The impact of the COVID-19 pandemic on the European Union's public health policy

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Abstract: *In the spring of 2020 the COVID-19 pandemic emerged as one of the most complex and most serious challenges of the European Union, threatening the lives and quality of life of European citizens and the economy and healthcare systems of EU Member States. The fight against the pandemic required the collaboration of many different disciplines and sectors, and over time it had become clear that co-operation between EU Member States and EU organisations is essential for successful crisis management. This cross-border healthcare emergency has seriously tested the mechanisms set by EU treaties and legislations, as well as the organisations responsible for shaping and implementing the European Union's public health policy. Over the past year we have gained valuable data on how the system of rules and task sharing mechanisms have supported the fight against the pandemic and its effects. By reviewing and examining our findings, we may find answers about the impact of the COVID-19 pandemic on the European Union's public health policy and how it can be further developed.*

Keywords: ***COVID-19; public health; European Union; health policy; healthcare***

Introduction

The appearance of the coronavirus (SARS-COV-2), which causes severe respiratory syndrome, was reported by the Chinese authorities in Wuhan in December 2019 (ECDC 2020a: 1). The pandemic caused by the virus was named coronavirus-19, or COVID-19 (Esakandari 2020: 1). Typical symptoms of the disease include fever, dry cough and loss of taste and smell. Though a significant proportion of the infected are asymptomatic, COVID-19 can be severe or even fatal in

many cases. By 20 January 2020, nearly 300 cases had already been registered in China and the virus had also appeared in neighbouring Asian countries. As a result of the rapid spread of the virus, by 21 February 2020, a total of 47 cases had been identified in nine European countries (Spiteri et al, 2020: 1). By 11 March, a total of 118,000 cases of COVID-19 had been identified across 114 countries, at which point the Director-General of the WHO declared the situation a pandemic, urging national governments to act immediately (WHO 2020). The pandemic posed a serious challenge to the public health systems and economies of the EU Member States, and required advanced solutions from the EU itself. By March 2020, it became clear that the pandemic would be the strongest test of the Union's public health policy to date.

In our study, we examined the effects of the COVID-19 pandemic on public health policy in the European Union, seeking answers to the following main questions: What EU rules and task-sharing mechanisms were in place to address the pandemic and its public health impact in 2020? To what extent can we consider the European Union's public health policy to be effective in tackling the COVID-19 pandemic in 2020? To successfully manage future pandemics, in which direction should EU public health policy be further developed?

We hypothesise that the regulations and task-sharing mechanisms established before 2020 for EU public health policy did not provide the relevant EU institutions with sufficient powers and tools to manage the COVID-19 pandemic fully. As a policy with supportive powers under the Lisbon Treaty, we hypothesise that EU public health policy has not proved sufficient to coordinate Member States' public health measures properly. We hypothesise that to coordinate future pandemics more effectively at the EU level, it is necessary to provide broader tools and support mechanisms for the public health policy at the EU level and the institutions responsible for its implementation.

The theoretical framework of the study

As a theoretical framework of the study, we used the model of institutional rational choice (IRC). The central concept of IRC is the institution itself, which means formal organisations and the system of public policy instruments. The IRC sought to establish a standard explanatory model capable of describing, explaining and predicting social actions in different institutions and their outcomes based on uniform principles (Gajduschek et. al, 2010: 35–36). The IRC is a general language that captures the way rules, the physical-material conditions of the world and the various characteristics of the community determine the scenes and places for action, the incentives that affect individuals and the resulting social outcomes (Sabatier 1999: 59). With the theory's help, we can understand why the institutions and public policies created to solve various social problems are successful or unsuccessful. We can also formulate forecasts

and provide normative guidelines on the type of institutions we can expect the right choices and methods to achieve a given policy goal. The IRC is a theoretical framework for examining and understanding a wide variety of public policy areas (Gajduschek et al. 2010: 36). The IRC provides a complicated approach to analysing situations where multiple organisations and actors' complex strategies and actions can be identified (Ostrom, 2005: 188).

Based on this theoretical approach, EU public health policy can be defined and interpreted by examining the roles of relevant EU legislation, mechanisms and EU organisations. Examining the sets of rules that define the EU's public health policy, the division of tasks between EU organisations will help understand the value system and logic that defined the Union's epidemic management in 2020. By comparing the actions taken by EU organisations with their significant public health outcomes, it is possible to assess whether the EU has achieved the objectives set out in its public health policy. Thus, the IRC application will contribute to the critical legislative and organisational aspects of disease management at the EU level and thus to the future development of EU public health policy.

Methods

As the first step of a systematic scientific assessment, we summarised the societal needs and problems posed by the COVID-19 pandemic. Next, we outlined the European Union's public health policy's main objectives concerning the COVID-19 pandemic and categorised the Union's main responsibilities for repressing the pandemic and supporting health systems. In the next section of the analysis, we summarised the EU rule-making systems and task-sharing mechanisms in place for these tasks before 2020 and the actions taken by EU organisations during the coronavirus pandemic. In the next step, we assessed the EU public health policy's effectiveness in terms of output and outcome indicators related to the main objectives and measures. Outcome indicators were COVID-19 deaths in 2020 and excess deaths in 2020, which showed whether the Union's public health policy goals (such as curbing the epidemic and protecting the health and lives of citizens) had been achieved. Output indicators were used to assess the information that showed whether the measures enabled EU organisations to coordinate Member States' non-pharmaceutical measures, vaccine procurement and cross-border health services (such as the heterogeneity of the Member States' stringency index, or face-covering policies). Finally, we examined the direction in which the Union's public health policy should move to manage future epidemics successfully and the resolutions formulated by key EU actors and organisations in this regard.

In the systematic scientific evaluation of the Union's public health policy, we studied domestic and international scientific literature, as well as international treaties and legislation. In addition, we analysed the text of the main treaties, decisions, recommendations and resolutions published in Eur-Lex and issued by the European Commission, the European Parliament and the Council. The study did not examine the effects of the pandemic from aspects beyond the European Union's public health policy, such as economic aspects, or aspects related to Schengen. The time period examined by the study ranges from the start of the pandemic until 31 December 2020.

Results

Social needs and problems caused by the COVID-19 pandemic

In the spring of 2020, the COVID-19 pandemic affected certain groups of European citizens in a wide-ranging and different way, resulting in the emergence of a very complex set of problems facing the governments of the Member States and the European Union. Uncertainties about the spread of the virus, its mechanism of action and uncertainties about the treatment options for the disease caused concern and fear among citizens. The pandemic posed a serious threat to the lives and quality of life of the population. The elderly and those with chronic illnesses are at increased risk (Wolff 2020).

Due to the rapid spread of the SARS-COV-2 virus, there was a possibility of overloading health capacities in a short time, and that could cause a significant reduction in the chances of survival for people with COVID-19 disease. Due to the burden on the health system, individuals with other non-COVID-19 medical conditions sometimes did not receive timely or adequate quality care, and that could have been perceived as a threat by the population (Shaun 2020). Fear and stress of infection, as well as increasing isolation due to social distancing and quarantine, have increased mental health problems among certain social groups (Xiong 2020).

The economic effects of restrictive measures to slow the spread of the pandemic have also been significant and far-reaching. Turnover and revenue have fallen sharply in many sectors including aviation, vehicle manufacturing, raw material processing, construction and tourism (World Bank 2020). Hundreds of thousands of people lost their jobs in a short time or were forced to earn less on reduced working hours. The pandemic also created serious challenges to the education systems of the countries, especially where digital solutions in education were less prevalent, or less advanced, or where specific social groups had less access to these tools. In addition, EU Member States were affected by the effects of the pandemic in different ways and to distinct degrees due to their dissimilar economic structures.

Each and every country developed a need to deal with the emergency caused by the pandemic, such as protecting people's health and lives, or preventing the healthcare system from collapsing. On the other hand, it became necessary to apply restrictive measures only to an extent, and only for as long as it's epidemiologically justified in order to prevent the collapse of certain economic sectors. In addition, it seemed clear that EU Member States needed to coordinate their crisis management measures as if when a Member State did not take appropriate measures to reduce the spread of the pandemic, the healthcare and economic systems of other EU Member States could be affected.

The main objectives of the European Union's public health policy in relation to the COVID-19 pandemic

The Treaty of Lisbon adopted in 2007 clarifies the competences of the Member States and of the Union in the public health policy. The competence of the Member States is to provide healthcare services and related resources, whilst pursuant to Articles 2C and 2E of the Treaty the Union has competence in the field of supporting and coordinating Member State activities aimed at the protection of human health and development of health (Council of the European Union 2007: 47–48). In addition to these, the Union and the Member States have divided competence in regard to public health safety risks.

By adopting the Treaty of Lisbon, Article 168 of the Treaty on the Functioning of the European Union contains the provisions on the field of public health. Pursuant to par. 1 of this Article 'a high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities', and the Union action supplementing the national policy shall be aimed at, inter alia, the prevention, research of factors and reasons risking the health, as well as at education and notification (Official Journal of the European Union 2012: 122). Article 168, par. 2 motivates the harmonisation of the policy and activities of the Member States, sharing their good practice in the aforementioned fields, and encourages the Member States to establish co-operations aimed at the development of the healthcare services of border regions.

Pursuant to par. 4, the Union has competence in taking 'measures regarding setting up the high-level and safety provisions of medicines and medical products' (Official Journal of the European Union 2012: 123). Paragraph 5 highlights that the Union action shall be inclusive of 'monitoring, early warning of and combating serious cross-border threats to health' (Official Journal of the European Union 2012: 123). Paragraphs 5 and 7 set out, however, that the Union shall respect the health policy of the Member States, excluding any kind of harmonisation in the fields subject to par. 1 and 2, and in accordance with the Treaty of Lisbon, it sets out, that the provision of healthcare services shall still remain the exclusive competence of the Member States.

Based on the overview described above, the European Union's public health policy's fundamental objective is to protect the lives and health of EU citizens, with the more specific aim of reducing the pandemic and supporting the health systems of the Member States. Measures to reduce the pandemic and thereby reduce the reproductive rate of the virus (ECDC 2020b), as well as interventions to support the functioning of health systems, can be summarised as follows:

a) Decreasing the number of contacts (e.g., adapting stay at home restrictions, cancellation of public events and gatherings, school and workplace closures, restrictions on internal movement, international travel controls);
b) Decreasing the risk of transmission (e.g., obligatory use of face masks in outdoor and indoor spaces, application of hand and respiratory hygiene rules);
c) Controlling the infection source (e.g., open public testing, contact tracing, isolation of symptomatic cases not requiring hospitalisation, quarantining of contacts).
d) Reducing the proportion of the population susceptible to infection (with safe and effective vaccinations).
e) Supporting stressed health systems by providing health capacities, tools and human resources.

These interventions can be grouped into three main categories, which also define the responsibilities of the European Union: Reducing the number of physical contacts, reducing the likelihood of infection transmission and controlling the infection source (1) can be achieved through non-pharmaceutical measures and their coordination at the EU level. Reducing the proportion of the population susceptible to infection (2) can be achieved by applying pharmaceutical measures and their coordination at the EU level. Support for health systems (3) can be achieved by coordinating cross-border health coordination at the EU level. In the next section of the analysis, we summarised for these three areas of responsibility which EU rule systems and task-sharing mechanisms were in place before 2020 and what measures were implemented by EU organisations during the coronavirus pandemic.

Overview of pre-pandemic EU regulatory frameworks, task-sharing mechanisms and EU actions in 2020

Coordination of non-pharmaceutical measures taken by Member States at EU level

Regulations established before 2020 to support the implementation of this task

The pandemics caused by the SARS-COV-1 virus emerging in 2002[6], and the H1N1/09 virus in 2009[7], raised the attention of the European Union and the Member States on the significance of transnational healthcare emergencies. The Decision of the European Parliament and of the Council in 2013 on serious cross-border threats to health constituted an important basis of those regulations and mechanisms, which arose as opportunities in spring 2020 by the European Union and the Member States in regard to controlling the pandemics caused by the SARS-COV-2 virus. The purpose of the decision is to assist the control of pandemics risking human health and the prevention of the spread thereof by supporting pandemic co-operation and coordination between the Member States (European Parliament 2013). To this end, the Decision includes such provisions and guidelines which enable the risk assessment, monitoring of cross-border health risks as well as the coordination of counter-actions against them.

Pursuant to Article 4 of Title II, the Member States shall develop preparedness and response plans, on whose content they shall notify the specified Union bodies, as well as all Member States every third year (European Parliament 2013: 7). The purpose of arrangements, in addition to the harmonisation of the plans, is the exchange of good practices and experience.

Article 6 of Title III provides that a pandemic supervisory network shall be established, and the Member State authorities have to send the specified pandemic data categories and information to this network (European Parliament 2013: 8). Such data are, inter alia, information regarding the emergence and spread of contagious diseases of known or unknown origin. The establishment of an early notice and rapid response system monitoring the transnational health risks is provided in Article 8 of Title IV, which promotes Union-level risk assessment and supports communication between the Member States, and pro-

6 The SARS-COV-1 virus appeared in China in November 2002, and by September 2003 nearly 8,000 infections had been identified worldwide. One in ten infected had died from the disease caused by the virus (Rabenau et al. 2005: 1).

7 The H1N1 virus, which emerged in Mexico in 2009 and caused an epidemic, contained genes for swine flu, bird flu and human flu. By June 2009, nearly 30,000 cases had been identified worldwide, and on 11 June, the WHO declared a pandemic (Sullivan et al. 2009: 1).

vides a quick alarm. The alert as per Article 9 may be made by a Member State, inter alia, when a rapidly spreading pandemic exceeding the national response--ability, causing a large number of cases or deaths to emerge in the area, which may affect multiple Member States (European Parliament 2013: 9–10). Article 11 of the Decision provides in detail which European Union bodies shall play a key role in the coordination of the response on the emergency situation, and sets out the notification and reporting obligations of the Member States on the public health measures taken by them, and highlights that the Member States may also ask for assistance from each other.

EU organisations supporting the task

The European Commission is the proposal-maker, decision-preparation, enforcement and control body of the European Union, which has as many members as the Member States (Greer et al. 2019: 30). The main duties of the Commission are to initiate different laws, control the observing of the provisions and the enforcement of professional policies. Pursuant to par. 30 of the Decision on transnational severe health risks, adopted in 2013, the Commission gets enforcement competences in order to harmonise and coordinate the Member State actions related to the health crisis (European Parliament 2013: 5). Pursuant to Article 19 of the Decision, the Commission shall make reports to the European Parliament and the Council every third year on the operation of the pandemic supervisory network and the quick response system.

One of the main corresponding bodies of the Commission is the Directorate--General for Health and Food Safety (DG SANCO), which is responsible for the formation and enforcement of public health and food safety policies (Greer et al. 2019: 30–31). In the Strategic Plan of the Directorate-General for the term between 2016–2020, the monitoring and effective management of transnational health risks are presented as a priority, and the target is set up to increase the number of those Member States which improved their preparation and response abilities (European Commission 2016).

One of the main European Union professional bodies in the battle against the COVID-19 pandemic is the European Centre for Disease Prevention and Control, established in 2004 (European Parliament 2004). The purpose of the operation of the organisation is to support the effective and coordinated management of pandemics (Greer 2019: 58–59). For this purpose, the ECDC operates the early warning and rapid response system, conducts risk assessments and data analyses regarding contagious diseases of unknown origin, risking human health. The organisation plays an active role in the European pandemic expert education by implementing scientific training programs and conferences. The ECDC further provides advice to each institute of the European Union and the Member States and establishes co-operations with the European Medicines

Agency, the World Health Organization and international pandemics organisations beyond Europe.

Main actions implemented by EU organisations in 2020

As early as 25 January 2020, the ECDC indicated in its weekly flash report that the coronavirus which had emerged in China's Wuhan Province could be considered as a pandemic threat and its global spread was highly likely (ECDC 2020b: 8). However, EU Member States were slow to respond to the emergency and initially adopted different strategies, notably Sweden and the United Kingdom, which had initially aimed at achieving herd immunity, but over time all countries recognised that non-pharmaceutical measures had to be taken due to the rapid spread of the pandemic and the hastily overburdened healthcare structures.

On 16 March, the European Commission published its guidelines on border management measures, which, in addition to protecting citizens' health, were to ensure the free movement of goods and services (European Commission 2020a). The guidelines set out a number of considerations for Member States to design their public health measures and restrictions. Although the European Commission was less proactive in the initial phase of the pandemic, by 15 April it issued a timetable and a set of criteria to Member States, which facilitated the planned lifting of restrictions (European Commission 2020c). The document sets out three main criteria that need to be assessed before restrictions can be lifted. First, it has to be examined whether there has been a significant reduction in the spread of the pandemic (e.g. the number of new cases), then the available sufficient healthcare (e.g. utilisation of ICU beds) and adequate monitoring capacities (e.g. testing and contact tracing) need to be taken into consideration. The guidelines underscored that evidence-based decision-making was particularly recommended for Member States and they are also encouraged to coordinate their actions with other Member States and comply with EU rules.

Since the outbreak of the pandemic, the ECDC has continuously provided epidemiological assessments, comparative analyses of individual Member States' measures and recommendations in many areas based on scientific evidence (ECDC 2020c; ECDC 2020d).

Management of pharmaceutical measures at the EU level

Regulations established before 2020 to support the implementation of this task

The Decision of the European Parliament and the Council on serious cross-border threats to health contains essential elements for managing pharmaceutical measures at the EU level. Article 5 of Title II contains the provisions on joint

procurements related to healthcare counter-measures, claiming that the process is ensured for all Member States; however, participation to the proceeding is not mandatory. Prior to initiating the joint procurement, the participating Member States shall agree in a separate agreement on the practical and professional implementation aspects of the process.

EU organisations supporting the task

The European Medicines Agency plays a significant role in the management of transnational risks, since the duty of the organisation is the scientific evaluation of distribution requests of medicines, monitoring and supervision of the safety of medicines (Greer et al. 2019: 121–122). Therefore, during a world pandemic, this agency evaluates the potential medicines aimed at the management of a contagious disease, as well as vaccines aimed at the reduction of the spread of the disease.[8]

Main actions implemented by EU organisations in 2020

In its Regulation of 14 April 2020, the Council of the European Union introduced emergency support to finance epidemic-related expenditure, allowing the Commission, in co-operation with the Member States, to procure, transfer and stock up products and services to the Member States (the Council of the European Union 2020). As described by Greer and his colleagues, the joint procurement agreement allows Member States to jointly procure medicines, medical devices, services and goods in the event of cross-border health threats (Greer et al 2020).

The coordination of cross-border healthcare co-operation at the EU level.

Regulations established before 2020 to support the implementation of this task

The Directive of the European Parliament and of the Council on the application of patients' rights in cross-border healthcare, adopted in 2011, may be deemed a key moment from the aspect of healthcare co-operations between the Member States. The purpose of the Directive is to support the access of citizens to cross-border healthcare services, thus assisting patient mobility and co-operation between the Member States (European Parliament 2011). From the aspect of the

8 The headquarters of the agency was moved from London to Amsterdam after Brexit (consilium.europa.eu 2020).

access of citizens, Article 31 of the Directive shall be highlighted, providing that when a patient is unable to use the healthcare required by the Member States as per his/her residence within the deadline based on medical grounds, (s)he may enjoy healthcare in another Member States following such request. Article 6 of Chapter II of the Directive provides that each Member State has to establish national contact points, whose purpose is to support the citizens in exercising their rights related to transnational healthcare services (European Parliament 2011: 57). Therefore, the national contact points establish co-operations with each other, with the professional and patient organisations and health insurance companies operating in their Member States. Chapter III of the Directive has further provisions on the reimbursement of transnational healthcare costs, whilst Chapter IV contains guidelines regarding mutual assistance and co-operation between the Member States, also motivating the Member States in the development of border region co-operations, exchange of information and experience. (European Parliament 2011: 60–62).

EU organisations supporting the task

The Health Security Committee was established by Article 17 of the Decision on transnational severe health risks, adopted in 2013 (European Parliament 2013: 13). Pursuant to the Decision, the duty of the committee, which has two representatives per each Member State, is the harmonisation of readiness and response planning, coordination of response on transnational health crises, in co-operation with the European Commission and the Member States.

Main actions implemented by EU organizations in 2020

The COVID-19 pandemic affected Member States at different times and to different degrees in the spring of 2020, and health systems were overwhelmed in some countries. Under the Cross-border Healthcare Directive adopted in 2011 (European Parliament 2011) and the European Commission's Communication promoting cross-border co-operation in healthcare adopted on 3 April 2020, many Member States have requested and received assistance from the European Union and from other Member States, by that means effectively reducing the pressure on their health systems (European Commission 2020b). In this context, during the pandemic's spring and autumn waves, hospital beds, equipment, emergency transport and hospital care were provided to citizens of other Member States by countries less burdened at the time. The Commission's April communication emphasises that the cross-border assistance in healthcare is coordinated by the Health Security Committee, which coordinates requests for assistance and organises the necessary measures through the Early Warning and Response System. The communication also details the criteria and the rules

already in place for the reimbursement of medical expenses incurred in the Member State providing treatment, and encourages Member States to develop healthcare co-operation in border regions.

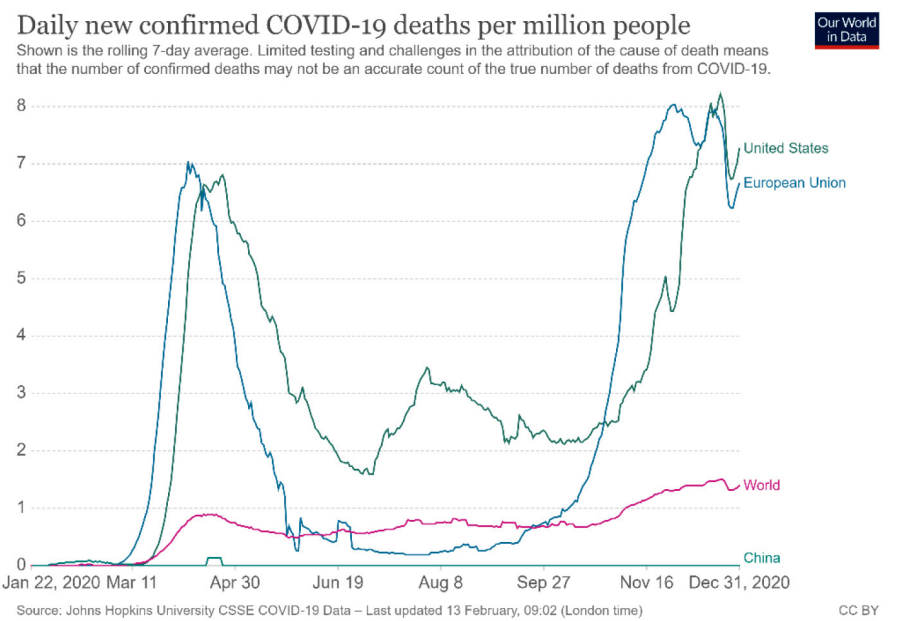
In the next chapter of the analysis, we examine the effectiveness of the European Union's public health policy in addressing the COVID-19 pandemic in 2020 regarding the resources at its disposal.

Evaluation of the results of the measures taken by the European Union

Evaluation of the outcome of the fundamental objective of EU public health policy

The European Union's primary objectives have not been met, namely to protect the health and lives of the population and to reduce the risk and adverse effects of the epidemic, with significant deaths at the EU level during the spring and autumn waves of the epidemic in 2020. The daily new confirmed COVID-19 deaths per million people in 2020 was well above the world average for most of 2020, as well as the average Chinese mortality data (Fig. 1). The limitation of the analysis of COVID-19 mortality data is that neither EU Member States nor the rest of the world has a standardised COVID-19 case definition.

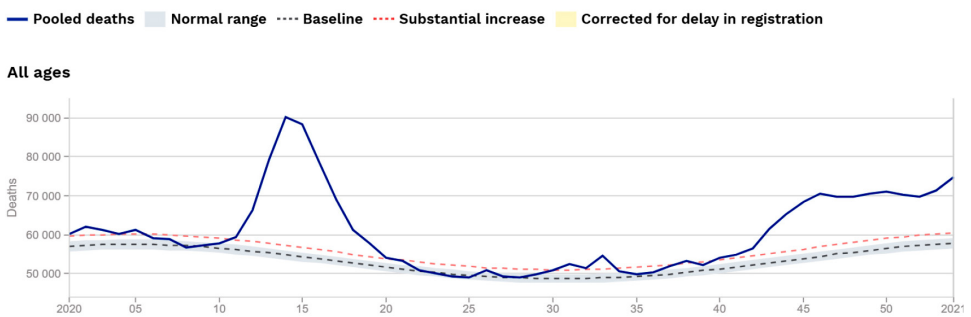
Figure 1: Daily new confirmed COVID-19 deaths per million people in the USA, the EU, China and the World from 24 January 2020 to 31 December 2020.



Source: University of Oxford (2020)

It is also advisable to examine the extent of excess mortality. The Euromomo database contains weekly mortality data for 21 EU Member States as well as Switzerland and Norway. Based on this, between March and May 2020 and between October and December 2020, the EU Member States' mortality rate increased substantially compared to previous years (Fig. 2.).

Figure 2: Pooled weekly total number of deaths in the data-providing EuroMOMO partner countries in 2020.



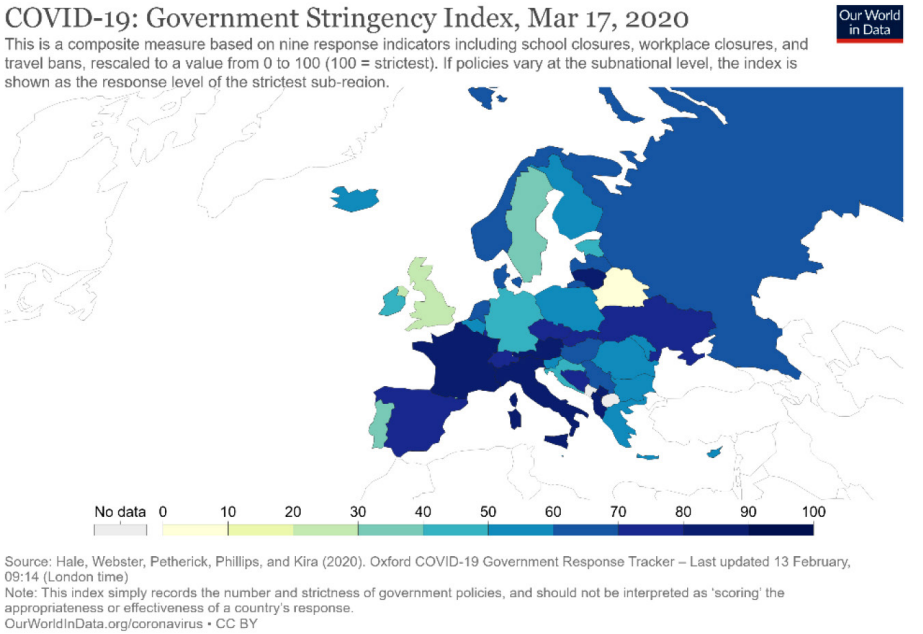
Source: Euromomo database (2020)

The evaluation of the coordination of non-pharmaceutical measures at the Union level

To assess the coordination of non-pharmaceutical measures to reduce physical contact, we used the 'stringency index' as an output indicator developed by the University of Oxford, which consists of nine components: school closures, workplace closures, stay-at-home requirements, restrictions on public gatherings, closures of public transport, cancellation of public events, public information campaigns, restrictions on internal movements and international travel controls. The severity of each Member State's restrictive measures is indicated by the index with values between 0 and 100, with a value of '0' being the least stringent and a value of '100' being the most stringent. If the Member States' stringency indexes show a heterogeneous picture, it can be said that the measures of the Member States have not been fully harmonised.

On 17 March 2020, six days after the WHO declared a pandemic, EU Member States' stringency index showed an enormous difference. Of the 27 Member States, three were between 20 and 40, 12 were between 40 and 60, eight were between 60 and 80 and four were between 80 and 90 (Fig. 3).

Figure 3: European countries' stringency index values on 17 March 2020



Source: University of Oxford (2020)

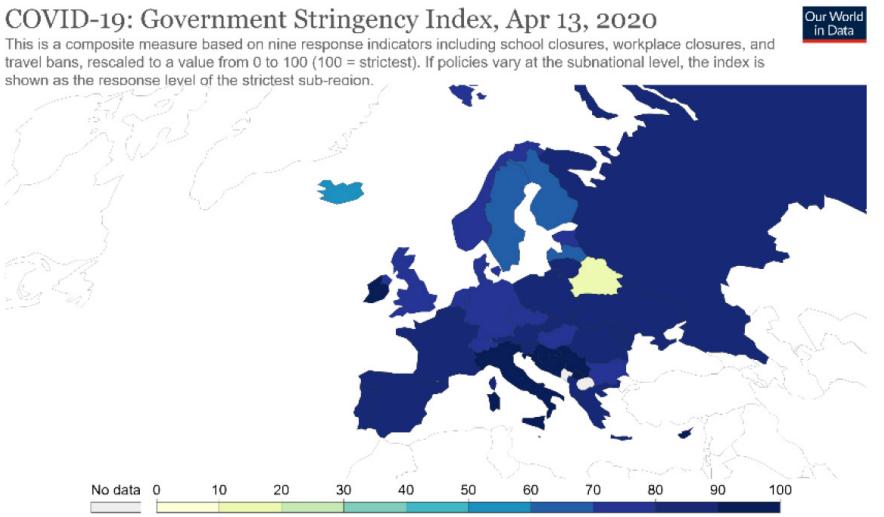
When the COVID-19 epidemic broke out in the spring of 2020, a significant number of EU Member States reacted late and the EU did not have sufficient resources to fully coordinate Member States' actions. As a result, the wide, community-based spread of the virus was not prevented in many countries. This has led to significant morbidity and mortality numbers, the overburdening of health systems and economic decline due to the introduction of necessarily applied non-pharmaceutical measures.

By April 2020, the restrictive measures were significantly tightened and the stringency indexes were standardised. Of the 27 Member States, two were between 60 and 70, 23 were between 70 and 90 and two were between 90 and 100 (Fig. 4.).

In assessing the coordination of non-pharmacological measures to decrease the risk of transmission, we examined mask-wearing policies in Member States. If the Member States' mask-wearing policies show a heterogeneous picture, it indicates a lack of harmonisation.

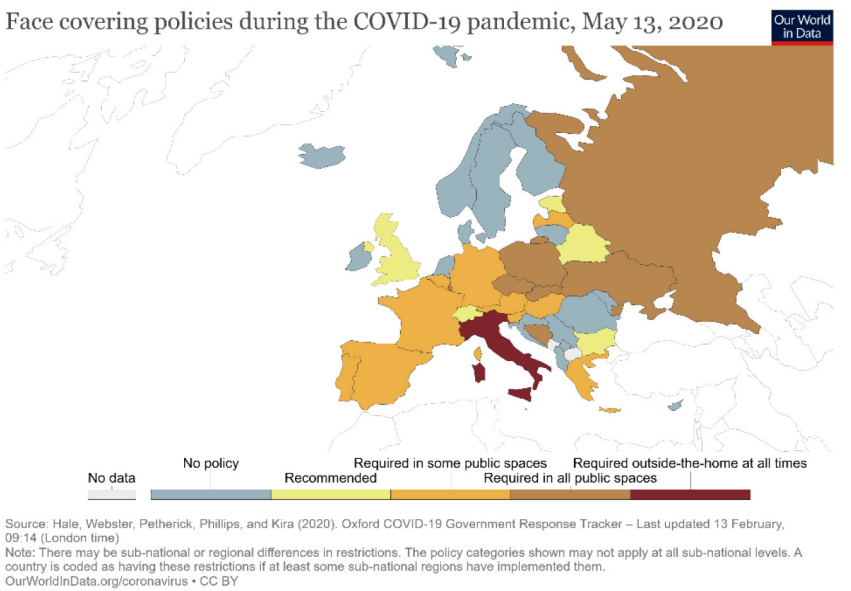
On 13 May 2020, two months after the situation was classified as a pandemic, eight out of 27 Member States had no guidelines, three countries only recommended wearing a mask. In 12 countries mask-wearing was obligatory only in parts of public spaces. In three countries mask-wearing was obligatory in all

Figure 4: European countries stringency index values on 13 April 2020



Source: University of Oxford (2020)

Figure 5: European countries face covering policies on 13 May 2020



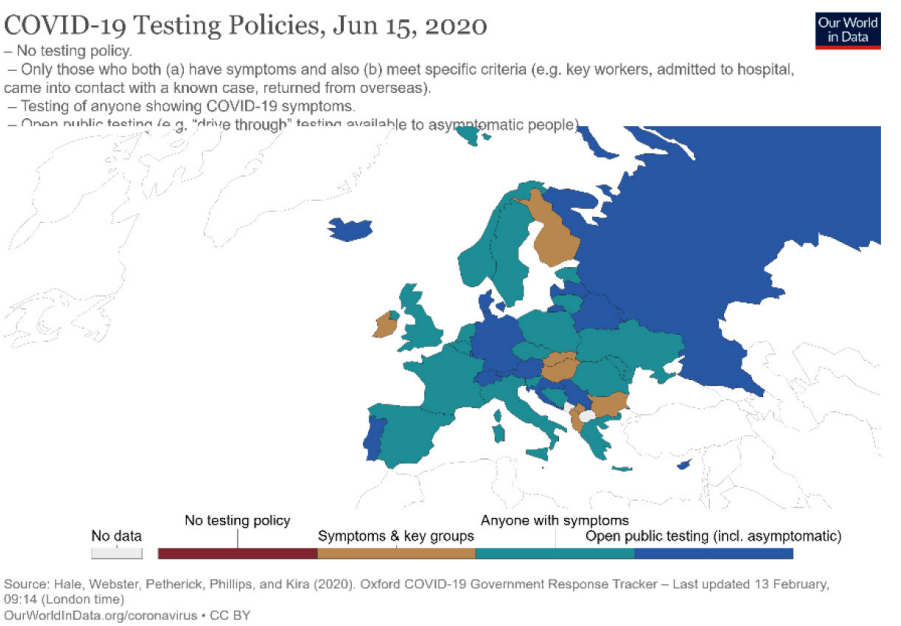
Source: University of Oxford (2020)

public spaces, while in the case of one country, mask wearing was mandatory both indoors and outdoors (Fig. 5).

Although the delayed response of Member States and EU organisations was initially replaced by a more proactive approach over time, EU Member States still don't have a uniform face covering strategy.

A similar observation can be made regarding the coordination of Member States' infection source control, i.e. screening and contact tracing strategies at the EU level. On 15 June 2020, in five of the 27 Member States, only those who had symptoms and belonged to a specific group were tested (e.g. health workers, hospitalisation, returning from abroad). All symptomatic individuals were tested in 18 Member States and a testing strategy for both symptomatic and asymptomatic individuals was in place in seven Member States (Fig. 6). The testing policies of the Member States thus showed a heterogenic picture, indicating a lack of harmonisation.

Figure 6: European countries testing policies on 15 June 2020



Source: University of Oxford (2020)

European Union organisations have facilitated the planned implementation and coordination of lifting restrictions by formulating guidelines and criteria, which is a significant achievement in terms of mitigating economic damage, though Member State governments are not obliged to take decisions on the basis of these criteria. The same applies to the recommendations made in the

ECDC's public health assessments, and to the recommendations made in papers comparing the epidemiological management strategies of Member States. Until adequate vaccines or therapies become available to provide effective treatment for the disease, a wrong decision by the government of a single Member State to overemphasise economic or other interests could pose significant public health risks for all Member States.

Evaluation of the management of pharmaceutical measures at the EU level

According to the information provided by the European Commission on 31 December 2020, the EU would procure 2 billion doses of COVID-19 vaccine under a joint procurement agreement with several manufacturers, which will be made available to the Member States (European Commission 2020f). The benefit of joint procurement is that, in addition to scarce production capacity, it still provides equitable access to the vaccine for all Member States involved in the procurement, and vaccine manufacturers are less able to manipulate Member States competing for the vaccine. The joint procurement of vaccines is a significant achievement, allowing all Member States to start their immunisation programs simultaneously and, if successful, to phase out restrictive measures. It should also be noted that, in the case of vaccines, more comprehensive research, development and production processes have made it possible for the EU Member States to obtain vaccines through joint procurement. In contrast, in the initial phase of the pandemic, due to the rapid spread of the virus, it was impossible to implement joint procurement, which required lengthy consultations for drugs and medical equipment needed to treat the disease.

Evaluation of the coordination of cross-border health co-operation at the EU level

EU organisations have made significant progress in coordinating cross-border co-operation in healthcare: Member States have taken over the treatment and care of patients from countries whose hospital capacity has been overburdened, thus improving the chances of survival for many EU citizens. During both the spring and autumn waves of the pandemic, several EU Member States requested and received assistance through EU mediation (e.g. Germany provided the capacity to Italy, the Czech Republic, Belgium), and the Member States offered each other medical capacity, human resources and medical equipment. The Health Security Committee played an essential role in cross-border coordination, linking the EU Member States requesting assistance with the Member States offering health capabilities.

Discussion

The question may arise as to the direction in which the European Union's public health policy can develop in light of the 2020 pandemic experience. Before and after the COVID-19 crisis, several experts argued that the creation of a European Health Union and the extension of EU competences in public health policy were a less realistic goal due to the large differences between Member States' health systems (Vollaard et al. 2016; Clemens et al, 2020). According to Clemens and colleagues, decentralised operations better able to respond to differing needs in each Member State, and the European Union must be left to play a coordinating role in supporting action and development. According to Guy, the 168(7) paragraph of the TFEU (the Treaty on the Functioning of the European Union) does not allow the Union to take comprehensive action in the field of public health and has a major impact on Member States' public health policies; therefore, it's more of a symbiotic relationship between the Member States and the Union (Guy, 2020).

However, according to his analysis, the European Union can influence Member States' public health policies in an indirect way, for example through EU budgetary policies or the European Semester's country-specific recommendations. According to other authors, the experience of the COVID-19 pandemic shows that the powers of EU organisations need to be expanded in order to manage health emergencies more effectively, for example, by providing the ECDC with broader powers and by funding, developing a common emergency, testing and contact tracing strategy, further developing the EU civil protection system, developing common stockpiles and staff (Alemanno 2020; Greer et al. 2020).

Although the opinions of the healthcare experts are controversial, the motion of the European Parliament issued on 7 July 2020, aimed at joint commitment initiated by five families of parties (PPE, S & D, Renew, Vers/Ale, GUE/NGL) on the Union's public health strategy after the COVID-19 pandemic assumes that the European Member States might head towards a closer healthcare co-operation and integration (European Parliament 2020).

The problem identification of the motion declares, inter alia, that the EU has no sufficient tools to appropriately manage pandemics, moreover, significant benefits might arise as a result of access to transnational healthcare services and the better harmonisation of Member State measures. The motion highlights further that the Union Treaties and Regulations provide more room to achieve the public health objectives compared to as of today, and the social and economic processes make the Union's public health policy even more significant. The motion calls the Member States to enhance their co-operation in the field of healthcare, perform stress tests evaluating their healthcare system.

The motion requires the Commission to make a proposal on the minimum requirements of quality healthcare and to make a proposal on establishing

a European response mechanism assisting the management of health crises. According to the motion, in the future, the healthcare and the financing thereof will get a more emphasised role in the process of the European Semester; and in the field of public health, joint procurements may also get a bigger role. The motion further aims at the expansion of financing and the competences of the ECDC, enabling the organisation to work out mandatory guidelines for the Member States and to become able to more efficiently manage the research. The president of the European Commission also confirmed in her speech made in the European Parliament on 7 September 2020, that the Commission's objective is to create a stronger healthcare union and the development of the Union's risk and crisis management system, highlighting the reinforcement of the European Medicines Agency and the ECDC (European Commission, 2020e).

Conclusion

In the spring of 2020, EU Member States had to deal simultaneously with a complex set of problems that threatened human health, rising unemployment, declining government revenues and rising public spending, and various social conflicts. The IRC has proved to be an appropriate tool for evaluating the EU public health policy. The review of EU regulations, task-sharing mechanisms and organisations' functions helped to understand the value system and logic that defined the Union's epidemic management in 2020.

Based on our analysis, our first hypothesis was confirmed as the regulations and task-sharing mechanisms established before EU public health policy until 2020 did not provide the relevant EU institutions with adequate powers to address the COVID-19 epidemic fully. The pre-pandemic EU rules and task-sharing mechanisms only partially covered the complex set of tasks needed to manage the crisis. In many areas, the EU did not have the powers and opportunities to unify Member States' actions.

The analysed data partially confirmed our second hypothesis. Although EU treaties and legislation state that the operation of the health system and the management of emergencies are the responsibility of the Member States, over time it has become clear that if Member States' risk assessments are not based on a uniform methodology and these governments do not take uniform action, it could cause serious problems for other Member States. The rules established before the COVID-19 pandemic and the mechanisms for the division of responsibilities and tasks between EU and Member State organisations were only partially able to ensure the protection of the physical and mental health of European citizens or the effective management of the pandemic. Important differences could be identified between the Member States in strategies to reduce the number of physical contacts, in measures to reduce the likelihood of transmission and control the source of infection, both in the spring and au-

tumn of the pandemic. Significant heterogeneity levels were identified in the Member States' stringency indexes, face-covering policies and testing strategy. At the same time, the European Union has made crucial progress in managing vaccine procurement and coordinating cross-border healthcare.

The experience of the COVID-19 pandemic in 2020, the reviewed international literature and the analysed data confirmed our third hypothesis. A risk assessment based on standard criteria, data collection and indicators is essential for adequately managing future epidemics at the EU level. It is also necessary to provide broader tools and support mechanisms for the public health policy at the EU level and the institutions responsible for its implementation.

The Member States and the European Union must make progress in preventing epidemics and managing health crises, especially in coordinating non-pharmaceutical measures. Based on the literature and decisions and documents issued by EU organisations, it seems that closer co-operation between Member States' health systems could be developed. Overall, the emergence and the consequences of this new type of coronavirus could accelerate the transformation of the European Union's public health policy and it can help promote closer co-operation between European health systems.

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