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Country

Norway

Target

Government and Public Health

Industry & Commerce

Topic

Stakeholders

Vaccination

Tags

Vaccines

Ebola

epidemic

Background

Emerging infectious diseases have a potential for great harm, spreading unchecked in naïve populations, usually poorly prepared to deal with the new threat. The devastating effect of infectious diseases is most strongly felt in low income countries, where the health infrastructure and preparedness plans are at best insufficient.

The most recent example of a devastating epidemic was the Ebola virus epidemic in western Africa. Ebola virus is easily transmissible and has a high disease-fatality rate. The 2014-2015 outbreak in Guinea, Sierra Leone, Liberia, Nigeria, Senegal and Mali, was the largest ever, and the most severely affected places had weak health systems, few personnel and little

infrastructure, worsening the outbreak scenario. Another virus, the Zika virus, recently gained worldwide attention for outbreaks in Central and South America and for its discovered link with increased risk of microcephaly in new-borns. The fight against this new threat is only starting and concerted efforts from multiple and different stakeholders will be needed to tackle it.

One effective way to fight infectious diseases are vaccines. In recent years vaccines have been facing reduced confidence from the public in their benefits, and this is especially true in the case of emerging infectious disease and newly developed vaccines against them. In case of an outbreak of a pathogen for which a vaccine doesn't already exist, the need to develop a vaccine is great, but the process is long and results often come too late. Even if a vaccine is developed in time, trust issues may arise, limiting its uptake, as was the case of the flu epidemic in Europe in 2009.

The recent Ebola epidemic showed that it is possible to develop vaccines faster in cases of dire need. However, in this particular situation a potential vaccine was already in the pipeline, and the severity of disease led stakeholders to make ad-hoc private/public/philanthropic alliances. While the vaccine was developed much faster because of the crisis, it was still too late to be of much use in the actual epidemic. WHO expert assessments panels, analysing the response to the Ebola outbreak, concluded that the current infectious disease response system was no longer adequate.

The Coalition for Epidemic Preparedness Innovations (CEPI) was created to provide a new system of vaccine development, where vaccine candidates are developed prior to outbreaks, making them ready for efficacy trials when an epidemic arises. CEPI aims to contain outbreaks at the earliest stages possible, protecting the populations most at risk, by advancing safe and affordable vaccine development.

Project description

The project was officially launched in January 2017 and is currently still in its starting phase, which is planned to last until end of 2017. During this interim period, the coalition is governed by the Norwegian government, with close collaborations with the Indian government, Wellcome Trust, Bill & Melinda Gates Foundation, and World Economic Forum. The coalition is composed of a partnership of public and private actors, as well as non-governmental agencies and civil society actors. The Interim Board of CEPI consists of experts from all types of partners: industry, NGOs, governments.

CEPI's Scientific Advisory Committee meets regularly to assess proposals, discuss future work directions, and advise the Board on scientific and industrial partners and opportunities. In order to coordinate the various actors needed for vaccine development and accessibility, a Joint Coordination Group was set up, whose actions are meant to integrate all the efforts required to provide quick and affordable vaccines to populations in need in times of need, for the diseases in CEPI's portfolio. Organizations that support CEPI's endeavours as partners, participate in the "Partners" Forum, a platform of cooperation and communication. Among the partners that have already joined, there are notable members of civil society: Global Citizen, Save the Children, and NGOs such as the Wellcome Trust, and the Bill and Melinda Gates Foundation.

The role of CEPI is defined as "an end-to-end approach", meaning an involvement in all the steps in between vaccine discovery and vaccine delivery. CEPI will act as a funding body for the development of vaccines identified for the infectious diseases covered by it. Two calls for proposals have already been designed and launched with the collaboration of the Bill and Melinda Gates Foundation. CEPI aims to help develop

vaccines that will be equitably available to all those in need and for which the cost will not be an impediment to their distribution. The starting point for the coalition is to focus on three ?priority diseases? - MERS-CoV, Lassa virus and Nipah virus ? for which they aim to develop two vaccine candidates per disease, in order for them to be readily available in case of an outbreak. The three priority diseases were chosen for their potential public health impact and risk of an epidemic occurring, but also based on what vaccine development capabilities were already existing.

Several calls for proposals have already taken place since the launch of the Coalition:

- Request for information: Rapid response platform technologies for epidemic preparedness
- Call for proposals 1: Vaccine development against prioritized epidemic infectious diseases. The second part of this call for proposals - full proposals submissions - has recently ended (12 July 2017).
- Call for proposals 2: Platform technologies to enable rapid vaccine development for epidemic prone infections. The first applications are in the process of being reviewed.

CEPI has also been a participant at high level meetings and conferences (C20 Civil Society Summit, United Nations General Assembly, Global Virus Network, Developing Country Vaccine Manufacturers? Network, G20 Leaders? Declaration). The coalition also organize their own events, such as meetings with industry.

Lessons learned and challenges

In May 2017 there was an Ebola outbreak in the Democratic Republic of Congo. At that time, the question arose of what role will CEPI play in future outbreaks? During the Ebola

outbreak in May, the role CEPI played was only to provide support to WHO if it was needed. In future outbreaks of diseases targeted by CEPI, CEPI will be able to:

- Mobilise key actors at the early stages of an outbreak ? regulatory authorities, public health bodies and clinical scientists
- Call upon strong partnerships with organisations able to send medical personnel and support in case of outbreaks ? such as Médecins Sans Frontières (Doctors Without Borders).

The development of partnerships needs to happen before an outbreak occurs.

Status of the project

The project is forging ahead, moving towards a transition from the interim stage to a definitive format. The current newsletter is released once a month, with a direct address from the CEPI CEO included. The coalition stresses their commitment to open communication and transparency of actions. The call for applications for the second stage of the 2nd call for proposals was issued, and the 4th meeting of the CEPI scientific advisory committee was held to evaluate them. Selected partnerships will be announced at a later date.

CEPI will continue to work towards accelerating the vaccine research for the three diseases chosen as priority diseases, and also towards extending their scope further to other infectious diseases lacking a vaccine and having a pandemic spread potential. The model on which CEPI is based - involving various stakeholders, establishing wide ranging partnerships, and including civil society - is being successfully applied to other endeavours related to vaccines and health innovation (such as PATH, HEAL Alliance, Gavi).

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