

15 years of the ECDC

Since its founding in 2004, the European Centre for Disease Prevention and Control has faced measles, West Nile virus, and Brexit. Talha Burki looks back at its first 15 years, and to its future.



Sept 28, 2019, marks 15 years since the management board of the European Centre for Disease Prevention and Control (ECDC) held its inaugural meeting. The agency had been established by a regulation passed by the European Parliament and Council earlier in the year. "The Centre's mission should be to identify, assess and communicate current and emerging threats to human health from communicable diseases", affirmed the founding document. The 2002–03 severe acute respiratory syndrome (SARS) outbreak had shown the speed with which a pathogen could emerge, spread, and claim lives. It was clear that the European Union (EU), with its open borders and expanding membership, needed an organisation that could offer risk assessment, help to coordinate epidemic response, and provide a hub to analyse and interpret epidemiological data.

"The political borders of countries are not respected by pathogens" explains Nick Gent, Deputy Head of Public Health England's Emergency Response Department. "Freedom of movement of goods and people, as well as the fact that many diseases of concern are zoonotic, created the necessity for a centralised system, so that we had good oversight and we could minimise hazards." After all, within a matter of months of its first appearance in southern China, air travel had spread the SARS-associated coronavirus all over the world.

"There will always be a lot of outbreaks of all kinds of diseases", notes Marc Sprenger, director of ECDC from 2010–15 and now director of the Antimicrobial Resistance Secretariat at WHO. "Over the last 15 years, the ECDC has tried to answer what these outbreaks mean for the EU. Is there a risk of importing and spreading

infections in Europe? What is the situation with mosquitoes and vector-borne diseases? Is there a chance Ebola can spread beyond Africa?" Gent notes that the agency has played a crucial role in promulgating best practices in emergency preparedness and response. "They do much more than just the classic epidemiological stuff", he said.

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In 2008, the ECDC launched the European Surveillance System. 4 years later, it began publishing its weekly communicable disease threat report. The agency produces regular bulletins on specific infections. For example, the August, 2019, measles and rubella monitoring report states that in June of the same year, 28 countries in the EU and European Economic Area (EEA) notified 1433 cases of measles, with France, Bulgaria, and Italy reporting over 200 cases each. During transmission season, West Nile virus is monitored on a weekly basis. From Aug 2 to Aug 8, EU member states reported 13 cases scattered across Greece, Italy, and Cyprus. "If you go onto the ECDC website, you can find state-of-the-art maps showing the spread of diseases and you can construct your own graphs", said Sprenger. "This is one of the big achievements of the ECDC: to collect all that data and make it accessible to everyone."

Danielle Solomon (University College London, UK) wrote the Faculty of Public Health's blueprint for the post-Brexit relationship between the ECDC and the UK. "The concrete things

like the early warning mechanism and the expert opinions are obviously valuable, but if the UK separates from the ECDC we will find a way of replacing them", she said. The ECDC publishes everything it produces online. Its website and its wealth of data can be accessed by members and non-members alike, so regardless of the form Brexit takes the UK will still be able to obtain guidance. But there are ECDC working groups from which the UK would be excluded in the event of a no-deal Brexit, and it would no longer be in a position to shape policy. "Leaving the ECDC means the UK would not have a role in the agency's discussions or in setting priorities", said Heidi Larson (London School of Hygiene and Tropical Medicine, UK). The ECDC in turn would be deprived of the expertise of British scientists. "The UK has a very strong tradition in the field of infectious diseases", said Sprenger. "They have been at the core of the ECDC."

Then there are the informal relationships facilitated by the ECDC.



Andrea Ammon, Director of the ECDC



ECDC

The Emergency Operation Centre at ECDC

“One of the key benefits of the ECDC is that it connects public health specialists in different countries; those relationships will continue if the UK leaves the ECDC, but there is a risk they might expire when personnel move on”, explains Solomon. “At the moment, it is easy for someone in London to call their counterpart in Paris to ask what they are doing about a particular disease, or whether they want to collaborate, because they are part of the same network. It would be a pity to lose that ease of access.” The ECDC supports 17 networks and consortia of experts across Europe.

Larson has no doubt as to the value of the ECDC. “They are a vital organisation; they are very relevant, and they are not duplicating the work of any other entity I know of in Europe”, she told *The Lancet Infectious Diseases*. “They are constantly monitoring what is going on; the risk assessment part of their work is really important.” The ECDC epidemic intelligence team identifies infectious disease threats. These are discussed at the daily round table meeting to decide on the most appropriate course of action. This might be further monitoring, an epidemiological update, a news story on the ECDC website, or the offer of technical assistance to affected member states. But the meeting could also decide to issue a rapid risk

assessment. “The risk assessments are almost an art form; they have been developed to an extremely high level and can be put out in a very short time”, says Sprenger. “Most organisations in public health struggle to deliver rapid statements, but the ECDC does so again and again; it is an impressive feat.”

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The agency includes several disease programmes: antimicrobial resistance and health-care associated infections; emerging and vector-borne diseases; foodborne and waterborne diseases and zoonoses; HIV, sexually transmitted infections, and viral hepatitis; influenza and other respiratory viruses; tuberculosis; and vaccine-preventable diseases. Nearly all of its funding is allocated directly from the EU budget (the remainder is contributed by the EEA members). The ECDC will receive roughly €60 million for the 2019 financial year. It will receive the same again in 2020 and 2021. The stability of the agency’s funding stream stands in contrast to WHO, which receives around 20% of its revenues from fixed

contributions from member states and the rest from voluntary contributions. “Without the ECDC, European taxpayers would spend a great deal more money, because each country would have to go over the same work”, adds Sprenger. “That is the beauty of the ECDC—they deliver state-of-the-art work and provide a great return on investment.”

In 2018, the ECDC responded to 31 requests from its membership and the European Parliament and published more than 200 documents on its website. Gent believes that the 15-year anniversary offers an opportunity for reflection. “The ECDC has managed to establish an expert group of staff in a relatively short period of time, across a multiplicity of functions, and it has become an effective focus for the dissemination of information and intelligence”, he said. “Now might be a good time for it to take stock and look at how the public health systems in and around Europe have developed and what would be the best way to add value.” Sprenger wonders whether the ECDC ought to play a larger part in risk management, perhaps offering more support to countries that are dealing with outbreaks.

The ECDC has started working on its strategy for 2021–27. If the recent past is anything to go by, the coming years will be an eventful time in terms of communicable diseases. “The last decade or so has given us a very good view of how population movements are amplifying the exportability of disease risks; we are getting a clearer idea of what the infectious disease challenges of the future might look like”, said Gent. “Things like influenza, Ebola, and Middle East respiratory syndrome are really setting the agenda. We have seen how diseases can travel at unprecedented speed; that means we need to be able to react quickly.” The ECDC had plenty to deal with in its first 15 years; the next 15 are likely to be even busier.

Talha Burki