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ESPAS Ideas Paper Series

Geopolitics of Health

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SUMMARY

Public health is becoming increasingly globalised. Especially since the Covid-19 pandemic, health has become a central topic on the geopolitical stage, and has increasingly become interlinked and interconnected across the EU policy ecosystem. This paper will examine the impacts of four key dimensions of the 'geopolitics of health' that have or could have an impact on the EU and current EU capabilities, focusing on issues relevant to external relations: for example trade and economics, climate and environment, migration, social issues, and security.

The first dimension is health diplomacy: how governments and international organisations coordinate (or not) global policies to safeguard and improve public health. One interesting and topical aspect of this is how states use health investments and development cooperation to foster partnerships with other states and civil societies in various parts of the world. This became very evident with the pandemic, which triggered a 'vaccine diplomacy' race to deepen relationships with partners through solidarity and to exert influence globally. The second dimension is open strategic autonomy in health: the global competition for control of value chains and strategic dependencies for active pharmaceutical ingredients, medical products and countermeasures that were highlighted by the pandemic. The third is ongoing structural trends in health and related sectors (e.g. health inequalities, demographic changes, and digitalisation), which impact on social cohesion and the EU's overall actorness on the global health stage. The fourth dimension is security, defence, and the mitigation of major shocks. Many major risks facing the EU have primary and secondary impacts on human health and public health systems, such as bioterrorism and hybrid warfare, extreme weather events, and raw material and chips shortages.

Though health is mostly a Member State competence, the Covid-19 pandemic demonstrated that there is room within the Treaties for the EU to play a strong supporting role in public health and global health, particularly in the face of cross-border health threats. In this regard, the EU is aiming to strengthen its actions towards global health, with a new EU Global Health Strategy in preparation. The aim of this paper is to provide a foundation for discussion on the changing nature of the EU's approach to global health in light of developments of the last few years, as well as on how it can tackle challenges and seize opportunities that lie ahead for a healthier world of the future.



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Introduction

Aim

Public health is becoming increasingly globalised. This trend, along with the Covid-19 pandemic and other large-scale international developments and crises, is increasingly elucidating the spillover of health into many other policy areas. Though the concept of [‘health in all policies’ \(HiAP\)](#) has existed for some time, the crisis has made its necessity all the more evident and pressing. This paper will investigate the ‘geopolitics of health’ as it pertains to the EU, by illustrating how public health is interlinked across the EU policy ecosystem, particularly focusing on issues relevant to external relations: for example trade and economics, climate and environment, migration, social issues, international cooperation and security. The aim of this paper is to provide a foundation for discussion about the interrelation between geopolitics and health in light of developments of the last few years, on the changing nature of the EU’s approach to global health, and on how the EU can tackle challenges and seize opportunities that lie ahead for a healthier world of the future.

The EU’s role in (global) health policy

Public health is defined in Article 168 TFEU (the ‘health article’) as a shared competence between the EU and its Member States, while Member States retain the right to define and deliver their national healthcare services.¹ At present this seems unlikely to fundamentally change despite the evolving context (and though recently some calls for Treaty reform have emerged, for example from the Conference on the Future of Europe).² Nevertheless, the Covid-19 crisis demonstrated added value for additional EU-level support, particularly in the face of cross-border health threats. While Member States are responsible for the decisions, strategies, administration, and provision of healthcare to their citizens, the measures taken by the EU since the start of the crisis have demonstrated that the scope for EU action towards health is both broader and more cross-cutting than traditionally thought of. For example, according to Article 168(1) TFEU, actions at EU-level shall complement national policies to fight major health scourges by promoting research, providing information, and monitoring and combating cross-border health threats. The Commission may take “any useful initiative to promote [...] coordination,” in close contact with Member States (Article 168(2)) - a potentially powerful set of tools.

Furthermore, the EU’s competence in public health includes specific areas, such as the regulation of substances of human origin, medicines and medical devices, and tobacco. Many of the initiatives put forward and measures taken by the Commission towards mitigating the pandemic took or complemented their legal basis from other legal instruments than the ‘health article’. For example, joint procurement was based on Decision 1082/2013/EU of the European Parliament and of the Council (on cross-border health threats), the Pharmaceutical Strategy draws on Articles 101 and 102 TFEU (both related to the internal market) in addition to Article 168, and the EU Digital Covid Certificate was based on Article 21(1) TFEU, also known as the right to free movement within the Union. This demonstrates that there is significant room within the Treaties for the EU to play a strong supporting and coordinating role in public health.

A trend of the EU slowly increasing its health activities was already evident pre-pandemic with the creation of bodies such as the European Medicines Agency (EMA) in 1995 and the European Centre

for Disease Prevention and Control (ECDC) in 2004. The pandemic undeniably accelerated this trend, prompting first the announcement of the largest ever health-specific EU investment package, the EU4Health programme (under the EU's Multi annual financial framework 2021-2027) in early 2020, followed later in the year by the European Health Union (EHU), a legislative package aimed at boosting the EU's health resilience. The EHU includes new health-related initiatives and agreements such as the coordination and distribution of medical countermeasures (key supplies and materials) through joint procurement and the EU Strategy for Covid-19 Vaccines, as well as the more long-term Pharmaceutical Strategy. Most notably, the Commission's newly created Directorate-General (DG) Health Emergency Response and Preparedness Authority ([HERA](#)) aims to avoid the fragmentation and resulting tensions that were seen in the early days of the pandemic by anticipating threats and coordinating emergency responses in the event of future health crises both domestically and from abroad. In the same vein, the EU strengthened the mandates of the [EMA](#) and [ECDC](#). The European Parliament has adopted several resolutions to improve EU resilience and preparedness, notably on [serious cross-border threats to health](#), and created a [special committee on Covid-19](#) that aims to outline the lessons learned from the pandemic and make recommendations for the future. Similarly, the Council of the European Union has adopted [conclusions on Covid-19 lessons learned in health](#).

In the geopolitical dimension, Article 168(3) specifies the scope of EU cooperation with third countries and competent international organisations in the sphere of public health. This is part of the mandates of several EU bodies, such as the European External Action Service, and the Commission's DG for Health and Food Safety (SANTE), DG for European Civil Protection and Humanitarian Aid Operations (ECHO), DG for International Partnerships (INTPA), and the new DG HERA (as regards threat surveillance and countermeasures). Further to this, the current French Presidency of the Council has detailed its support for strengthening the EU's actions towards global health.³ The European Council strongly supported the initiative for a new international instrument on pandemic prevention, preparedness and response within the WHO framework, negotiations of which were launched on 1 December 2021. The Parliament has drafted a [motion for a resolution on a European strategy for international cooperation](#), calling for a global approach to research and innovation with a strong focus on health. Discussions are now underway across the EU in order to draw lessons from the COVID-19 crisis (e.g. the [Commission's 2021 Communication on early lessons from the pandemic](#) and the Parliament's new COVI committee), and to determine if and how the EU's global health security and support ambitions fit within existing EU capabilities and competences.⁴

The most recent development is the launch of work towards [a new EU Global Health Strategy](#), where a Commission Communication is foreseen by the end of 2022. This initiative will be instrumental in shaping the future of the EU's global health engagement.

Key dimensions

1. Health diplomacy since Covid-19: state of play, trends, major actors and their strategies

Global health diplomacy - how governments and international organisations coordinate global policies to safeguard and improve health - is a subset of international relations that has existed since at least the foundation of the WHO in 1948. Health diplomacy became especially prominent in international relations with the HIV pandemic,⁵ which fostered global cooperation to coordinate the creation of numerous multilateral programs and initiatives (AIDS service organizations, UNAIDS, UNITAIDS, EU Programme for Action to Confront HIV/AIDS, Malaria and Tuberculosis).⁶ The importance given to health in international relations continued to grow through several epidemics - SARS in 2003, H1N1 in 2009, MERS in 2012 and Ebola in 2014 and 2018.⁷ These served as wake-up

calls for how the health of one nation can affect others - not just its immediate neighbours, but around the world - and how cooperation could lead to better health outcomes and help actors work together in areas of common interests.

Over the last few decades, global health has become increasingly politicised (especially since the adoption of the United Nations 2030 Sustainable Development Goals (SDGs), many of which involve health), with the World Health Organization (WHO) acting as the coordinating and leading authority. Although the WHO's decision-making mostly relies on intergovernmentalism, multi-stakeholder diplomacy has widely developed and gained traction with the increasing involvement of NGOs and international organisations (e.g. Red Cross, Doctors Without Borders, Oxfam, etc.), and an increase in joint international initiatives such as the Coalition for Epidemic Preparedness Innovations ([CEPI](#)), as well as the Access to Covid-19 Tools Accelerator ([ACT-A](#)) and the Financial Intermediary Fund ([FiF](#)) for Pandemic Preparedness and Response (both G20 enterprises).⁸

With the Covid-19 pandemic, health diplomacy became a major field of geostrategic competition, highlighting opportunities for countries to gain influence through production and distribution of medical countermeasures.⁹ The most striking example of this 'battle for influence through policies of generosity'¹⁰ is the Chinese personal protective equipment (PPE) diplomacy. For example, China was accused by the US of stockpiling PPE in the early days of the spread of the virus and restricting exports despite massively increasing its production, causing a global shortage once the pandemic was declared.¹¹

It became apparent that the only way to stem the tide of the pandemic would be through worldwide vaccination, launching a global race to develop and distribute vaccines and therapeutics involving both private pharmaceutical corporations and public bodies. Vaccines were at first produced in limited quantities and in a small number of countries, so donations and exports became a powerful source of international prestige, cooperation, solidarity, and also tension. The EU, the US, China, Russia, India and many others such as Cuba, Iran, South Africa, etc., all attempted to assert their leadership through distribution of vaccines, therapeutics, PPE, humanitarian aid, as well as macro-financial support to prop up the economies of humanitarian partners.¹²

As the pandemic affected countries across the world, national interest in acquiring Covid-19 vaccines to protect their populations quickly grew. At the same time, there was an economic interest from a sales and trade perspective, and there were also diplomatic and humanitarian interests in building partnerships and exerting influence globally. Beyond diplomacy, high rates of infection mean high rates of viral genetic mutation (i.e. variation), so limiting the spread of the disease through the provision of vaccines to third countries is not only a humanitarian effort on the part of vaccine-producing nations, it is also an effort to limit the potential development of new variants that may be more infectious, have more serious effects, and are not prevented by current vaccines.

Though nations and their private businesses would continue to compete for vaccine diplomacy, international cooperation in research and development was evidently necessary and a joint interest for many nations to fight the pandemic effectively. Indeed, the ability for countries to rapidly share epidemiological data and collaborate on therapeutic and vaccine research and production was a major advantage of the globalisation of public health. Examples include the EU interoperability gateway for Member States to share contact tracing information, and the [WHO Global Clinical Platform for Covid-19](#). However, global challenges to cross-border data sharing took many forms, including difficulties in comparing data due to differences in reporting methods.¹³

After lengthy debate, an [agreement on a temporary waiver](#) of elements of the World Trade Organization's (WTO) Agreements on Trade-Related Aspects of Intellectual Property Rights (TRIPS) was recently reached at the WTO. Originally proposed by India and South Africa, the agreed solution provides the required legal certainty for authorising the manufacturers of certain developing countries to produce vaccines against Covid-19 without the consent of patent owners to the extent necessary to address the Covid-19 pandemic for a period of five years. It includes the use of administrative orders instead of compulsory licensing legislation, and a waiver that would cut red

tape and speed up procedures to the maximum, both for domestic and export purposes. In essence, the waiver will enable certain developing countries (for example in Africa) to rapidly manufacture patented vaccines themselves rather than relying on imports and donations. The waiver shows a shift in the relative emphasis placed on the interests outlined above, towards humanitarian multilateralism and diplomacy.

Nevertheless, although COVAX - the collaborative distribution tool for Covid-19 vaccines to low-to-middle income countries, co-led by the WHO - has been widely criticised for being slow, it was a key success of multilateralism. The vaccine diplomacy strategies of leading nations can be illustrated by looking at their rates of donations vs. exportations of vaccines (see **Figure 1**). As of February 2022, the EU has had the highest rate of Covid-19 vaccine exports (1.78 billion doses) and second-highest rate of donations (380 million doses) worldwide to the U.S.¹⁴ Regarding exports, the EU traded a higher proportion of vaccines to neighbouring or developed countries such as Canada, Turkey and Ukraine,¹⁵ and donated to its Western Balkan neighbours and to COVAX. China, the largest exporter in September 2021, exported to developing countries that were already its strategic partners through the Belt Road Initiative (BRI) (Angola, Indonesia, Ethiopia, etc.)¹⁶ and to countries with which it had no partnership before the pandemic, especially in Latin America.¹⁷ China presented itself as a responsible global health power, though 96% of the vaccines it traded were sold and not donated.¹⁸ Moreover, it did not participate much in COVAX and preferred to engage with countries bilaterally,¹⁹ and the lower efficacy of Chinese vaccines (Sinopharm and Sinovac) undermines the Chinese narrative that they were more helpful to third countries than the West.

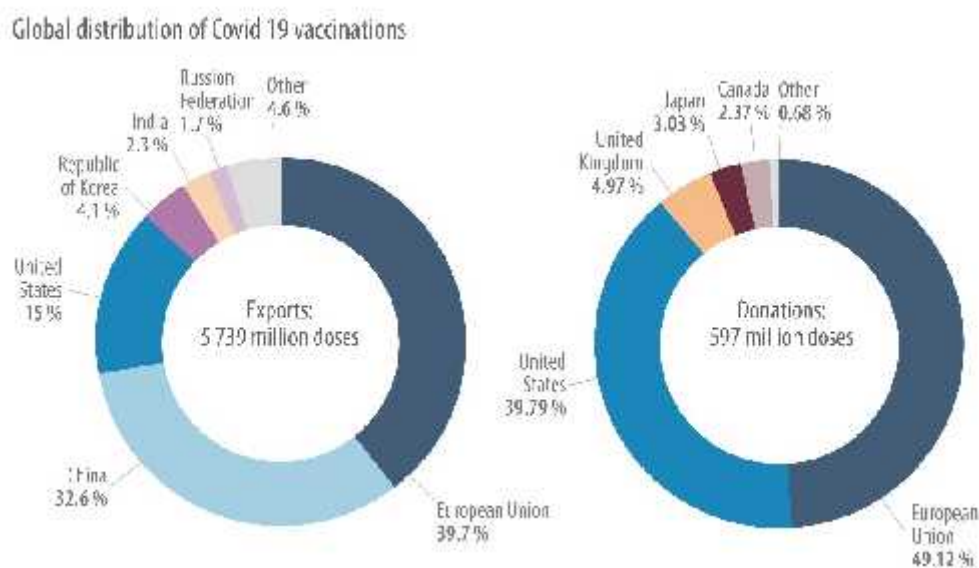


Figure 1. Global distribution of Covid-19 vaccines, in terms of exports (left) and donations (right) as of March 2022. Donation rates include only vaccines donated and delivered through COVAX. Sources: Exports - [WTO](#), Donations - [Multilateral Leaders Taskforce on Covid-19](#).

On the other hand, after a slow start focusing on its own population, the US has become the leading donor of vaccines worldwide, with over 500 million donated doses so far, half of which through COVAX.^{20,21} The US was the third largest exporter, behind the EU and China.²² Russia and India have also joined in: Russia traded its vaccine Sputnik-V to South America (Argentina, Bolivia), Africa (Libya, Algeria),²³ as well as to Serbia and Montenegro.²⁴ India attempted to become 'the world's vaccine laboratory' through its Serum Institute but the high internal rate of Covid-19 hampered its production capabilities to contribute to COVAX (among other factors).²⁵ Other countries such as

South Africa, Senegal, Rwanda, Cuba, and Iran are also developing their manufacturing capacities and producing their own vaccines.²⁶ However, production of finished vaccines requires active pharmaceutical ingredients (i.e. raw materials) which are often imported, making the pharmaceutical value chain even more complex. These value chain complexities will be discussed in more detail in the next section.

Beyond vaccine diplomacy, a major diplomatic success for the EU came with the EU Digital COVID Certificate - digital proof of vaccination against Covid-19, recovery, or testing certificates. It has now been adopted by 37 non-EU countries through equivalence agreements, as far and wide as Vietnam, Uruguay, and New Zealand.²⁷ Its widespread international success can be attributed to multiple factors: its efficacy in promoting free movement and tourism, its central role in mitigating negative economic effects during the pandemic, and the minimal cost to adoption due to being open source.

Throughout the pandemic, the EU advocated for global cooperation through international institutions and expressed strong interest in working multilaterally by supporting the coordinator role of the WHO, especially compared to other global powers. Indeed, in May 2020 the EU hosted an international pledging conference to raise money in order to make medical technologies available worldwide. While the US, Russia, and India did not attend the conference, much of the €15.9 billion collected came from the European Investment Bank, the Commission, and EU Member States using a Team Europe approach.²⁸ The EU also managed to garner swift support for a Covid-19 resolution at the World Health Assembly in May 2020.²⁹ Furthermore, in 2020 the US - at the time led by Donald Trump - was less inclined towards multilateralism through the WHO, claiming it overly praised China's early response to the virus.³⁰ The US even moved to withdraw from the WHO, a move that was halted by the following president, Joe Biden.

True to the EU's dedication to rules-based international order and multilateralism, the Council [adopted a decision in March 2022](#) to open negotiations towards an international agreement on pandemic prevention, preparedness and response (the 'pandemic treaty') through the WHO. Similarly, discussions are underway to revise the WHO's [International Health Regulations](#). In view of the range of opinions and priorities expressed by various global players, achieving consensus on and effective implementation of the eventually reviewed International Health Regulations, the new pandemic treaty, and the proposed Financial Intermediary Fund for pandemic preparedness housed by the World Bank will necessitate continued EU advocacy.

These changes to the international health landscape have been matched by a renewed EU strategy for international partnerships. For instance, in response to the pandemic, the EU stepped up its humanitarian assistance via the Team Europe 'approach,' which essentially pools resources from the EU, Member States, and financial institutions and donates to its most vulnerable partners, including 130 countries. As of April 2021 total funds raised through Team Europe amounted to €46 billion.³¹ Furthermore, global health is one of the pillars of the Global Gateway Strategy, the EU's €300 billion investment plan for international development presented in December 2021, which aims to develop the manufacturing capacities of its partners and support them in the diversification of their supply chains inter alia.³² It is part of the "Build Back Better World" strategy, a US-led G7 initiative. These new programs counter the Chinese BRI, and advocate for the creation of partnerships driven by democratic and ecological values, providing mostly aid and fewer loans than the BRI.

2. Open strategic autonomy in health: global competition for control over the pharmaceutical value chain

The economic significance of Europe's pharmaceutical sector is large and growing, with EU exports in medicinal and pharmaceutical products amounting to nearly EUR 250 billion in 2021,³³ or nearly 2% of the EU's total GDP.³⁴ The European continent is home to some of the world's biggest

pharmaceutical companies (e.g. Swiss giants Roche and Novartis, GSK from the UK, Sanofi from France, Merck KGaA from Germany). The EU27 held 24% of global pharmaceutical revenue in 2020.³⁵

Like many other products, medicines are manufactured, shipped, and sold via complex value chains, which profited from globalisation largely to improve manufacturing and supply (market) efficiency and make products cheaper. Generally speaking in this sector the EU has a relatively high degree of autonomy and global influence. According to a study commissioned by the European Federation of Pharmaceutical Industries and Associations (EFPIA), in 2019 in terms of value 62.5% of the EU27's supply in pharmaceuticals came from Europe itself, while China and India respectively only accounted for 2.4% and 1.3% of imports. Switzerland and the US are by far the biggest sources of the EU's pharmaceutical imports, accounting for 8.8% and 13.3%, respectively. However when represented in terms of volume, imports of pharmaceuticals from China increase to 14.4% of the volume of the EU's total imports, and the US drops to just 4% (see **Figure 2**).³⁶ However, it is not only the value or quantity that matters, as a product may be of critical or essential value, for example in the case of certain pharmaceutical raw ingredients.

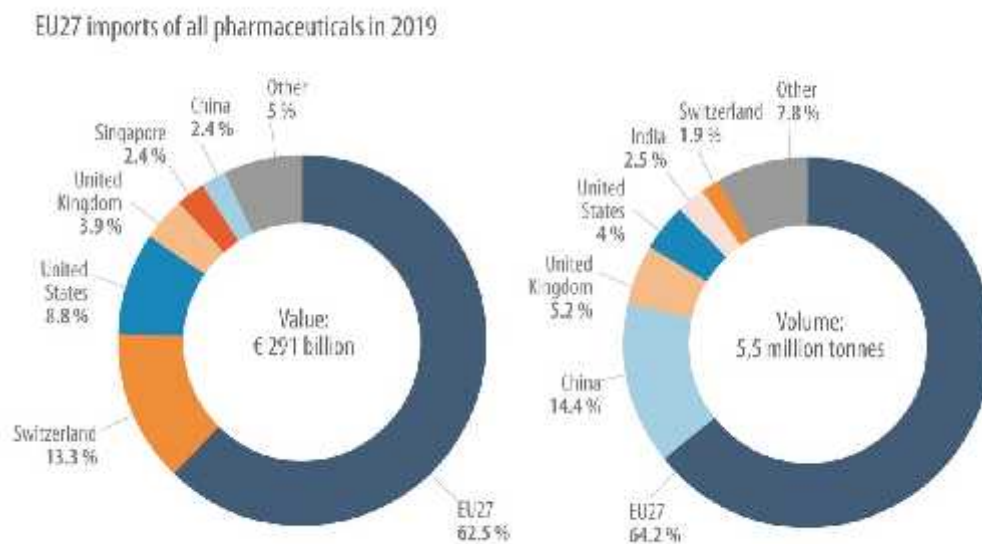


Figure 2. EU27 imports of all pharmaceuticals in 2019, in terms of value (left) and volume (right). Source: data from Eurostat via [EFPIA](#)

As previously discussed, in some ways the globalisation of health had major positive impacts during the Covid-19 pandemic, particularly in the context of vaccine diplomacy and international cooperation for research and development. However, in others it highlighted or created problems. In the early days of the pandemic, vulnerabilities in the medical supply chain emerged, particularly as production across the board decreased due to national restrictions on cross-border trade, be it export restrictions or other limitations to the international movement of goods.³⁷ Most notably, the supply of personal protective equipment (PPE), such as masks, was particularly strained (as previously mentioned), as was the sourcing of active pharmaceutical ingredients (APIs).³⁸

Furthermore, once specific vaccines and therapeutics for Covid-19 began to be produced and distributed, supply chain bottlenecks emerged, such as export restrictions, scarcity of supply of raw materials due to high demand, and differences in regulatory frameworks.³⁹ The resulting vaccine inequity has caused important tensions. As an example, in early 2021 the US government invoked the Defense Production Act to prioritise distribution of equipment and raw materials needed

towards US companies, in order to ensure adequate vaccine supplies for its own citizens. In April 2021, the Serum Institute in India, one of the world's largest vaccine producers, was not able to reach its manufacturing targets and had to place an export ban on vaccines to third countries in favour of vaccinating its own people, blaming the US for banning exports of raw materials.⁴⁰ However, according to a White House Senior Administrator there never was a de facto embargo on exportation.⁴¹ This does not negate the fact that the Serum Institute experienced shortages, but rather that the US was not able to meet the high internal and global demands.

Another indirect threat to healthcare systems globally comes from characteristics of the semiconductor (chips) industry. An increasing percentage of medical technologies and devices - known as medtech - contain and rely on computer chips. This includes imaging machines, pacemakers, blood pressure and glucose monitors, and many more. Shortages of chips due to ongoing trade issues (especially with China and Taiwan), compounded by the pandemic, extreme weather events, and now the Russian war on Ukraine, have had a profound impact on the medtech industry, causing a supply disruption of medical devices to healthcare providers.⁴² Medtech shortages can put the lives of people who depend on these devices at risk. The Commission's [newly proposed Chips Act](#) aims to ensure the EU's security of supply of chips. Developing chip manufacturing capacities within Europe will take considerable time and investment, and, most importantly, will likely require difficult trade-offs that should be assumed transparently.

These examples illustrate the complexity of global medical supply chains, the ripple effects that disturbances in them can cause, the resulting tensions that can arise, as well as the critical importance of resilience for public health. They also point to the difficulty in detecting the (weaker) links in a supply chain and in identifying the choices involved. Globalisation has resulted - in some cases - in dependence on a reduced number of lower cost suppliers located in regions of the world of higher political risk, instability or that do not share the core values of the EU. These realisations brought about by the pandemic and the ongoing discussion at EU-level about open strategic autonomy indicate a shift in mentality for many nations towards understanding the breadth of cross-sectoral impacts that globalisation has had, particularly on health, a field that is traditionally considered a matter dealt with at the national level.

The pandemic clearly demonstrated the importance and value of a secure pharmaceutical and medical supply chain not just to the EU, but to nations around the world. For example, though it has a big role in manufacturing of generic pharmaceuticals, India is heavily reliant on China for active pharmaceutical ingredients (APIs).⁴³ India is planning to make its pharmaceutical sector more resilient to shocks by boosting its pharmaceutical production, by simplifying the regulatory approvals process, and through various tax concessions⁴⁴ and incentive schemes.⁴⁵ Relatedly, Africa is currently dependent on medical imports, accounting for 70% to 90% of pharmaceuticals consumed in most of sub-Saharan Africa.⁴⁶ By establishing the African Medicines Agency (an initiative that was underway already before the pandemic), the African Union (AU) is pushing to improve access to medicines for the continent by harmonising and improving regulation.⁴⁷ The EU has developed new partnerships with Africa such as between the ECDC and Africa CDC, and between the African Medicines Agency and EMA, and launched a Team Europe-funded initiative via the Global Gateway to support the AU's efforts to manufacture vaccines and medicines on the continent. For the EU, it is important that partner countries follow [Good Manufacturing Practices](#) and implement EU environmental and social standards in their expansions of production.

Though the EU's medical supply chain proved overall to be quite resilient in the face of Covid-19, its complexity, magnitude, and the danger posed in case of its disruption underscore the need for security and open strategic autonomy.⁴⁸ It is important to note, however, that reliance on importation does not in itself pose a problem; it requires an assessment of whether the dependency is strategic and poses a vulnerability to the EU. At the request of the European Council, in May 2021 the Commission published a staff working document on strategic dependencies and capacities.⁴⁹

This document includes a bottom-up mapping of strategic dependencies for products that form the foundation of the pharmaceutical supply chain, which will serve as a starting tool for improving the resilience of the health procurement systems of the EU and its Member States.

In response to the pandemic the EU has enhanced its public health strategies and capabilities, and started to improve resilience towards future health threats. One key success was the use of the Joint Procurement Agreement (2014), which allowed the Commission to organize the purchasing conditions for the sourcing of medical countermeasures and vaccines for participating Member States. Others include the EU4Health programme, which will provide funding towards improving many areas of health in EU countries, and pave the way towards the new political umbrella of the EHU. A key initiative of the EHU is the [Pharmaceutical Strategy](#), proposed in November 2020, which aims to ensure accessibility and availability of medicines including through the diversification of international partnerships. As a part of it, the Commission is conducting an ongoing structured dialogue on the security of medicines supply,⁵⁰ which aims to establish a more detailed understanding of the functioning of global pharmaceutical supply chains.

Furthermore, the EU has expanded the mandates of the ECDC and the EMA, and launched DG HERA, which will contribute to epidemiological surveillance and facilitating cooperation for medical countermeasures in the case of another health crisis, including by collaborating with international organisations such as BARDA and the WHO.⁵¹ The Global Gateway and DG HERA will complement each other to support security of supply chains globally.⁵² These developments jointly aim to increase the EU's capabilities to coordinate and improve production and distribution of medical products through global supply chains, particularly in the case of another health emergency.

3. Structural trends and their impact on social cohesion and the EU's geopolitical presence

A healthy Europe means a stronger Europe in the world. The geopolitics of health does not stop at states' competition strategies, diplomacy, and trade: it should also be viewed through the prism of other major structural trends. Health inequalities, demographic shifts, and a rise in non-communicable diseases (NCDs) are challenges faced by the EU and across the world. Here, we see both advantages and disadvantages of the globalisation of public health, as well as an opportunity to apply the lessons learned during the Covid-19 pandemic for better global health cooperation. The way we deal with these changes and challenges and emerge as a strong, healthy, cohesive population and as a global trendsetter will have an impact on the EU's position on the global stage, and its ability to exert its influence as a credible health leader and as a progressive industrial, investment and trade partner.

Good health and access to quality healthcare is a key facet of citizens' well-being. However, within the EU, not to mention across the world, marked health inequalities exist: persisting differences in health status and longevity and in the distribution of health resources between geographical regions and population groups.⁵³ Health inequalities arise from various socio-economic factors such as employment, income, education, gender and ethnicity, as well as from different exposure to environmental and commercial determinants of health. Indeed, lower socio-economic status alone with no other factors is associated with an overall 2.1-year reduction in life expectancy across WHO countries.⁵⁴ Poor health can hamper participation in the labour market, as well as satisfaction with existing public infrastructures and therefore social cohesion. The quality and fairness of a population's health and healthcare is an indicator of the development of its society.⁵⁵ The EU has some of the best access to healthcare in the world (see **Figure 3**), but even so the Covid-19 pandemic highlighted and exacerbated health inequalities present between and within societies - a phenomenon termed the 'syndemic' - by hitting people of lower socio-economic status harder.

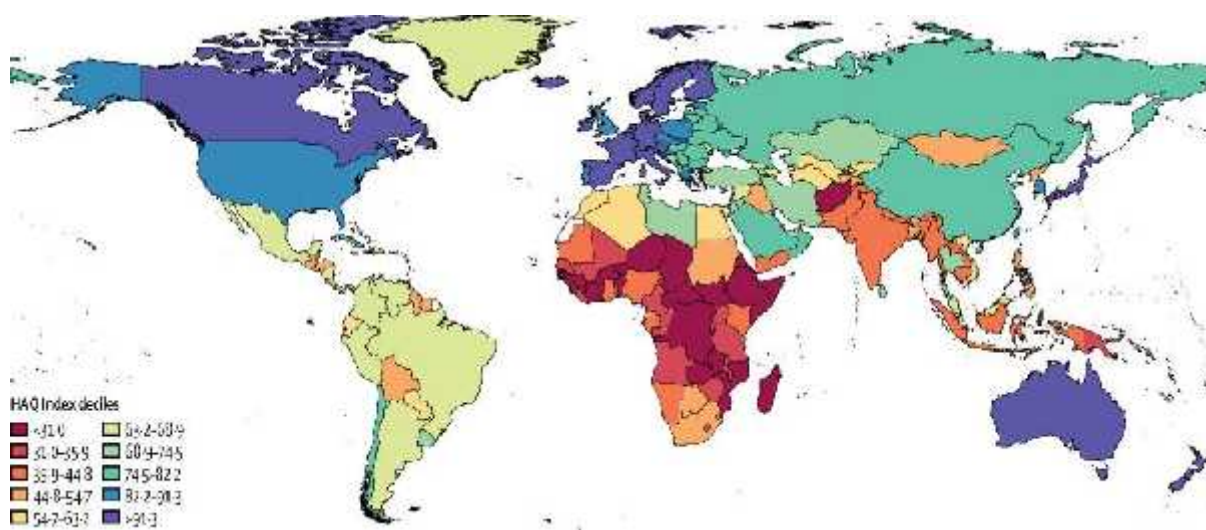


Figure 3. Global map of Healthcare Access and Quality index. Source: [The Lancet](#), 2018⁵⁶

Increasing longevity and a declining fertility rate mean that overall the [European population is ageing](#). This increasing proportion of elderly people will impact social services, pensions, and healthcare strategies, which will require increasing public investment. It will also shrink the workforce both by having fewer people working, and requiring more people to perform care work. Increasing healthcare expenditure for the elderly can however be partially offset by innovation, and by specific promotion of healthy ageing by public health programmes.⁵⁷ A similar and related trend is a striking rise in certain NCDs (such as obesity, cancer, diabetes, cardiovascular diseases, and mental health disorders) which accounted for almost 90% of deaths in Europe in 2019 and is expected to grow further.^{58, 59} Together, these two trends signify a potential decline in overall health and increase in health expenditure in the EU in years to come, which could have secondary impacts on social cohesion, public finances, labour force productivity, and overall quality of European life.

Furthermore, migration to the EU brings challenges to both healthcare systems and migrant health. Oftentimes there is a scarcity of data regarding migrants' health status, and they can face difficulties accessing health services such as legal and linguistic barriers, as well as discrimination.⁶⁰ In addition, they can present differing specific health needs due to genetic, lifestyle, and environmental factors, such as a higher rate of certain communicable and non-communicable diseases (and lower rates of others) and of maternal and child health problems.⁶¹ In parallel, they may suffer from late diagnosis or treatment. In addition, asylum-seekers can suffer from poor mental health, which can be partly due to the stress and trauma often associated with the conditions of leaving their home nation.⁶² All EU Member States recognise the right for every person to the highest of health standards regardless of origin, but due to variations in healthcare capacities and in migration rates this standard is hard to achieve uniformly. In reality, healthcare strategies, priorities, and outcomes differ between countries, and do not always meet the needs of migrants in the same way.⁶³

Another effect of globalisation is a growing importance of both cross-border mobility of patients and of health professionals. Health tourism is a phenomenon in which people travel to a country for the main purpose of seeking medical treatment. It is relatively understudied, but accounted for nearly 5% of all tourism in the EU in 2017, amounting to an approximately €47 billion industry.⁶⁴ Health tourism has existed for a long time, but the free movement of goods and services allowed by the World Trade Organization and the free movement of patients and professionals through the

Schengen Agreement in the EU has resulted in distinctively higher numbers of health tourists with a new pattern: going mainly from richer nations to less rich ones in search of lower-cost treatments.⁶⁵ On the other hand, health-related migrations in the other direction (albeit more long-term) - from poorer nations to richer ones - also occur: the phenomenon of medical brain-drain. According to the African Medical and Research Foundation, only 10% of doctors trained in Kenya each year remain working in the country after their studies.⁶⁶ This trend has accelerated with Covid-19, due to relaxed immigration regulations of certain EU countries for medical professionals during the crisis.⁶⁷ It could have dramatic consequences, given the WHO estimates a shortage of 18 million health workers by 2030 in low- and lower-middle income countries.⁶⁸

Moreover the EU's two overarching political priorities - the twin green and digital transitions - both have major implications for health, each presenting challenges and opportunities. Digitalisation of healthcare has vast potential to improve patient safety, efficiency in healthcare, and ultimately patient outcomes. Examples include better access to patient records and management through eHealth, better diagnostics and treatments aided by artificial intelligence, 5G-supported medical communications such as telesurgery, robotics in manufacturing and in hospitals, and personalised medicine facilitated by all of the above.

The European Health Data Space (a proposal for a regulation adopted by the Commission in May 2022) will be a system of rules, standards and practices, infrastructures and governance to support individual access to and control of personal health data, at national and EU levels. It will also develop a single market for electronic health record systems, medical devices and AI systems, as well as support the secure use of health data for research, innovation and regulation and policy-making. It may vastly contribute to better understanding and treating many of the health challenges we are facing today by boosting research and innovation. For example, geographical and demographic patterns in non-communicable diseases might be more readily detected and studied, as will patterns in the social, environmental and commercial determinants of health and health inequalities. It will also empower citizens to have better access and control closer over their own personal health data, and reduce inefficiencies in healthcare systems.

On the other hand, a concern is that access to higher-tech healthcare may only benefit already-privileged social groups, further widening the gap of health inequalities. Particularly with eHealth, care must be taken to duly safeguard access to personal and medical data, and not to disadvantage people that do not have access to computers or smartphones either due to cost, skills, or simply because they prefer not to use these. Relatedly, the question of societal trust in sharing health data is very pressing, as the proper functioning of the system will rely on this. If people do not trust in the system they will not use it, and therefore the purpose would be defeated. Furthermore, digitalisation of healthcare data increases its vulnerability to cybersecurity attacks (see next section), so utmost care must be taken for the system to be secure and robust. Similarly, the increasing digitalisation of healthcare makes it even more reliant on a secure semiconductor supply chain, and related IT skills, workforce and citizen/patient digital literacy.

On the green front, secondary impacts of climate change such as water scarcity, heat waves, and pollution increase pressure on healthcare systems and threaten natural reservoirs of potential therapeutics, which will be discussed in more detail in the following section. By using more renewable energy sources, promoting the use of rail and electric vehicles, and achieving net zero carbon emissions, the green transition has the potential to make our air cleaner and therefore reduce the high mortality rate associated with pollution.⁶⁹ In general, by improving the environment, the EU can, in the long term, mitigate some of the mounting burdens on healthcare systems (namely for respiratory and cardiovascular diseases) and improve general quality of European life through better health.

These trends exemplify an ongoing paradigm shift in the global conceptualisation of healthcare from a 'right for citizens', to a 'product for consumers'.⁷⁰ They also demonstrate that along with its globalisation, health is becoming both an individual matter and one of joint interest for the population, the nation, the EU (particularly in the case of the EHDS), and indeed the world. This shift raises questions about the nature and direction of future global health engagement activities at EU level, particularly in the context of previously mentioned trends in health diplomacy and discussions towards open strategic autonomy and the security of medical supplies. The EU's ability to act in accordance to sound strategic and anticipatory governance (improving its open strategic autonomy, addressing population-wide prevention, social and commercial determinants, and ensuring health in all policies) and to foster social cohesion through these societal changes (especially the twin transitions), minimise risks, and maximise on their opportunities will be key to securing and maintaining its position on the global health diplomacy stage. It is important to strive for equity, fairness and accessibility to healthcare across the bloc to minimise inequalities and prevent a deterioration of the standard of healthcare in the EU, which would hamper its legitimacy and credibility as a strong global health actor.

4. Defence, security, major shocks and their impact on health

The final dimension to be discussed in the context of the geopolitics of health is major shocks to the EU that could threaten human health and public health systems. Major shocks have multi-level impacts across society, and quite often the brunt of their fallout affects citizens and their health directly. The EPRS recently launched a new annual risks and capabilities monitor, this year entitled '[Future Shocks 2022: Addressing risks and building capabilities for Europe in a contested world](#).' It highlights several risks that could have secondary impacts on healthcare. Here, the focus is on major shocks with relatively direct impacts on health security (not all of which were included in the report), including bioterrorism, cyber-attacks on healthcare infrastructures, and climate change and extreme weather events. In addition to the many lessons learned about healthcare resilience from the Covid-19 pandemic, fostering resilience to major shocks through the corresponding capacities outlined below and in the Future Shocks 2022 report is essential to safeguard human health against secondary impacts from shocks in other policy sectors.

The use of chemical and biological weapons was prohibited after World War I with the Geneva Protocol (1925), and the prohibition of their development and storage respectively dates back to 1972 and 1993 with the Biological Weapons Convention and the Chemical Weapons Convention.⁷¹ Advances in biotechnology, which are generally a positive development for humanity, have led to growing concerns that restrictions on the use of chemical and biological weapons may be weakened, especially in light of Russia's war against Ukraine and potential bioweapon development programs in Iraq, Iran and North Korea.⁷² Indeed, scientific tools such as gain-of-function and gene engineering can be misused for the creation of new biological warfare agents in the near future.⁷³ Furthermore, as highlighted during a video-conference in 2020 by the UN Secretary-General Guterres,⁷⁴ "the weaknesses and lack of preparedness exposed by this pandemic provide a window into how a bioterrorist attack might unfold – and may increase its risks." Since bioweapon development can be hidden easily, it is difficult to assess its existence.

In 2003, the EU adopted a strategy against proliferation of weapons of mass destruction - which sets up a non-proliferation clause within EU border - and is working on its implementation with the output of the EU Non Proliferation and Disarmament Consortium.⁷⁵ Moreover, due to a hybridisation of risks due to technological development and extreme weather events and natural disasters, the risk of chemical, biological, radiological and nuclear incidents (CRBN) has increased in the last decades.⁷⁶ Risk management of such hazards is essential in order to avoid the repetition of disasters such as Chernobyl (1986) and Fukushima (2011), or the accidental (or purposeful) release of chemicals and pathogens that could significantly harm human health.

Beyond new weapons, technological advances carry significant security risks. While allowing huge progress in medicine and patient care, digitalisation of healthcare opens the door to possible misuses of health data, for example from (potential) employers, insurance companies or blackmailers, creating a new source of discrimination and inequality. Furthermore, it leaves healthcare vulnerable to cyberattacks that can threaten the functioning of hospitals, patient safety, security of patients' data, and medical research.⁷⁷ This was evidenced in May 2021 in Ireland, with the largest known attack against a health service computer system in history, and from which the Irish public healthcare system took four months to recover.⁷⁸

The pandemic further heightened these vulnerabilities by normalising remote medicine.^{79,80} Healthcare services constitute a very interesting target for cybercriminals since the data they can breach is highly critical and private, and therefore valuable. They cannot afford to lose their data even for a few hours as it puts patients' lives at risk, and it undermines trust and the capacity for them to deliver. According to a study by Sophos, ransomware attacks hit 66% of healthcare infrastructure in 2021, up by 37% from 2020, and 61% of them paid a ransom to get their data back.⁸¹ In 2021, IBM Security estimated that healthcare data breaches cost \$9.3 million per occurrence, twice the cost of attacks on industries which was \$4.24 million.⁸² In 2020, the High Representative of the Union for Foreign Affairs and the European Commission presented the EU Security Union Strategy.⁸³ One of its main dimensions is the new EU Cybersecurity Strategy which covers the security of healthcare services and aims to build joint capabilities to respond to cyber threats, especially through the creation of a Joint Cyber Unit.⁸⁴ By strengthening cyber resilience, this strategy aims to improve data security of critical public and private infrastructures while reinforcing global cooperation in the field.⁸⁵

Another cyber-related risk accompanied the pandemic: an 'infodemic' – a wave of media and online mis- and disinformation emanating from all corners of the globe, as well as domestically. This also had, and still has, implications for global health as people followed false advice, which for example encouraged them to use false cures, such as drinking bleach.⁸⁶ Several countries, notably Russia and China, as well as other foreign actors have engaged in disseminating mis- and disinformation campaigns on Covid-19. Their goals have been to boost their own images, while also undermining confidence in the western response to the pandemic.⁸⁷

Amongst other emerging risks, major shocks due to climate change (e.g. zoonotic epidemics and extreme weather events) are also likely to increasingly endanger human health in the coming decades. Water scarcity, food insecurity, increasing levels of pollution and heat in countries such as Indonesia⁸⁸, India⁸⁹ or Somalia⁹⁰ put human health at risk, by causing inter alia malnutrition, cardiovascular and respiratory illnesses.⁹¹ This puts pressure on local healthcare services and can lead to migration,⁹² which in turn stresses healthcare systems in other regions. Moreover, biodiversity loss is leading to loss of natural reservoirs for potential novel therapeutics, which could increase the risk of cross-species jumps and hamper the research and discovery of new medicines.⁹³

As the Covid-19 pandemic - presumed to be a zoonotic disease⁹⁴ - demonstrated, most nations struggled to manage and mitigate its economic and social consequences. However, zoonotic epidemics are likely to multiply due to the intensification of the human-animal interface related to population growth, intensified farming, and unsustainable exploitation of resources.⁹⁵ The Food and Agricultural Organisation estimates that 70% of human disease comes from animals, and notes that they are mainly attributable to humanity's dependence on animals for producing their food.⁹⁶ To help prevent and tackle future pandemics of an infectious origin, the EU is developing its capabilities in several ways, including the previously-mentioned strengthening of the ECDC and EMA as well as through the Commission's EU4Health programme, and the new DG HERA (all part of the EHU) as well as a [framework of measures related to medical countermeasures in the event of a public health emergency](#), which is to be soon adopted by the Council.

Extreme weather events such as hurricanes, cyclones, heat waves, droughts, and pollution peaks also constitute major shocks that will threaten human life and health. For instance, heatwaves have direct impacts on human health, causing dehydration, heat cramps and heat stroke, and sometimes leading to hospitalisation and in the worst cases to death. They also indirectly impact healthcare structures and services, which can be rapidly overburdened.⁹⁷ In Europe, the 2003 summer heatwave caused over 70 000 deaths.⁹⁸ Human exposure to heat is increasing exponentially and the heat peaks are more frequent, last longer, and affect more people. Indeed, according to WHO, the number of people exposed to heat rose by 125 million from 2000 to 2016.⁹⁹ Likewise, 4.2 million deaths per year and many respiratory disease are attributable to pollution.¹⁰⁰ If pollution keeps growing, its impact on health will worsen. Finally, the numbers of cyclones and hurricanes is increasing and causes deaths, injuries as well as poverty and displacement that will overall pressure the healthcare system. Africa and small islands, due to both their geographic position and poverty level, are more vulnerable to these threats,¹⁰¹ which could dramatically impact their population and lead to massive migration. Beyond its humanitarian responsibility, the EU therefore has a strategic interest to prevent and/or mitigate these shocks worldwide. Indeed, to face climate related risks on health, the Global Gateway Strategy emphasises the necessity to develop its capabilities on disaster risks and to ensure climate resilience to guarantee health.¹⁰²

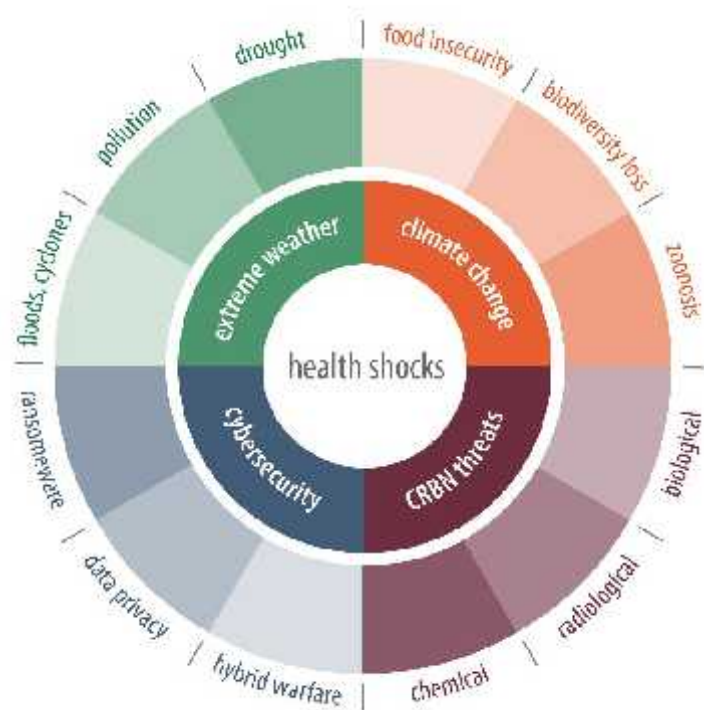


Figure 4. Foresight wheel illustrating the broad categories of health shocks described in this paper. This type of wheel can be used to explore the interlinkages of and similarities between secondary impacts of major shocks. These impacts could include, for example: injuries and deaths, inequalities, pressure on hospital infrastructures, loss of trust, migration, conflict escalation, and the loss of habitats and agricultural land.

These shocks demonstrate the interlinkages between global security and health security. In the context of the current Russian war of aggression on Ukraine, this connection appears even more

obvious. The food dependencies of several African and Middle Eastern countries (e.g. Egypt, Sudan, Lebanon) on Russian and Ukrainian imports are expected to drive food insecurity through inflation and shortages, and may trigger famine in countries that were already food-insecure before the war.¹⁰³ In areas where there is already limited access to healthcare services, the compounding issue of food insecurity can lead to persistent health problems such as child malnutrition. Indeed, the WHO estimates that up to 61% of the world's population will not have access to essential health services by 2030.¹⁰⁴ A poorer health situation may, in turn, catalyse political instability and create new tensions and even conflicts, threatening global stability and possibly leading in some cases to massive migration. Thus, health security must be seen as a key cornerstone of global security, without which long-term peace is not possible. Investing in healthcare infrastructure and supporting healthcare in third countries as well as domestically is therefore a strategic imperative for the EU.

Conclusion

The political momentum around health policy brought about by the pandemic presents the EU with a prime opportunity to reflect on and develop its global health priorities and capacities, and to potentially create a healthier future across the world in line with the UN SDGs and EU values. This paper has highlighted some of the key trends and recent developments in health and global health policy, as well as some of the interlinkages of health with numerous major policy fields including the EU's overarching priorities (the twin green and digital transitions) and EU foreign policy. Of course this is only a snapshot, while the full picture is infinitely more complex. The globalisation of public health and its resulting interconnectedness across the policy ecosystem has had profound effects on healthcare, as well as on the needs and strategies for public health policy of the EU and many other major actors. Ripple effects from tensions and developments permeate the entire international system, as clearly demonstrated by the Covid-19 pandemic.

In a geopolitical context, these ripple effects are particularly evident and discussed in terms of security of supply, for example for medical countermeasures, treatments, vaccines, medtech, and other health-related products. However, it is important to also consider impacts on Europe's ability to address demands, for instance in terms of delivering adequate healthcare both during crises and in the face of a changing health landscape due to other important issues that lurk in the shadows, such as a rise in non-communicable diseases, an ageing population, and pressure due to climate change. Moreover, global health action has two sides. On one hand, it encompasses global cooperation (i.e. multilateral and bilateral relations) to promote and safeguard the health of the EU's population. On the other, it includes actions to support health in partner countries, such as through humanitarian and development assistance, outbreak response, and vaccination. When considering the future (and quite possibly increasing) involvement of the EU in global health, it is necessary to assess and address blind spots and policy gaps along all four of these axes.

The ability for a country to deliver healthcare of a sufficiently high quality under increasing pressure underscores legitimacy and public trust in the modern nation state. Indeed, through globalisation there has been a notable shift in the conceptualisation of healthcare as a personal matter and individual right for citizens of a sovereign nation, to a series of products to be bought and sold via a global network that is intimately connected with geostrategies, as well as geopolitical cooperation and tensions. But no matter the geopolitical situation, patients need care - as a matter of life or death. In this shifting world order, the EU should take a close look at its health capabilities, the scope within which it has the ability to provide support to Member States and their diverse national health systems, and what it can or should do to make sure national and EU infrastructures are resilient against shocks and maximise on the opportunities brought about by global developments and

trends. The EU also needs to assess how it could become a stronger player in emerging area of global health, and strengthen partnerships for health with its partners across the world.

Questions arising

This paper has laid the groundwork for discussions on the EU's future strategy for global health action. The EU's effectiveness in this area will be determined by its successful deployment of sound anticipatory governance. In order to achieve this, strategic foresight in global health can help explore how existing capabilities correspond to both trends and aspirations for the future, and help identify policy gaps and how they could be filled. The questions below arise from trends identified and conclusions made in this text, and can serve to guide ongoing discussions.

- How should the EU act to address the international dimensions of health (from pandemic preparedness to prevention of non-communicable disease and antimicrobial resistance) for the benefit of its citizens and health systems?
- How could the EU's pharmaceutical and digital health markets and supply chains be secured in the face of various future geopolitical challenges?
- How can the EU balance the advantages and disadvantages of the globalisation of public health? How can the principle of open strategic autonomy help with this?
- How can the lessons learned from the Covid-19 pandemic on cross-border health cooperation contribute to tackling other global health challenges, including rising inequalities, the global burden of disease, and environmental pressure from climate change?
- Can the EU effectively play a strong role in global health in the way it would like to with its existing capabilities? What next steps are necessary to successfully achieve the EU's goals?

Authors: Virginia Mahieu and Lucie Coatleven

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