

# Criminological aspects of the spread, containment and prevention of COVID-19

Andrejs Vilks and Aldona Kipane

Rīga Stradiņš University, Riga, Latvia

**Abstract.** There are many facets of the current pandemic to face and learn about. In addition to medical, political, economic, socio-psychological and other aspects it would be necessary to identify and study criminological aspects too. Relevant approach includes determining the origin of COVID-19, tendencies in the spread of the virus, interaction between epidemiological, economic and criminogenic processes, control systems of pandemic situations and resources, including law enforcement responses to the virus, and socio-economic and criminogenic consequences of COVID-19. The criminological approach in general includes the study of the causes and development of socially unfavourable phenomena, their determining factors, as well as the development of a methodology for improving preventive measures. Particular attention will be paid by the authors to these aspects in their study.

**Key words:** COVID-19, coronavirus, criminological cognition, crime, pandemic, prevention.

## 1 Introduction

Criminology has now taken quite visible place in the social and legal sciences. First of all, this is due to an increase in various types of potential and actual threats (including crime) or other corresponding threats. The world is now facing a new socially negative phenomenon – the coronavirus, which has a global impact on all spheres of civilization, including legal and criminal manifestations. It can be assumed that the emergence and rapid spread of COVID-19 was caused by human negligence, non-compliance with social and legal norms. There are different views on the development, duration and consequences of the pandemic. High-risk conditions create the most favourable ground for criminal manifestations. Criminologists, with regard to their professional competencies, are very socially active, quite creative and integrated. The criminological approach by studying the formation of COVID-19, its spread, the effectiveness of preventive measures, can provide new information and insights how to mitigate the consequences of the global crisis. A physicist and writer Paolo Giordano emotionally describes the present by acknowledging that “Now a time of anomaly is, and we must learn to live in it and recognize this anomaly... It is in our own interest to learn from them (*viruses*)” [1]. There should be an objective need in the society, especially in crisis and post-crisis periods, to design a promising model of development, taking into account new potential criminal realities that are difficult to predict, as well as their negative consequences. One of the most prominent US security experts Henry Kissinger concludes that the reality is that the post-coronavirus world will never be like what it was [2]. The political and economic consequences of coronavirus will be felt for future generations. COVID-19, as a pronounced socio-epidemiological phenomenon, is undoubtedly a criminological assessment.

## 1.1 Aim

Aim is to study the criminological aspects of the origin and spread of COVID-19, to analyse the tendencies of crime and the consequences of the pandemic period, to identify new technological and communicative capabilities in limiting the spread of coronavirus and preventing its negative effects.

## 1.2 Material and methods

The article is based on the results of publications and scientific researches. The authors used the analytical method in the study, by studying Latvian and foreign experience, considering the origin of COVID-19 and its development trends, its connection with criminogenic processes. In addition, the authors used a descriptive method based on the study and generalization of materials and documents available from various sources.

## 2 Results and discussion

At the beginning of 2020, it was impossible to imagine that modern society would face a crisis that our generation had not experienced yet. The usual rhythm and order of life has changed completely. Undoubtedly, there are questions about what the post-pandemic world will be, what the impact of the crisis will be on global politics, the economy, the social environment, traditions, morality and values. The World Health Organization (WHO) described the coronavirus outbreak on March 11, 2020 as a pandemic [3]. (Coronavirus was confirmed as a pandemic by World Health Organization, 2020). The pandemic is, in fact, a serious infectious disease in which its constant spread to several countries of the world can be detected at the same time. The latest pandemic occurred in 2009 with swine flu, which according to experts' views resulted in hundreds of thousands of deaths [4]. Conditionally, the coronavirus pandemic can be compared to the unpredictability theory of "Black swan" of Nassim Nicholas Taleb, which is described in the work "Black Swan" [5, 6]. The theory is based on three conditions: firstly, the event (phenomenon, process) is unexpected in the corresponding social environment; secondly, the phenomenon, process, an event has considerable, and significant (generally negative) consequences; thirdly, the phenomenon or process stems from objective circumstances and can be tolerated, it is rational. It can be said that the pandemic was unexpected, it had very negative common consequences and its origin could be predicted, and some scientists had allowed its occurrence. The element of unpredictability is conditional.

### 2.1 Origin of COVID-19 in the context of criminological cognition

One aspect of the study is the possible origin of COVID-19 and its further trends in transnational expansion. In fact, researchers identify two possible hypotheses about the origin of the coronavirus. Firstly, it is the origin of the natural, under-controlled (unsanitary) virus [7]. All evidence so far points to the fact the COVID-19 virus is naturally derived and not man-made, explains immunologist Nigel McMillan from the Menzies Health Institute Queensland [8]. It is recognized that a possible virus is the result of recombination of a bat coronavirus with another still unknown coronavirus. The virus could have been passed to a person from a pangolin at a wet animal market in Wuhan [9].

To some extent, the opposite assumption is related to the fact that COVID-19 is of artificial origin – biological experiments were carried out in the laboratory of the Wuhan Institute of Virology (WIV), and there was a leak of micronutrients. An outbreak of

“Avian influenza” was recorded in the past in the region where SARS was registered. The criminological context of viral origins can be included in both hypotheses. Firstly, it can be concluded that the epidemiological situation in the Wuhan animal market may have been clearly unsanitary, without compliance with the relevant rules. Secondly, researches carried out at the Wuhan Institute of Virology may not have been properly observed or performed safely. According to Nikolai Petrovsky, a professor at the College of Medicine and Public Health at Flinder University, “it is therefore entirely plausible that the virus was created in the biosecurity facility in Wuhan by selection on cells expressing human ACE2, a laboratory that was known to be cultivating exotic bat coronaviruses at the time” [10].

N. Petrovsky mentions that the cultivated virus may have escaped from the facility, accidentally infecting an employee who then visited a fish market a few blocks from home and infected others there. It is equally possible to assume that waste was improperly thrown out of a facility which either infected people immediately outside the facility or through, for example, a stray cat that then visited the market or caused it to spread to humans. It should be noted that in the past employees of the US Embassy in China were concerned about safety in the laboratory, and a closely related bat virus was discovered at the institute. As early as January 2018 the US officials were reportedly concerned that safety breaches at a Wuhan lab studying coronaviruses in bats could cause a pandemic [11]. It was mentioned that the laboratory did not have adequately trained technicians and researchers who would strictly observe and maintain a high level of safety in the laboratory. Due to the origin of COVID-19, it should be noted that in the criminological context there is insufficient international cooperation, lack of operational critical information inspection, and insufficient control by international bodies at the appropriate levels of security to prevent dangerous pandemics. Logically, the question arises whether there are any corresponding risks in other foreign biological laboratories.

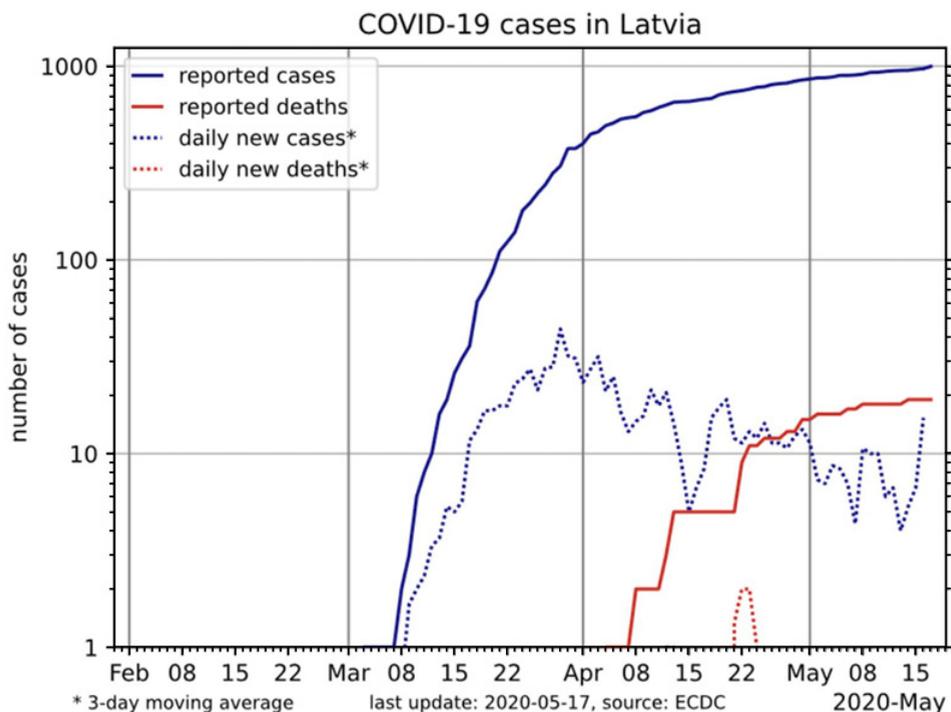
## **2.2 Development and expansion trends and consequences of COVID-19**

In Latvia the spread of COVID-19 began with the diagnosis of the first patient on March 2, 2020. In mid-May 2020, the number of people diagnosed with COVID-19 in Latvia exceeded a thousand, the number of deaths – 19. It is possible that the relevant negative trends will be minimized.

By mid-May 2020, COVID-19 had been confirmed by more than 4.2 million people worldwide, more than 293,000 died. More than 180 countries reported laboratory confirmed cases of COVID-19 on all continents, except Antarctica. The average mortality rate is about 1.5% among diagnosed cases and 11% among hospitalized.

Undoubtedly, an important question is: what could be the extent, scale and duration of the damage caused by coronavirus epidemic in Latvia, Europe and the world as a whole? Mathematical models describing the prevalence of infection are used by the US research centre “Institute for Health Metrics and Evaluation” (IHME), which uses available data to model the most likely scenarios and global minimum and maximum morbidity and mortality rates for COVID-19 in the world, as well as in some countries, including Latvia [13]. The mathematical model developed in the centre predicts that the prevalence of COVID-19 will reach its peak in the second half of April 2020, when the virus can kill dozens of lives a day [14]. The situation in Latvia at the time mentioned in the forecasts more than ten times was not true.

It is acknowledged that COVID-19 coronavirus assessments are reflected in two main dimensions: firstly, epidemiological coverage and public health implications; secondly, the impact of the crisis on the economic and financial situation, the social environment (people’s



**Fig. 1.** COVID-19 trends in Latvia to May 15, 2020 [12].

employment, income, social protection, etc.). However, we will note two other dimensions that we believe will be quite important in the future. The third dimension is communicative. It can be assumed that the process of human communication and interaction under the influence of COVID-19 will be transformed to some extent. People's habits as consumers will change – people, being remote, will not buy a lot of unnecessary stuff. In this respect, the good old days must be abandoned. In further contact people will be more prone to the local, known environment. People will be more aware that their quality of life is affected not only by the state, but also by the specific country or city. The fourth dimension is technogenic. It is related to modern technologies, including more intensive use of MI, as well as designing and development of new products and the much wider involvement of individuals in their use. It is expected that in the future the form of distance education will be more widely used in the field of education. Digital offices and management centres will be established. There is no doubt that the full range of problems is interconnected. It can be assumed that the coronavirus will have a lasting impact on the way of life, forms of communication, value systems and consciousness of most of humanity.

At the same time, however, it should be recognized that, in the crisis situation, the legislative and executive bodies of the European Union were unable to take timely joint actions to monitor the spread of coronavirus, assess the risks of infection in Europe, and mobilize the necessary medical and other resources to combat the epidemic and did not provide real assistance to the countries which were most affected by pandemic (Italy, Spain, France). In fact, European countries were forced to fight the disease alone. Instead of the European Union, China helped Italy.

In the current impact of COVID-19, a growing social crisis can be seen: rising unemployment, limited access to health care, structural changes in education and uncertainty,

and so on. It can be acknowledged that devaluation of moral values is also increasing in the society, there is a sufficient disregard for and ignorance of ethical norms, which manifests in violations of the restrictions set by the Cabinet of Ministers Resolution No. 103, 2020 [15]. Violence is spreading in the social environment, including families, indicating a complex mental crisis. The priest Mediņš considers that “the chaotic relations, confusion and going crazy, attitude to work and to things that we throw out and buy something new all the time lead to nowhere. There is no more modesty, no respect, and no holiness. In any case, we were all clearly aware of that abnormality the world was going to” [16].

The state administration system failed to anticipate a possible epidemiological, economic and social crisis. Though economic and social measures have been taken to mitigate the adverse effects of COVID-19, it is currently impossible to conclude whether they will be sufficient to ensure the safety of citizens, businessmen and society at large. Financial infusions and the assistance of international organizations are the most important and simplest means or “medicine” to overcome the crisis. The transfer of the scope and types of manifestations of the crisis can be continued, indicating its complexity. The crisis affected not only Latvia, but also most countries, confirming that it is also global in nature.

### **2.3 COVID-19 and criminogenic trends**

According to experts' opinions, scenarios of the development of the criminogenic situation under the influence of coronavirus disease COVID-19 are also diverse. The former deputy head of the chief of the State Police and the head of the Main Order Police Department A.Veļšs predicted that the restrictions imposed by the country as a result of the new coronavirus disease COVID-19 could lead to a reduction in crime [17]. A.Veļšs referred to the fact that the number of criminal offences registered in Latvia in 2019 has decreased compared to the previous year, and this trend has been continuing since 2014. He admits that a more detailed criminological studies should be carried out on impact of emergency situation of March 13, 2020 on crime, but his experience shows that there are now all the preconditions for crime to continue to decline. In comparison, it can be mentioned that a significant drop in crime was observed at the beginning of the economic crisis in 2008. The reason for this is that due to government recommendations, people currently spend a lot of time at home, working from home and not visiting public places. In addition, many places of entertainment and shopping do not work, so it is natural that the main form of crime, namely property crime, will decrease. It is logical that the theft of property will decrease because the residents are at home. There is also no public entertainment, so hooliganism, bodily harm and similar criminal offences will be reduced, the number of frauds will decrease as many businessmen have suspended their transactions and their finances. Although the COVID-19 crisis has led to an increase in the number of fake news distributors, it is unlikely that there will be any change in this area. Such fake news sites generate revenue from advertising, but the crisis has also affected the sphere of advertising.

In turn, the Attorney General Ē. Kalnmeiers believes that the return of socially vulnerable compatriots to their homeland can contribute to an increase in crime, and therefore they must be ready to strengthen security, especially when the police are understaffed [18]. He does not see the need for a separate security law yet, but things can change quickly: “as we know, a lot of people are coming back from abroad. And it is predicted that the number will continue to rise, because in large countries (Germany, France) the number of jobs is also declining and the first to lose jobs are foreigners. Returning to Latvia, all these jobs will not be guaranteed for them. There may be a need for additional security in the country to prevent an increase in crime.” In any case, the Minister of the Interior drew attention

to this. Coronavirus confuses law enforcement agencies: some predict a decrease in crime rates, others – on the contrary”. According to the chief of State Police A. Grišins, criminal statistics show that during the COVID-19 crisis the crime rate in Latvia has decreased, but in the future it may increase [19]. It is acknowledged that since the establishment of the state of emergency economic processes have decreased and public life is also passive, there is normative social distancing. As a result, the number of reported crimes has decreased, but despite the emergency situation, the police continue to maintain public order and criminal intelligence on the Internet. However, it is believed that an increase in crime can be expected over time. Although crime rates have generally declined, there has been a slight increase in various forms of criminal activities online, such as making fake news or expressing opinions that border on incitement to disrespect or hatred. The police assess the information received and initiate criminal proceedings if necessary. It should also be acknowledged that there are many sites on the Internet that link to headlines and the latest information about the spread of the virus or other related information. Visiting these sites can lead to re-entering social network passwords, stealing them, and gaining access to personal information. However, he acknowledged this could increase in the near future as police continue to carry out criminal intelligence and it is already clear that a long economic downtime can be a reason for increase in crime rate. In some time, it is possible to expect an increase in the number of crimes, the State Police are ready for this, as the Criminal police and front-line police officers continue to work and investigate how the crisis will affect public life [20]. Although crime has generally decreased, there is now a slight increase in various forms of online criminal activities, such as making fake news or expressing opinions that border on incitement to disrespect or hatred. The police evaluate the information received and initiate criminal proceedings if necessary.

It must be objectively acknowledged that as a result of the COVID-19 crisis there is a general trend of increase in crime [21]. Analysing the situation and trends of reported and registered crimes as a result of the COVID-19 crisis, it can be concluded that crime is now increasing significantly from the economic crisis of 1929–1933 and the global crisis of 2008–2010, when the number of reported and registered crimes has declined. Criminal manifestations escalate and increase at a time when state agencies and society are addressing other significant issues, reducing people’s caution or forcing them to act recklessly in an emergency. Experience shows that in many cases criminal offences may be directly related to the circumstances created by the COVID-19. It is important that not only quantitative, but also qualitative indicators of crime change. Regarding changes in the quality of crime, there are two trends: firstly, the increase in the number of crimes of primitive nature (brutal robbery, unmotivated murder, etc.) (Crime began to increase.); secondly, the intellectual development of crime, the commission of criminal offences using modern technologies or complex crime planning and logistics schemes [22].

Unfortunately, the coronavirus outbreak has provided fraudsters with new opportunities to take advantage of the high market demand for medical counterfeit products, personal protection and hygiene products. On March 19, 2020 the European Anti-Fraud Office (OLAF) initiated proceedings on import of counterfeit products, such as masks, medical devices, disinfectants and test kits used for fight against COVID-19 [23]. Since the beginning of the pandemic, OLAF has been collecting information and intelligence on this illegal trade. To protect our health and effectively combat the virus, it is important to prevent these counterfeit products from entering Europe. In addition to being ineffective against the virus, these products also do not meet the EU standards, and they can potentially harm our health, for example, they can cause dangerous bacterial contamination. Fraudsters are attracted by potentially huge illegal profits. They want to take advantage of our suffering and our needs, sometimes even desperate, for these products.

During the COVID-19 pandemic, many countries faced a shortage of face masks. The German state of North Rhine-Westphalia tried to buy masks online in bulk and it was subjected to transnational organized criminal groups schemes for undelivered masks worth almost 15 million euro [24]. The investigation activities covered Germany, Spain, the Netherlands, Ireland and the UK. The procurement was carried out by two companies in North Rhine-Westphalia. These companies contacted a Spanish company, which offered 10 Million face masks in stock, via the Internet. The buyer transferred 14.7 million euro to the fraudsters' accounts for these masks, but the purchaser did not get them. When buyers in Germany realised they had been cheated, they immediately contacted their bank in Germany, as well as the police. According to Europol, almost 500,000 of fraudulent money had already been transferred to the UK, from where it was due to be transferred to a bank account in Nigeria. Europol warns that the COVID-19 pandemic is also used by fraudsters and scammers, so countries and citizens buying means of protection against the new coronavirus online should be particularly attentive.

Counterfeiting is a global phenomenon that will increase significantly from year to year, also as a result of the impact of COVID-19. Technological development generally improves supply chains, improves the ability of criminals to produce dangerous counterfeit medical products, providing special logistics for transporting and delivering products to customers. This could undermine public confidence in health care institutions. The Council of Europe has successfully developed the first international legally binding Convention (MediCrim) to combat criminal offences related to counterfeiting of medicines and similar criminal offences against public health, which was opened for signature in October 2011 [25]. The objectives of the Convention are to prevent and combat the counterfeiting of medicines, to combat similar crimes, to protect the rights of consumers to the integrity of medicines and to maintain confidence in the health care system, and to protect the rights of victims of counterfeit and related criminal offences. It should be noted that the Convention has not been signed and ratified by Latvia. The authors admit that accession of Latvia to the above-mentioned convention will increase the resources and areas of cooperation between the law enforcement agencies of Latvia. It is possible that the prevention and combating of counterfeiting of medicines would become more efficient in the country.

## **2.4 New technologies in containment and prevention of COVID-19 negative consequences**

In connection with the rapid spread of COVID-19, it should be noted that the new digital technologies are getting involved in the control of the carriers of this virus. Thus, Digital technology companies Unacast, Facebook, Data for Good improve the ability to control the movement and location of the virus carrier, the quarantined person. The draft provides that anyone is able to obtain information that he/she had (a direct or indirect) contact with a virus carrier or a quarantined person. Those persons who will be involved in the project will have the opportunity to determine the location, time and duration of contact with people who may be connected with the COVID-19. Depending on the directness and duration of the contact, the necessary preventive measures will be determined. In Australia a special law has been adopted – “Human Biosafety Emergency 2020 [26]. The law sets out special security conditions [27]) during the spread of coronavirus. A specially designed COVIDSafe application helps to find close contact with cases of COVID-19. This application helps national and local officials of health care to communicate quickly with people, who may have been exposed to potential impacts of COVID-19. The application COVIDSafe speeds up the current manual search process of people who have been in close contact with someone

using the COVID-19 [28]. This means that people being in the contact will be contacted faster because they are at risk of infection. This reduces the chances transmitting the virus to family, friends and other members of the society. National and local health officials can only access application information if someone supports them and agrees to download a mobile programme and application. Officials of the Ministry of Health can only use this information to help alert those who may require quarantine or to verify relevant information. When downloading the application, a person must provide his/her name, mobile phone number, postal code, and age. Confirmation message on the connection will be received from the operator and the installation process will be completed. The COVIDSafe application, using Bluetooth technology, allows people with smart phones to receive information that they were close to an object with COVID-19. Health care employees will inform the owner of the phone that he or she has been close to an appropriate object.

It is expected that in Latvia also by mid-May 2020 the population will be offered the *Bluetooth* application, which will provide an opportunity to get information on possible contact with the carrier of COVID-19 [29]. Installation and use of the software will be free and voluntary. Users of smart devices will be able to receive information that they may have had contact with the patient. A person diagnosed with COVID-19 will be assigned a code to log in to the application. Exchanging signals from smart devices will allow you to detect the presence of appropriate contacts. The data will be stored in the application for 14 days. The data will then be deleted automatically. There is a clear need here for technological solutions if patients do not recover and will be carriers of the virus for a long time. Logically, the question arises as to what might be the relationship between the *Bluetooth* applications used to limit COVID-19 and criminology. This connection can be very interesting and promising. In Latvia, since 2017, persons who have been suspended from serving a sentence of deprivation of liberty may be subject to electronic supervision, it means control by technical means determined by a court and performed by the State Probation Service. In Latvia, electronic supervision is an intensive control measure ordered by a court for the control by technical means of those persons released from imprisonment for a period of one to 12 months [30]. It is referred to as an “assistant” in the common range of probation measures for conditionally released persons. The technical side of the electronic supervision is provided by three main issues – a bracelet, the base station and the computer software of the electronic supervision. The bracelet around the leg is small, its weight is 60 grams, it is with an adjustable rubber strap that can be worn on any leg, and it has a radio frequency transmitter. It should be worn constantly during supervision. The use of the electronic supervision is limited by the need for the base station, a limited number of cuffs. *Bluetooth* applications, which are much more economical and have a much wider range of use, can be used for those who can be released from serving a custodial sentence.

On April 7, 2020 the European Council adopted the historic document “Guidelines for Governments on Respect for Democracy, the Rule of Law and Human Rights under COVID-19” [31]. The guidelines provided governments with a set of solution tools to address the current unprecedented and massive sanitary crisis, respecting democracy, the rule of law and human rights. The policy paper rightly acknowledges that governments are facing enormous challenges for their citizens in the face of COVID-19 in their efforts to protect. Restrictions on society, which are an integral part of democracy, cannot be recognized as the key area of action. The most significant social, political and legal challenges countries are facing are their ability to respond effectively to this crisis, while ensuring that their actions do not undermine the rule of law and fundamental human rights. Although the virus destroys the lives of a lot of people, the destruction of fundamental societal values should not be allowed. Article 15 of the European Convention on Human Rights provides that in time of war or

other public emergency threatening the life of the nation any High Contracting Party may take measures derogating from its obligations under the Convention to the extent strictly required by the exigencies of the situation, provided that such measures are not inconsistent with its other obligations under international law [32]. It is acknowledged in the guidelines that each state must assess whether measures taken restrict human rights and freedoms under the Convention, as well as the types and extent of the restrictions. Restrictive measures should be aimed at protecting countries from threats by protecting public values. Any violation of the Convention will be assessed by the European Court on Human Rights. It is quite right that protection against crime and the protection of victims of crime are important in the context of the COVID-19 crisis and emergency. Criminal incidents, violations of the law, domestic violence and sexual harassment are increasingly reported to law enforcement authorities. This indicates that isolation and restrictive approaches can determine these criminal offences.

### 3 Conclusions

1. In order to prevent the negative consequences of the COVID-19, it is of great importance to know its origin and development trends. At present, there are no clear conclusions on the origin of the virus.
2. A criminological approach that studies the formation of COVID-19, its spread, the effectiveness of preventive measures, can provide a new understanding and conceptual approaches to mitigating the effects of the global crisis.
3. Prognostic models of COVID-19 development, including the development of the epidemiological situation in Latvia, have not been fulfilled. This could be explained by the balanced and well-designed functioning of the prevention and health system.
4. As a result of the COVID-19 crisis, there is a trend towards an increase in overall crime. The increase in the number of crimes of primitive nature (brutal robbery, unmotivated murder, etc.) is observed in the mechanisms of committing criminal offences. In addition, the intellectual development of crime, the commission of criminal offences using modern technologies or complex crime planning and logistics schemes can be stated too.
5. Modern technologies, including artificial intelligence, are increasingly being used to limit and prevent negative effects of COVID-19. In practice, physical surveillance and digital tracking technologies are used, which can contribute to violations of the legal framework for the protection of personal data.
6. Policy planning documents of the European Union and the Council should be used more broadly to limit and prevent the negative effects of COVID-19. It is necessary to identify the impact of the new conventional MediCrim regulation on legal and health sector in Latvia, as well as to develop international legal cooperation.

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