

ECDC's Growing Responsibilities in Defending Europe Against Infectious Diseases

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As a new independent agency of the European Union, the European Centre for Disease Prevention and Control (ECDC) is taking up growing responsibilities in strengthening Europe's defences against infectious diseases. The Centre opened its doors last year, and its headquarters are located in Stockholm, Sweden. Since becoming operational in May 2005, the ECDC has made significant progress in starting up its scientific activities at the same time as playing a very active role in responding to the arrival of H5N1 avian influenza in the European neighbourhood. By the end of this year, the ECDC plans to have experts in place covering all 49 of the infectious diseases that are notifiable at EU level.

ECDC's Role in Disease Prevention and Control

The European Centre for Disease Prevention and Control (ECDC) is built on a very different model to its US counterpart. Though ECDC is set to have a staff of around 300 and an annual budget of over €50 million by the end of the decade, this is small in comparison with the CDC in Atlanta which numbers its staff in thousands and its budget in billions. Indeed, ECDC is small in comparison with the Robert Koch Institute in Berlin or the UK and French public health agencies.

This is because public health remains primarily a Member State competence in the EU. ECDC supports the work of Europe's national disease control agencies, but does not centralise power or resources. The Centre does not have executive or regulatory powers, and key assets such as laboratories continue to be located in national institutes. The core functions of this Centre can be summarised as follows: reinforce and develop EU level disease surveillance, reinforce the EU's rapid alert systems against disease outbreaks, support the EU and its Member States in strengthening preparedness and response against epidemics, provide authoritative scientific advice on infectious diseases and the risks they pose, and work closely with Member States and other partners to prevent and control such diseases.

In the EU, where ever closer economic integration and open frontiers are an established fact, cooperation on public health issues is becoming more important. While the idea of creating a European CDC had been around for quite some time amongst public health experts, the outbreak of SARS in 2003 and its rapid spread across countries confirmed the urgency of the creation of an institution dedicated to EU-level

cooperation on public health issues. The ECDC was set up in record time for an EU agency: the European Commission presented draft legislation in July 2003 [1], by the spring of 2004 ECDC's Founding Regulation had been passed [2] and by the spring of 2005 the Centre opened its doors. As it started its activities, another threat – H5N1 avian influenza arriving in the EU's neighbourhood and the fear that it could adapt or mutate into a pandemic strain of human influenza – confirmed the relevance of its mission.

Achievements and Challenges During ECDC's First Year

In its first year of existence, the Centre can already display major achievements. In the context of the spread of H5N1 avian influenza, the ECDC has worked with public health authorities across Europe to develop EU guidelines for the protection of people who might be exposed to infected poultry and an assessment of the risk the disease posed to human health in Europe. Moreover, it sent epidemiologists to participate in the international teams that assisted countries outside the EU where human cases of avian influenza were reported.

The ECDC has also done substantial work on strengthening pandemic preparedness in Europe. It has been a partner, with the European Commission and WHO Europe, in a series of high-level workshops, the most recent of which was organised by ECDC and held in Uppsala, Sweden [3]. It has also undertaken a programme of country visits and support to assist Member States in reviewing their preparedness against a possible influenza pandemic. By May of 2006, nine EU Member States [4] – and three non-EU countries [5] – had been visited, with a series of sub-regional conferences taking place this autumn to examine the interoperability of Member States' national preparedness plans.

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In May 2005 ECDC was connected to the EU's Early Warning and Response System (EWRS), a network in which countries cooperate alerting each other about disease outbreaks that might spread across borders. Since then, the Centre has been working with the European Commission to monitor EWRS 24 h a day, 7 days a week. ECDC has become an increasingly important player on EWRS, and this role will continue to grow as the Centre takes over responsibility for hosting the IT-system that supports EWRS.

Other priorities since becoming operational included addressing the resurgence of HIV/AIDS and sexually transmitted infections, reinforcing the EU level response to anti-microbial resistance and looking for areas where European level scientific guidance can add value. Furthermore, ECDC is achieving growing importance as a contact point on infectious disease issues with international and national authorities from around the world.

As well as starting up its scientific programme, ECDC was also able to find permanent headquarters – the Tomtebodaboda building on the campus of the Karolinska Institute – and make rapid progress in recruiting staff.

European Level Epidemiological Information

European level disease surveillance is something that has been going on since the 1990s. As of 2006, there are some 17 epidemiology and surveillance related networks receiving funding from the EU [6]. However, most of these networks cover one disease group or type of infection and their methods of operation differ. A key long-term task for ECDC is to put in place a more systematic approach to European level disease surveillance. At the same time, ECDC needs to ensure that full use is made of the results of European level surveillance. Work on both is underway.

In 2005, ECDC signed a strategic partnership with the journal *Eurosurveillance* [7] to act as the Centre's scientific voice. This partnership helps ensure results from ECDC and the EU funded surveillance networks are rapidly reported to the scientific community. *Eurosurveillance* is an open source (i.e. free) web-based journal that reports infectious disease issues from a European perspective. It comprises of a weekly bulletin, containing outbreak news and short articles and a monthly journal containing longer scientific articles [8]. The journal currently receives financial support from the European Commission and is a joint project shared since 1995 between an editorial team based at both the Institut de Veille Sanitaire in Saint-Maurice, France, and the Health Protection Agency in London, United Kingdom. From March 2007 ECDC will take over the responsibility for producing *Eurosurveillance*.

Towards the end of 2006 ECDC will publish a major epidemiological report, analysing the available EU-level disease surveillance data for 2005 and before in order to establish a baseline for the current state of infectious disease in Europe.

Scientific Advice

ECDC is able to create panels of scientific experts to help it answer specific questions posed by its Member States or EU bodies (such as the European Commission and the European Parliament). The Centre published a call for experts in the autumn of 2005 and received nominations from 300 scientists from around Europe (as well as a few nominations from experts outside Europe). Scientific Panels consist of 11 members, selected following a rigorous selection procedure, from among those who have expressed their interest in working with ECDC.

The Centre set up an ad hoc panel of independent scientific experts to answer a series of eight scientific questions concerning H5N1 avian influenza and pandemic influenza. The panel started its work on February 2006 and published its report in June, offering answers to the different questions posed. The subjects ranged from the potential for the virus to develop resistance to drugs, to the potential for influenza viruses to be transmitted by bank notes and coins.

In order to provide scientific advice on vaccination issues, a scientific panel was also set up to answer questions addressed to ECDC on subjects including whether there is evidence to support influenza vaccination in children and anti-pneumococcal vaccination in elderly people. A report from this panel should be published towards the end of 2006.

Continuous Growth

The ECDC has grown continuously since its start up in 2005. The Centre's Director, Mrs Zsuzsanna Jakab, who had previously been State Secretary at Hungary's Ministry of Health and before that a Director in WHO Europe, took up post in March 2005. By May of 2005 she had in place a core team of 15 scientists and administrators – enough to enable the Centre to start operating. Total staff – including officials on secondment from national agencies – reached nearly 50 by the end of 2005 and is set to rise to 100 by the end of 2006.

ECDC currently has staff from 13 out of the 25 EU Member States [9] with professional backgrounds including medicine, public health, epidemiology, microbiology and veterinary science.

The structure of the Centre is based on key functions rather than disease groups, and comprises three technical units (Scientific Advice, Surveillance and Communications, Preparedness and Response), supported by a Unit for Administrative Services. The responsibility for overall coordination and external relations lies with the Director's Cabinet. The disease-specific activities lie horizontally in projects across the three technical units: ECDC has so far established cross-cutting projects in four areas: Vaccines and Immunization, Influenza, Antimicrobial resistance, and HIV/AIDS, STI and blood-borne viral infections.

As an independent EU Agency, the ECDC reports to a Management Board, whose members are nominated by the

EU and EEA/EFTA Member States [10]; the European Parliament and the European Commission. Its main functions include appointing the Director, ensuring that the Centre carries out its mission and tasks in line with the Founding Regulation, as well as approving and monitoring the implementation of ECDC's work programme and budget.

An Advisory Forum, composed of senior representatives of Member States public health institutes, and public health officials from the European Commission, advises the ECDC Director on the quality of the Centre's scientific work. Other organizations participate as observers, among them WHO Europe, European scientific associations and civil society groups.

Significant investments will be made to develop ECDC's infrastructure. One major investment will be the development of a state of the art emergency operations centre. In addition, ECDC will play a central role in the future development of Europe-wide IT systems such as the EWRS, and networks for the sharing of surveillance data.

Further Information

Visit ECDC's webpage: <http://ecdc.europa.eu>

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Notes

1. Proposal for a Regulation of the European Parliament and of the Council Establishing a European Centre for Disease Prevention and Control COM (2003) 441.
2. Regulation (EC) No 851/2004 of the European Parliament and of the Council of 21 April 2004 establishing a European Centre for disease prevention and control. OJ L 142, 30.4.2004, p. 1–11.
3. For more information see http://ecdc.europa.eu/press/pdf/060517_press_release.pdf
4. France, Germany, Greece, Italy, Lithuania, Poland, Portugal, Slovakia, UK.
5. Khazakstan, Turkey, Ukraine – these visits were led by WHO Europe.
6. For a full list see: <http://www.ecdc.eu.int/links.html>
7. For more information about Eurosurveillance see www.eurosurveillance.org.
8. For information on how to subscribe see www.eurosurveillance.org.
9. Belgium, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Netherlands, Portugal, Spain, Sweden, UK.
10. The EEA/EFTA countries are Iceland, Liechtenstein and Norway.