9] Croatian Medical Association. "Second Croatian Congress on Biosecurity and Bioprotection". [<https://www.hlz.hr/strucna-drustva/drugi-hrvatski-kongres-o-biosigurnosti-i-biozastiti-s-medunarodnim-sudjelovanjem/>]. Accessed 09 September 2020.

[10] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

### 1.5.1c

**Is there an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1 , No = 0

**Current Year Score: 0**

In Croatia, there is no agency responsible for the oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual-use research. Although the Ministry of Foreign Affairs sets licensing conditions for those handling dual-use materials, there is no mention of direct oversight of these agencies within the relevant legislation [1]. Further, there is no information on the websites of the Ministries of Agriculture, Defense, Health, and Science and the Verification, Research, Training and Information Center (VERTIC) database regarding oversight of dual-use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential [2, 3, 4, 5, 6]. In June 2018, the National Academies of Sciences, Engineering, and Medicine (NASEM)—in cooperation with the InterAcademy Partnership (IAP), the Croatian Academy of Sciences and Arts, and the Croatian Society for Biosafety and Biosecurity—convened an international workshop to discuss strategies to promote sustained global dialogue and increased common understanding of the essential elements of governance for research in the life sciences, which raises potential biosecurity concerns and dual-

use issues [7]. No evidence of any follow-up to this workshop was found. However, the second Croatian congress on biosecurity and bioprotection is planned for November 2020. [8]. The Confidence-building Measures (CBMs) under the Biological Weapons Convention (BWC) for Croatia from 2018 do not make reference to an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual-use research. The 2019 CBM report is inaccessible [9].

- [1] Ministry of Agriculture. "Documents". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.
- [2] Ministry of Defense. "Publications". [<https://www.morh.hr/kategorija/dokumenti/>]. Accessed 09 September 2020.
- [3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.
- [4] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.
- [5] European Commission. 2009. Council Regulation (EC) No 428/2009. "Setting up a European Union Regime for the Control of Exports, Transfer, Brokering and Transit of Dual-use Items". [[https://trade.ec.europa.eu/doclib/docs/2009/june/tradoc\\_143390.pdf](https://trade.ec.europa.eu/doclib/docs/2009/june/tradoc_143390.pdf)]. Accessed 09 September 2020.
- [6] Verification Research, Training and Information Center (VERTIC) Database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.
- [7] European Commission. "Dual-use Research and Trade Controls: Opportunities and Controversies". [<https://ec.europa.eu/jrc/en/publication/dual-use-research-and-trade-controls-opportunities-and-controversies>]. Accessed 09 September 2020.
- [8] The National Academies of Sciences, Engineering, and Medicine. "Governance of DualUse Research in the Life Sciences: An International Workshop". [<http://nas-sites.org/dels/events/dual-use-governance/>]. Accessed 09 September 2020.
- [9] Croatian Medical Association. "Second Croatian Congress on Biosecurity and Bioprotection". [<https://www.hlz.hr/strucna-drustva/drugi-hrvatski-kongres-o-biosigurnosti-i-biozastiti-s-medunarodnim-sudjelovanjem/>]. Accessed 09 September 2020.
- [10] United Nations Office at Geneva (UNOG). 2018. "Confidence-Building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.

## 1.5.2 Screening guidance for providers of genetic material

### 1.5.2a

**Is there legislation and/or regulation requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no public evidence of a national legislation or policy in Croatia that addresses the screening of synthesized DNA before it is sold. The Ministries of Agriculture, Defense, Health, Science and Transport have not issued regulation, policy, or other guidelines regarding the sale of synthesized DNA [1, 2, 3, 4, 5]. The Law on Genetically Modified Organisms (GMO) regulates treatment of GMOs, cross-border transfer of GMOs, etc. but it does not require the screening of synthesized DNA before it is sold [6]. A list of microbiological searches that are performed by the Croatian Institute for Public Health does not contain screening of synthesized DNA before it is sold [7]. Further, the Confidence Building Measures (CBMs) under the Biological Weapons Convention (BWC) for Croatia from 2018 do not make reference to the screening of synthesized DNA before it is sold, and the 2019 CBM report is inaccessible [8]. The Verification, Research, Training and Information Center (VERTIC) database does not have information about legislation and/or regulation requiring the screening of synthesized DNA against lists of known pathogens and toxins before it is sold. [9]

- [1] Ministry of Agriculture. "Documents". [<https://poljoprivreda.gov.hr/dokumenti/10>]. Accessed 09 September 2020.
- [2] Ministry of Defense. "Publications". [<https://www.morh.hr/kategorija/dokumenti/>]. Accessed 09 September 2020.
- [3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.
- [4] Ministry of Science and Education. "Science". [<https://mzo.hr/hr/rubrike/znanost>]. Accessed 09 September 2020.
- [5] Ministry of the Sea, Transport and Infrastructure. [<https://mmpi.gov.hr/>]. Accessed 09 September 2020.
- [6] Croatian Parliament. 2018. "Law on Genetically Modified Organisms (Zakon o genetski modificiranim organizmima, NN 70/05, 137/09, 28/13, 47/14, 15/18)". [<https://www.zakon.hr/z/571/Zakon-o-genetski-modificiranim-organizmima>]. Accessed 09 September 2020.
- [7] Croatian Institute for Public Health. "A List of Microbiological Searches". [<https://www.hzjz.hr/sluzba-mikrobiologija/popis-mikrobioloskih-pretraga/>]. Accessed 09 September 2020.
- [8] UNOG. 2018. "Confidence-building Measures". [[https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2018\\_croatia\\_rev.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2018_croatia_rev.pdf)]. Accessed 09 September 2020.
- [9] Verification Research, Training and Information Center (VERTIC) Database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed 09 September 2020.

## 1.6 IMMUNIZATION

### 1.6.1 Vaccination rates

#### 1.6.1a

##### Immunization rate (measles/MCV2)

Immunization rate (measles/MCV2), 95% or greater = 2, 80-94.9% = 1, Less than 80%, or no data = 0

**Current Year Score: 2**

2019

World Health Organization

#### 1.6.1b

##### Are official foot-and-mouth disease (FMD) vaccination figures for livestock publicly available through the OIE database?

Yes = 1, No = 0

**Current Year Score: 1**

2020

OIE WAHIS database

## Category 2: Early detection and reporting for epidemics of potential international concern

### 2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

#### 2.1.1 Laboratory testing for detection of priority diseases

##### 2.1.1a

**Does the national laboratory system have the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests?**

Evidence they can conduct 5 of the 10 core tests and these tests are named = 2, Evidence they can conduct 5 of the 10 core tests and the tests are not named = 1, No evidence they can conduct 5 of the 10 core tests = 0

**Current Year Score: 2**

There is evidence that the national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 World Health Organization (WHO)-defined core tests. The Microbiology service at the Croatian Institute of Public Health can perform all of the 6 commonly defined tests: polymerase chain reaction (PCR) testing for Influenza virus (flu); virus culture for poliovirus (polio); serology for HIV; microscopy for mycobacterium tuberculosis (tuberculosis/TB); rapid diagnostic testing for plasmodium spp. (malaria); and bacterial culture for Salmonella enteritidis serotype Typhi (typhoid). [1] Evidence for country-specific tests was not found.

[1] Croatian Institute for Public Health. "List of microbiological tests". [<https://www.hzjz.hr/sluzba-mikrobiologija/popis-mikrobioloskih-pretraga/>]. Accessed 09 September 2020.

##### 2.1.1b

**Is there a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing?**

Yes, there is evidence of a plan, and it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 2, Yes, there is evidence of a plan, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 1, No evidence of a plan = 0

**Current Year Score: 0**

There is no evidence that Croatia has a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing including for Covid-19.

Websites of the Ministries of Health, Agriculture, Defense and Croatian Institute for Public Health do not reference a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing. [1, 2, 3, 4] In addition, the Protection and Rescue Plan for the Territory of the Republic of Croatia (adopted in 2010), National Security Strategy of the Republic of Croatia (adopted in 2017), National Generic and Integrated Plan of Coordinated Approach in Health Crisis Situations (adopted in 2010) do not reference a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing. [5,

6, 7].

- [1] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.
- [2] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.
- [3] Ministry of Defense. [<https://www.morh.hr/en/>]. Accessed 09 September 2020.
- [4] Croatian Institute of Public Health. [<https://www.hzjz.hr/>]. Accessed 09 September 2020.
- [5] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.
- [6] Croatian Parliament. 2017. "National Security Strategy of the Republic of Croatia (Strategija nacionalne sigurnosti Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2017\\_07\\_73\\_1772.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2017_07_73_1772.html)]. Accessed 09 September 2020.
- [7] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generiki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)". [<https://vlada.gov.hr/UserDocImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

## 2.1.2 Laboratory quality systems

### 2.1.2a

**Is there a national laboratory that serves as a reference facility which is accredited (e.g., International Organization for Standardization [ISO] 15189:2003, U.S. Clinical Laboratory Improvement Amendments [CLIA])?**

Yes = 1, No = 0

**Current Year Score: 1**

The Croatian Institute for Public Health is the national laboratory, which serves as a reference facility, is accredited [1]. The Croatian Accreditation Agency, issues accreditation certificates which confirm that a certain body (e.g. laboratory) meets the requirements to perform certain tasks according to the directives of the European Union (EU) and regulations of the Republic of Croatia [2]. The Croatian Institute for Public Health is accredited by the Croatian Accreditation Agency in accordance with "Norm: HRN EN ISO/IEC 17025:2007; Standard: (ISO/IEC 17025:2005+Cor.1:2006; EN ISO/IEC 17025:2005+AC:2006)). This accreditation is issued for testing of waters, food, animal feeding stuff, objects of common use, microbiological cleanliness of facilities and sampling of waters [3]. The Croatian Veterinary Institute is also a reference facility that has 133 accredited methods according to the HRN EN ISO/IEC 17025:2007 standard. This standard sets out the general requirements for the ability to carry out testing and calibration, including sampling, and is applicable to all organizations that conduct tests and calibrations, regardless of the types of testing and calibration, the size of the organization, and the range of testing and calibration [4, 5].

- [1] Croatian Institute for Public Health. "Department for Microbiology". [<https://www.hzjz.hr/sluzba-mikrobiologija/>]. Accessed 09 September 2020.
- [2] Croatian Accreditation Agency. "About Us". [<http://www.akreditacija.hr/EN>]. Accessed 09 September 2020.
- [3] Croatian Institute for Public Health. "Accreditation Certificate". [[https://www.hzjz.hr/wp-content/uploads/2013/11/AKR\\_1041.pdf](https://www.hzjz.hr/wp-content/uploads/2013/11/AKR_1041.pdf)]. Accessed 09 September 2020.
- [4] Croatian Veterinary Institute. "About Us". [<http://www.veinst.hr/en/about-us>]. Accessed 09 September 2020.
- [5] Directorate for Veterinary and Food Safety. "Official and Reference Laboratories for Food and Feed". [<http://www.veterinarstvo.hr/default.aspx?id=1269>]. Accessed 09 September 2020.

### 2.1.2b

Is there a national laboratory that serves as a reference facility which is subject to external quality assurance review?

Yes = 1 , No = 0

Current Year Score: 1

The Croatian Institute for Public Health is the national laboratory that serves as a reference facility and it is subject to an external quality assurance review. It has been a subject of specific external quality assessment by the European Center for Disease Prevention and Control (e.g. for typing of verocytotoxin-producing E.coli or for detection, isolation, and characterization of influenza viruses) [1, 2].

[1] European Center for Disease Prevention and Control. 2014. "Fourth External Quality Assessment Scheme for Typing of Verocytotoxin-producing E.coli (VTEC)". [<https://www.ecdc.europa.eu/en/publications-data/fourth-external-quality-assessment-scheme-typing-verocytotoxin-producing-ecoli>]. Accessed 09 September 2020.

[2] European Center for Disease Prevention and Control. 2016. "External Quality Assessment Scheme for Detection, Isolation and Characterisation of Influenza Viruses for the European Reference Laboratory Network for Human Influenza". [<https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/EQA-influenza-detection-ERLI-Net-2015.pdf>]. Accessed 09 September 2020.

## 2.2 LABORATORY SUPPLY CHAINS

### 2.2.1 Specimen referral and transport system

#### 2.2.1a

Is there a nationwide specimen transport system?

Yes = 1 , No = 0

Current Year Score: 0

In Croatia, there is insufficient evidence of a nationwide specimen transport system. In 2019, the Croatian Institute for Public Health issued the latest version of the "Instructions for Collecting and Sending Samples", but it does not refer to a nationwide transportation system [1]. Moreover, certain private courier companies undertake shipping of investigational medicines and clinical supplies to clinics and hospitals, through to the inbound return shipping of patient specimens to laboratories and research organizations [2]. There is no further evidence on the websites of the Ministry of Health and Ministry of Agriculture [3, 4].

[1] Croatian Institute for Public Health. "Instructions for Taking and Sending Samples". [<https://www.hzjz.hr/sluzba-mikrobiologija/upute-za-uzimanje-i-slanje-uzoraka/>]. Accessed 09 September 2020.

[2] DHL Medical Express. [[https://www.dhl.hr/en/express/industry\\_solutions.html](https://www.dhl.hr/en/express/industry_solutions.html)]. Accessed 09 September 2020.

[3] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[4] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

### 2.2.2 Laboratory cooperation and coordination

#### 2.2.2a

Is there a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak?

Yes = 2 , Yes, but there is evidence of gaps in implementation = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Croatia has a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak. According to article 14 of the Law on the Protection of Population from Infectious Diseases, Minister of Health may authorize, based on the recommendation of the Croatian Institute for Public Health, microbiological laboratories of legal and individual persons to conduct testing during an outbreak. However, the Law does not further elaborate how this can be done. [1] Protection and Rescue Plan for the Territory of the Republic of Croatia, National Security Strategy of the Republic of Croatia, National Generic and Integrated Plan of Coordinated Approach in Health Crisis Situations and Law on Civil Protection System, as well as websites of the Ministry of Health, Ministry of Agriculture and Institute for Public Health do not have a reference to a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak. [2, 3, 4, 5, 6, 7, 8]

[1] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

[3] Croatian Parliament. 2017. "National Security Strategy of the Republic of Croatia (Strategija nacionalne sigurnosti Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2017\\_07\\_73\\_1772.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2017_07_73_1772.html)]. Accessed 09 September 2020.

[4] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni genericki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)". [<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[5] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[6] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[7] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[8] Croatian Institute of Public Health. [<https://www.hzjz.hr/>]. Accessed 09 September 2020.

## 2.3 REAL-TIME SURVEILLANCE AND REPORTING

### 2.3.1 Indicator and event-based surveillance and reporting systems

#### 2.3.1a

**Is there evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease?**

Yes, there is evidence of ongoing event-based surveillance and evidence that the data is being analyzed on a daily basis = 2,

Yes, there is evidence of ongoing event-based surveillance, but no evidence that the data are being analyzed on a daily basis

= 1, No = 0

**Current Year Score: 0**

There is no evidence that Croatia conducts ongoing event-based surveillance and analysis of infectious diseases. The Institute for Clinical Microbiology of the Clinic for Infectious Diseases "Dr. Fran Mihaljevic" combines three departments that deal with bacterial, viral, and parasitic infections. Although the Institute processes 100,000 samples annually, there is no evidence that this is done through event-based surveillance [1]. No further evidence is found on the websites of the Ministry of Health or

the Ministry of Agriculture [2, 3].

[1] Clinic for Infectious Diseases "Dr. Fran Mihaljevic". "Institute for Clinical Microbiology". [<http://bfm.hr/page/zavod-za-klinicku-mikrobiologiju>]. Accessed 09 September 2020.

[2] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[3] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

### 2.3.1b

**Is there publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years, including for Covid-19. On the websites of the WHO, Ministry of Health and Institute for Public Health there is no information that Croatia has reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years. [1, 2, 3, 4]

[1] World Health Organization (WHO). "Health Emergency Dashboard. Croatia". [<https://extranet.who.int/publicemergency>]. Accessed 01 April 2021.

[2] World Health Organization (WHO). "Croatia". [<https://www.euro.who.int/en/countries/croatia>]. Accessed 01 April 2021.

[3] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 01 April 2021.

[4] Croatian Institute for Public Health. [<https://www.hzjz.hr/>]. Accessed 01 April 2021.

## 2.3.2 Interoperable, interconnected, electronic real-time reporting systems

### 2.3.2a

**Does the government operate an electronic reporting surveillance system at both the national and the sub-national level?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that the Government of Croatia operates an electronic reporting surveillance system at both the national and sub-national levels through the Central Health Information System (CEZIH). The CEZIH ensures functionalities such as reporting after patient visit, connection with biochemical laboratories, submission of laboratory results, submission of requests to special health care hospitals, reporting on infectious diseases, sharing information regarding the appearance of side effects during the implementation of immunization against infectious diseases [1]. The Croatian Institute for Public Health uses data from CEZIH for monitoring and analysis of health data and indicators [2]. However, the CEZIH system states that the reporting of infectious disease is done by a doctor in PHC, and s/he can additionally provide information about it and send to CEZIH. However, it does not clarify whether this is a requirement and which doctors might be required to do this. [1] Separately, in order to ensure electronic reporting surveillance for Covid-19, the Ministry of Health has introduced an information system which provides statistical data concerning Covid-19 (e.g. active cases, total cases, people hospitalized, etc.). [3]

[1] Central Health Information System. "Functionalities".

[[http://www.cezih.hr/pzz/dokumentacija/01\\_00\\_CEZIH\\_koncept\\_sustava.pdf](http://www.cezih.hr/pzz/dokumentacija/01_00_CEZIH_koncept_sustava.pdf)]. Accessed 09 September 2020.

[2] Croatian Institute for Public Health. "Public Health Service". [<https://www.hzjz.hr/sluzba-javno-zdravstvo/>]. Accessed 09 September 2020.

[3] Government of Croatia. "Covid-19". [<https://www.koronavirus.hr/>] Accessed 09 September 2020.

### 2.3.2b

#### Does the electronic reporting surveillance system collect ongoing or real-time laboratory data?

Yes = 1, No = 0

**Current Year Score: 1**

In Croatia, an electronic reporting surveillance system, called the Central Health Information System (CEZIH), collects ongoing/real-time laboratory data. An electronic CEZIH was introduced by the government to connect stakeholders and provide real-time data on patients and providers [1]. CEZIH ensures functionalities such as report after a patient visit, connection with biochemical laboratories, submission of laboratory results, submission of requests to special health care hospitals, reporting on infectious diseases, sharing information about the appearance of side effects caused by immunization against infectious diseases [2].

[1] IntegratedCare4People. "Developing an Integrated e-health System in Croatia to Drive Care Improvements".

[<https://www.integratedcare4people.org/practices/327/developing-an-integrated-e-health-system-in-croatia-to-drive-care-improvements/>]. Accessed 09 September 2020.

[2] Central Health Information System. "Functionalities".

[[http://www.cezih.hr/pzz/dokumentacija/01\\_00\\_CEZIH\\_koncept\\_sustava.pdf](http://www.cezih.hr/pzz/dokumentacija/01_00_CEZIH_koncept_sustava.pdf)]. Accessed 09 September 2020.

## 2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

### 2.4.1 Coverage and use of electronic health records

#### 2.4.1a

##### Are electronic health records commonly in use?

Electronic health records are commonly in use = 2, Electronic health records are not commonly in use, but there is evidence they are used = 1, No evidence electronic health records are in use = 0

**Current Year Score: 1**

There is evidence of an electronic health record (EHR) system in place but there is no sufficient evidence to indicate that electronic health records are commonly used in Croatia. According to government and media reports, the national EHR system, called eKarton, has been available since September 2016 [1, 2]. However, most hospitals still have independent clinical IT systems that are not fully integrated into the national information system, although they do exchange substantial data with the Croatian Health Insurance Fund. There is no information on how many hospitals use an electronic system as opposed to the paper-based system. [3] There is no clear indication regarding how many institutions utilize the EHR system, although it appears to be available to all institutions and patients in the country.

[1] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/nadogradnja-sustava-ezdravstva-od-rujna-dostupan-ekarton-i-ehzzo-portal-za-pacijente/2752>]. Accessed 09 September 2020.

[2] Central Health Information System. "Health Records". [<http://www.cezih.hr/eKarton.html>]. Accessed 09 September 2020.

[3] World Bank. 2018. "Universal Health Coverage in Croatia: Reforms to Revitalize Primary Health Care".

[<http://documents.worldbank.org/curated/en/773931516167775654/pdf/122807-WP-RDC-Croatia-pages-fixed-PUBLIC.pdf>].

Accessed 09 September 2020.

### 2.4.1b

**Does the national public health system have access to electronic health records of individuals in their country?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that the Croatian public health system has access to electronic health records of individuals. Creating electronic health records is one of priorities of the National Health Care Strategy 2012-2020. [1] A national system of electronic health records, which is part of the Central Health Information System (CEZIH), appears to have been implemented in September 2016, however the extent of use is unclear. [2, 3] A 2018 World Bank paper notes "CEZIH is an integrated information system that connects and controls all peripheral information systems in primary care doctors' offices, pharmacies, and biochemical laboratories, as well as information systems in hospitals used for centralized scheduling of outpatient consultations and diagnostic tests. Access to CEZIH is granted to authorized users only, that is, health care providers contracted by the Croatian Health Insurance Fund (HZZO) to provide services within the scope of mandatory health insurance". The HZZO is operated by the Ministry of Health. [1]

[1] World Health Organization (WHO). "Global Observatory for eHealth - Croatia".

[<http://www.who.int/goe/policies/countries/hrv/en/>]. Accessed 09 September 2020.

[2] Ministry of Health. Central Health Information System. "Electronic Health Records". [<http://www.cezih.hr/eKarton.html>]. Accessed 09 September 2020.

[3] Ministry of Health. Central Health Information System. "Functionalities".

[[http://www.cezih.hr/pzz/dokumentacija/01\\_00\\_CEZIH\\_koncept\\_sustava.pdf](http://www.cezih.hr/pzz/dokumentacija/01_00_CEZIH_koncept_sustava.pdf)]. Accessed 09 September 2020.

### 2.4.1c

**Are there data standards to ensure data is comparable (e.g., ISO standards)?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that the national electronic health record (EHR) system, called eCarton, has data standards to ensure data is comparable. It appears that the Central Health Information System (CEZIH) operates the system. CEZIH is developed by Ericsson Nikola Tesla d.d. and the system is based on open standards: HL7v3 – ISO/ANSI (Clinical Data Exchange) [1].

[1] Ericsson Nikola Tesla d.d. "Presentation of Central Health Information System".

[[https://www.fer.unizg.hr/\\_download/repository/Healthcare\\_information\\_system\\_in\\_Croatia\\_16-9\\_RevD\\_-\\_FER\\_-\\_2015.pdf](https://www.fer.unizg.hr/_download/repository/Healthcare_information_system_in_Croatia_16-9_RevD_-_FER_-_2015.pdf)]. Accessed 09 September 2020.

## 2.4.2 Data integration between human, animal, and environmental health sectors

### 2.4.2a

**Is there evidence of established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data (e.g., through mosquito surveillance, brucellosis surveillance)?**

Yes = 1 , No = 0

**Current Year Score: 1**

In Croatia, there are established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data. Since 2014, there is a Working Group for Zoonosis, comprising the Agency for Food, which is part of the Ministry of Agriculture, Directorate for Veterinary and Food Safety, which is part of the Ministry of Health, Institute of Public Health, Veterinary Institute, Faculty of Veterinary, and Agency for Food. The Working Group is also responsible for data exchange. Data are collected and exchanged on the basis of legally reported cases of human and animal diseases, reports on disease controls, national laboratory reports, and animal food analyses [1, 2, 3].

[1] Croatian Institute for Public Health. 2017. "Annual Reporting on Zoonosis (Godišnje izvješće o zoonozama u Hrvatskoj)". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/godisnje-izvjesce-o-zoonozama-u-hrvatskoj/>]. Accessed 09 September 2020.

[2] Veterinary Portal. "Working Group for Zoonosis". [<http://veterina.com.hr/?p=50391>]. Accessed 09 September 2020.

[3] Directorate for Veterinary and Food Safety. "Reports on the occurrence of diseases in animals in the Republic of Croatia". [<http://www.veterinarstvo.hr/default.aspx?id=185>]. Accessed 09 September 2020.

## 2.4.3 Transparency of surveillance data

### 2.4.3a

**Does the country make de-identified health surveillance data on infectious diseases publicly available via reports (or other format) on government websites (such as the Ministry of Health, Ministry of Agriculture, or similar)?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence that Croatia regularly makes de-identified health surveillance data on disease outbreaks publicly available via reports on government websites.

Existing reports are not prepared on weekly or monthly basis. The Division for Epidemiology of Communicable Diseases of the Croatian Institute of Public Health presented the overview and the assessment of the epidemiological situation in Croatia in 2016, based on the national communicable disease notification network, outbreak reporting network, and the vaccination coverage surveillance network data. The report was formally published in 2017. There is no information on previous reports or future reporting. Some of the diseases reported are Salmonellosis, Campylobacteriosis, Morbili, and West Nile [1].

In its Annual Report, the Croatian Veterinary Institute also publishes surveillance data on disease outbreaks. The last report was prepared for the year 2019. Diseases reported include Salmonella spp and E.coli [2]. The Government has introduced electronic data base which is publicly available and presents latest data and information related to Covid-19. [3]

[1] Croatian Institute for Public Health. "Communicable Diseases in Croatia 2016". 2017. [[https://www.hzjz.hr/wp-content/uploads/2017/10/ZBVHR\\_2016\\_Final.pdf](https://www.hzjz.hr/wp-content/uploads/2017/10/ZBVHR_2016_Final.pdf)]. Accessed 09 September 2020.

[2] Croatian Veterinary Institute. "Annual Reports". [<http://www.veinst.hr/godisnji-izvjestaji>]. Accessed 09 September 2020.

[3] Government of Croatia. "Covid-19". [<https://www.koronavirus.hr/>] Accessed 09 September 2020.

### 2.4.3b

**Does the country make de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1 , No = 0

**Current Year Score: 1**

Croatia makes de-identified health surveillance data on Covid-19 publicly available via daily reports (or other format) on the specialized Covid-19 government website. This website provides latest information related to Covid-19 in Croatia, such as number of tested people, number of confirmed cases in last 24 hours, number of confirmed cases per region, deaths in last 24 hours, number of hospitalized patients on ventilator. [1] The latest recommendations concerning COVID are available on the website of the Institute for Public Health. [2]

[1] Government of Croatia. "Covid-19". [<https://www.koronavirus.hr/>] Accessed 09 September 2020.

[2] Croatian Institute for Public Health. "Covid-19 - the latest recommendations". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/koronavirus-najnovije-preporuke/>] Accessed 09 September 2020.

## 2.4.4 Ethical considerations during surveillance

### 2.4.4a

**Is there legislation and/or regulations that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities?**

Yes = 1 , No = 0

**Current Year Score: 1**

In Croatia, there is a legal framework that safeguards the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. Since May 2018, the European Union's (EU) General Data Protection Regulation (GDPR) is applicable in Croatia. The GDPR defines that "personal data should be processed in a manner that ensures appropriate security and confidentiality of the personal data, including for preventing unauthorized access to or use of personal data and the equipment used for the processing". Moreover, health data is included as personal data. According to the GDPR, "personal data concerning health should include all data pertaining to the health status of a data subject which reveal information relating to the past, current or future physical or mental health status of the data subject" [1].

[1] EU Commission. 2016. "General Data Protection Regulation (GDPR)". [[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L\\_.2016.119.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2016.119.01.0001.01.ENG)]. Accessed 09 September 2020.

### 2.4.4b

**Is there legislation and/or regulations safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware)?**

Yes = 1 , No = 0

**Current Year Score: 1**

In Croatia, there is a legal framework that safeguards the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, including protection from cyber attacks. Since May 2018, the EU's General Data Protection Regulation (GDPR) is applicable in Croatia. The GDPR defines that "personal data should be processed in a manner that ensures appropriate security and confidentiality of the personal data, including for preventing unauthorized access to or use of personal data and the equipment used for the processing". Moreover, health data is

included as personal data. According to GDPR, "personal data concerning health should include all data pertaining to the health status of a data subject which reveal information relating to the past, current or future physical or mental health status of the data subject" [1]. According to Section 49 of GDPR, the processing of personal data, including data generated through health surveillance activities, must include preventing unauthorized access to electronic communications networks and malicious code distribution and putting a stop to 'denial of service' attacks and damage to computer and electronic communication systems [1].

[1] EU Commission. 2016. "General Data Protection Regulation (GDPR)". [[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L\\_.2016.119.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2016.119.01.0001.01.ENG)]. Accessed 09 September 2020.

## 2.4.5 International data sharing

### 2.4.5a

**Has the government made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region?**

Yes, commitments have been made to share data for more than one disease, Yes, commitments have been made to share data only for one disease = 1, No = 0

**Current Year Score: 2**

As a member of the European Union (EU), Croatia shares surveillance data during a public health emergency with other countries in the region for more than one disease.

All EU and European Economic Area (EEA) countries are part of the European Center for Disease Prevention and Control's Early Warning and Response System (EWRS). The EWRS is a platform to "allow exchange of information on risk assessment and risk management for more timely, efficient and coordinated public health action... The EWRS is used for notifications on outbreaks, exchanging information and decisions about the coordination of measures among Member States. Over the years, it has played an important role to support health crisis related to severe acute respiratory syndrome (SARS), Ebola virus disease, avian influenza in humans and other communicable diseases." [1] Article 9 of Chapter IV of the European Union (EU) Decision on Serious Cross-Border Threats to Health notes that the European Commission "shall make available to the national competent authorities through the EWRS any information that may be useful for coordinating the response...including information related to serious cross-border threats to health and public health measures related to serious cross-border threats to health transmitted through rapid alert and information systems established under other provisions of Union law or the Euratom Treaty." [2]

[1] European Center for Disease Prevention and Control. "Early Warning and Response System (EWRS)." [<https://ecdc.europa.eu/en/early-warning-and-response-system-ewrs>]. Accessed 09 September 2020.

[2] European Union. 2013. "Decision No 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on Serious Cross-Border Threats to Health and Repealing Decision No 2119/98/EC". Official Journal of the European Union. [[https://ec.europa.eu/health/sites/health/files/preparedness\\_response/docs/decision\\_serious\\_crossborder\\_threats\\_22102013\\_en.pdf](https://ec.europa.eu/health/sites/health/files/preparedness_response/docs/decision_serious_crossborder_threats_22102013_en.pdf)]. Accessed 09 September 2020.

## 2.5 CASE-BASED INVESTIGATION

### 2.5.1 Case investigation and contact tracing

#### 2.5.1a

**Is there a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency?**

Yes, there is evidence that the national government supports sub-national systems to prepare for future public health emergencies = 2, Yes, there is evidence that the national government supports sub-national systems, but only in response to active public health emergencies = 1, No = 0

**Current Year Score: 0**

There is no evidence that Croatia has a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of an active or future public health emergency.

One of the special measures to protect the population from infectious diseases are, defined in the article 12.1 of the Law on Protection of Population from Infectious Diseases, which was adopted in 2018, is early detection of sources, field work and epidemiological research. National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations, adopted in 2010, envisages, as one of the key elements, monitoring of infectious diseases. However, there are no specific provisions in these laws how to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency.[1, 2]

Protection and Rescue Plan for the Territory of the Republic of Croatia (adopted in 2010), National Security Strategy of the Republic of Croatia (adopted in 2017), and Law on Civil Protection System (adopted in 2015), as well as websites of the Ministry of Health and Institute for Public Health do not have a reference to providing support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency [3, 4, 5, 6, 7]

[1] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

[3] Croatian Parliament. 2017. "National Security Strategy of the Republic of Croatia (Strategija nacionalne sigurnosti Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2017\\_07\\_73\\_1772.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2017_07_73_1772.html)]. Accessed 09 September 2020.

[4] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generi?ki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)". [<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[5] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[6] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

[7] Croatian Institute of Public Health. [<https://www.hzjz.hr/>]. Accessed 09 September 2020.

### 2.5.1b

**Does the country provide wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention?**

Yes, both economic support and medical attention are provided = 2, Yes, but only economic support or medical attention is provided = 1, No = 0

**Current Year Score: 2**

Croatia provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention.

Special measures to protect the population from infectious diseases are defined in article 55 of the Law on Protection of Population from Infectious Diseases is quarantine. [1] The right to salary compensation and the right to healthcare are both rights associated with compulsory health insurance or other circumstances as determined by the Compulsory Health Insurance Act if the insured are isolated as carriers or due to infections in their surroundings. Salary compensation is available to the entire population, including whoever is temporarily prevented from working irrespective of whether they are ordered to quarantine or they are in self-isolation. [2]

[1] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] Croatian Health Insurance Fund. [<https://www.hzzo.hr/en/prava-osiguranika-na-privremenu-nesposobnost-za-rad-zbog-pojave-koronavirusa-2019ncov/>]. Accessed 09 September 2020.

### 2.5.1c

**Does the country make de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1, No = 0

**Current Year Score: 0**

Croatia does not make de-identified data on contact tracing efforts for Covid-19 (including the percentage of new cases from identified contacts) available via daily reports (or other formats) on government websites. The government's Covid-19 website provides the latest information related to Covid-19 in Croatia. [1] The latest recommendations concerning COVID are available on the website of the Institute for Public Health. [2] However, these sources do not include de-identified data on contact tracing.

[1] Government of Croatia. "Covid-19". [<https://www.koronavirus.hr/>] Accessed 09 September 2020.

[2] Croatian Institute for Public Health. "Covid-19 - the latest recommendations". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/koronavirus-najnovije-preporuke/>] Accessed 09 September 2020.

## 2.5.2 Point of entry management

### 2.5.2a

**Is there a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency?**

Yes, plan(s)/agreement(s) are in place to prepare for future public health emergencies = 2, Yes, but plan(s)/agreement(s) are in place only in response to active public health emergencies = 1, No = 0

**Current Year Score: 0**

There is no evidence of a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active or future public health emergency.

According to article 5.5 of the Integrated Border Management Strategy, relevant authorities (i.e. border police, customs, health and veterinary authorities) are obliged to cooperate to protect the health of population. However, the Strategy does not have a specific reference to identification of suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency. [1]

According to the Ministry of Interior website, competent epidemiologists in the counties, in cooperation with the network of occupational medicine specialists, were educating border police officers on the prevention measures and to prevent the spread of the new coronavirus infection. [2] According to media outlets, entrance in Croatia during Covid-19 outbreak is jointly controlled between border police, inspection and epidemiological service following instructions of the Croatian Institute for Public Health. [3]

[1] Government of Croatia. 2019. "Integrated Border Management Strategy (Strategija integriranog upravljanja granicom)." [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2019\\_09\\_91\\_1802.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2019_09_91_1802.html)] Accessed 09 September 2020.

[2] Ministry of Interior. 2019. "News." [<https://civilna-zastita.gov.hr/vijesti/priopcenje-za-medije-stozera-civilne-zastite-republike-hrvatske-od-5-ozujka-2020/2227>] Accessed 09 September 2020.

[3] KAportal. "New measures on the border crossings." [<https://kaportal.net.hr/aktualno/vijesti/3814039/nove-mjere-na-granicnim-prijelazima-ukinuta-obveza-samoizolacije-hrvatskim-drzavljanima-omogucen-prelazak-granice/>] Accessed 09 September 2020.

## 2.6 EPIDEMIOLOGY WORKFORCE

### 2.6.1 Applied epidemiology training program, such as the field epidemiology training program, for public health professionals and veterinarians (e.g., Field Epidemiology Training Program [FETP] and Field Epidemiology Training Program for Veterinarians [FETPV])

#### 2.6.1a

**Does the country meet one of the following criteria?**

- Applied epidemiology training program (such as FETP) is available in country
- Resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP)

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

There is evidence that an applied epidemiology training program (such as the Field Epidemiology Training Program (FETP)) is available in Croatia; however, there is no publicly available information on resources provided by the government to send citizens to another country to participate in applied epidemiology training programs. Since 2014, following the positive evaluation of the European Center for Disease Control (ECDC) Commission, the Croatian Public Health Institute has become an education institution within the framework of the European Program for Training in Epidemiological Interventions (EPIET). In addition, Croatian experts have participated on an ad hoc basis in different courses and EU funded projects (e.g. EMERGE) [1, 2, 3, 4]. However, based on available information from the Croatian budget for 2019 and 2020, it cannot be determined whether resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs [5, 6]. Although relevant policy documents, such as the National Health Care Strategy 2012-2020, highlight the importance of training, there are no specific references related to applied epidemiology training [7].

[1] Croatian Institute for Public Health. "European Program for Intervention Epidemiology Training". 2017.

[<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/edukacija-europskog-programa-za-osposobljavanje-za-epidemioloske-intervencije/>]. Accessed 09 September 2020.

[2] European Center for Disease Prevention and Control.

[[https://ecdc.europa.eu/sites/portal/files/documents/Summary%20of%20work%20activity\\_%20Durdica%20Marosevic\\_2017.pdf](https://ecdc.europa.eu/sites/portal/files/documents/Summary%20of%20work%20activity_%20Durdica%20Marosevic_2017.pdf)]. Accessed 09 September 2020.

[3] Croatian Institute for Public Health. "Projects and Programs". [<https://www.hzjz.hr/projekti-i-programi/>]. Accessed 09 September 2020.

[4] EMERGE. "Efficient Response to Highly Dangerous and Emerging Pathogens at EU Level (EMERGE)".

[[https://www.emerge.rki.eu/Emerge/EN/Content/AboutUs/Workpackages/Workpackages\\_node.html#doc7022228bodyText7](https://www.emerge.rki.eu/Emerge/EN/Content/AboutUs/Workpackages/Workpackages_node.html#doc7022228bodyText7)]. Accessed 09 September 2020.

[5] Ministry of Finance. "Budget for 2019". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2019-godina/608>]. Accessed 09 September 2020.

[6] Ministry of Finance. "Budget for 2020". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2020-godina/2981>]. Accessed 09 September 2020.

[7] Ministry of Health. 2012. "National Health Care Strategy 2012-2020". [<https://ec.europa.eu/migrant-integration/librarydoc/national-health-care-strategy-2012---2020>]. Accessed 09 September 2020.

**2.6.1b**

**Are the available field epidemiology training programs explicitly inclusive of animal health professionals or is there a specific animal health field epidemiology training program offered (such as FETPV)?**

Yes = 1 , No = 0

**Current Year Score: 0**

In Croatia, there is no evidence that available field epidemiology training programs (FETP) are explicitly inclusive of animal health professionals or a specific animal health field epidemiology training program is offered (such as the Field Epidemiology Training Program for Veterinarians (FETPV)). There is no publicly available information on the websites of the Ministry of Agriculture and Health, Institute of Public Health, Veterinary Institute and Directorate for Veterinary and Food Safety about animal health epidemiology training [1, 2, 3, 4, 5].

[1] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[2] Ministry of Health. "Programs and Projects". [<https://zdravlje.gov.hr/programi-i-projekti/1986>]. Accessed 09 September 2020.

- [3] Croatian Institute for Public Health. 2017. "European Program for Intervention Epidemiology Training". [https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/edukacija-europskog-programa-za-osposobljavanje-za-epidemioloske-intervencije/]. Accessed 09 September 2020.
- [4] Directorate for Veterinary and Food Safety. "Education, Professional Examination, State Professional Examination". [http://www.veterinarstvo.hr/default.aspx?id=1070]. Accessed 09 September 2020.
- [5] Veterinary Institute. 2020. "Annual Report for 2019". [http://www.veinst.hr/aktualnosti]. Accessed 09 September 2020.

## 2.6.2 Epidemiology workforce capacity

### 2.6.2a

Is there public evidence that the country has at least 1 trained field epidemiologist per 200,000 people?

Yes = 1 , No = 0

Current Year Score: 0

2020

Completed JEE assessments; Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## Category 3: Rapid response to and mitigation of the spread of an epidemic

### 3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

#### 3.1.1 National public health emergency preparedness and response plan

##### 3.1.1a

Does the country have an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential?

Evidence that there is a plan in place, and the plan is publicly available = 2, Evidence that the plan is in place, but the plan is not publicly available OR, Disease-specific plans are in place, but there is no evidence of an overarching plan = 1, No evidence that such a plan or plans are in place = 0

Current Year Score: 2

Croatia has a national public health emergency response plan in place, which is publicly available and addresses planning for multiple communicable diseases with pandemic potential. In Croatia, public health emergency response is part of the Protection and Rescue Plan for the Territory of the Republic of Croatia, which is adopted in 2010. This document is a framework for planning the action of all rescue and protection participants in times of catastrophes and major accidents, including public health emergencies. It is delivered at the strategic level and serves to develop protection and rescue plans on operational and tactical levels, as well as standard operating procedures [1]. Further, there is a reference in this regard in the National Security Strategy which was adopted in 2017. According to the strategy, "The capabilities of the health system and the civil protection system will be improved to provide a timely response to the threat to life and health of citizens, which is a consequence of chemical, biological, radiological and nuclear threats and risks" [2]. In addition, in 2010, the Government

adopted National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations is prescribing the roles of health care institutions in health crisis situations [3]. Finally, Croatia as the EU Member State has to follow regulations at the EU level such as Decision 1082/2013/EU on serious cross-border threats to health [4].

[1] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

[2] Croatian Parliament. 2017. "National Security Strategy of the Republic of Croatia (Strategija nacionalne sigurnosti Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2017\\_07\\_73\\_1772.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2017_07_73_1772.html)]. Accessed 09 September 2020.

[3] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generički, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)". [<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[4] European Commission. 2013. "Decision 1082/2013/EU on Serious Cross-border Threats to Health". [[https://ec.europa.eu/health/preparedness\\_response/crisis\\_management\\_en](https://ec.europa.eu/health/preparedness_response/crisis_management_en)]. Accessed 09 September 2020.

### 3.1.1b

**If an overarching plan is in place, has it been updated in the last 3 years?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 0**

The Croatian national public health emergency preparedness and response plan has not been updated in the last three years. The "Protection and rescue plan for the territory of the Republic of Croatia" covers various types of emergencies, including health emergencies. This plan was adopted in 2010 and has not been updated since then [1].

[1] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

### 3.1.1c

**If an overarching plan is in place, does it include considerations for pediatric and/or other vulnerable populations?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 0**

Croatia has a public health emergency response plan in place, but it does not include considerations for pediatric and other vulnerable populations, except evacuations. The Protection and Rescue Plan for the Territory of the Republic of Croatia from 2010, under heading 5, defines that "civil protection plans of local and regional self-governments, determine the lists of vulnerable groups and plans the organization of support in carrying out the evacuation, for the following categories of local population: pregnant women; mothers with children under 12; children up to the age of 15; sick, powerless, immobile, persons older than 75 years life and people with special needs" [1]. The Ministry of Health does not have further information about considerations for pediatric and other vulnerable populations in case of diseases [2].

[1] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

### 3.1.1d

Does the country have a publicly available plan in place specifically for pandemic influenza preparedness that has been updated since 2009?

Yes = 1, No = 0

Current Year Score: 0

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

## 3.1.2 Private sector involvement in response planning

### 3.1.2a

Does the country have a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response?

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Croatia has a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response. Point 82 of the National Generic Integrated Plan of Coordinated Approach in Health Crisis Situations only defines that coordination with the private sector is regulated with specific agreements, but there is no available information about mechanism(s) for engaging the private sector to assist with the outbreak emergency preparedness and response [1]. The protection and rescue plan for the territory of the Republic of Croatia does not refer to mechanisms for engaging with the private sector to assist with outbreak emergency preparedness and response [2]. There is no publicly available information on the website of the Ministry of Health about specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response [3].

[1] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generi?ki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)". [<https://vlada.gov.hr/UserDocImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[2] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

[3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

## 3.1.3 Non-pharmaceutical interventions planning

### 3.1.3a

Does the country have a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic?

Yes, a policy, plan and/or guidelines are in place for more than one disease= 2, Yes, but the policy, plan and/or guidelines exist only for one disease = 1, No = 0

Current Year Score: 1

Croatia has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic for one disease - Covid-19.

Law on Protection of Population from Infectious Diseases does not reference NPIs. [1] World Health Organization report Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza does not reference Croatia. [2] The website of the Ministry of Health and Institute for Public Health do not have information about NPIs. [3, 4] However, NPIs are available for Covid-19 on the website of the Croatian Institute for Public Health including instructions on wearing protective gear, masks, recommendations for gatherings, social distancing etc. [5]

[1] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] World Health Organization (WHO). 2019. "Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza". [<https://apps.who.int/iris/bitstream/handle/10665/329438/9789241516839-eng.pdf?ua=1>]. Accessed 09 September 2020.

[3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[4] Croatian Institute for Public Health. [<https://www.hzjz.hr/>]. Accessed 09 September 2020.

[5] Croatian Institute for Public Health. "Covid-19 - the latest recommendations". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/koronavirus-najnovije-preporuke/>] Accessed 09 September 2020.

## 3.2 EXERCISING RESPONSE PLANS

### 3.2.1 Activating response plans

#### 3.2.1a

Does the country meet one of the following criteria?

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak in the past year?

- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

There is evidence that Croatia has activated their national emergency response plan for an infectious disease outbreak including Covid-19 and a state of emergency was declared. On the 3rd of March 2020 due to the Covid-19 situation, a decision was made to declare a danger of epidemic throughout the Republic of Croatia. On the same day the Government issued a Decision on measures during the state of emergency (e.g. schools are closed, people aged over 65 have to stay in their homes, etc.) [1]

There is no publicly available information on the websites of the Ministry of Health, Institute for Public Health and Ministry of Interior about a national-level biological threat-focused exercise. [2, 3, 4] According to media, in 2018 Croatian public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event. [5] The World Health Organization simulation exercise page does not have any information about a completed exercise. [6]

- [1] IndexHR. "Declared a danger of epidemic for Croatia". [<https://www.index.hr/vijesti/clanak/proglasena-opasnost-od-epidemije-za-hrvatsku-stozer-dao-nove-informacije/2162428.aspx>]. Accessed 09 September 2020.
- [2] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.
- [3] Croatian Institute for Public Health. [<https://www.hzjz.hr/>]. Accessed 09 September 2020.
- [4] Ministry of Interior. "Documents". [<https://civilna-zastita.gov.hr/vijesti/8>]. Accessed 09 September 2020.
- [5] Ministry of Defense. 2018. "Nuclear-Biological-Chemical exercise TEAM 1836 - 2018". [<https://www.morh.hr/bojna-nuklearno-biolosko-kemijske-obrane-hkov-a-sudjelovala-na-vjezbi-tim-1836-2018/>]. Accessed 09 September 2020.
- [6] World Health Organization (WHO). "Country Profile - Croatia". [<https://extranet.who.int/sph/country/300>]. Accessed 09 September 2020.

### 3.2.1b

**Is there evidence that the country in the past year has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities?**

Yes, the country has developed and published a plan to improve response capacity = 2 , Yes, the country has developed a plan to improve response capacity, but has not published the plan = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that in the last year Croatia has undergone an exercise to identify a list of gaps and best practices through either an after-action review (post emergency response) or a biological threat-focused IHR exercise with the World Health Organization (WHO). The WHO After Action Review page and WHO country office page do not have any information on exercises involving Croatia. [1,2] The websites of the Ministry of Health, Ministry of Interior and Ministry of Defense do not have information about identification of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and development of a plan to improve response capabilities. [3, 4, 5]

- [1] World Health Organization (WHO). "After Action Review." [<https://extranet.who.int/sph/after-action-review>]. Accessed 09 September 2020.
- [2] World Health Organization (WHO). "Country Profile - Croatia". [<https://www.euro.who.int/en/countries/croatia>]. Accessed 09 September 2020.
- [3] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.
- [4] Ministry of Interior. "Documents". [<https://civilna-zastita.gov.hr/vijesti/8>]. Accessed 09 September 2020.
- [5] Ministry of Defense. "Documents". [<https://www.morh.hr/>]. Accessed 09 September 2020.

## 3.2.2 Private sector engagement in exercises

### 3.2.2a

**Is there evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Croatia has, in the past year, undergone a national-level biological threat-focused exercise that has included private sector representatives. According to information available on World Health Organization (WHO) Strategic Partnership Portal, Croatia has not, in the past year, undergone a national-level biological threat-focused exercise that has

included private sector representatives. [1] There is no publicly available information on the websites of the Ministry of Health, Ministry of Interior, Ministry of Defense, Institute for Public Health and WHO. [2, 3, 4, 5, 6] There is no further evidence on the WHO Simulation Exercise page. [7]

[1] World Health Organization (WHO). "Strategic Partnerships Portal". [<https://extranet.who.int/sph/country/300>] Accessed 09 September 2020.

[2] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[3] Ministry of Interior. "Documents". [<https://civilna-zastita.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[4] Ministry of Defense. "Documents". [<https://www.morh.hr/>]. Accessed 09 September 2020.

[5] Croatian Institute for Public Health. [<https://www.hzjz.hr/>]. Accessed 09 September 2020.

[6] World Health Organization (WHO). "Country Profile - Croatia". [<https://www.euro.who.int/en/countries/croatia>]. Accessed 09 September 2020.

[7] World Health Organization (WHO). "Simulation Exercise:.". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 09 September 2020.

## 3.3 EMERGENCY RESPONSE OPERATION

### 3.3.1 Emergency response operation

#### 3.3.1a

**Does the country have in place an Emergency Operations Center (EOC)?**

Yes = 1 , No = 0

**Current Year Score: 1**

The Ministry of Interior. Directorate for Civil Protection is the Emergency Response Center (EOC) of Croatia. The mission of the Ministry of Interior. Directorate for Civil Protection is to constitute and maintain a modern system of rescue and protection in the Republic of Croatia, which will be able to respond with all available resources to all needs for the protection of people, assets, and environment in the events of disasters, accidents, and other needs of a modern society and, if necessary, extend or obtain help from other countries in emergency situations. The directorate is tasked with preparing plans and managing operational forces as well as coordinating the activities of all participants in the protection and rescue system [1]. According to article 12 of the Law on Civil Protection System, the Ministry of Interior. Directorate for Civil Protection coordinates the functioning of the civil protection system, including health emergencies [2].

[1] Ministry of Interior. Ministry of Interior. "Directorate for Civil Protection". [<https://civilna-zastita.gov.hr/>]. Accessed 09 September 2020.

[2] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)".

[<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

#### 3.3.1b

**Is the Emergency Operations Center (EOC) required to conduct a drill for a public health emergency scenario at least once per year or is there evidence that they conduct a drill at least once per year?**

Yes = 1 , No = 0

**Current Year Score: 0**

Although the Ministry of Interior's Directorate for Civil Protection is the Emergency Operations Center (EOC) of Croatia and conducts a drill at least once every year, there is no evidence that these drills are specific to public health.

The Ministry of Interior's Directorate for Civil Protection adopts annual programs for national civil protection exercises which are of interest to Croatia and verifies exercises proposed by the local self-government, considers participation in international exercises, and proposes decisions concerning such participation. It also proposes Croatia as a host of an international exercise. Annual programs do not have information on the scope of these drills (e.g. a drill focused on health) [1, 2]. Annual Working Plans for 2018 and 2020 are not publicly available on the website of the Ministry of Interior's Directorate for Civil Protection.

[1] Ministry of Interior. Directorate for Civil Protection. 2017. "Annual Working Plan for 2018 (Plan rada Državne uprave za zaštitu i spašavanje za 2018. godinu)". [[https://duzs.hr/download/GODISNJI\\_PLAN\\_2018\\_2.pdf](https://duzs.hr/download/GODISNJI_PLAN_2018_2.pdf)]. Accessed 09 September 2020.

[2] Ministry of Interior. Directorate for Civil Protection. 2016. "Annual Working Plan for 2017 (Plan rada Državne uprave za zaštitu i spašavanje za 2017. godinu)". [[https://duzs.hr/download/dokumenti/planovi\\_i\\_izvjesca\\_o\\_radu/godisnji\\_planovi\\_rada/Planaradaza2017.pdf](https://duzs.hr/download/dokumenti/planovi_i_izvjesca_o_radu/godisnji_planovi_rada/Planaradaza2017.pdf)]. Accessed 09 September 2020.

### 3.3.1c

**Is there public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario. The Directorate for Civil Protection is Croatia's EOC. The Directorate's Working Plan for 2019 and 2020 is not publicly available. Based on other sources (e.g., World Health Organization, Ministry of Health), there is no public evidence to show that the Directorate for Civil Protection or other institutions involved in the system of civil protection, can conduct, or have conducted within the last year, a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario [1, 2]. However, there is some information on exercises organized in previous years, such as the simulation exercise in the event of suspected Ebola virus infection in 2014 or simulation exercise for classic and African pig plague in 2015 [3, 4]. In addition, according to media outlets in early February 2020 a simulation exercise concerning Covid-19 was planned, but there are no evidence that this exercise was organized. [5]

[1] Ministry of Interior. "Directorate for Civil Protection". [<https://civilna-zastita.gov.hr/vjezbe/109>]. Accessed 09 September 2020.

[2] World Health Organization (WHO). 2019. "Calendar of Activities". [[https://extranet.who.int/sph/calendar/2019?1&type=All&field\\_region\\_tid=All&country\\_tid=300](https://extranet.who.int/sph/calendar/2019?1&type=All&field_region_tid=All&country_tid=300)]. Accessed 09 September 2020.

[3] Croatian Institute for Public Health. 2014. "Simulation Exercise in the Event of Suspected Ebola Virus Infection". [<https://www.hzjz.hr/priopcenja-mediji/odrzana-je-simulacijska-vjezba-pripravnosti-u-slucaju-sumnje-na-zarazu-virusom-ebole/>]. Accessed 09 September 2020.

[4] Veterinary Portal. 2015. "Simulation Exercise for Classic and African Pig Plague". [<http://veterina.com.hr/?p=49499>].

Accessed 09 September 2020.

[5] GPortal. 2020. "Meeting between Beros and ministers and state inspector concerning Coronavirus".

[<https://ogportal.com/2020/02/01/sastanak-berosa-s-ministrima-i-drzavnim-inspektorom-o-koronavirusu/>]. Accessed 09 September 2020.

## 3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

### 3.4.1 Public health and security authorities are linked for rapid response during a biological event

#### 3.4.1a

Does the country meet one of the following criteria?

- Is there public evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

- Are there publicly available standard operating procedures, guidelines, memorandums of understanding (MOUs), or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 0**

In Croatia, there is insufficient evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e. bioterrorism attack).

According to media, in 2018 Croatian national security authorities have carried out an exercise to respond to a potential deliberate biological event, but there is no evidence of involvement of health authorities. [1] There is no evidence that there are publicly available standard operating procedures, guidelines, memorandums of understanding (MOUs) or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e. bioterrorism attack). This information is not publicly available on the website of the Ministry of Health or Ministry of Interior. [2, 3] Section XIX of the National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations refers to Specific Health Safety Plans, Preparations and Reactions to Radiological, Biological, and Chemical Incidents as operating procedures between the public health and security authorities to respond to a potential deliberate biological event, but these Specific Plans are not publicly available [4].

[1] Ministry of Defense. 2018. "Nuclear-Biological-Chemical exercise TEAM 1836 - 2018". [<https://www.morh.hr/bojna-nuklearno-biolosko-kemijske-obrane-hkov-a-sudjelovala-na-vjezbi-tim-1836-2018/>]. Accessed 09 September 2020.

[2] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[3] Ministry of Interior. "Documents". [<https://civilna-zastita.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[4] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generi?ki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)".

[<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

## 3.5 RISK COMMUNICATIONS

### 3.5.1 Public communication

#### 3.5.1b

**Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) outline how messages will reach populations and sectors with different communications needs (eg different languages, location within the country, media reach)?**

Yes = 1 , No = 0

**Current Year Score: 0**

Relevant policy documents and legislation in Croatia do not have in place a section detailing a risk communication plan that is specifically intended for use during a public health emergency. Section 3.3.6 of the "Protection and rescue plan for the territory of the Republic of Croatia" refers to public health emergencies. However, the section does not refer to communication in case of public health emergencies. [1] Other relevant documents such as the National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations, Law on Civil Protection System, and Law on the Protection of Population from Infectious Diseases do not have a section detailing a risk communication plan that is specifically intended for use during a public health emergency [2, 3, 4].

[1] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

[2] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generički, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)". [<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[3] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[4] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

### 3.5.1 Risk communication planning

#### 3.5.1a

**Does the country have in place, either in the national public health emergency response plan or in other legislation, regulation, or strategy documents, a section detailing a risk communication plan that is specifically intended for use during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 0**

Relevant policy documents and legislation in Croatia do not have in place a section detailing a risk communication plan that is specifically intended for use during a public health emergency. Section 3.3.6 of the "Protection and rescue plan for the territory of the Republic of Croatia" refers to public health emergencies. However, the section does not refer to communication in case of public health emergencies. [1] Article 9 of Law on the Protection of Population from Infectious Diseases refers to Communication. The Law prescribes that Institutes for Public Health are obliged to inform health workers and population about specific measures that are introduced in case of public health emergency, as well as their

implementation. [2] Other relevant documents such as the National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations and Law on Civil Protection System do not have a section detailing a risk communication plan that is specifically intended for use during a public health emergency [3, 4]. Website of the Ministry of Health does not have additional information about risk communication plan that is specifically intended for use during a public health emergency. [5]

[1] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

[2] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pucanstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[3] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generi?ki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)". [<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[4] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[5] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

### 3.5.1c

**Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence that in Croatia the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. According to article 21 of the Law on Civil Protection System, which is adopted in 2015, a headquarter of civil protection is established at central, regional and local level. [1] According to article 11 of the Ordinance on the composition of the headquarters, the manner of work and the conditions for the appointment of the chief, deputy chief and members of the civil protection headquarters, which is adopted in 2016, civil protection headquarters are responsible for communication with the public in case of emergency situations. [2] Law on the Protection of Population from Infectious Diseases (adopted in 2007, with latest amendments from 2020), National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (adopted in 2010) and Protection, Rescue Plan for the Territory of the Republic of Croatia (adopted in 2010) and website of the Ministry of Health do not have information about a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. [3, 4, 5, 6]

[1] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[2] Croatian Parliament. 2016. "Ordinance on the composition of the headquarters, the manner of work and the conditions for the appointment of the chief, deputy chief and members of the civil protection headquarters (Pravilnik o sastavu stožera, na?inu rada te uvjetima za imenovanje na?elnika, zamjenika na?elnika i ?lanova stožera civilne zaštite, NN 37/2016)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2016\\_04\\_37\\_1006.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2016_04_37_1006.html)]. Accessed 09 September 2020.

[3] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od

zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titu-%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[4] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni generi?ki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)".

[<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[5] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)].

Accessed 09 September 2020.

[6] Ministry of Health. [<https://zdravlje.gov.hr/>]. Accessed 09 September 2020.

## 3.5.2 Public communication

### 3.5.2a

**In the past year, is there evidence that the public health system has actively shared messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation?**

Public health system regularly shares information on health concerns = 2, Public health system shares information only during active emergencies, but does not regularly utilize online media platforms = 1, Public health system does not regularly utilize online media platforms, either during emergencies or otherwise = 0

**Current Year Score: 1**

There is evidence that in Croatia the public health system has actively shared messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation, but information sharing seems to be active only during emergencies. On the website of the Croatian Institute for Public Health there is evidence that the public health system has actively shared messages to inform the public about ongoing public health concerns. [1, 2, 3, 4] Active sharing of messages concerning Covid-19 is ensured through the specialized Covid-19 government website. [5] Neither the Ministry of Health nor the Croatian Institute for Public Health have social media pages. On the websites of the Ministry of Health and Institute for Public Health there is no evidence that the public health system has actively shared messages via online media platforms to inform the public about dispel rumors, misinformation or disinformation [1, 6]

[1] Croatian Institute for Public Health. "News". [<https://www.hzjz.hr/cat/aktualnosti/>] Accessed 09 September 2020.

[2] Croatian Institute for Public Health. 17 May 2020. "Flu in season 2019/2020". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/gripa-u-hrvatskoj-u-sezoni-2019-2020-17-5-2020/>] Accessed 09 September 2020.

[3] Croatian Institute for Public Health. 3 May and 10 May 2020. "Flu in season 2019/2020". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/gripa-u-hrvatskoj-u-sezoni-2019-2020-3-5-2020/>] Accessed 09 September 2020.

[4] Croatian Institute for Public Health. 26 April 2020. "Flu in season 2019/2020". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/gripa-u-hrvatskoj-u-sezoni-2019-2020-26-4-2020/>] Accessed 09 September 2020.

[5] Government of Croatia. "Covid-19". [<https://www.koronavirus.hr/>] Accessed 09 September 2020.

[6] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

### 3.5.2b

**Is there evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years?**

No = 1, Yes = 0

**Current Year Score: 1**

There is no evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years. Based on the review of the President of Croatia, Ministry of Health, Institute for Public Health websites and media outlets there is no such evidence. [1, 2, 3, 4, 5]

[1] President of Croatia. [<https://www.predsjednik.hr/>] Accessed 09 September 2020.

[2] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[3] Croatian Institute for Public Health. "News". [<https://www.hzjz.hr/cat/aktualnosti/>]. Accessed 09 September 2020.

[4] Jutarnji. "Croatia won Covid-19, this Government won Covid-19! After the party meeting in Split, the Prime Minister spoke about the coronavirus". [<https://www.jutarnji.hr/vijesti/hrvatska/hrvatska-je-pobijedila-covid-19-ova-vlada-je-pobijedila-covid-19-premier-nakon-stranackog-sastanka-u-splitu-govorilo-o-koronavirusu-10343935>]. Accessed 09 September 2020.

[5] N1. "Exclusive for N1: The first interview of Zoran Milanovic after the beginning of the epidemic".

[<http://hr.n1info.com/Vijesti/a498907/EKSKLUZIVNO-za-N1-Prvi-intervju-Zorana-Milanovica-nakon-pocetka-epidemije.html>]. Accessed 09 September 2020.

## 3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

### 3.6.1 Internet users

#### 3.6.1a

Percentage of households with Internet

Input number

**Current Year Score: 79.08**

2019

International Telecommunication Union (ITU)

### 3.6.2 Mobile subscribers

#### 3.6.2a

Mobile-cellular telephone subscriptions per 100 inhabitants

Input number

**Current Year Score: 106.64**

2019

International Telecommunication Union (ITU)

### 3.6.3 Female access to a mobile phone

#### 3.6.3a

Percentage point gap between males and females whose home has access to a mobile phone

Input number

Current Year Score: 3.0

2019

Gallup; Economist Impact calculation

### 3.6.4 Female access to the Internet

#### 3.6.4a

Percentage point gap between males and females whose home has access to the Internet

Input number

Current Year Score: 9.0

2019

Gallup; Economist Impact calculation

## 3.7 TRADE AND TRAVEL RESTRICTIONS

### 3.7.1 Trade restrictions

#### 3.7.1a

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak?

Yes = 0, No = 1

Current Year Score: 0

There is evidence that Croatia, in the past year, has issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak. On 15 March, the Commission introduced export authorization requirements for exports of personal protective equipment outside of the European Union. [1] On the website of the Ministry of Health, Ministry of Interior and Institute of Public Health there are no further information about restriction, without international/bilateral support, on the export/import of medical goods. [2, 3, 4]

[1] European Commission. "Commission publishes guidance on export requirements for personal protective equipment". [https://trade.ec.europa.eu/doclib/press/index.cfm?id=2123] Accessed 09 September 2020.

[2] Ministry of Health. "News". [https://zdravlje.gov.hr/vijesti/8]. Accessed 09 September 2020.

[3] Ministry of Interior. "News". [https://mup.gov.hr/]. Accessed 09 September 2020.

[4] Croatian Institute for Public Health. "News". [https://www.hzjz.hr/cat/aktualnosti/] Accessed 09 September 2020.

#### 3.7.1b

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak?

Yes = 0, No = 1

**Current Year Score: 1**

There is no evidence that Croatia issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc.) due to an infectious disease outbreak. There is no publicly available information from the Directorate for Veterinary and Food Safety, Ministry of Interior, Ministry of Health, World Health Organization (WHO) Disease Outbreak News, World Organization for Animal Health (OIE) Weekly disease information and media outlets in the past year. [1, 2, 3, 4, 5].

[1] Directorate for Veterinary and Food Safety. "Temporary Import Prohibitions/Special Import Conditions for Certain Types of Products of Animal Origin from Certain Third Countries". [<http://www.veterinarstvo.hr/default.aspx?id=3487>]. Accessed 09 September 2020.

[2] Ministry of Interior. [<https://www.mup.hr/novosti/?categoryId=0>]. Accessed 09 September 2020.

[3] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[4] World Health Organization (WHO). "Disease Outbreak News. Croatia". [<http://www.who.int/csr/don/en/>]. Accessed 09 September 2020.

[5] World Organization for Animal Health (OIE). "Weekly Disease Information". [[https://www.oie.int/wahis\\_2/public/wahid.php/Diseaseinformation/WI](https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI)]. Accessed 09 September 2020.

## 3.7.2 Travel restrictions

### 3.7.2a

**In the past year, has the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak?**

Yes = 0, No = 1

**Current Year Score: 0**

There is evidence that Croatia, in the past year, has implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. On 16 March 2020, the European Commission adopted a Communication recommending a temporary restriction of non-essential travel from third countries into the EU, including Croatia. "To protect the population of the Republic of Croatia from Covid-19, persons are temporarily prohibited from or restricted in crossing the state border at all border crossings of the Republic of Croatia. This Decision shall enter into force on 19 March 2020 and shall be implemented for 30 days," a statement by the ministry reads. [1, 2]

[1] European Commission. 2020. "Communication recommending a temporary restriction of non-essential travel from third countries into the EU". [<https://data.consilium.europa.eu/doc/document/ST-9208-2020-INIT/en/pdf>]. Accessed 09 September 2020.

[2] EU Schengen. 2020. "Croatia Bans From Entering Travelers from non-EU Countries, and Some EU Citizens". [<https://data.consilium.europa.eu/doc/document/ST-9208-2020-INIT/en/pdf>]. Accessed 09 September 2020.

## Category 4: Sufficient and robust health sector to treat the sick and protect health workers

### 4.1 HEALTH CAPACITY IN CLINICS, HOSPITALS, AND COMMUNITY CARE CENTERS

#### 4.1.1 Available human resources for the broader healthcare system

##### 4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 299.96

2016

WHO; national sources

##### 4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 812.24

2016

WHO; national sources

##### 4.1.1c

Does the country have a health workforce strategy in place (which has been updated in the past five years) to identify fields where there is an insufficient workforce and strategies to address these shortcomings?

Yes = 1, No = 0

Current Year Score: 1

There is evidence that Croatia has a public workforce strategy in place to identify fields where there is an insufficient workforce and strategies to address these shortcomings; this strategy has been updated in the past five years. Based on the "Regulation on monitoring, analysis and forecasting of labor market needs for individual titles and development and taking into account the recommendations for educational enrolment" policy, the Croatian Employment Service analyses and forecasts the needs of the labor market for certain professions, including health care professionals [1, 2]. As a result of the aforementioned analysis, the Employment Service prepares a document called "Recommendations for educational enrolment policy and scholarship policy" that outlines strategies to address labor market needs [3]. This document was last prepared for 2020 and includes the public health workforce. The types of public health workforce mentioned are nurses and medical technicians. Recommendations include indicating where the number of enrolments and scholarships must be

increased for students, which are provided on a county level.

[1] Ministry of Labor and Pension System. "Employment Service". [<http://www.hzz.hr/default.aspx?id=10354>]. Accessed 09 September 2020.

[2] Government of Croatia. 2010. "Regulation on Monitoring, Analysis and Forecasting of Labor Market Needs for Individual Titles and Development and Taking into Account the Recommendations for Educational Enrollment Policy (Uredba o pracenju, analizi i predvidjanju potreba tržišta rada za pojedinim zvanjima, te izradi i uzimanju u obzir preporuka za obrazovnu upisnu politiku, OG 93/10)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2010\\_07\\_93\\_2600.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2010_07_93_2600.html)]. Accessed 09 September 2020.

[3] Croatian Employment Service. 2019. "Recommendations for Educational Enrollment Policy and Scholarship Policy for 2020 (Preporuke za obrazovnu upisnu politiku i politiku stipendiranja za 2020. godinu)". [[https://www.hzz.hr/content/publikacije-skole/2020/hzz\\_preporuke\\_obrazovna\\_i\\_upisna\\_politika\\_stipendiranja\\_2020.pdf](https://www.hzz.hr/content/publikacije-skole/2020/hzz_preporuke_obrazovna_i_upisna_politika_stipendiranja_2020.pdf)]. Accessed 09 September 2020.

## 4.1.2 Facilities capacity

### 4.1.2a

#### Hospital beds per 100,000 people

Input number

**Current Year Score: 554**

2017

WHO/World Bank; national sources

### 4.1.2b

#### Does the country have the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit located within the country?

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that Croatia has the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit located within the country.

According to Article 21 of the Law on Protection of Population from Infectious Diseases, "Persons found to be ill or suspected of being infected with infectious diseases of Article 20 of this Act are obliged to be isolated and treated in the health care facilities which have insured conditions for isolation and treatment of patients with infectious diseases" [1]. The "Dr. Fran Mihaljevic" Clinic for Infectious Diseases is the designated facility to isolate patients with highly communicable diseases. The Clinic has Department of General Infectious Diseases with Day Hospital. [2]

According to press statements "isolation unit located at the Clinic for Infectious Diseases Dr. Fran Mihaljevic, to some extent meets modern health standards for the isolation of patients infected with particularly dangerous and/or rapidly spreading viruses. Ten beds have been prepared for such patients in several hospital rooms, video cameras and an intercom have been installed to communicate with patients, staff have been educated and additionally equipped, and diagnostic tests for coronavirus are just being set up. However, in order to achieve the highest degree of protection in the insulation units, a pressure-reducing ventilation system is lacking, which would make it significantly more difficult for the virus to escape from

the room". [3] Website of the Ministry of Health does not have additional information about Croatian capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit. [4]

[1] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-za-%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] Clinic for Infectious Diseases "Dr. Fran Mihaljevic". [<http://bfm.hr/page/ustrojstvene-jedinice>]. Accessed 09 September 2020.

[3] TportalHR. 2020. "The only Croatian 'quarantine' has no vacuum as an additional barrier to viruses ('Jedina hrvatska 'karantena' nema podtlak kao dodatnu barijeru za viruse)". The Emergency Admissions Unit. [<https://www.tportal.hr/vijesti/clanak/ups-jedina-hrvatska-karantena-nema-podtlak-kao-dodatnu-barijeru-za-viruse-foto-20200129>]. Accessed 09 September 2020.

[4] Ministry of Health. [<https://zdravlje.gov.hr/>] Accessed 01 April 2021.

#### 4.1.2c

Does the country meet one of the following criteria?

- Is there evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years?

- Is there evidence that the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years?

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence that Croatia has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years or that Croatia has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years.

The "Dr. Fran Mihaljevic" Clinic for Infectious Diseases is the designated facility to isolate patients with highly communicable diseases. The Clinic has Department of General Infectious Diseases with Day Hospital. [1] Websites of the Ministry of Health and "Dr. Fran Mihaljevic" Clinic for Infectious Diseases do not have information about expanding isolation capacities in response to an infectious disease outbreak. [1, 2] According to media outlets, during the Covid-19 outbreak, the army had to set up tents for hospitals in order to expand their capacities. [3]

[1] Clinic for Infectious Diseases "Dr. Fran Mihaljevic". [<http://bfm.hr/page/ustrojstvene-jedinice>]. Accessed 01 April 2021.

[2] Ministry of Health. [<https://zdravlje.gov.hr/>] Accessed 01 April 2021.

[3] Nova S. November 2020. "The army set up tents for hospitals in Zagreb and Varaždin (Vojska postavila šatore za bolnice u Zagrebu i Varaždinu)". [<https://nova.rs/svet/vojska-postavila-satore-za-bolnice-u-zagrebu-i-varazdinu/>] Accessed 01 April 2021.

## 4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

### 4.2.1 Routine health care and laboratory system supply

#### 4.2.1a

**Is there a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs?**

Yes for both laboratory and medical supply needs = 2, Yes, but only for one = 1, No = 0

**Current Year Score: 2**

There is a national procurement protocol in place in Croatia, which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory needs (such as equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs.

The public procurement system, including the acquisition of laboratory needs and medical supplies, is regulated by the Law on Public Procurement (NN 120/16) [1]. The websites of the Croatian Institute for Public Health and Veterinary Directorate provide information on all public procurement processes performed by the Institute, including those related to the acquisition of laboratory needs (such as equipment, reagents, and media) and medical supplies (e.g. equipment and PPE). [2, 3]. All public procurement announcements, including those related to the acquisition of laboratory needs, with a value equal to or greater than 30819 USD are published in the Electronic Public Procurement Portal of the Republic of Croatia [4].

[1] Croatian Parliament. 2017. "Law on Public Procurement (Zakon o javnoj nabavi, NN 120/16)".

[<https://www.zakon.hr/z/223/Zakon-o-javnoj-nabavi>]. Accessed 09 September 2020.

[2] Croatian Institute for Public Health. "Public Procurement". [<https://www.hzjz.hr/postupci-javne-nabave/>]. Accessed 09 September 2020.

[3] Croatian Veterinary Directorate. "Public Procurement". [<http://www.veterinarstvo.hr/default.aspx?id=4590>]. Accessed 09 September 2020.

[4] Electronic Public Procurement Portal. "Purchaser: Institute for Public Health". [<https://www.nabavke.com/javne-nabavke-tenderi-hrvatska/cjepivo-protiv-morbila-parotitisa-i-rubele-zivo-za-2019-2021-godinu/hrvatski-zavod-za-javno-zdravstvo/zagreb/1728001#infotab>]. Accessed 09 September 2020.

### 4.2.2 Stockpiling for emergencies

#### 4.2.2a

**Does the country have a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 2**

There is evidence that Croatia has a stockpile of medical supplies (e.g. medical countermeasures (MCM), medicines, vaccines, medical equipment, Personal Protective Equipment (PPE)) for national use during a public health emergency.

Croatia has three-year vaccination programs, the last one covering the period 2019-2021. These programs envisage annual

needs of vaccines for different diseases (e.g. malaria, rabies, measles, etc.) [1]. Information about a stockpile of medical countermeasures are available in media outlets as well (e.g. concerning Virus A(H1N1): "With existing national stocks and new orders, Croatia has enough antiviral drugs, a total of 800,000 doses, covering about 18 percent of the population") [2]. Some general information about a stockpile of medical countermeasures are available in media outlets. According to the statements of Minister of Finance and Croatian Chamber of Doctors there is a stockpile of medical supplies for several months. [3, 4]. The European Commission has decided to create strategic stocks of medical equipment, such as fans and protective masks, in order to help European Union countries during the Covid-19 virus pandemic. [5]

[1] Ministry of Health. "Vaccination Programs". [<https://zdravstvo.gov.hr/programi-cijepljenja/2505>]. Accessed 09 September 2020.

[2] Zastita. 2009 "Swine Flu: Croatia Ready for Pandemic (Svinjska gripa: Hrvatska spremna i za pandemiju)". [<https://www.zastita.info/hr/casopis/clanak/svinjska-gripa-hrvatska-spremna-i-za-pandemiju,2786.html>]. Accessed 09 September 2020.

[3] Vecernji list. 2020. "Minister Maric: No need for supplies, there is food and medicines for several months (Ministar Mari?: 'Ne treba raditi zalihe, hrane i lijekova ima za par mjeseci)". [<https://www.vecernji.hr/vijesti/ministar-maric-ne-treba-raditi-zalihe-hrane-i-lijekova-ima-za-par-mjeseci-1385605>]. Accessed 09 September 2020.

[4] HRT vijesti. 2020. "Soldo: Don't run out of stockpiles of medicines, there are plenty of them (Soldo: Nemojte raditi zalihe lijekova, ima ih dovoljno)". [<https://vijesti.hrt.hr/600954/soldo-nemojte-raditi-zalihe-lijekova-ima-ih-dovoljno>]. Accessed 09 September 2020.

[5] Aljazeera Balkans. 2020. "The EU is creating strategic stocks of medical equipment (EU stvara strateške zalihe medicinske opreme)". [<http://balkans.aljazeera.net/vijesti/eu-stvara-strateske-zalihe-medicinske-opreme>]. Accessed 09 September 2020.

#### 4.2.2b

**Does the country have a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 0**

There is no evidence that Croatia has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. Law on the Protection of Population from Infectious Diseases (adopted in 2007, with latest amendments from 2018) and Law on Medicines (adopted in 2013, last amended in 2018) do not regulate a stockpile of laboratory supplies. [1, 2] Websites of the Ministry of Health, Institute for Public Health and Agency for Medicinal Products and Medical Devices do not have information about a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. [3, 4, 5]

[1] Croatian Parliament. 2018. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] Croatian Parliament. 2013. "Law on Medicines (Zakon o lijekovima, NN 76/13, 90/14, 100/18)". [<https://www.zakon.hr/z/399/Zakon-o-lijekovima>]. Accessed 09 September 2020.

[3] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[4] Croatian Institute for Public Health. "News". [<https://www.hzjz.hr/cat/aktualnosti/>] Accessed 09 September 2020.

[5] Agency for Medicinal Products and Medical Devices. "News". [<https://www.halmed.hr/en/O-HALMED-u/Osnovni-podaci-i-dokumenti/Dokumenti/>] Accessed 09 September 2020.

#### 4.2.2c

**Is there evidence that the country conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence that Croatia conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency.

The Law on the Protection of Population from Infectious Diseases (adopted in 2007, last amended in 2018) and Law on Medicines (adopted in 2013, last amended in 2018) do not regulate a stockpile of medical supplies for national use during a public health emergency. [1, 2] Croatia has three-year vaccination programs, the last one covering the period 2019-2021. These programs envisage annual needs for vaccines for different diseases (e.g. malaria, rabies, measles, etc.) [3]. Websites of the Ministry of Health, Croatian Institute for Public Health and Agency for Medical Products and Medical Devices of Croatia do not have additional information about an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency [4,5,6].

[1] Croatian Parliament. 2007. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] Croatian Parliament. 2013. "Law on Medicines (Zakon o lijekovima, NN 76/13, 90/14, 100/18)". [<https://www.zakon.hr/z/399/Zakon-o-lijekovima>]. Accessed 09 September 2020.

[3] Ministry of Health. "Vaccination Programs". [<https://zdravstvo.gov.hr/programi-cijepljenja/2505>]. Accessed 09 September 2020.

[4] Ministry of Health. [<https://zdravlje.gov.hr/>] Accessed 01 April 2021.

[5] Croatian Institute for Public Health. [<https://www.hzjz.hr/>] Accessed 01 April 2021.

[6] Agency for Medical Products and Medical Devices of Croatia. [<https://www.halmed.hr/en/>] Accessed 01 April 2021.

### 4.2.3 Manufacturing and procurement for emergencies

#### 4.2.3a

**Does the country meet one of the following criteria?**

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is no evidence that Croatia has a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. Medical Countermeasures (MCM), medicines, vaccines, equipment, PPE) for national use during a public health emergency. However, there is evidence that Croatia has a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency.

Such information do not exist on the website of the Ministry of Health, Ministry of Economy and Institute for Public Health.

[1, 2, 3] However, according to media outlets, during Covid-19 outbreak, domestic companies have been engaged to produce

all kind of medical equipment, including medical countermeasures. [4]. In addition, according to media outlets "from the end of March until today, Croatia has imported more than 400 tons of protective equipment from China to fight the coronavirus pandemic, and the total cost of goods and transportation rises to HRK380 million. More than HRK13 million worth of goods were procured from domestic companies, according to a response from the Ministry of Economy." [5] The European Commission has decided to create strategic stocks of medical equipment, such as fans and protective masks, in order to help European Union countries, including Croatia, during the Covid-19 virus pandemic. In March 2020, the European Commission created first ever rescEU stockpile of medical equipment and announced a new public procurement procedure for laboratory equipment and testing equipment.[6,7,8]

Croatia has been part of the European Union (EU) Joint Procurement Agreement for Medical Countermeasures, which ensures that member states have access to medical countermeasures from abroad, if necessary, when a serious cross-border threat to health is registered. The agreement aims to "secure more equitable access to specific medical countermeasures and improved security of supply", as well as balancing prices for EU member states. It is also designed to ensure acquisition of vaccines, antivirals and medical countermeasures for serious cross-border threats to health [9].

[1] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[2] Ministry of Economy and Sustainable Development. "News". [<https://www.mingo.hr/>]. Accessed 09 September 2020.

[3] Croatian Institute for Public Health. "News". [<https://www.hzjz.hr/cat/aktualnosti/>] Accessed 09 September 2020.

[4] Tolerancija Respekt Informiranje Sloboda (TRIS). 2020. "Return of the written off: Domestic producers on the front line of defense against coronavirus (Povratak otpisanih: Doma?i proizvo?a?i na prvoj crti obrane protiv koronavirusa)".

[<http://tris.com.hr/2020/03/povratak-otpisanih-domaci-proizvodaci-na-prvoj-crti-obrane-protiv-koronavirusa/>] Accessed 09 September 2020.

[5] Tportal. 2020. "The government has finally revealed how much it has spent on the purchase of protective equipment; also published the names of companies - domestic and Chinese (Vlada napokon otkrila koliko je potrošila za nabavu zaštitne opreme; objavili i imena tvrtki - doma?ih i kineskih)". [<https://www.tportal.hr/vijesti/clanak/vlada-napokon-otkrila-koliko-je-potrosila-za-nabavu-zastitne-opreme-objavili-i-imena-tvrtki-domacih-i-kineskih-foto-20200503/print>] Accessed 09 September 2020.

[6] Aljazeera Balkans. 2020. "The EU is creating strategic stocks of medical equipment (EU stvara strateške zalihe medicinske opreme)". [<http://balkans.aljazeera.net/vijesti/eu-stvara-strateske-zalihe-medicinske-opreme>]. Accessed 09 September 2020.

[7] European Commission. 2020. "Covid-19: Commission creates first ever rescEU stockpile of medical equipment".

[[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_20\\_476](https://ec.europa.eu/commission/presscorner/detail/en/IP_20_476)] Accessed 09 September 2020.

[8] European Commission. 2020. "COVID19 - an overview of EU measures to combat coronavirus and mitigate the effects of the crisis (COVID19 - pregled mjera EU-a u borbi protiv koronavirusa i ublažavanju u?inka krize)".

[[https://ec.europa.eu/croatia/news/eu\\_response\\_to\\_covid19\\_summary\\_hr](https://ec.europa.eu/croatia/news/eu_response_to_covid19_summary_hr)] Accessed 09 September 2020.

[9] European Commission. "Joint Procurement Of Medical Countermeasures".

[[https://ec.europa.eu/health/preparedness\\_response/joint\\_procurement\\_en](https://ec.europa.eu/health/preparedness_response/joint_procurement_en)]. Accessed 3 September 2020

#### 4.2.3b

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is no evidence that Croatia has a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency or a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency. Websites of the Ministry of Health, Ministry of Economy and Institute for Public Health do not have such information. [1, 2, 3] However, according to media outlets, during Covid-19 outbreak, domestic companies have been engaged to produce all kind of medical equipment, including laboratory supplies. [4] In March 2020, the European Commission created first ever rescEU stockpile of medical equipment. [5] On 18 March, the Commission announced a new public procurement procedure for laboratory equipment and testing equipment. [6]

[1] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[2] Ministry of Economy and Sustainable Development. "News". [<https://www.mingo.hr/>]. Accessed 09 September 2020.

[3] Croatian Institute for Public Health. "News". [<https://www.hzjz.hr/cat/aktualnosti/>] Accessed 09 September 2020.

[4] Tolerancija Respekt Informiranje Sloboda (TRIS). 2020. "Return of the written off: Domestic producers on the front line of defense against coronavirus (Povratak otpisanih: Doma?i proizvo?a?i na prvoj crti obrane protiv koronavirusa)".

[<http://tris.com.hr/2020/03/povratak-otpisanih-domaci-proizvodaci-na-prvoj-crti-obrane-protiv-koronavirusa/>] Accessed 09 September 2020.

[5] European Commission. 2020. "Covid-19: Commission creates first ever rescEU stockpile of medical equipment".

[[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_20\\_476](https://ec.europa.eu/commission/presscorner/detail/en/IP_20_476)] Accessed 09 September 2020.

[6] European Commission. 2020. "COVID19 - an overview of EU measures to combat coronavirus and mitigate the effects of the crisis (COVID19 - pregled mjera EU-a u borbi protiv koronavirusa i ublažavanju u?inka krize)".

[[https://ec.europa.eu/croatia/news/eu\\_response\\_to\\_covid19\\_summary\\_hr](https://ec.europa.eu/croatia/news/eu_response_to_covid19_summary_hr)] Accessed 09 September 2020.

## 4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

### 4.3.1 System for dispensing medical countermeasures (MCM) during a public health emergency

#### 4.3.1a

**Does the country have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics)?**

Yes = 1 , No = 0

**Current Year Score: 0**

Croatia does not have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics). Law on the Protection of Population from Infectious Diseases (adopted in 2007, last amended in 2020), Law on Medicines and National Generic (adopted in 2013, last amended in 2018), National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (adopted in 2010) do not regulate this issue. [1, 2] Websites of the Ministry of Health, Croatian Institute for Public Health and Agency do not have information about a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency. [4, 5, 6]

[1] Croatian Parliament. 2007. "Law on the Protection of Population from Infectious Diseases (Zakon o zaštiti pucanstva od zaraznih bolesti, NN 79/07, 113/08, 43/09, 130/17, 114/18, 47/20, 114/18, 47/20)". [<https://www.zakon.hr/z/1067/Zakon-o-za%C5%A1titi-pu%C4%8Danstva-od-zaraznih-bolesti>]. Accessed 09 September 2020.

[2] Croatian Parliament. 2013. "Law on Medicines (Zakon o lijekovima, NN 76/13, 90/14, 100/18)".

[<https://www.zakon.hr/z/399/Zakon-o-lijekovima>]. Accessed 09 September 2020.

[3] Government of Croatia. 2010. "National Generic, Integrated Plan of Coordinated Approach in Health Crisis Situations (Nacionalni genericki, integrirani plan koordiniranog postupanja u zdravstvenim kriznim situacijama)".

[<https://vlada.gov.hr/UserDocImages//2016/Sjednice/Arhiva//83-4.pdf>]. Accessed 09 September 2020.

[4] Ministry of Health. "News". [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[5] Croatian Institute for Public Health. "News". [<https://www.hzjz.hr/cat/aktualnosti/>] Accessed 09 September 2020.

[6] Agency for Medicinal Products and Medical Devices. "News". [<https://www.halmed.hr/en/O-HALMED-u/Osnovni-podaci-i-dokumenti/Dokumenti/>] Accessed 09 September 2020.

## 4.3.2 System for receiving foreign health personnel during a public health emergency

### 4.3.2a

**Is there a public plan in place to receive health personnel from other countries to respond to a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 1**

In Croatia, there is a public plan in place to receive health personnel from other countries to respond to a public health emergency. According to Article 11 of the Law on the Civil Protection System, adopted in 2015 (NN 82/15, 118/18, 31/20), "on the proposal of the Head of the State Administration, when the Republic of Croatia is affected by a disaster, the Government of the Republic of Croatia makes a decision on seeking and receiving international assistance and the decision to provide assistance to other countries when they are affected by the disaster." The definition of disaster also includes health emergencies [1]. Croatia has a bilateral agreement with Austria outlining procedures for requesting and providing assistance during an emergency, including personnel. The document outlines a variety of types of emergencies and emergency needs including the provision of "medical help." The agreement outlines procedures for facilitating the arrival of personnel including visa-free stays, employment permit waivers and equipment provision. [2] More broadly, in the Ministry of Interior Directorate for Civil Protection, within the Department for International Cooperation, there is a National Center responsible for coordinating the receiving and/or sending of emergency help which, in order to coordinate activities, participates in the work of the state administration bodies in the process of crossing the state border during transit, income and/or sending urgent help. These activities are regulated by the Decree on the manner of crossing the state border when accepting or sending urgent assistance in protection or rescue, which has been adopted based on the Law on Civil Protection System and also covers health emergencies. This Decree facilitates the arrival and movement of foreign personnel during an emergency by regulating operational issues, such as visa regime, PPE usage, transit, etc. [2] Finally, as an EU Member State, Croatia is part of the EU Civil Protection Mechanism. In 2001, the EU Civil Protection Mechanism was established to foster cooperation among national civil protection authorities across Europe. The Mechanism currently includes all 28 EU Member States in addition to Iceland, Montenegro, Norway, Serbia, the former Yugoslav Republic of Macedonia, and Turkey. The mechanism was set up to enable participating states to provide coordinated assistance to victims of natural and manmade disasters in Europe and elsewhere. However, the Civil Protection Mechanism does not have any details on how it facilitates the arrival of these teams within European countries or elsewhere [3].

[1] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15, 118/18, 31/20)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[2] National Council of Austria. 2006. "Agreement between the Republic of Austria and the Republic of Croatia on mutual assistance with disasters or serious accidents." ("Abkommen zwischen der Republik Österreich und der Republik Kroatien über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen.")

[<https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20004867>]. Accessed 8 August 2020.

[3] Ministry of Interior. Directorate for Civil Protection. 2006. "Decree on the Manner of Crossing the State Border During Accepting or Sending Urgent Assistance in Protection or Rescue (Uredba o nacinu prelaska državne granice prilikom primanja i/ili upucivanja žurne pomoci u zaštiti i spašavanju)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2006\\_05\\_52\\_1238.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2006_05_52_1238.html)]. Accessed 09 September 2020.

[4] European Commission. "EU Civil Protection Mechanism". [[http://ec.europa.eu/echo/what/civil-protection/mechanism\\_en](http://ec.europa.eu/echo/what/civil-protection/mechanism_en)]. Accessed 09 September 2020.

## 4.4 HEALTHCARE ACCESS

### 4.4.1 Access to healthcare

#### 4.4.1a

**Does the constitution explicitly guarantee citizens' right to medical care?**

Guaranteed free = 4, Guaranteed right = 3, Aspirational or subject to progressive realization = 2, Guaranteed for some groups, not universally = 1, No specific provision = 0

**Current Year Score: 3**

2020

World Policy Analysis Center

#### 4.4.1b

**Access to skilled birth attendants (% of population)**

Input number

**Current Year Score: 99.9**

2015

WHO/World Bank/United Nations Children's Fund (UNICEF)

#### 4.4.1c

**Out-of-pocket health expenditures per capita, purchasing power parity (PPP; current international \$)**

Input number

**Current Year Score: 194.5**

2017

WHO Global Health Expenditure database

### 4.4.2 Paid medical leave

#### 4.4.2a

**Are workers guaranteed paid sick leave?**

Paid sick leave = 2, Unpaid sick leave = 1, No sick leave = 0

Current Year Score: 2

2020

World Policy Analysis Center

### 4.4.3 Healthcare worker access to healthcare

#### 4.4.3a

**Has the government issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency?**

Yes = 1, No = 0

Current Year Score: 0

The Government of Croatia has not issued any legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency. Based on a review of the National Public Health Strategy, Law on Health Protection, Law on Civil Protection System and set of by-laws and ordinances related to civil protection, as well as the website of the Ministry of Health there are no references related to prioritized healthcare services for healthcare workers who become sick as a result of responding to a public health emergency [1, 2, 3, 4, 5]. The only related reference has been identified in the Decree on the manner and conditions for exercising the material rights of mobilized members of civil defense units during participation in activities in the civil protection system, based on which "the competent body is obliged to protect mobilized member from responsibility and/or the consequence of an accident during the time spent in civil protection activities for the days of mobilization" (Article 8) [6].

[1] Ministry of Health. 2012. "National Health Strategy 2012-2020, Nacionalna strategija razvoja zdravstva Hrvatske 2012-2020".

[<https://zdravlje.gov.hr/UserDocsImages/dokumenti/Programi,%20projekti%20i%20strategije/Skracena%20Nacionalna%20strategija%20razvoja%20zdravstva%20-%20HRV%20-%20za%20web.pdf>]. Accessed 09 September 2020.

[2] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15, 118/18, 31/20)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[3] Croatian Parliament. 2015. "Law on Health Protection (Zakon o zdravstvenoj zaštiti, NN 100/18, 125/19)". [<https://www.zakon.hr/z/190/Zakon-o-zdravstvenoj-za%C5%A1titi>]. Accessed 09 September 2020.

[4] Ministry of Interior. Directorate for Civil Protection. "Documents". [<https://civilna-zastita.gov.hr/dokumenti-91/91>]. Accessed 09 September 2020.

[5] Ministry of Health. "Documents". [<https://zdravlje.gov.hr/dokumenti/10>]. Accessed 09 September 2020.

[6] Ministry of Interior. Directorate for Civil Protection. 2017. "Decree on the Manner and Conditions for Exercising the Material Rights of Mobilized Members of Civil Defense Units During Participation in Activities in the Civil Protection System (Uredba o nacinu i uvjetima za ostvarivanje materijalnih prava mobiliziranih pripadnika postrojbi civilne zaštite za vrijeme sudjelovanja u aktivnostima u sustavu civilne zaštite, NN br. 33/17)". [<http://www.propisi.hr/print.php?id=5020>]. Accessed 09 September 2020.

## 4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

### 4.5.1 Communication with healthcare workers

#### 4.5.1a

**Is there a system in place for public health officials and healthcare workers to communicate during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 0**

In Croatia, there is insufficient evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency.

According to Article 21 of the Law on Civil Protection System, adopted in 2015, units of civil protection is established at central, regional and local level. [1] According to the Plan for Protection and Rescue from 2010, the Ministry of Health established the Crisis Unit in case of catastrophes and major accidents. It is part of the civil protection system. According to the plan, "State-level protection and rescue participants are hierarchically linked to local-level protection and rescue participants, and the collection and exchange of information between them takes place within the special communication and information systems of individual protection and rescue participants and/or through the unique communication and information system of 112 centers" [2]. 112 is the unified communications information system for collecting and unifying data on events by relevant state authorities and emergency services and coordination among all of them [3].

112 is a unique operational communications system that works on international, state, county, and local level and coordinates all services in the event of an accident or disaster. The person receiving the call within the center collects the most important information about the accident, including the place of accident, short description of the accident, and whether there are injuries. After collecting relevant information begins activation of all other services involved. State Center 112 participates in coordinating responses to major accidents and disasters by informing County Center 112, state administration bodies, emergency medical services, etc. The County Center 112 is the one that participates in operations and coordinates the response at county level [4].

[1] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[2] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\\_08\\_96\\_2707.html](https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html)]. Accessed 09 September 2020.

[3] Central State Portal. "112 - Unique European Emergency Number". [<https://gov.hr/moja-uprava/pravna-drzava-i-sigurnost/sluzbe-za-zastitu-i-spasavanje/112-jedinstveni-europski-broj-za-hitne-sluzbe/520>]. Accessed 09 September 2020.

[4] Turkalj, M. 2018. "The Role of Hospital Emergency Admission in Emergency Situations (Uloga bolničkog hitnog prijema u izvanrednim situacijama)". Master's Thesis. University of Zagreb, School of Medicine. [<https://repozitorij.unizg.hr/islandora/object/mef%3A2007/datastream/PDF/view>]. Accessed 09 September 2020.

#### 4.5.1b

**Does the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector?**

Yes = 1 , No = 0

**Current Year Score: 0**

In Croatia, there is insufficient evidence of a system in place for public health officials and healthcare workers to communicate during an emergency that encompasses healthcare workers in both the public and private sector. According to Article 21 of the Law on Civil Protection System, adopted in 2015, a unit of civil protection is established at central, regional and local level. [1] According to the 2010 Plan for Protection and Rescue, the Ministry of Health has established a Crisis Unit in case of catastrophes and major accidents, which is part of the civil protection system. According to the plan, "State-level protection and rescue participants are hierarchically linked to local-level protection and rescue participants, and the collection and exchange of information between them takes place within the special communication and information systems of individual protection and rescue participants and/or through the unique communication and information system of 112 centers" [2]. 112 is the unified communications information system for collecting and unifying data on events by relevant state authorities and emergency services and coordination among all of them [3].

112 is a unique operational communications system that works on international, state, county, and local level and coordinates all services in the event of an accident or disaster. The person receiving the call within the center collects the most important information about the accident, including the place of accident, short description of the accident, and whether there are injuries. After collecting relevant information begins activation of all other services involved. State Center 112 participates in coordinating responses to major accidents and disasters by informing County Center 112, state administration bodies, emergency medical services, etc. The County Center 112 is the one that participates in operations and coordinates the response at county level [4].

[1] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, NN 82/15)". [https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite]. Accessed 09 September 2020.

[2] Government of Croatia. 2010. "Protection and Rescue Plan for the Territory of the Republic of Croatia (Plan zaštite i spašavanja za područje Republike Hrvatske)". [https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010\_08\_96\_2707.html]. Accessed 09 September 2020.

[3] Central State Portal. "112 - Unique European Emergency Number". [https://gov.hr/moja-uprava/pravna-drzava-i-sigurnost/sluzbe-za-zastitu-i-spasavanje/112-jedinstveni-europski-broj-za-hitne-sluzbe/520]. Accessed 09 September 2020.

[4] Turkalj, M. 2018. "The Role of Hospital Emergency Admission in Emergency Situations (Uloga bolničkog hitnog prijema u izvanrednim situacijama)". Master's Thesis. University of Zagreb, School of Medicine. [https://repositorij.unizg.hr/islandora/object/mef%3A2007/datastream/PDF/view]. Accessed 09 September 2020.

## 4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

### 4.6.1 Healthcare associated infection (HCAI) prevention and control programs

#### 4.6.1a

**Is there evidence that the national public health system is monitoring for and tracking the number of healthcare associated infections (HCAI) that take place in healthcare facilities?**

Yes = 1 , No = 0

**Current Year Score: 1**

In Croatia, the national public health system monitors and tracks the number of healthcare-associated infections (HCAI) that occur in healthcare facilities.

The relevant reference document is the Ordinance on Conditions and Method of Carrying Out the Measures for Prevention

and Concentration of Hospital Infections ,which was adopted in 2013. Based on Articles 30 and 31 of the Ordinance, the Commission for Prevention and Suppression of Hospital Infections of the Ministry of Health and the Reference Center for Hospital Infections of the Ministry of Health are responsible for analyzing the situation in institutions and submitting a comprehensive annual report on the movement of infections, implementing measures for the prevention, and monitoring of health-related infections in institutions in Croatia [1]. Access to the website of the Reference Center for Hospital Infections of the Ministry of Health of the Republic of Croatia is not possible without password, but from available sources it can be concluded that relevant authorities are collecting data on HCAI [2].

[1] Ministry of Health. 2013. "Ordinance on Conditions and Method of Carrying out the Measures for Prevention and Concentration of Hospital Infections (Pravilnik o uvjetima i na?inu obavljanja mjera za spre?avanje i suzbijanje bolni?kih infekcija, NN 85/12 i 129/13)". [<http://www.propisi.hr/print.php?id=3481>]. Accessed 09 September 2020.

[2] Ministry of Health. Reference Center for Hospital Infections. "Presentation". [[https://www.aaz.hr/sites/default/files/Pracenje\\_i\\_izvjescivanje\\_o\\_bolnickim\\_infekcijama\\_u\\_Hrvatskoj\\_Ana\\_Budimir.pdf](https://www.aaz.hr/sites/default/files/Pracenje_i_izvjescivanje_o_bolnickim_infekcijama_u_Hrvatskoj_Ana_Budimir.pdf)]. Accessed 09 September 2020.

## 4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

### 4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

#### 4.7.1a

**Is there a national requirement for ethical review (e.g., from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial?**

Yes = 1 , No = 0

**Current Year Score: 1**

Croatia has a system for ethical review before beginning a clinical trial. Under the provisions of the Ordinance on Clinical trials and Good Clinical Practice (Official Gazette No. 121/07), adopted in 2007, and Ordinance on Clinical Trials of Medicinal Products and Good Clinical Practice (Official Gazette No. 25/15), adopted in 2015, the scope of work of the Central Ethics Committee (CEC) is to issue opinions in the procedure of granting approvals for clinical trials of medicinal products and/or medical devices, including academic clinical trials; to issue opinions in the procedure of granting approvals for non-interventional trials; to accept non-substantial amendments to previously approved clinical trial protocols; to issue opinions in the procedure of granting approvals for substantial amendments to the approved clinical trial protocols; and to accept final clinical trial reports. The CEC is an independent committee of 19 members, including healthcare professionals, and members of non-medical professions. Administrative support for the activities of the CEC is provided by the Agency for Medicinal Products and Medical Devices [1].

[1] Agency for Drugs and Medicine. "Central Ethics Committee". [<http://www.halmed.hr/en/O-HALMED-u/Sredisnje-eticko-povjerenstvo-SEP/>]. Accessed 09 September 2020.

#### 4.7.1b

**Is there an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence of an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics in Croatia. Based on analysis of the Ordinance of the Central Ethics Committee of the Agency for Medicinal Products and Medical Devices, adopted in 2016 and Ordinance on Clinical Testing of Medicines and Good Clinical Practice, adopted in 2015, such an expedited process does not exist [1, 2]. In addition, there is no form available on the website of the Agency for Medicinal Products and Medical Devices to request an expedited review [3].

[1] Agency for Medicinal Products and Medical Devices. 2016. "Ordinance of the Central Ethics Committee (Poslovnik o radu središnjeg eti?kog povjerenstva, NN 25/15)". [[http://www.halmed.hr/fdsak3jnFsk1Kfa/ostale\\_stranice/SEP\\_Poslovnik.pdf](http://www.halmed.hr/fdsak3jnFsk1Kfa/ostale_stranice/SEP_Poslovnik.pdf)]. Accessed 09 September 2020.

[2] Ministry of Health. 2015. "Ordinance on Clinical Testing of Medicines and Good Clinical Practice (Pravilnik o klinickim ispitivanjima lijekova i dobroj klinickoj praksi, NN 25/15 i 124/15)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2015\\_03\\_25\\_534.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2015_03_25_534.html)]. Accessed 109 September 2020.

[3] Agency for Medicinal Products and Medical Devices. "Forms". [<http://www.halmed.hr/O-HALMED-u/Obrasci/>]. Accessed 09 September 2020.

## 4.7.2 Regulatory process for approving medical countermeasures

### 4.7.2a

**Is there a government agency responsible for approving new medical countermeasures (MCM) for humans?**

Yes = 1 , No = 0

**Current Year Score: 1**

The Agency for Medicinal Products and Medical Devices is the government agency in Croatia responsible for approving new medical countermeasures for humans. A few of the agency's responsibilities include granting of marketing authorizations for medicinal and homeopathic medicinal products; granting of authorizations for parallel imports of medicinal products; making expert assessments of quality, efficacy, and safety of medicinal products; performing laboratory analyses of medical devices; and performing tasks of the official laboratory for quality control. [1]

[1] Agency for Medicinal Products and Medical Devices. "About Us". [<http://www.halmed.hr/en/O-HALMED-u/Osnovni-podaci-i-dokumenti/Djelatnosti/>]. Accessed 09 September 2020.

### 4.7.2b

**Is there an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence of an expedited process for approving medical countermeasures for human use during public health emergencies in Croatia. Based on analysis of the Ordinance of the Central Ethics Committee of the Agency for Medicinal Products and Medical Devices, adopted in 2015, and Ordinance on Clinical Testing of Medicines and Good Clinical Practice, adopted in 2015, there is no expedited process for approving medical countermeasures for human use during public health emergencies. In addition, there is no available form on the websites to request an expedited review [1, 2, 3].

[1] Agency for Medicinal Products and Medical Devices. 2015. "Ordinance of the Central Ethics Committee (Poslovni o radu središnjeg eti?kog povjerenstva, NN 25/15)". [[http://www.halmed.hr/fdsak3jnFsk1Kfa/ostale\\_stranice/SEP\\_Poslovnik.pdf](http://www.halmed.hr/fdsak3jnFsk1Kfa/ostale_stranice/SEP_Poslovnik.pdf)]. Accessed 09 September 2020.

[2] Ministry of Health. 2015. "Ordinance on Clinical Testing of Medicines and Good Clinical Practice (Pravilnik o klini?kim ispitivanjima lijekova i dobroj klini?koj praksi, NN 25/2015 I 124/2015)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2015\\_03\\_25\\_534.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2015_03_25_534.html)]. Accessed 09 September 2020.

[3] Agency for Medicinal Products and Medical Devices. "Forms". [<http://www.halmed.hr/O-HALMED-u/Obrasci/>]. Accessed 09 September 2020.

## Category 5: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

### 5.1 INTERNATIONAL HEALTH REGULATIONS (IHR) REPORTING COMPLIANCE AND DISASTER RISK REDUCTION

#### 5.1.1 Official IHR reporting

##### 5.1.1a

Has the country submitted IHR reports to the WHO for the previous calendar year?

Yes = 1 , No = 0

Current Year Score: 1

2020

World Health Organization

#### 5.1.2 Integration of health into disaster risk reduction

##### 5.1.2a

Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that epidemics and pandemics are integrated into the national risk reduction strategy or that there is a standalone national disaster risk reduction strategy for pandemics. Croatia has a risk assessment document, into which epidemics and pandemics are integrated, but it is unclear whether there is a related risk reduction strategy. Section 6.4 of the document entitled "Risk assessment from disasters in Republic of Croatia" elaborates on epidemic/pandemic issues, such as risk assessment of the territory of Croatia, impact on population and economy, as well as measures to be

implemented in case of epidemics/pandemics, such as purchase of equipment, vaccines, etc. [1].

[1] Government of Croatia. 2015. "Risk Assessment from Disasters in Republic of Croatia (Procjena rizika od katastrofa za Republiku Hrvatsku)". [[http://www.platforma.hr/images/dokumenti/Procjena\\_rizika\\_RH\\_FINAL.pdf](http://www.platforma.hr/images/dokumenti/Procjena_rizika_RH_FINAL.pdf)]. Accessed 09 September 2020.

## 5.2 CROSS-BORDER AGREEMENTS ON PUBLIC HEALTH AND ANIMAL HEALTH EMERGENCY RESPONSE

### 5.2.1 Cross-border agreements

#### 5.2.1a

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 2**

Croatia has cross-border agreements, protocols, and MOUs with neighboring countries with regard to public health emergencies. Croatia is a member of the European Union (EU). At the EU level, Decision 1082/2013/EU on serious cross-border threats to health provides the framework to coordinate preparedness and response planning to strengthen capacities for the monitoring, early warning and assessment of, and response to health emergencies between all EU member states [1]. According to the Strategy for National Security "The Republic of Croatia will intensify international cooperation and build capacity to reduce disaster risks by developing an early warning system and standards and operational forces for action within the European Union, in particular with neighboring countries with whom we share common risks" [2]. Finally, Croatia has signed agreements on cooperation in protection and rescue with the following neighboring countries: Republic of Hungary (signed 1997), Republic of Slovenia (signed 1997), Bosnia and Herzegovina (signed 2001), Republic of Austria (signed 2004), and Montenegro (signed 2008). These agreements are related to cooperation in the field of protection from natural and civilizational disasters, including public health emergencies [3, 4].

[1] European Commission. "Crisis Preparedness and Response".

[[https://ec.europa.eu/health/preparedness\\_response/crisis\\_management\\_en](https://ec.europa.eu/health/preparedness_response/crisis_management_en)]. Accessed 09 September 2020.

[2] Croatian Parliament. 2017. "National Security Strategy of the Republic of Croatia (Strategija nacionalne sigurnosti Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2017\\_07\\_73\\_1772.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2017_07_73_1772.html)]. Accessed 09 September 2020.

Accessed 09 September 2020.

[3] European Commission. "Civil Protection International Cooperation".

[[https://ec.europa.eu/echo/files/civil\\_protection/civil/prote/cp11\\_en.htm](https://ec.europa.eu/echo/files/civil_protection/civil/prote/cp11_en.htm)]. Accessed 09 September 2020.

[4] Ministry of Interior. Directorate for Civil Protection. "List of International Agreements". [<https://civilna-zastita.gov.hr/zakoni/349>]. Accessed 09 September 2020.

#### 5.2.1b

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 2**

Croatia has cross-border agreements, protocols, and MOUs with neighboring countries with regard to animal health emergencies. Croatia is a member of the European Union (EU). At the EU level, Decision 1082/2013/EU on serious cross-border threats to health provides the framework to coordinate preparedness and response planning to strengthen capacities for the monitoring, early warning and assessment of, and response to health emergencies, including animal health [1]. According to the Strategy for National Security "The Republic of Croatia will intensify international cooperation and build capacity to reduce disaster risks by developing an early warning system and standards and operational forces for action within the European Union, in particular with neighboring countries with whom we share common risks" [2]. Croatia also actively participates in regional cooperation through bilateral cooperation with neighboring countries (e.g. signed Cooperation agreement between Croatian Veterinary Institute and Serbian Veterinary Institute) and implementation of different projects (e.g. Assistance to Western Balkan countries for improving compliance to international standards on aquatic animal health) [3, 4].

[1] European Commission. "Crisis Preparedness and Response".

[[https://ec.europa.eu/health/preparedness\\_response/crisis\\_management\\_en](https://ec.europa.eu/health/preparedness_response/crisis_management_en)]. Accessed 09 September 2020.

[2] Croatian Parliament. 2017. "National Security Strategy of the Republic of Croatia (Strategija nacionalne sigurnosti Hrvatske)". [[https://narodne-novine.nn.hr/clanci/sluzbeni/2017\\_07\\_73\\_1772.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2017_07_73_1772.html)]. Accessed 09 September 2020.]. Accessed 09 September 2020.

[3] Croatian Veterinary Institute. "Cooperation Agreement with Serbian Veterinary Institute".

[<http://www.veinst.hr/aktualnosti/197-potpisan-sporazum-o-suradnji-hrvatskog-veterinarskog-instituta-i-veterinarskog-specijalistikog-instituta-iz-nia>]. Accessed 09 September 2020.

[4] Directorate for Veterinary and Food Safety. "Assistance to Western Balkan Countries for Improving Compliance to International Standards on Aquatic Animal Health". [<http://www.veterinarstvo.hr/default.aspx?id=1209>]. Accessed 09 September 2020.

## 5.3 INTERNATIONAL COMMITMENTS

### 5.3.1 Participation in international agreements

#### 5.3.1a

Does the county have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?

Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

**Current Year Score: 2**

2021

Biological Weapons Convention

#### 5.3.1b

Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?

Yes = 1, No = 0

**Current Year Score: 1**

2021

Biological Weapons Convention

### 5.3.1c

Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?

Yes = 1, No = 0

**Current Year Score: 1**

2021

Biological Weapons Convention

### 5.3.1d

Extent of United Nations Security Council Resolution (UNSCR) 1540 implementation related to legal frameworks and enforcement for countering biological weapons:

Very good (60+ points) = 4, Good (45–59 points) = 3, Moderate (30–44 points) = 2, Weak (15–29 points) = 1, Very weak (0–14 points) or no matrix exists/country is not party to the BWC = 0

**Current Year Score: 4**

2021

Biological Weapons Convention

## 5.3.2 Voluntary memberships

### 5.3.2a

Does the country meet at least 2 of the following criteria?

- Membership in Global Health Security Agenda (GHSA)
- Membership in the Alliance for Country Assessments for Global Health Security and IHR Implementation (JEE Alliance)
- Membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP)
- Membership in the Australia Group (AG)
- Membership in the Proliferation Security Initiative (PSI)

Needs to meet at least two of the criteria to be scored a 1 on this measure. , Yes for five = 1, Yes for four = 1, Yes for three = 1, Yes for two = 1, Yes for one = 0, No for all = 0

**Current Year Score: 1**

2021

Global Health Security Agenda; JE Alliance; Global Partnership; Australia Group; PSI

## 5.4 JOINT EXTERNAL EVALUATION (JEE) AND PERFORMANCE OF VETERINARY SERVICES PATHWAY (PVS)

### 5.4.1 Completion and publication of a Joint External Evaluation (JEE) assessment and gap analysis

#### 5.4.1a

Has the country completed a Joint External Evaluation (JEE) or precursor external evaluation (e.g., GHSA pilot external assessment) and published a full public report in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

#### 5.4.1b

Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?

Yes = 1 , No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

### 5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

#### 5.4.2a

Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

OIE PVS assessments

#### 5.4.2b

Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5 FINANCING

### 5.5.1 National financing for epidemic preparedness

#### 5.5.1a

**Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?**

Yes = 1 , No = 0

Current Year Score: 0

There is no clear evidence that Croatia has allocated national funds to improve capacity to address epidemic threats within the past three years. In the national budget of Croatia for 2018, 2019 and 2020 there are funds allocated to address emergency situations. However, there is no information that these allocations cover capacity improvements to address epidemic threats. [1, 2, 3] On the websites of the Ministry of Health, Ministry of Agriculture and Institute for Public Health there is no further information about allocation of national funds to improve capacity to address epidemic threats within the past three years. [4, 5, 6] According to media outlets, the government has reallocated some funds from the 2020 national budget for medical supplies in response to Covid-19. [7]

[1] Ministry of Finance. "State Budget for 2020". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2020-godina/2981>]. Accessed 09 September 2020.

[2] Ministry of Finance. "State Budget for 2019". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2019-godina/608>]. Accessed 09 September 2020.

[3] Ministry of Finance. "State Budget for 2018". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2018-godina/609>]. Accessed 09 September 2020.

[4] Ministry of Health. [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[5] Ministry of Agriculture. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[6] Croatian Institute for Public Health. "News". [<https://www.hzjz.hr/cat/aktualnosti/>] Accessed 09 September 2020.

[7] Osijekdanas. "Croatia amends budget for 2020 due to Covid-19 disease crisis". [<https://osijek-danas.com/2020/05/08/hrvatska-izmijenila-proracun-za-2020-zbog-krize-bolesti-covid-19/>] Accessed 09 September 2020.

### 5.5.2 Financing under Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS) reports and gap analyses

#### 5.5.2a

**Does the Joint External Evaluation (JEE) report, National Action Plan for Health Security (NAPHS), and/or national GHSA roadmap allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?**

Yes = 1 , No/country has not conducted a JEE = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

### 5.5.2b

**Does the Performance of Veterinary Services (PVS) gap analysis and/or PVS assessment allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?**

Yes = 1 , No/country has not conducted a PVS = 0

**Current Year Score: 0**

2021

OIE PVS assessments

## 5.5.3 Financing for emergency response

### 5.5.3a

**Is there a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency (such as through a dedicated national reserve fund, an established agreement with the World Bank pandemic financing facility/other multilateral emergency funding mechanism, or other pathway identified through a public health or state of emergency act)?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is insufficient evidence of a publicly identified special emergency public financing mechanism and funds that Croatia can access in the face of a public health emergency. As an EU Member State, Croatia is part of the EU Civil Protection Mechanism. In 2001, the EU Civil Protection Mechanism was established, fostering cooperation among national civil protection authorities across Europe. The mechanism was set up to enable coordinated assistance from participating states to victims of natural and manmade disasters in Europe and elsewhere [1, 2]. Based on media articles, Croatia benefited from this fund during the Covid-19 pandemic. [3] Based on Article 73 of the Law on Civil Protection System, the Republic of Croatia has established an extra-budgetary civil protection fund to secure financial means for protection and rescue in major accidents and disasters [4]. However, based on analysis of the national budget for 2020, 2019 and 2018 it is not clear if this can be specifically accessed by Croatia when faced with a public health emergency. [5, 6, 7] Croatia is not an IDA borrowing country and, thus, is not eligible for the World Bank Pandemic Financing Facility. However, in June 2020, the World Bank Board of Directors approved two projects totaling US\$500 million to provide emergency support to Croatian authorities to cushion the effects of the triple shock that hit the country earlier this year. The unprecedented crisis was caused by the health impacts of Covid-19; the economic crisis caused by the pandemic lockdowns in Croatia and worldwide; and the extensive damage caused by the strongest earthquake in 140 years that hit the Zagreb area on March 22, 2020 [8, 9].

[1] European Commission. "EU Civil Protection Mechanism". [[http://ec.europa.eu/echo/what/civil-protection/mechanism\\_en](http://ec.europa.eu/echo/what/civil-protection/mechanism_en)]. Accessed 09 September 2020.

[2] European Commission. "European Civil Protection and Humanitarian Operations". [[http://ec.europa.eu/echo/funding-evaluations/funding-humanitarian-aid\\_en](http://ec.europa.eu/echo/funding-evaluations/funding-humanitarian-aid_en)]. Accessed 09 September 2020.

[3] Danas. "Plenkovic: In the recovery package for the Coronavirus, Croatia received more than it expected (Plenkovic: U

paketu za oporavak od korone Hrvatska dobila više nego što je očekivala)." [<https://www.danas.rs/svet/plenkovic-u-paketu-za-oporavak-od-korone-hrvatska-dobila-vise-nego-sto-je-ocekivala/>]. Accessed 09 September 2020.

[4] Croatian Parliament. 2015. "Law on Civil Protection System (Zakon o sustavu civilne zaštite, 82/15, 118/18, 31/20)". [<https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite>]. Accessed 09 September 2020.

[5] Ministry of Finance. "State Budget for 2020". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2020-godina/2981>]. Accessed 09 September 2020.

[6] Ministry of Finance. "State Budget for 2019". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2019-godina/608>]. Accessed 09 September 2020.

[7] Ministry of Finance. "State Budget for 2018". [<https://mfin.gov.hr/proracun-86/drzavni-proracun-2018-godina/609>]. Accessed 09 September 2020.

[8] World Bank. "Borrowing Countries". [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed 09 September 2020.

[9] Reliefweb. "World Bank Supports Croatia to Weather Difficult Times Caused by Covid-19 Pandemic and Recent Earthquake". [<https://reliefweb.int/report/croatia/world-bank-supports-croatia-weather-difficult-times-caused-covid-19-pandemic-and>]. Accessed 09 September 2020.

## 5.5.4 Accountability for commitments made at the international stage for addressing epidemic threats

### 5.5.4a

Is there evidence that senior leaders (president or ministers), in the past three years, have made a public commitment either to:

- Support other countries to improve capacity to address epidemic threats by providing financing or support?
- Improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 0**

There is no evidence that senior leaders (president or ministers) in Croatia have made a public commitment either to support other countries to improve capacity to address epidemic threats by providing financing or support in the past three years, or to improve its own domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity during the same period.

Based on a review of media outlets, Prime Minister Plenkovic said that in the recovery package for the Coronavirus, Croatia received more than it expected. [1] Before the Covid-19 pandemic, there is no evidence that senior leaders (president or ministers) in Croatia made a public commitment either to support other countries to improve capacity to address epidemic threats by providing financing or support in the past three years, or to improve its own domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity during the same period. Based on a review of media outlets, information on the websites of the Ministry of Health and Ministry of Foreign Affairs, as well as the World Health Organization (WHO), no evidence can be found. [2, 3, 4]

[1] Danas. "Plenkovic: In the recovery package for the Coronavirus, Croatia received more than it expected (Plenkovi?: U paketu za oporavak od korone Hrvatska dobila više nego što je očekivala)." [<https://www.danas.rs/svet/plenkovic-u-paketu-za-oporavak-od-korone-hrvatska-dobila-vise-nego-sto-je-ocekivala/>]. Accessed 09 September 2020.

[2] Ministry of Health. [<https://zdravlje.gov.hr/vijesti/8>]. Accessed 09 September 2020.

[3] Ministry of Foreign Affairs. [<https://poljoprivreda.gov.hr/>]. Accessed 09 September 2020.

[4] World Health Organization (WHO). "Country profile - Croatia". [<https://www.euro.who.int/en/countries/croatia>]. Accessed 23 July 2020.

### 5.5.4b

Is there evidence that the country has, in the past three years, either:

- Provided other countries with financing or technical support to improve capacity to address epidemic threats?
- Requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

In the past three years Croatia has provided other countries with financing or technical support to improve capacity to address epidemic threats and at the same time Croatia has requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats.

According to the Global Health Security Funding Tracker, Croatia has committed US\$1.09 million to other countries to help with immunizations. In the last several years US\$235.06 million has been committed to Croatia, while US\$77.56 million has been disbursed to help with emergency response efforts, linking public health and security authorities, zoonotic diseases, and the national laboratory system. [1] As an EU Member State, Croatia is part of the EU Civil Protection Mechanism. In 2001, the EU Civil Protection Mechanism was established, fostering cooperation among national civil protection authorities across Europe. The mechanism was set up to enable coordinated assistance from the participating states to victims of natural and manmade disasters in Europe and elsewhere [2, 3].

Based on media articles, Croatia benefited from this fund during Covid-19 pandemic. [4] The World Bank Board of Directors, in June 2020, approved two projects totaling US\$500 million to provide emergency support to Croatian authorities to cushion the effects of the triple shock that hit the country earlier that year. The unprecedented crisis was caused by the health impacts of Covid-19; the economic crisis caused by the pandemic lockdowns in Croatia and worldwide; and the extensive damage caused by the earthquake that hit the Zagreb area on March, 22, the strongest in 140 years [5].

[1] GHS Funding Tracker. "Croatia". [<https://tracking.ghscosting.org/details/919/funder>]. Accessed 01 April 2021.

[2] European Commission. "EU Civil Protection Mechanism". [[http://ec.europa.eu/echo/what/civil-protection/mechanism\\_en](http://ec.europa.eu/echo/what/civil-protection/mechanism_en)]. Accessed 09 September 2020.

[3] European Commission. "European Civil Protection and Humanitarian Operations". [[http://ec.europa.eu/echo/funding-evaluations/funding-humanitarian-aid\\_en](http://ec.europa.eu/echo/funding-evaluations/funding-humanitarian-aid_en)]. Accessed 09 September 2020.

[4] Danas. "Plenkovic: In the recovery package for the Coronavirus, Croatia received more than it expected (Plenkovi?: U paketu za oporavak od korone Hrvatska dobila više nego što je o?ekivala)." [<https://www.danas.rs/svet/plenkovic-u-paketu-za-oporavak-od-korone-hrvatska-dobila-vise-nego-sto-je-ocekivala/>]. Accessed 09 September 2020.

[5] Reliefweb. "World Bank Supports Croatia to Weather Difficult Times Caused by Covid-19 Pandemic and Recent Earthquake". [<https://reliefweb.int/report/croatia/world-bank-supports-croatia-weather-difficult-times-caused-covid-19-pandemic-and>]. Accessed 09 September 2020.

### 5.5.4c

Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?

Yes = 1 , No = 0

Current Year Score: 1

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## 5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

### 5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

#### 5.6.1a

Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?

Yes = 1, No = 0

Current Year Score: 0

There is no evidence of a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza. The national system for monitoring infectious diseases includes a list of 99 infectious diseases. Diseases from the list are subject to reporting requirements in the European Union (EU) and relevant data are also sent to the European Center for Disease Prevention and Control (ECDC) in Stockholm, which collects data on the spread of infectious diseases from all EU Member States. For certain diseases, data are sent to other international collaborative institutions, such as the World Health Organization (WHO). For certain groups of diseases, there is a growing cross-cutting cooperation, for example, data on food-borne epidemics in Croatia are sent to the European Food Safety Authority (EFSA), which together with the ECDC issues an annual publication of zoonoses and epidemics that are transferred by food. In the procedure for reporting infectious diseases, for diseases declared in the EU, cases are reported in accordance with the European Commission Decision (2012/506 / EC) and for diseases declared in Croatia, diseases are reported and monitored according to national definitions [1, 2].

[1] Croatian Institute for Public Health. "Department for Monitoring Infectious Diseases With a Register of Infectious Diseases". [<https://www.hzjz.hr/sluzba-epidemiologija-zarazne-bolesti/odjel-za-pracenje-zaraznih-bolesti/>]. Accessed 09 September 2020.

[2] European Food Safety Authority. 2016. "The European Union Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents and Food-borne Outbreaks in 2013".

[<https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/EU-summary-report-trends-sources-zoonoses-2013.pdf>]. Accessed 09 September 2020.

#### 5.6.1b

Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?

Yes = 0, No = 1

**Current Year Score: 1**

There is no public evidence that Croatia has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years. Based on a review of the Report of the 2016 PIP Framework Review Group by the World Health Organization (WHO) in 2016, there are no references that Croatia has not shared samples in accordance with the PIP framework [1]. In addition, there is no media coverage stating that Croatia has not shared influenza samples.

[1] World Health Organization (WHO). 2016. "Report of the 2016 PIP Framework Review Group".  
[[http://apps.who.int/gb/ebwha/pdf\\_files/EB140/B140\\_16-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/EB140/B140_16-en.pdf?ua=1)]. Accessed 09 September 2020.

**5.6.1c**

**Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?**

Yes = 0 , No = 1

**Current Year Score: 1**

There is no public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years. Based on a review of information from WHO reports/website and media coverage, there is no evidence that Croatia has not shared pandemic pathogen samples during an outbreak in the past two years, including samples for Covid-19 [1, 2].

[1] World Health Organization (WHO). [<http://www.who.int>]. Accessed 09 September 2020.  
[2] World Health Organization (WHO). "Covid-19 - Croatia". [<https://covid19.who.int/region/euro/country/hr>]. Accessed 09 September 2020.

## Category 6: Overall risk environment and vulnerability to biological threats

### 6.1 POLITICAL AND SECURITY RISK

#### 6.1.1 Government effectiveness

##### 6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

**Current Year Score: 2**

2020

Economist Intelligence

**6.1.1b**

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

2020

Economist Intelligence

**6.1.1c**

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

**6.1.1d**

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

2020

Economist Intelligence

**6.1.1e**

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 47

2020

Transparency International

**6.1.1f**

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

### 6.1.1g

**Human rights risk (Economist Intelligence score; 0-4, where 4=best)**

Input number

**Current Year Score: 3**

2020

Economist Intelligence

## 6.1.2 Orderly transfers of power

### 6.1.2a

**How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?**

Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

**Current Year Score: 3**

2021

Economist Intelligence

## 6.1.3 Risk of social unrest

### 6.1.3a

**What is the risk of disruptive social unrest?**

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

**Current Year Score: 2**

2021

Economist Intelligence

## 6.1.4 Illicit activities by non-state actors

### 6.1.4a

How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 4

2021

Economist Intelligence

### 6.1.4b

What is the level of illicit arms flows within the country?

4 = Very high, 3 = High, 2 = Moderate, 1 = Low, 0 = Very low

Current Year Score: 1

2020

UN Office of Drugs and Crime (UNODC)

### 6.1.4c

How high is the risk of organized criminal activity to the government or businesses in the country?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.1.5 Armed conflict

### 6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 3

2021

Economist Intelligence

## 6.1.6 Government territorial control

### 6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.1.7 International tensions

### 6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 2

2021

Economist Intelligence

## 6.2 SOCIO-ECONOMIC RESILIENCE

### 6.2.1 Literacy

#### 6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

Current Year Score: 99.1

2011

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);  
The Economist Intelligence Unit

### 6.2.2 Gender equality

#### 6.2.2a

United Nations Development Programme (UNDP) Gender Inequality Index score

Input number

Current Year Score: 0.88

2018

United Nations Development Programme (UNDP); The Economist Intelligence Unit

## 6.2.3 Social inclusion

### 6.2.3a

#### Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

Input number

**Current Year Score: 0.3**

2017

World Bank; Economist Impact

### 6.2.3b

#### Share of employment in the informal sector

Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0

**Current Year Score: 0**

There is no statistical data for Croatia about the share of employment in the informal sector. Databases of the World Bank, Croatian National Employment Service, Croatian Bureau of Statistics and Eurostat, as well as the report of the European Parliament called "The employment and social situation in Croatia" do not have information on the share of employment in the informal sector. [1, 2, 3, 4, 5]

[1] World Bank. "Informal Employment". [<https://data.worldbank.org/indicator/SL.ISV.IFRM.ZS>]. Accessed 09 September 2020.

[2] European Parliament. 2019. "The employment and social situation in Croatia". [[https://www.europarl.europa.eu/RegData/etudes/STUD/2019/642345/IPOL\\_STU\(2019\)642345\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/642345/IPOL_STU(2019)642345_EN.pdf)]. Accessed 09 September 2020.

[3] Croatian National Employment Service. "Statistics". [<https://www.hzz.hr/statistika/>]. Accessed 09 September 2020.

[4] Croatian Bureau of Statistics. "Statistics - Employment and Salaries". [<https://www.dzs.hr/>]. Accessed 09 September 2020.

[5] Eurostat. "Employment". [[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Employment\\_statistics/hr](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Employment_statistics/hr)]. Accessed 09 September

### 6.2.3c

#### Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

**Current Year Score: 3**

2016, or latest available

World Bank; Economist Impact calculations

## 6.2.4 Public confidence in government

### 6.2.4a

Level of confidence in public institutions

Input number

Current Year Score: 0

2021

Economist Intelligence Democracy Index

## 6.2.5 Local media and reporting

### 6.2.5a

Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

Input number

Current Year Score: 1

2021

Economist Intelligence Democracy Index

## 6.2.6 Inequality

### 6.2.6a

Gini coefficient

Scored 0-1, where 0=best

Current Year Score: 0.3

Latest available.

World Bank; Economist Impact calculations

## 6.3 INFRASTRUCTURE ADEQUACY

### 6.3.1 Adequacy of road network

#### 6.3.1a

What is the risk that the road network will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

### 6.3.2 Adequacy of airports

#### 6.3.2a

What is the risk that air transport will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

### 6.3.3 Adequacy of power network

#### 6.3.3a

What is the risk that power shortages could be disruptive?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 4

2021

Economist Intelligence

## 6.4 ENVIRONMENTAL RISKS

### 6.4.1 Urbanization

#### 6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 57.24

2019

World Bank

### 6.4.2 Land use

#### 6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: -0.01

2008-2018

World Bank; Economist Impact

### 6.4.3 Natural disaster risk

#### 6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.5 PUBLIC HEALTH VULNERABILITIES

### 6.5.1 Access to quality healthcare

#### 6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 78.07

2018

United Nations; World Bank, UNICEF; Institute for Health Metrics and Evaluation (IHME); Central Intelligence Agency (CIA)  
World Factbook

#### 6.5.1b

Age-standardized NCD mortality rate (per 100 000 population)

Input number

Current Year Score: 443.7

2019

WHO

#### 6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 20.86

2019

World Bank

### **6.5.1d**

**Prevalence of current tobacco use (% of adults)**

Input number

Current Year Score: 36.6

2018

World Bank

### **6.5.1e**

**Prevalence of obesity among adults**

Input number

Current Year Score: 24.4

2016

WHO

## **6.5.2 Access to potable water and sanitation**

### **6.5.2a**

**Percentage of homes with access to at least basic water infrastructure**

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

### **6.5.2b**

**Percentage of homes with access to at least basic sanitation facilities**

Input number

Current Year Score: 96.54

2017

UNICEF; Economist Impact

### 6.5.3 Public healthcare spending levels per capita

#### 6.5.3a

Domestic general government health expenditure per capita, PPP (current international \$)

Input number

Current Year Score: 1561.09

2018

WHO Global Health Expenditure database

### 6.5.4 Trust in medical and health advice

#### 6.5.4a

Trust medical and health advice from the government

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 0

2018

Wellcome Trust Global Monitor 2018

#### 6.5.4b

Trust medical and health advice from medical workers

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 2

2018

Wellcome Trust Global Monitor 2018