



## POLICY BRIEF

### Centralized vaccine procurement in the post-COVID-19 European Union

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## Abstract

### Introduction:

The COVID-19 pandemic has confronted healthcare systems worldwide with societal, psychological, and economic burdens. The widespread use of the developed COVID-19 vaccines has been generally pursued to stop the spread, decrease mortality rates, and lift the economic burden of healthcare systems. However, it became apparent that the demand for vaccines outnumbers the supply provided by pharmaceutical manufacturers. This policy brief explores the use of centralized procurement globally to formulate recommendations on how the European Union (EU) and its member states can benefit from such an approach.

### Policy Options:

Globally, different models with varying levels of collaboration on procurement are implemented. The collaboration can be limited to information sharing or extend towards centralized procurement of medical goods. However, during the COVID-19 pandemic, countries collaborated at an unprecedented scale, pooling together resources and expertise to ensure access to scarce vaccine supplies. The resulting centralized approach witnessed in the United States (US), EU, African Union (AU), or through COVAX highlighted the benefits of centralized procurement in the state of crisis.

### Recommendations:

- An independent institution for pandemic preparedness and response:
  - focuses on transparent and timely access to vaccines
  - supports strengthening of national capacities and healthcare systems through periodic monitoring and evaluation.
- A centralized procurement system for all EU member states under the independent institution.
- The development of comprehensive and efficient emergency preparedness plans.

**Keywords:** COVID-19, Vaccination, Centralized procurement, HERA, EU, Emergency response

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## Introduction

In March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic. Globally, the virus has cost more than five million lives, and infection rates have been continuously in flux since the first cases of the virus were reported (1,2). The contagiousness of the disease has confronted healthcare systems worldwide with the question of how to stop its spread most effectively (3). In the early stages of the pandemic, it quickly became apparent that the containment of the virus was nearly impossible without taking drastic measures. Countries implemented mitigation and suppression strategies to slow down disease spread, such as social distancing and lockdowns (4–6). Such strategies contributed to the overarching goal of flattening the curve, in which the number of cases is spread over a longer period of time to not overwhelm healthcare systems' capacity and resources (2). However, it cannot be neglected that despite their effectiveness, such measures carried extensive economic costs and wide-ranging social and psychological costs. Additionally, since their effectiveness depended heavily on individual adherence, standing alone, they were inadequate to contain the virus (7).

Therefore, the development of vaccines for COVID-19 was anticipated with great interest as an effective strategy to end the pandemic and alleviate the above-mentioned burdens from nations and inhabitants (4). The health benefits of vaccinating against COVID-19 include the reduction in mortality and morbidity for those most at risk. Additionally, it reduces further cases and often averts severe disease cases. The economic benefits of vaccination include a reduction in treatment costs, fewer absenteeism rates in the workforce, and hopefully the expedition of a return to normal

social and economic functioning (8). A recent study states that COVID-19 vaccination for individuals above 60 years has already averted 469,000 deaths globally, highlighting the importance of vaccination in the ongoing pandemic (9,10). The European Commission (EC) has declared COVID-19 vaccines as the best way out of the pandemic, presupposing high vaccination rates (11). Therefore, high availability of safe and effective vaccines in an equitable and timely manner is crucial (3,10).

## Context

The existence of vaccines does not mean that countries have the infrastructure and resources to effectively distribute them, nor that individuals will accept them. In the EU, access and availability failed to meet demand when vaccination campaigns started in March 2021. Thus, despite the availability of the needed technology, the EU was - and remains - unable to distribute enough vaccines in an equitable way across its Member States (MS) (12). The EU took a common approach in securing and facilitating distribution. Presented in June 2020, the objectives of the Vaccines Strategy were to 'accelerate the development, manufacturing and deployment of vaccines against COVID-19' (11). However, actions taken to meet the objectives have been widely criticized and were subject to much scrutiny (12,13). Some of the flawed aspects of the strategy included, as stated by EC president von der Leyen, being too optimistic regarding the ability to mass-produce vaccines, acting too late in granting authorization, and not preparing MS equally to distribute vaccines (12,14). Moreover, lack of transparency, lengthy negotiation processes which ended only after a possible threat of monopolizing by the US, and suboptimal vaccine rollout with no regard to national capacities led to inequitable and less than timely access



(12,14). The delay in procurement also led various groups to negotiate with manufacturers on their own (14).

Acknowledging the weaknesses of the vaccine strategy, the EC launched the European Health Emergency Preparedness and Response Authority (HERA) in September 2021 (11). It is a key pillar of the new European Health Union, aiming to fill gaps in the EU's health emergency response and preparedness capabilities. HERA combines the power of the European Centre for Disease Prevention and Control (ECDC) and the European Medicines Agency (EMA), and it has already been challenged for having various flaws. For example, HERA is not an independent agency, and key European institutions such as the European Parliament are not involved. Furthermore, according to the treaties (TEU and TFEU), the EU only holds limited competency to actually translate HERA's vision into action.

The pandemic has demonstrated that the current strategies to tackle health emergencies at the European level are insufficient. Even though the development of HERA could be a first step in the right direction, the accelerated momentum of the pandemic must be utilized to work towards a comprehensive strategy. Therefore, the aim of this policy brief is to develop a new strategy for vaccine procurement in the EU, built upon and informed by previous strategies throughout the world.

### **Policy Options**

In November 2020, the EC adopted the 'Pharmaceutical Strategy for Europe'. The initiative aims to ensure access to affordable medicines, enhance the crisis preparedness and response mechanisms, and diversify and

secure supply chains whilst promoting a strong united EU voice in the world (15). Yet, as witnessed during the pandemic, inefficiencies in the supply chain, procurement capacity constraints, and limited financial resources can hinder access to life-saving medicines. To be well-prepared for the possible occurrence of similar scenarios as the COVID-19 pandemic, we argue that a new, revised procurement strategy, which ensures equitable and timely access to vaccines for all, is needed. We consider centralized procurement, by aggregating demand, increasing bargaining power, and improving procurement management, as a useful tool to comprehensively address flaws in previous strategies. The WHO defines it as the combination of 'several buyers into a single entity that purchases (...) on behalf of those buyers' (13). Figure 1 illustrates factors influencing the feasibility of a centralized procurement approach.

Based on the characteristics of different procurement models (as displayed in Table 1), governments and organizations choose the best option for them. Examples include *informed buying*, where only information on prices and suppliers is shared, or *coordinated informed buying*, where members additionally conduct joint market research. In the *group contracting model*, members enter joint negotiations with selected suppliers; however, the procurement can be done individually, in contrast to the *central contracting and procurement scheme*. Some strategy choices are discussed below, focusing firstly on general procurement mechanisms and secondly on COVID-19 specific procurement approaches, which provide the basis for the development of our conclusive recommendations.



**Table 1: SWOT Analysis of Possible Collaboration**

	<b>Information Sharing Models</b>		<b>Pooled Procurement Models</b>	
	<b>Informed Buying</b>	<b>Coordinated Informed Buying</b>	<b>Group Contracting</b>	<b>Central Contracting and Procurement</b>
<b>Characteristics</b>	Information sharing on prices and suppliers Procurement conducted individually	Information sharing on prices and suppliers Procurement conducted individually Joint market research	Joint Price Negotiations Joint Selection of Suppliers Procurement conducted individually	Joint Tenders and Contract awarding through a representative organization Central procurement unit pools the resources and conducts the purchase on behalf of MS
<b>Strengths</b>	<ul style="list-style-type: none"> <li>- Least costly, less complex than joint procurement</li> <li>- Reduced administrative and horizon scanning costs</li> <li>- Reduction of risks associated with the choice of supplier</li> </ul>		<ul style="list-style-type: none"> <li>- Savings due to bulk purchasing</li> <li>- Lower prices</li> <li>- More efficient supply chain</li> <li>- Improved accountability, transparency, and cost-efficiency</li> </ul>	
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>- Lack of economies of scale factor</li> <li>- May not contribute to lower price purchase</li> </ul>		<ul style="list-style-type: none"> <li>- Complexity – requires a reliable governance system</li> <li>- High setup cost</li> </ul>	
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>- Development of standardized methods for manufacturers and medicine development assessments</li> <li>- May contribute to further political integration</li> <li>- Improved international collaboration</li> </ul>		<ul style="list-style-type: none"> <li>- Improved harmonization of the drug registration process</li> <li>- Improved reliability and accountability of suppliers</li> <li>- Pooled resources and expertise</li> <li>- Greater involvement of local manufacturers</li> <li>- Creation of a single market</li> <li>- Promotion of international trade</li> </ul>	
<b>Threats</b>	<ul style="list-style-type: none"> <li>- Unwillingness of MS to share the information</li> <li>- Limited impact of the reference pricing</li> </ul>		<ul style="list-style-type: none"> <li>- Differing needs among member states</li> <li>- Lack of involvement of bigger MS</li> <li>- Lack of political will and commitment</li> </ul>	

### Procurement Pre-COVID 19

Prior to the pandemic, collaboration on procurement was utilized by international organizations such as the PAHO Revolving Fund and UNICEF (16–19). Within Europe, such activities before the pandemic were often justified by insufficient individual markets of the participating countries (20); this is particularly true for the procurement of small-volume products, such as orphan drugs and innovative medicine. Appendix A provides an overview of European collaborations in place before the pandemic. However, such pre-existing structures were not equipped to deal with a large-scale health crisis like COVID-19.

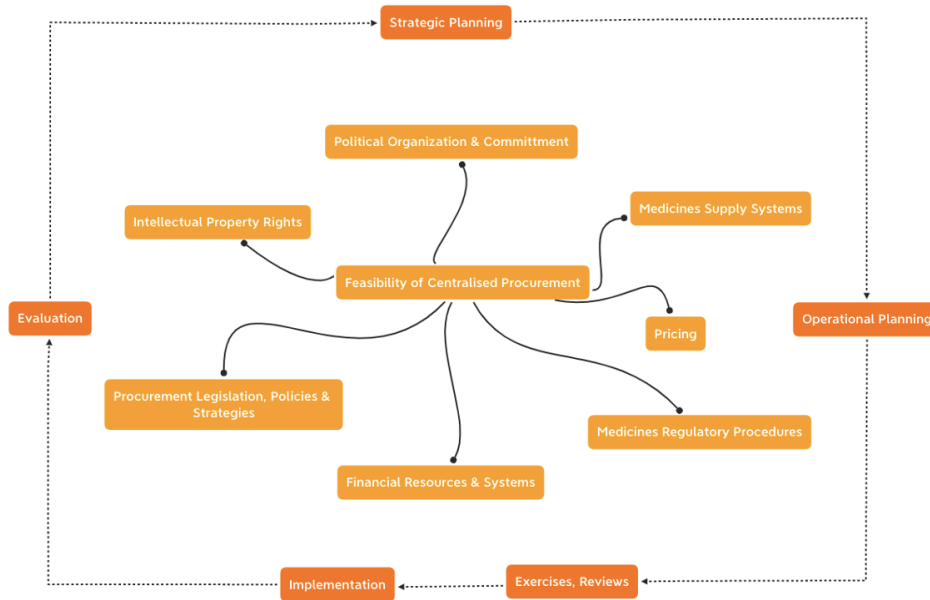
### Centralized Procurement EU

However, during the pandemic, due to the scarce supplies, and state of emergency, many countries decided to cooperate on an unprecedented scale. Governments were entering into Advance Purchase Agreements (APAs) with vaccine companies to secure access to vaccine doses. Meaning they were

committing to purchasing products that were yet to enter the market. Most of these agreements were between private manufacturers and intergovernmental organizations (i.e., EU, COVAX, African Union).

The EU negotiated APAs with vaccine manufacturers as part of their vaccination strategy (21). This followed an unusual approach as vaccines’ safety, quality, and efficacy were previously assessed at the EU level by the EMA, while price negotiations and subsequent reimbursement decisions were commonly taken at the national level (22). The legal basis for pooling competencies at the EU level was the Council regulation EU 2016/369 (23), which set up the emergency support instrument under the principle of solidarity to respond to the pandemic.

Figure 1 illustrates some of the general factors influencing centralized procurement embedded into the broader context of pandemic preparedness. It underlines the complex interplay of various factors.



**Figure 1:** Fusion of Centralised Procurement Feasibility and Pandemic Preparedness Model; Adapted from ECDC, 2009



### *Centralized Procurement Africa*

In Africa, by February 2020, the Africa Joint Continental Strategy for COVID-19 Outbreak was adopted. Managing the continental-level coordinated response required the leadership of the African CDC, which birthed two main operational units; the Africa Task Force for Coronavirus and Africa CDC's Incident Management System (24). To pool resources, strengthen the supply chain, and improve coordinated actions against COVID-19, an African Coronavirus Fund was established, which has aided the AU to procure and distribute essential medical equipment and supplies, thereby strengthening mobilization and response rates (24).

### *Procurement US*

To coordinate the acceleration of development, procurement, and distribution of pandemic countermeasures, the United States government started Operation Warp Speed (OWS) (25). This collaboration between the Department of Defense and the Department of Health and Human Services consisted of services like the Center for Disease Control and Prevention, the National Institutes of Health, and the Biomedical Advanced Research and Development Authority (BARDA), which served as the basis for the development for its European counterpart HERA. Whilst the focus of OWS included therapeutics and diagnostics, most financial resources were spent on developing vaccines (25). BARDA's approximately 18 billion US dollar investment in various manufacturers made OWS the greatest global effort to develop COVID-19 vaccines (26). The vaccine tracking system by the CDC allowed states to place weekly orders, however, states had no say in which vaccines were delivered (27).

### *Centralized Procurement COVAX*

Globally, in April 2020, COVID-19 Vaccines Global Access (COVAX) was set up to ensure equitable access to COVID-19 tests, treatments, and vaccines (28). COVAX has two modalities of participation. Firstly, low- and middle-income countries participate through the Advance Market Commitment (AMC) instrument (29). After confirming participation, supported by WHO and partners, countries develop national deployment and vaccination plans before signing indemnity and liability agreements. Participants can request additional technical assistance and cold chain support. Secondly, self-funded participants indicate the share of the population to be covered (10%-50%), whereupon COVAX negotiates and enters agreements with manufacturers on their behalf (30). Countries then receive vaccines through optional or committed purchase arrangements, both requiring up-front payment. Participating countries sequentially receive enough doses to cover 20% of the population. Once all reach the 20% threshold, further doses are allocated according to vulnerability and risk criteria.

A comprehensive overview of key mechanisms for the different procurement approaches can be found in Table 2, whereas their SWOT analysis is presented in Table 3.

### *Analysis*

The described policy options show a general tendency in international organizations and states to explore more centralized approaches to tackle emergency health crises. This trend in pooling further powers at the EU level becomes apparent in the recent call to establish a European Health Union. The pandemic has shown the need for timely and coordinated responses in the procurement of



vaccines for the general population. Table 3 highlights that the benefits of centralized procurement outweigh its shortcomings. Equitable and timely access to vaccines in a transparent manner seems to be its core strength derived from the procurement policies. The lack of procurement legislation and limited financial resources seem to be recurring themes in the policies of PAHO, UNICEF, and COVAX, which hinder their effective use. Additionally, the complexity of setting up such systems, currently one of the main challenges and contributions to a lackluster COVID-19 response, could be overcome by utilizing the already high level of harmonization of the EU and involved institutions such as EMA and the ECDC and potentially HERA. Questions as to the extent to which MS will give up autonomy over vaccine purchases might need to be clarified. To counter discordance, it should be considered to apply centralized procurement only in a health crisis through the emergency support instrument of the EU. We argue that the opportunities of centralized procurement presented in Table 3 can be harnessed by the EU, while the threats can be overcome through already existing structures in the EU.

The application of APAs under a centralized procurement scheme in the EU demonstrated some pitfalls that must be addressed. Extended price negotiations with vaccine manufacturers led to a delay in vaccine procurement. Consequently, MS stopped relying on EU efforts to procure vaccines. The observed delays ultimately resulted in a shortfall in the number of vaccines available to EU residents. However, the EU was able to negotiate a price lower than the U.S., possibly attributing to a lengthier negotiation process (31).

The formulated policy options built upon the pharmaceutical strategy for Europe, which addresses crisis preparedness and securing supply chains in pharmaceutical products. The examples of centralized procurement given in section 3 shall guide the implementation of the EU procurement system.

### *Stakeholders*

Improving EU vaccine procurement requires the involvement and alignment of various stakeholders. The EC, Parliament, Council of Ministers, individual MS, and pharmaceutical industry hold high interest and power. The EU institutions would most likely favor a centralized procurement system as this can increase their negotiation power. On the other hand, pharmaceutical companies are less inclined to support a centralized procurement system as it potentially limits their influence on pricing. Another challenge is aligning MS interests to agree on how this new procurement system should look. The integration of stakeholders with high interest but low power, for example, the ECDC, WHO, EMA, and more, must also be regarded.

Considering the above analysis, the following recommendations were developed, aiming to produce comprehensive guidance on how to procure vaccines in a crisis through a pooling mechanism whilst aligning the majority of stakeholder interests. In anticipation of a future crisis, we want to generate fruitful cooperation and collaboration at all levels and across borders and act as an undivided EU.





**Table 2: Policy option characteristics**

	<b>EU</b>	<b>UNICEF’s Supply Division</b>	<b>PAHO Revolving Fund</b>	<b>Operation Warp Speed</b>	<b>COVAX AMC</b>	<b>COVAX Facility</b>	<b>AU COVID-19 Response Fund</b>
<b>Model</b>	Central contracting and procurement	Central contracting and procurement	Group contracting	N/A	Central contracting and procurement		Central contracting and procurement
<b>Ownership</b>	EU member states	UNICEF	PAHO member states	US Government	Gavi, The Coalition for Epidemic Preparedness Innovations, WHO	Gavi, The Coalition for Epidemic Preparedness Innovations, WHO	Africa CDC
<b>Financing mechanism</b>	Emergency Support Instruments National Budgets	Mainly donor funding, a few countries pay in full for the vaccine purchases + administrative fee (3-6%)	National budgets (price of the vaccines + 3,5% recapitalization fee)	National budget and additional funds allocated through BARDA	Mainly donor funding	National governments	Donor funding
<b>Procurement activities</b>	Centralized	Centralized	Left to the states	Centralized	Centralized	Centralized	Centralized
<b>Timeframe</b>	COVID-19 pandemic	Permanent	Permanent	15.05.2020 – 24.02.2021 then responsibilities transferred to the White House COVID-19 Response Team	COVID-19 Pandemic	COVID-19 Pandemic	COVID-19 Pandemic
<b>Range of products or services involved</b>	COVID-19 vaccines	Routine vaccination	Vaccines, syringes, and related supplies	COVID-19 therapeutics, diagnostics, and vaccines	COVID-19 vaccines	COVID-19 vaccines	COVID-19 vaccines
<b>Purchasing mechanism</b>	Direct procurement: Advance purchase agreement	Multi-year tender	Annual tender	Direct procurement: Other transaction Agreement	Direct procurement: Advance Market Commitment	Direct procurement: Optional/ Committed Purchase Arrangements	Direct procurement: Advance purchase agreement



**Table 3: SWOT Overview of Procurement Policies**

	<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Threats</b>
<b>EU</b>	<p>Higher negotiation power compared to single member states (lower pharmaceutical prices)</p> <p>Ensures access to promising vaccines in a timely manner for all MS</p> <p>Risk-sharing between the pharmaceutical manufacturers and the EU</p>	<p>Transparency of the negotiated conditions</p>	<p>Exploration of more centralized and multi-national efforts to purchase and distribute medicinal products</p>	<p>APAs cause the possibility of purchasing ineffective or unsafe vaccines, or vice versa</p> <p>Risk of a pharmaceutical contractor not adhering to predetermined conditions</p>
<b>UNICEF</b>	<p>Provides equitable and efficient access to vaccines</p> <p>Resource pooling ensures equal access for MS</p> <p>Guided by an experienced partner</p>	<p>Initial capitalization and management of funds</p> <p>National procurement legislation</p>	<p>Lower unit prices, eventually generating cost savings</p> <p>Greater stability in vaccine supplies</p>	<p>Reporting and evaluation according to harmonized external standards rather than national ones</p> <p>Reliance on external bodies (a risk that country capacities will not be developed accordingly, creating a long-term dependence on external bodies)</p>
<b>PAHO</b>	<p>Global recognition of PAHO</p> <p>High level of accountability</p> <p>Promoting equity and encouragement of collaboration between local agencies</p>	<p>Limited financial resources</p> <p>Very bureaucratic and rigid in processes</p>	<p>Partnerships for resource mobilization</p>	<p>MS unable to meet the annual requirements for the Revolving Funds</p> <p>Financial and operational stability of the MS</p>
<b>US</b>	<p>Guarantee of enough vaccines for the citizens of the US</p>	<p>Other countries were also able to close deals with the vaccine manufacturers and had more vaccine doses per capita than the US</p>	<p>Ordering system for vaccinations can be seen as an example of a system for the EU</p>	<p>States have no say in which vaccines will be delivered, causing relegation of the vaccines</p>
<b>COVAX AMC &amp; FACILITY</b>	<p>Expertise of partners (translating into broad manufacturer portfolios and strong bargaining power)</p>	<p>Insufficient funding</p> <p>Severe demand-supply gap</p> <p>Lack of transparency in concluded contracts</p>	<p>Promotion of health equity and the benefits of multilateralism</p>	<p>Vaccine hoarding in high-income countries</p> <p>Few countries offer vaccine donations (if so, they often arrive last-minute and in small numbers)</p> <p>Slow process, leading participants to enter into bilateral agreements undermining COVAX efforts</p>
<b>African Union</b>	<p>Aid in the procurement and distribution of essential COVID-19 medical equipment and supplies</p> <p>Reinforcement of AU MS response to the COVID-19 challenge</p>	<p>Vaccine shortage</p> <p>Low vaccination rates</p>	<p>Legal, operational, and institutional autonomy of the Africa CDC from the African Union Commission</p> <p>Sustained close collaboration at the national, regional, and continental levels</p> <p>Encouraging vaccine manufacturing on the African continent</p>	<p>Delays in accessing COVID-19 vaccines</p>

## Recommendations

The discussed policy options demonstrated the necessity of establishing a designated institution charged with the ownership and control of a centralized crisis response, which presents an entirely independent body (hereinafter referred to as the institution) as opposed to the recently developed HERA under the EC. This allows the institution to act detached from other key EU players. Its mandate must ensure not only transparent negotiations and timely access to vaccines but also establish continuous efforts and support to strengthen national capacities and healthcare systems through periodic monitoring and evaluation. This guarantees that when vaccinations are procured, MS are equipped to utilize them efficiently according to national needs. The institution shall function as the overarching and coordinating emergency response body and, more specifically, should build on the approach of centralized procurement taken by the EU in the COVID-19 pandemic, of which advantages have been discussed above.

Since health is a MS competence, this strategy requires ensuring that MS interests are aligned, to then be transferred to the supranational level. It is apparent that such an endeavor requires will and political commitment. Therefore, the momentum created by the COVID-19 pandemic must be utilized to bring together European institutions, MS, and relevant stakeholders, to initiate negotiations that will facilitate the streamlining of interests. Such congregations create room for copious deliberation, helping all parties to agree on the institution's exact scope and modus operandi. Similarly to HERA, the institution must aim to collaborate closely with the ECDC and EMA, incorporating their advice in the development of the pandemic response. Regular meetings with representatives of all three institutions,

pre- and during a pandemic, allow for monitoring of disease threats and medicinal products. A sufficient amount of resources must be invested to set up a resilient technical infrastructure that allows for continuous data sharing. This data exchange provides an evidence base for the institution's negotiations with vaccine manufacturers. Widely criticized in the COVID-19 was the lack of transparency. Hence, content of negotiation processes should be made available to citizens in an easily accessible, comprehensive manner, on a designated part of the institution's website. Since public money is spent, we need to be aware of agreements made at the supranational level.

The existence of comprehensive and efficient emergency preparedness plans which enable MS to effectively respond to and manage future pandemics must be ensured, as this allows strategies, such as the above-mentioned centralized procurement, to function smoothly. To sustain emergency preparedness across the EU, adequate resources need to be dedicated toward interdisciplinary proactive pandemic preparedness and response planning, following the cycle depicted in Figure 1. Common standards for participating countries shall be developed, adhered to by participating MS, transferring competencies to the EU, where insufficient national capacities to respond to a pandemic are present. There is an urgent need to evaluate MS infrastructure and pandemic response to identify shortcomings. Once identified, the institution can direct resources and support towards MS in greatest need.

As the name entails, a pandemic affects the whole world. COVID-19 has distinctly demonstrated how interconnected the globe is, where European public health is highly influenced by global public health.

Therefore, it should not be neglected that the EU must internally strengthen the centralized approach and further foster international partnerships to promote timely and swift emergency responses, comprehensive information, and evidence sharing, all helping to mitigate international public health emergencies.

### Conclusion

In conclusion, vaccine procurement policies in the EU hold great potential for improvement. During COVID-19, the lack of transparency in lengthy negotiation processes, and lack of unity and solidarity were considered problematic. By setting up a centralized procurement mechanism under a novel independent body for emergency and pandemic response, the procurement of vaccines in a future health crisis will run smoothly. Embedding this in elaborate emergency preparedness planning, the EU will be able to react timely and in MS and citizens' best interest.

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## Appendices

### Appendix A

**Table 1:** European collaborations in the procurement of health technologies

	<b>Start date</b>	<b>Countries involved</b>	<b>Scope</b>	<b>Aspects of procurement covered</b>
<b>Central Eastern European and South Eastern European Countries Initiative</b>	November 2016	Romania, Bulgaria, Croatia, Latvia, Poland, Serbia, Slovakia, Slovenia, Republic of Moldova, FYR Macedonia	Pharmaceuticals	Price negotiation
<b>Southern European initiative</b>	June 2016	Greece, Bulgaria, Spain, Cyprus, Malta, Italy, Portugal	Innovative medicines	Information sharing on prices and markets, collaboration on R&D
<b>Declaration of Sofia</b>	June 2016	Bulgaria, Croatia, Estonia, Hungary, Latvia, FYR Macedonia, Romania, Serbia, Slovakia, Slovenia	Pharmaceuticals	Information sharing on prices and markets, with potential for joint purchasing in the future
<b>Nordic Pharmaceuticals Forum</b>	June 2015	Denmark, Iceland, Norway, Sweden	Pharmaceuticals	Horizon scanning, information sharing on prices and markets
<b>Romanian and Bulgarian Initiative</b>	June 2015	Romania, Bulgaria	Innovative medicines	Joint negotiations in purchasing to get lower prices for pharmaceuticals and cross-border exchange of medicines in short supply to ensure continuity of access
<b>BeNeLuxA</b>	April 2015	Belgium, Netherlands, Luxembourg, Austria	Pharmaceuticals And medical devices	HTA, horizon scanning, information sharing on prices and markets, joint negotiation for purchasing to ensure affordability
<b>Baltic Partnership Agreement</b>	May 2012	Latvia, Lithuania, Estonia	Innovative medicines	Centralized joint purchasing (tenders, negotiation, payment, and distribution) to reduce expenditure and ensure continuity of access

Adapted from (32)



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