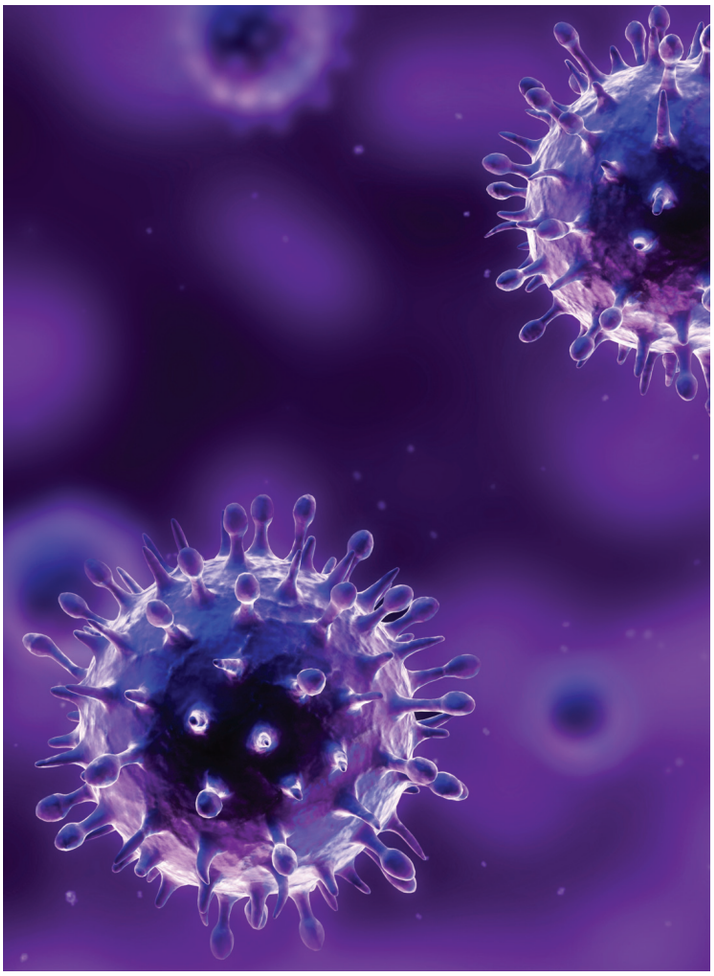


## Summary Report

# Pharmaceuticals and Security: Strengthening Industry Engagement

## Future directions in public-private collaboration for health security

**A Roundtable Discussion hosted by the Centre for Global Health Policy, University of Sussex**

**Stefan Elbe & Anne Roemer-Mahler**

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The Royal Institution of Great Britain, Mayfair, London

**www.sussex.ac.uk/globalhealthpolicy**

University of Sussex
Centre for Global Health Policy

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Roundtable on

# Pharmaceuticals and Security: Strengthening Industry Engagement

## Future directions in public-private collaboration for health security

**The Centre for Global Health Policy at the University of Sussex convened an international expert roundtable to consider the future of cross-sectoral collaborations for strengthening global health security. Comparing experiences across the areas of pandemic preparedness, biodefense and emerging infections, roundtable participants included representatives from international organizations, government, industry, non-governmental organizations, cross-sectoral partnerships, and the university sector. This report summarizes the experiences shared by participants during the meeting, which was convened on 7 February 2014 at the Royal Institution of Great Britain in London. The event was held under the Chatham House rule, and was supported by research grants funded by the European Research Council (ERC) and the Economic and Social Research Council (ESRC) of the United Kingdom.**

# Executive Summary

**Political demand for new pharmaceuticals has intensified at the outset of the twenty-first century. Developing new medicines, and widening access to them, has become a key policy objective across the areas of global health, international development and bio-security. Often, however, this increased political demand is not matched by an equally strong market demand, generating a significant gap between perceived public health needs and what pharmaceutical markets are supplying. To bridge that gap, extensive efforts have been invested in creating new collaborations between the public sector, private non-for-profit organizations and pharmaceutical companies. This roundtable gave participants the opportunity to exchange their experiences and take stock of cross-sectoral partnerships across three key areas of global health security: biodefense, pandemic preparedness, and neglected tropical diseases. This report summarizes the views shared by the participants about the nature and sustainability of such cross-sectoral collaborations aimed at strengthening health security.**

## Partnerships

Participants agreed that cross-sectoral partnerships remain crucial to pharmaceutical development in the area of global health security, especially in contexts where development costs are high and resources are limited. Based on the experiences of the past decade, however, they also urged a greater degree of realism about expectations, finding that such partnerships are difficult to achieve in practice, and that the risks of failure are far from insignificant. In particular, expectations need to be calibrated to the specific functions that partnerships can fulfill – depending, for example, on the specific health and scientific problem being addressed, the detailed characteristics of the drug target, the nature of the product, the size of the market, as well as the types of organizations involved in the partnership.

Participants thought that partnerships could be strengthened to better meet medical need in areas where there is no significant commercial market. They also felt that partnerships could further improve risk-sharing practices, could help engage low- and middle-income countries, and could usefully exploit the opportunities emerging from technological change.

## Incentives

Participants emphasized market certainty and reliable government procurement as some of the most important incentives for stimulating industry engagement with partnerships for health security. Indeed, in the absence of a viable commercial market, governments and global health initiatives continue to play a key role in creating greater market certainty. Participants did, however, also identify significant additional opportunities to broaden the business case for partnerships – through, for example, advancing new technological development, repurposing existing products, and gaining access to new markets. Participants also discussed stockpiling as a particular kind of market guarantee.

The appropriateness of stockpiling was thought to vary according to political priorities and risk perceptions, the technological and regulatory capacities of individual governments, as well as market and product characteristics. Some industry participants felt that international stockpiling could in future help create larger markets and potentially reduce the regulatory burden for companies. Those working in the area of biodefense in particular, however, also thought that the prospects for international stockpiling remain limited at present because of significant international variation in risk perceptions across countries, because of on-going concerns about legal liabilities, and because of the lack of clear regulatory pathways. Effective and appropriate incentivisation of industry engagement in health security partnerships thus remains an ongoing challenge.

## Sustainability

Identifying more sustainable business models to develop and manufacture new pharmaceuticals in the area of health security also emerged as a central theme for participants in the roundtable. In the absence of recurring market revenues, a small number of governments and non-for profit private organizations tend to bear the bulk of development and procurement costs for partnerships. This, in turn, increases the price pressure on manufacturers, which can negatively affect the sustainability of their business model for engaging in partnerships. Yet participants also identified at least three opportunities for making such partnerships more sustainable in future through: 1) promoting enhanced regulatory certainty, particularly for manufacturers of biodefense products and for developing countries manufacturers of pandemic influenza vaccines; 2) strengthening intergovernmental collaboration through global joint programming and greater harmonization of policy priorities, markets and regulation; and 3) greater efforts to combine emergency and commercial use applications of products. Yet, some participants highlighted that developing multiple disparate indications for a single drug or vaccine can be scientifically challenging.

# Introduction

Political demand for pharmaceuticals has increased over the past decade, as governments, international institutions, and non-governmental organizations seek to provide populations with greater access to key medicines. HIV/AIDS was undoubtedly a significant initial driver of this trend, but the focus soon broadened to include malaria, tuberculosis, and neglected tropical diseases. The insecurities generated by emerging infectious diseases (including pandemic influenza), coupled with the growing fear of bioterrorism, only heightened such political demand for new pharmaceuticals further still. This increased emphasis on drugs and vaccines places pharmaceutical companies in a pivotal role, as they possess both the technological know-how for pharmaceutical development and the ability to finance costly clinical trials.

The experience of the past decade also suggests, however, that the priorities of commercially operating pharmaceutical companies are often not naturally aligned with this heightened political demand. Many pharmaceutical companies have determined the commercial incentives for investing in the kind of medicines that governments and global health initiatives increasingly desire to be too weak. Lower profit margins compared to other therapeutic areas, difficult demand forecasts, and high opportunity costs are just some of the factors weighing on industry calculations. A significant gap thus remains between political demand and market supply in many areas of global health policy.

### Political demand

- **medical countermeasures for bioterrorism**
- **(re-)emerging infectious diseases**
- **neglected tropical diseases**
- **pandemic influenza**

### Market demand

- **comparatively low profit-margins**
- **difficulty to forecast demand**
- **opportuniity costs**

As a way of bridging that gap, substantial efforts have been devoted to enhancing collaboration between the public sector, the private non-for profit sector, and pharmaceutical companies. This high-level roundtable invited leaders from government, the pharmaceutical industry, global health initiatives and academia to take stock of such collaborations across three key areas of global health security: pandemic preparedness, biodefense, and neglected tropical diseases. Participants were especially encouraged to reflect upon how the following broader developments were likely to shape the future prospects of such collaborations:

- a changing ecosystem of research and development making both intra- and cross-sectoral partnerships a more common feature of the pharmaceutical development landscape;
- the rise of biotechnology companies and pharmaceutical producers from emerging markets as more significant actors;
- the emergence of increased regulatory demands, including in the areas of product safety and reimbursement; and
- the persistence of political controversies around the stockpiling of medicines and vaccines.

Over the course of the day, participants assessed how these changes are shaping the nature, incentives and sustainability of cross-sectoral collaborations for health security.

# Partnerships

## Bridging Need and Demand

Participants agreed that cross-sectoral partnerships remain necessary for pharmaceutical development in the area of global health security, especially in contexts where development costs are high and resources are limited. Based on the experiences of the past decade, however, they also urged a greater degree of realism about expectations. Despite many notable successes, partnerships can be difficult to achieve in practice, and the risks of failure are far from insignificant. While their objective is to maximize benefits and to minimize risks, those objectives can also be at cross-purposes for different partners. And even a strong partnership is, in and of itself, no guarantee of a successful outcome in terms of developing a new pharmaceutical product. Especially in the current financial and political environment, marked by fiscal tightening and donor fatigue, expectations will need to be calibrated to the different functions that such partnership can fulfill.

## A Diversity of Partnerships

Participants identified a rich diversity of partnerships formed over the past decade across the areas of biodefense, pandemic preparedness and neglected tropical diseases. The prospects for success, and the commercial business case for entering into such collaborations, vary according to:

- the stage of the pharmaceutical development cycle (e.g. discovery, clinical trials, manufacturing, etc.)
- the nature of the product (how great is the scientific complexity involved; is the product preventative or therapeutic)
- the size of the market (high volume vs. low volume markets)
- the likelihood of drug resistance (e.g. antibiotics, where the use of new medicines may need to be restricted)
- the size of the company (established pharmaceutical company versus small- or medium-sized biotechnology company)
- the total number of partners involved in the partnership.

When forming expectations about what cross-sectoral partnerships can realistically deliver in the area of health security, and about how they can be further strengthened, this wide range of dimensions needs to be taken into account.

## Strengthening Partnership Models

### Meeting Needs Without a Market

Some areas of medical need are very unlikely to ever be transformed into a market opportunity. Yet, the societal value of meeting those needs could be immense. Roundtable participants explored different models that have been developed to address this situation, such as Prizes and the Health Impact Fund. Participants found that a key constraint for many of these models is the absence of a global mechanism to negotiate financial contributions and, indeed, the willingness of governments and private organizations to provide the requisite financial backing.

### Improving Risk-sharing

Even in areas where some market demand exists, partnerships are frequently hampered by disagreement about exactly how the risks are to be shared – pointing to a need for improved risk-sharing mechanisms. Here several roundtable participants discussed a blended capital market mechanism, which would use grants to finance early R&D where risks are very large but the sums required relatively small. At the more advanced stage – where risks diminish but the required funds increase – they thought that capital market mechanisms could be usefully brought in.

### Engaging Low- and Middle-Income Countries

Participants felt that there were also opportunities to develop new partnership models based on the growing engagement of low- and middle-income countries – including both public and private sector groups. Indeed, participants noted that much of the existing global health model was still predominantly based on the culture created in 2000, and entrenched in donor-recipient dynamics. In the face of rapidly changing international economic and political dynamics, this model was at risk of becoming out of touch, and approaches to partnership that worked in the past may not be applicable in the future.

### Developing a Global Framework

Several participants called for the development of a global framework to increase the availability of and access to pharmaceuticals with limited commercial markets. Differences became visible, however, with regard to the approach that such a framework should take. While some argued that innovation for biosecurity could not work on the basis of a fragmented market approach, others pointed out that many large pharmaceutical companies are looking for such a framework in the context of business opportunities in emerging markets. It was also highlighted that a Framework Convention on Global Health is currently being developed through the World Health Organization.

### Leveraging Technological Change

Finally, some participants also thought that new partnership models were likely to emerge as a reflection of scientific and technological change. In the area of pandemic preparedness, for example, the development of the H7N9 vaccine virus was discussed. That occurred largely outside the WHO strain generation system through a company working in collaboration with the Biomedical Advance Research and Development Authority (BARDA). They were able to construct the vaccine solely on the basis of the genetic sequence information. It was predicted that national and WHO control over sequence data, and virus and reagent generation could diminish in future. The current system of collaboration, it was predicted, could therefore change as the technologies underpinning also change.

# Incentives

## Beyond Push and Pull?

For partnerships to succeed, benefits need to accrue to all parties. From a business perspective, participants agreed that the creation of a market remains key for a win-win scenario to emerge. Push incentives, such as R&D grants and technology transfer, can be very useful in creating such a broader business case. Participants also cautioned, however, they are ultimately of limited use if there is no market at the end. On the industry side, several participants confirmed that their companies' engagement in partnerships was due to a combination of push and pull incentives. However, it was also felt that in order to be more effective in future, incentives will need to take opportunity costs into account more fully. While some (especially larger) companies may be able to absorb opportunity costs under corporate social responsibility programs, or by repurposing existing products, this is often not viable for the majority of companies.

## Creating a Market Through Reliable Procurement Commitments

In areas where commercial market demand is low, participants thought that reliable procurement by governments and global health initiatives is crucial to the success of partnerships. Several participants recalled instances where expectations on the part of companies had not been met by governments. For instance:

- the initial commitment made by governments from the African meningitis belt to buy a meningitis A vaccine if it was priced below US$ 0.5 has not been fulfilled.
- In the United States, several companies invested in the development of medical countermeasures encouraged by a fund of US$5.6 billion for R&D and procurement of medical countermeasures, which had been made available through Project Bioshield in 2004. After this money sunset, however, the annual procurement fund consists currently of US$ 250 million. According to participants, this has caused a great deal of unease among companies that – having made significant investments in development – they now find that insufficient monies are available for the procurement of their products.

Where there is a history of governments and global health initiatives pulling out of such commitments, companies will find it more difficult to make the necessary R&D and manufacturing investment decisions.

Related challenges identified by participants include that the policy priorities of governments can change quite rapidly, that government budget-planning cycles tend to be shorter than in the pharmaceutical industry, and that risk perception varies significantly across countries. Notable government investments such as Project Bioshield, the Advance Market Commitment for a pneumococcal vaccine in 2007, and national stockpiles for pandemic preparedness reflect the focus on health security in the aftermath of the anthrax attacks in the United States, the HIV/AIDS pandemic in developing countries, and the global H1N1 and H5N1 influenza pandemic threats. Yet, in the wake of austerity measures subsequently undertaken by many governments in the context of the global financial crisis, participants discussed the challenges and need for commitments of similar proportion to recur in the near future.

## Strengthening the Business Case

Participants identified several ways in which the business case for partnerships could be strengthened. Short of concrete procurement commitments, industry participants felt that governments can still help to create some market assurances by raising public awareness of the threats, and by communicating broad plans and requirements – as done for instance by BARDA's Broad Agency Announcements. They also felt that government investment in better data on the epidemiology of particular diseases, and the suitability of specific products for emergency use, could lead to greater confidence in national and international procurement commitments. Participants further explored ways in which a win-win scenario for industry engagement could be constructed beyond the creation of a market guarantee alone. Here they pointed to how partnerships can generate additional opportunities for technological development, can open up new avenues for existing products, and can facilitate entry into new markets. Innovation procurement for specific products, it was argued, should be pursued.

## Stockpiling

Stockpiling was discussed at length as a specific form of market creation capable of encouraging industry engagement in partnerships. Roundtable participants pointed out that stockpiling medical countermeasures in the United States had been more successful in encouraging industry engagement than in the United Kingdom because volumes in the United States had been significantly greater. Yet, participants also identified several issues that need to be taken into account when considering the appropriateness of stockpiling as a market guarantee.

### Political Sensitivities

Stockpiling pharmaceuticals has become a politically more sensitive issue. Some governments faced criticism about using public funds to create sizeable stockpiles for threats that have not materialized. In the absence of an acute health threat, governments may also be reluctant to bring the risk of a pandemic or bioterrorist attack onto the agenda in order not to alarm the public. Yet, conversely, if governments have not created stockpiles in the event of an emergency, they risk being subsequently criticized of having neglected their duty to protect the public. Reliable and transparent efficacy data can also be a political problem for stockpiling products, as can be seen with ongoing debates surrounding the antiviral medication *Tamiflu*.

### International Stockpiles

The Roundtable also discussed the issue of *international* stockpiling, particularly in the field of medical countermeasures. Industry participants pointed out that there was a significant business interest in understanding the potential of creating international stockpiles not only to reduce the risk of depending on a single government for procurement, but also to expand their market. Participants also reported that a number of governments stockpile medical countermeasures, and that variability is often due to the political prioritization of biodefense and regulatory frameworks. Creating international stockpiles could help reduce the regulatory burden of navigating different national legislations for companies that, in this sector, tend to be small and operate with limited resources. On the government side, international procurement of medicines and vaccines could be advantageous to enhance purchasing power. Yet, some government participants pointed to difficulties in sharing stockpiles at the international level because of liability concerns and different regulatory frameworks.

### Lack of Regulatory Pathways

Participants identified the lack of clear regulatory pathways as a further obstacle for the creation of international stockpiles. Some participants argued that, in the United States, Project Bioshield had been more successful in creating industry interest not only because of the funds made available but also because it helped create regulatory pathways – notably the animal rule and the ability of stockpiling products for emergency use prior to the approval of the US Food and Drug Administration (USFDA). Similar regulatory pathways do not exist in many other countries, representing a key barrier to market entry. That said, it has been possible to create international stockpiles in some areas – such as for products for some emerging and re-emerging infectious diseases, pandemic influenza, and smallpox. In those cases agreements need to be reached on who carries the stockpiling costs. On several occasions the costs and logistics of stockpiling were eventually passed on to the manufacturing company (as in the case of the Meningitis A vaccine).

**Stockpiling Active Pharmaceutical Ingredients (APIs) and Materials**

Many countries, especially low-income countries, cannot afford to stockpile finished products for health security. In the area of influenza vaccines, WHO has thus been working instead on having APIs and necessary materials in place, so that production can begin rapidly in the event of a pandemic. Under this initiative, the Brazilian Butantan Institute and the Serum Institute of India, for instance, are receiving H7N9 vaccine candidate seeds to start preparing the first batches in case a pandemic happens. While stockpiling APIs and materials may be more cost effective than stockpiling finished products, however, participants pointed out that this approach also involved complex issues of manufacturing capacity and technology transfer.

## Opportunities for Technological Co-development

Multiple participants identified the pursuit of technological and scientific development, particularly in areas where they saw commercial opportunities, as an important incentive for industry engagement in cross-sectoral partnerships. For example:

- Novartis co-invested with BARDA in the development of cell-culture technologies for the production of influenza vaccines that can be deployed *both* for pandemic and seasonal vaccines.
- Sanofi Pasteur continues to work with Aeras on identifying a suitable candidate for a tuberculosis vaccine.
- The Serum Institute of India has worked with PATH on manufacturing meningitis A, rotavirus and pneumococcal vaccines, and has received access to conjugate and cell-culture technologies that have helped expand the company's R&D pipeline.

In many cases the prospects of commercial success for such projects is far from evident at the outset. While Novartis' engagement with BARDA has been a technological success, for example, it is not yet clear to what extent it can also be called a commercial success. Similarly, Sanofi Pasteur's work with Aeras is not considered an important commercial business opportunity, but more of an important and promising scientific one. For the Serum Institute of India, the commercial success of the Meningitis A project became clear only in the course of the project, especially when the meningitis belt widened from 14 to more than 20 countries and the Serum Institute was subsequently able to increase volumes from 25 million to 50 million doses. While cross-sectoral partnerships do not always have an immediate commercial bearing, participants nevertheless felt that they can usefully facilitate technology transfer and that this can contribute to long-term success – especially of smaller companies and developing countries manufactures.

## Finding New Uses, Opening New Markets

Opportunities for re-purposing existing products, and accessing new markets, were highlighted by participants as further incentives for companies to engage in cross-sectoral partnerships. Pharmaceutical companies continuously review their existing portfolio to identify products that can be leveraged for new indications. Bayer, for example, has engaged in a partnership with the Global Alliance for TB Drug Development to coordinate a global clinical trial to study the potential of one of its antibiotics, moxifloxacin, to shorten the standard treatment of tuberculosis as part of a multi-product regimen. Engagement in such partnerships can also help companies learn more about diseases and markets. Through its collaboration with WHO on Chagas disease, Bayer learned that the disease had also become a more significant burden in the United States, and consequently worked on how to register the product there. Sanofi Pasteur's collaboration with global health initiatives through GAVI, PATH, WHO and UNICEF has helped the company learn more about vaccine distribution in emerging markets. *Tamiflu* was mentioned as another example of a product whose commercial success was enhanced by leveraging public health arguments on pandemic preparedness after the product had initially been rejected by regulators in Europe and the United States on the grounds of limited effectiveness for seasonal influenza.

# Sustainability

Sustainability emerged as an ongoing issue in the development and manufacture of pharmaceuticals for which no commercial demand exists. In the absence of recurrent commercial market revenues, other funding sources have to bear the development and manufacturing costs. The capacities and interests of those funding sources, in turn, have to be identified and maintained. Here participants identified three opportunities for making such partnerships more sustainable in the future through:

- Promoting greater regulatory certainty (particularly for manufacturers of biodefense products and for developing countries manufacturers of pandemic influenza vaccines)
- Strengthening intergovernmental collaboration through global joint programming and greater harmonization of policy priorities, markets and regulation
- Greater efforts to combine emergency and commercial use applications of products

## Combining Emergency and Commercial Use

### Pandemic and Seasonal Influenza Vaccines

To minimize the burden on governments and private non-for-profit organizations, growing attention is being devoted to identifying commercial applications for products and technologies that are also required for emergency use. Influenza vaccines, according to several roundtable participants, are one of the most promising candidates in this regard – as they are required both for seasonal flu and a possible pandemic. Indeed, in most cases the capacity to develop pandemic influenza vaccines depends on a company's existing capacity to produce seasonal influenza vaccines.

Yet even here challenges remain. A key obstacle for developing countries manufacturers is access to technology, as is the lack of demand for seasonal vaccines in the absence of national immunization programs. In addition, in order to rapidly scale up production in a pandemic, they also face long delays to build up chicken flocks and increase egg production. For larger pharmaceutical companies from high-income countries, in turn, a key problem is the intensely competitive nature of the seasonal influenza vaccine market. With low profit margins, some industry participants observed, seasonal influenza is only of limited commercial interest, and several companies have recently withdrawn from this market. This has further reduced the capacity for the production of both seasonal and pandemic influenza. For those companies still involved in seasonal influenza production, surge capacity remains a further challenge, as it requires the manufacturer to switch in mid-stream from one product to another. From their perspective, the reliability of procurement commitments is therefore crucial to maintaining their interest in this business and, hence, global production capacity.

## Price Pressure

### Monoclonal Antibodies for Pandemic Influenza

Opportunities to combine emergency use and commercial use applications may also emerge in the area of monoclonal antibodies for pandemic influenza. It was suggested that a manufacturing facility used for the production of a monoclonal antibody with a commercial application, such as against tumor necrosis factor (TNF) associated with autoimmune disorder, could also be used to produce a monoclonal antibody for the H5 influenza virus strain. Crucially, the switch in production could be done without vast retooling because, as long as the workforce is trained, there are mechanisms for switching from one product to the other.

### BARDA's Push for Broad-Spectrum Drugs

Attempts to push commercial applications for emergency use products have also been undertaken by BARDA, which has increasingly promoted a strategy of developing broad-spectrum drugs. Participants reported that the agency's expectation is that they will support the development process up to licensure, but that the pull incentive will come from the commercial market. Participants pointed out, however, that there is big risk involved in developing broad-spectrum antivirals, and very deep pockets are required for such an endeavor.

A commercially viable business model is challenging for the majority of pharmaceuticals required in the fields of neglected tropical diseases, emerging and re-emerging infectious diseases, and biodefense. Currently, a small number of governments and non-for-profit organizations bear the bulk of the development and procurement costs. Given the need of governments to justify public expenditure, especially in times of austerity measures, the pressure on manufacturers to reduce prices is considerable.

Outside of the area of biodefense, a growing trend has been for governments and global health initiatives to turn towards pharmaceutical companies in low- and middle-income countries as suppliers of low cost medicines and vaccines. Some of those companies are able to produce at considerably lower costs than their counterparts in high-income countries. The reasons for that include relatively lower labor costs, lower profit-margins, and high volumes. On the downside, however, participants also reported that such price pressure from governments and global health initiatives is creating a situation where this business model is becoming less sustainable.

Nor has proved easy to offset the low margins of their business for low-income countries by charging higher prices in middle-income countries. Some governments, for example, appeared to reduce national immunization programs once they were no longer eligible for GAVI funding or demanded to be charged the same rates as GAVI. Finally, participants reported that developing countries pharmaceutical companies may face stiff competition from the market entry of state-owned companies from China which are able to sell below cost because of government subsidies.

## The Regulatory Environment

A weak regulatory environment was perceived by several participants as another significant challenge for the sustainability of partnerships – especially in the fields of pandemic preparedness and biodefense. Producers of medical countermeasures face unclear regulatory pathways for products that cannot be tested in clinical trials. In the United States a dedicated regulatory environment has now emerged for medical countermeasures, which allows for the stockpiling and approval of such products by using animal models.

Indeed, promoting procurements prior to FDA approval was highlighted by participants as a key achievement of Project Bioshield. However, the absence of similar regulatory pathways in other countries is seen as a key barrier to market entry internationally.

Insufficient regulatory capacity, albeit of a very different kind, was also flagged up by participants as a significant barrier to market entry and sustainability for many pharmaceutical companies in low-income countries. Roundtable participants reported that manufacturers of influenza vaccines, which WHO seeks to engage through the Global Action Plan for Influenza Vaccine (GAP), are frequently confronted with national regulators that do not possess the requisite expertise, capacity and experience to approve such vaccines. In addition to working with manufacturers in low-income countries on a sustainable business case for pandemic influenza preparedness, WHO therefore also works in parallel on increasing the capacity of regulators in these countries.

## Intergovernmental Collaboration

Several participants also explored greater intergovernmental collaboration as a driver of enhanced sustainability for cross-sectoral collaboration in the area of health security. Industry participants, for example, highlighted that global joint programming and greater harmonization of policy priorities, markets and regulation could enhance the sustainability of cross-sectoral collaboration in a range of areas – including for antibiotics and medical countermeasures. It was noted that WHO can facilitate international stockpiling and has done so for antiviral medicines such as oseltamivir, for instance. In the field of biodefense, Australia, Canada, the United Kingdom and the United States have also signed a Memorandum of Understanding, and government participants reported that this was providing direction and support to national programs.

Finally, governments are also looking into increasing shared procurement to enhance purchasing power for medical countermeasures and to achieve savings on administrative costs. In the field of pandemic preparedness, such efforts led to the EU Decision on Serious Cross Border Threats to Health, which includes provisions to establish voluntary joint procurement of medical countermeasures in the European Union. Industry participants acknowledged the need for intergovernmental coordination of purchasing to avoid access problems in emergency situations. Some industry participants cautioned that large tenders contributed to lowering prices, which, in turn, might affect profit margins and investment incentives. Others, however, pointed out that large tenders can provide sustainable and more navigable markets. Enhancing the sustainability of health security partnerships thus emerged as an ongoing challenge in the discussion.

# About the Centre for Global Health Policy

## Advancing the knowledge base for global health policy

**The Centre for Global Health Policy at the University of Sussex is an interdisciplinary research centre dedicated to advancing the knowledge base for global health policy. Directed by Professor Stefan Elbe, the Centre brings together more than thirty researchers, across more than ten disciplines, undertaking work in the areas of global health policy, politics and governance. Members of the Centre have significant track records of attracting external funding, publish widely on contemporary challenges, and organise regular events, such as workshops, seminars, roundtables and conferences, on pressing global health issues.**

### Vision

Through interdisciplinary research in global health policy, we wish to help:

- Reduce significant health inequalities between and within countries for greater social justice
- Enable international access to effective, affordable, and compassionate healthcare
- Identify transnational determinants and consequences of diseases

### Principal Aims

- Promote global health by generating funding for rigorous, innovative and cross-disciplinary research that will benefit national and international policy communities in global health
- Help to consolidate, support and grow an international network of global health researchers
- Host networking events which allow a broad range of stakeholders (including researchers, policy-makers, industry, activists, media and students) to exchange their knowledge, ideas and experiences

### Example Research Projects

- Pharmaceuticals and Global Health
- Migration, Mobilities and Global Health
- Genetics, Genomics and Global Health
- The Rising Powers and Global Health
- Realising Rights to Global Health
- Global Health Security
- Health Systems in Fragile States
- International Science and Bioethics Collaborations

To read more about our projects and connect to our researchers, please see our website: **www.sussex.ac.uk/globalhealthpolicy**. The Centre is keen to work with other research partners showing similar interests and welcomes requests for collaboration.


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