



ECDC **CORPORATE**

Annual Report of the Director

2009

European Centre for
Disease Prevention and Control

Annual Report of the Director

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Abbreviations

ABAC	Accrual-Based Accounting, the EC integrated budgetary and accounting system	EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
AEFI	Adverse events following immunisation	ENIVD	European Network for Diagnostics of Imported Viral Diseases
AF	Advisory Forum	Enter-net	International surveillance network for the enteric infections <i>Salmonella</i> and VTEC 0157
AIDS	Acquired immunodeficiency syndrome	ENVI	Committee for Environment, Public Health and Food Safety of the European Parliament
AMR	Antimicrobial resistance	EOC	Emergency Operations Centre
APSED	Asia-Pacific Strategy for Emerging Diseases	EPIET	European Programme for Intervention Epidemiology Training
BCoDE	Present and Future Burden of Communicable Disease in Europe	EpiNorth	Co-operation Project for Communicable Disease Control in Northern Europe
BSN	Basic Surveillance Network	ESAC	European Surveillance of Antimicrobial Consumption
CCDC	Chinese Center for Disease Control and Prevention (China CDC)	ESCAIDE	European Scientific Conference on Applied Infectious Disease Epidemiology
CCHF	Crimean-Congo haemorrhagic fever	ESCMID	European Society of Clinical Microbiology and Infectious Diseases
CDC	Centers for Disease Control and Prevention, USA	ESSTI	European Surveillance of Sexually Transmitted Infections
CFEP	Canadian Field Epidemiology Program	ESWI	European Scientific Working Group on Influenza
DG JLS	Directorate-General for Justice, Freedom and Security	EU	European Union
DG Research	Directorate-General for Research	EUCAST	European Committee on Antimicrobial Susceptibility Testing
DG SANCO	Directorate-General for Health and Consumer Protection	EU-IBIS	European Union Invasive Bacterial Infections Surveillance
DIPNET	European Diphtheria Surveillance Network	EuroCJD	European and allied countries collaborative study group of Creutzfeldt-Jakob disease
DIVINE-NET	Network for prevention of emerging (food-borne) enteric viral infections: diagnosis, viability testing, networking and epidemiology	EuroHIV	European Centre for the Epidemiological Monitoring of AIDS
DSN	Dedicated Surveillance Network	EUROPOL	European Police Office
DSPs	Disease-Specific Programmes (ECDC)	EuroTB	Network for surveillance of Tuberculosis in Europe
DTP	Diphtheria, tetanus and pertussis	EUVAC.NET	Surveillance Community Network for Vaccine-Preventable Infectious Diseases
E₃	European Environment and Epidemiology Network	EWGLINET	European Working Group for Legionella Infections
EAAD	European Antibiotic Awareness Day	EWRS	Early Warning and Response System
EACCME	European Accreditation Council for Continuing Medical Education	EXC	Executive Committee
EAHIL	European Association for Health Information and Libraries	FEM	Field Epidemiology Manual
EARSS	European Antimicrobial Resistance Surveillance System	FP EU	Framework Programme for Research
ECCMID	European Congress of Clinical Microbiology and Infectious Diseases	FWD	Food- and waterborne diseases and zoonoses
ECDC	European Centre for Disease Prevention and Control	HCU	Health Communication Unit
EDEN Project	Emerging Diseases in a changing European Environment	HEDIS	Health Emergency and Diseases Information System
EEA	European Environment Agency	HIV	Human immunodeficiency virus
EEA/EFTA	European Economic Area/European Free Trade Association	HPA	Health Protection Agency, UK
EFSA	European Food Safety Authority		
EISS	European Influenza Surveillance Scheme		

HPV	Human papillomavirus
HSC	Health Security Committee of the EU
ICT	Information and communication technology
IHR	International Health Regulations
IPSE	Improving Patient Safety in Europe
IUSTI	International Union against Sexually Transmitted Infections
JRC	Joint Research Centre
KIS	Knowledge and information services
KM	Knowledge management
MB	Management Board
MDR TB	Multidrug-resistant tuberculosis
MedISys	Medical Information System
MMR	Measles, mumps and rubella
MRSA	Methicillin-resistant <i>Staphylococcus aureus</i>
MSM	Men who have sex with men
NMFPs	National Microbiology Focal Points
PRU	Preparedness and Response Unit
RASFF	Rapid Alert System for Food and Feed
SARS	Severe Acute Respiratory Syndrome
SAU	Scientific Advice Unit
SCG	Scientific Consultation Group
SHIPSAN	Ship Sanitation Project
STI	Sexually transmitted infections
TB	Tuberculosis
TBE	Tick-borne encephalitis
TEPHINET	Training Programs in Epidemiology and Public Health Interventions Network Inc
TESSy	The European Surveillance System
TTT	Threat Tracking Tool
VENICE	Vaccine European New Integrated Collaboration Effort
VIRGIL	European Surveillance Network for Vigilance against Viral Resistance
VTEC	Verotoxin-producing <i>Escherichia coli</i>
WHO	World Health Organization
WHO/EURO	Regional Office for Europe of the World Health Organization
WHO HQ	Geneva Headquarters of the World Health Organization
XDR TB	Extensively drug-resistant tuberculosis



Foreword from the Chairman of the Management Board

2009 was a remarkable, and in some ways, historic year for ECDC and its Management Board. When the Board convened for its seventeenth meeting in the autumn of 2009 – five years after its inaugural meeting at the Rosenbad building in Stockholm in September 2004 – there was little time for reflecting on past achievements as two important events had occurred which were to have a profound impact on the future of the Centre.

The first and by far the most dramatic of these events was the 2009 influenza A(H1N1) pandemic. At various points in 2009, ECDC and its counterpart organisations in the Member States were under intense pressure, as policy makers, the media and the public sought advice on the nature of the threat posed by the new A(H1N1) influenza virus. I was hugely impressed by the way the ECDC Director and her staff rose to this challenge. The daily epidemiological reports published by ECDC, coupled with its excellent scientific guidance documents and hands-on technical support were of immense value to health officials at both national and EU levels.

In future years, the 2009 influenza pandemic will be seen as the event which proved, beyond any doubt, the value of having a European Centre for Disease Prevention and Control to the EU and its Member States. The level of service ECDC provided has set a benchmark for future pan-European public health events.

What makes ECDC's performance even more remarkable is that, on top of a huge unplanned workload arising from the pandemic, the Centre still managed to deliver a very high proportion of its 2009 work plan. A full account of the achieved results is presented in this report.

The second dramatic event was that the Centre's Founding Director, Zsuzsanna Jakab, was nominated as WHO's new Regional Director for Europe. This was a

fitting recognition of the outstanding job Zsuzsanna has done in starting up ECDC and establishing it as an internationally recognised centre of excellence. It was also recognition of the excellent work done by her staff as a whole over the past five years. Nonetheless, it means that 2010 will be a challenging year for ECDC as a new leader is chosen and then settles in.

The new director will inherit a vibrant Centre, with a well established scientific programme and excellent staff. But 2010 is the last year in which ECDC's staffing and budget will expand. Working closely with the Board, they will therefore have some important strategic decisions to make on how best to deploy ECDC's resources, and which actions to prioritise. 2009 may come to be seen as the end of the first chapter in ECDC's development, with 2010 marking the start of a new chapter under a new director.

So what then of the 5th anniversary of ECDC's Management Board? We marked this at a gathering of the Board, along with ECDC's Advisory Forum and the Directors of its Competent Bodies in Uppsala Castle, Sweden. This was an occasion to recognise the achievements of the past, and in particular the outstanding contribution of Zsuzsanna Jakab. But it was also an occasion to talk about the future. The conclusions of that meeting on how ECDC's various bodies and partners can work together more effectively might also, in time, mark a new chapter in ECDC's governance.

Professor Hubert Hrabcik
Chairman of the ECDC Management Board



Introduction by the Director

As Professor Hrabcik rightly notes, 2009 was a remarkable year for ECDC. The Centre extended the range of its activities and implemented an ambitious Work Programme, while at the same time meeting the challenges posed by the 2009 pandemic. This was the first influenza pandemic in over 40 years and it put significant pressure on the public health sector across Europe. The consequence for ECDC was that we were on an emergency footing from late April onwards.

During this period, ECDC managed, while devoting part of its resources to the pandemic, to ensure the implementation of its Work Programme for most of the initially planned activities. ECDC delivered increased output, further developed its partnerships, and consolidated its internal structures in order to address the needs for a strengthened response to the threat of communicable diseases in Europe.

In 2009, ECDC was further strengthened through an increased budget. The budget grew from EUR 40.2 million in 2008 to EUR 50.7 million in 2009, and staff increased to 199 persons.

The A(H1N1) influenza pandemic

ECDC devoted considerable energy and resources to monitoring, assessing and supporting the response to the influenza A(H1N1) pandemic, from the end of April 2009 until the end of the year. For the first time, I decided to activate the ECDC Public Health Event (PHE) at level 2, its highest level. The pandemic didn't find ECDC unprepared, and the Centre was able to respond quickly and efficiently, based on years of preparation. Indeed, in its first years of existence ECDC had built the tools, procedures, plans and partnerships to be able to handle such critical situations. The pandemic thus proved to be an occasion for ECDC to test its capacities and to speed up the implementation of some of its projects. ECDC made a difference in many areas, by providing 'Daily Updates' summarising the information on the pandemic, by providing enhanced data surveillance covering all European countries, by producing dedicated scientific advice covering critical areas, and by intense communication with the media, the public and experts via its website.

An independent evaluation later concluded that 'ECDC showed its good capability to respond to a PHE level 1 and 2, [which] also showed the great skills, capacity and motivation of the ECDC staff', and that the Member States were satisfied with the role played by ECDC.

Public health functions

ECDC's Surveillance Unit further developed its data collection and reporting activities. Two more Dedicated Surveillance Networks were transferred to ECDC, in addition to the eight already run by ECDC, with a third one following early in 2010. ECDC published its flagship surveillance report, the Annual Epidemiological Report, as well as several major surveillance reports on specific diseases.

ECDC produced more than 50 scientific opinions in the area of communicable diseases at the request from our stakeholders, as well as scientific guidance, mostly related to the pandemic.

Apart from the pandemic, ECDC monitored 191 threats and prepared 25 threat assessments. A specific focus was given to the monitoring of threats in mass gathering events. Strengthening preparedness remained a priority, as expressed by several simulation exercises and increased assistance to EU Member States on threat detection and response capacities.

ECDC launched its new comprehensive web portal in 2009. Other communications activities included the publication of 43 scientific documents. A new visual identity and a communication strategy were developed and adopted. A number of audiovisual products and webcasts were produced to promote public health messages, press conferences were held, and ECDC's information stands could be found at various events.

Disease-related work

I decided to strengthen the role of the Disease-Specific Programmes by integrating them across the Surveillance and Scientific Advice Units and appointing their coordinators as heads of section, giving them a formally recognised managerial role and enhanced budgetary control. Later, in November 2009, the Management Board also approved the specific long-term strategies of each of the Disease Programmes (2010–2013).

ECDC's Tuberculosis Programme expanded its surveillance activities and further implemented its 'Framework Action Plan to Fight Tuberculosis in the EU'.

HIV/AIDS work was dedicated to surveillance of both HIV/AIDS and sexually transmitted infections. ECDC took over the European surveillance of sexually transmitted infections in 2009.

Work on food- and waterborne diseases focused on surveillance activities, the coordination of urgent inquiries

for outbreaks, collaborative work with WHO and the European Food Safety Agency, and recommendations for the prevention of Creutzfeldt-Jakob disease.

ECDC conducted several risk assessments for vector-borne diseases, collaborated with networks for travel medicine, and released a communication toolkit on tick-borne diseases.

A large part of ECDC's activities on vaccine-preventable diseases was related to the pandemic, particularly the work on the effectiveness and safety of influenza vaccines.

ECDC's focus on antimicrobial resistance in Europe and its push for the development of new antibiotics gained momentum by working together with the European Medicines Agency. ECDC coordinated the second European Antibiotic Awareness Day in November and integrated several surveillance networks for healthcare-associated infections and antimicrobial resistance into ECDC surveillance activities.

Partnerships

Throughout the year we worked on a number of issues, supporting (and supported by) the Member States, EU candidate countries, the European Commission, the EU presidencies, international partners such as WHO or the US CDC, and other EU agencies, particularly the European Medicines Agency. A meeting with key national institutions in the area of communicable diseases in Europe was held in Uppsala in October 2009, gathering 270 participants. ECDC continued to work closely with EU candidate countries and WHO, in particular WHO/EURO. The influenza pandemic offered many opportunities to further strengthen these partnerships.

The way to the future

On 1 February 2010, I will take up post as the World Health Organization's new Regional Director for Europe. I will be based in Copenhagen. Looking back at the last five years, I am amazed at how much has been accomplished by ECDC, and how quickly it has become a major player in European public health. This has been possible thanks to the hard and dedicated work of ECDC's staff, who proved again during the pandemic their commitment to protecting and improving the health of European citizens. I leave behind a strong Centre, which is respected by the Member States, the European Institutions, and also our external partners. The main public health functions of ECDC are now well established and the foundations are now in place to further strengthen the work on specific diseases. I see a bright future for ECDC, and, as the incoming WHO Europe Regional Director, great opportunities to further strengthen the links between both institutions through enhanced collaboration in order to foster areas of complementarity. Together we can ensure an even more efficient response to health threats and thus improve the health of European citizens.

Zsuzsanna Jakab
ECDC Director

Executive summary

In 2009 ECDC managed, while devoting part of its resources to the pandemic, to ensure the implementation of the majority of the initially planned activities as outlined in its Work Programme. ECDC delivered increased output, further developed its partnerships, and consolidated its internal structures, in order to address the need for a strengthened response to the threat of communicable diseases in Europe.

Resources

In terms of resources, ECDC continued to strengthen its capacities through an increased budget, in line with the gradual growth foreseen until 2010 in the EU financial perspectives 2007–2013 and ECDC's 'Strategic Multi-Annual Programme 2007–2013'. The budget allocated to ECDC grew from EUR 40.2 million in 2008 to EUR 50.7 million in 2009, and its staff increased to reach 199 persons.

Response and monitoring of the H1N1 pandemic

ECDC devoted considerable energy and resources to monitoring, assessing and supporting the response to the 2009 influenza A(H1N1) pandemic, from the end of April until the end of the year. This crisis was handled according to the ECDC Public Health Event operation plan, with full engagement of all Units and Programmes and a large number of ECDC staff. For the first time, the Director decided to activate the ECDC Public Health Event at level 2, the highest level possible. The Centre was able to respond quickly and efficiently to the pandemic, thanks to years of preparation. During the first years of its existence, ECDC had built the tools, procedures, plans and partnerships to address critical situations. The pandemic was an opportunity for ECDC to test its capacities and to speed up the implementation of some of its projects. ECDC made a difference in many areas, for example by providing daily updates that summarised the global situation. ECDC also enhanced data surveillance covering all European countries, provided dedicated scientific advice covering critical areas – when only little was known about the virus – and maintained day-to-day communication with the media, the public and experts via its website. ECDC also invested in public health options relating to vaccination and the monitoring of possible adverse events. Partnerships with the Member States, the European Commission and the EU presidencies, international partners such as WHO or the US CDC, and other EU agencies – particularly with the European Medicines Agency – were of crucial importance.

Public health functions

ECDC continued to consolidate its public health functions (surveillance, scientific advice, preparedness and response, health communication) by strengthening

its infrastructure and modes of operation. ECDC also interfaced with the Commission and supported the Member States' capacity building. This is in line with the 'Strategic Multi-Annual Programme 2007–2013' which states that for the 2007–2009 period, top priority should be given to the development of public health functions. With all public health functions in place, ECDC could then embark on a more systematic, coordinated and effective fight against communicable diseases throughout the European Union. At the end of 2009, all public health functions are fully in place and in routine operation.

In the area of surveillance, ECDC further developed its TESSy system by emphasising data collection, reporting activities, and a strong focus on quality assurance (comparability and quality of data). The assessment of all Dedicated Surveillance Networks, which began in 2006, was completed in 2009. In addition to the eight networks already transferred, two more networks were transferred in 2009. A third transfer was prepared and will be completed at the beginning of 2010. ECDC also published its flagship surveillance report, the Annual Epidemiological Report, as well as several surveillance reports on specific diseases.



Presentation on pandemic influenza A(H1N1) at the 2009 ESCAIDE conference in Stockholm

1 http://ecdc.europa.eu/en/aboutus/Key%20Documents/07-13_KD_Strategic_multiannual_programme.pdf

ECDC produced more than 50 scientific opinions in the area of communicable diseases at the request of its stakeholders (particularly the European Commission and the Member States). Scientific guidance documents were mostly related to the pandemic. ECDC organised several scientific meetings, including the annual ESCAIDE conference. Several major scientific projects were developed further, in particular an important project on climate change and its impact on the transmission of infectious diseases in Europe. Collaboration with the Member States on the core functions of reference microbiology laboratories remained a priority.

Beside the pandemic, ECDC monitored 191 threats and prepared 25 threat assessments. A specific focus was given to the monitoring of threats in mass gathering events. Strengthening preparedness remained a priority through simulation exercises and assistance to EU Member States on threat detection and response capacities. Training was continued, and ECDC developed a strategy for the creation of a training centre function.

The Health Communication Unit launched ECDC's new web portal, as well as an internal intranet. 43 scientific documents were published. A new visual identity and a communication strategy were adopted. A number of audiovisual products, press conferences, webcasts and information stands were produced to convey ECDC messages. ECDC also worked with the Member States to develop country cooperation on health communication activities and established a Knowledge and Resource Centre on Health Communication in October 2009.

Disease-related work

ECDC continued to build tools for scientific work, databases, and networks and developed methodologies for

the disease-specific work related to the seven disease groups covered by ECDC's work. In 2009, two major changes were implemented.

First, the Disease-Specific Programmes were integrated both into the Surveillance and Scientific Advice Units. The programme coordinators were appointed as heads of section, giving them a formally recognised managerial role and enhanced budgetary control.

Second, in November 2009, the Management Board approved the specific long-term strategies of each of the Disease-Specific Programmes (for the period 2010–2013). These strategies clarify what is expected from ECDC in the area of each of the disease groups. Until now, ECDC's Strategic Multi-Annual Work Programme only included general and common objectives valid across all the disease programmes. As activities related to specific diseases were gaining more visibility and importance, eventually becoming the Centre's main focus, a precise strategy for each disease was needed.

Regarding influenza, most of the work was devoted to the monitoring of the pandemic, and the Work Programme was revised during the summer to better reflect the challenges ECDC had to make when it responded to the pandemic.

As to tuberculosis, ECDC continued the implementation of its 'Framework Action Plan to Fight Tuberculosis in the EU' by developing monitoring tools. Surveillance activities were expanded to multidrug-resistant tuberculosis and HIV-related tuberculosis.

HIV/AIDS work was dedicated to surveillance of both HIV/AIDS and sexually transmitted infections (ECDC took over the European surveillance of sexually transmitted



Panel discussion at the Competent Bodies Meeting in Uppsala, October 2009

infections in 2009) and the improvement of knowledge and practices through different projects focused on behaviours, migrant populations, testing policies for HIV/AIDS as well as projects related to sexually transmitted infections. One of the main areas of work was 'men who have sex with men' (MSM), as MSM remains one of the predominant modes of HIV transmission in Europe. ECDC also started preparation work for the surveillance of hepatitis in Europe.

The Programme for Food- and Waterborne Diseases focused on surveillance activities, the coordination of urgent inquiries for outbreaks, collaborative work with WHO and the European Food Safety Agency, and recommendations for the prevention of Creutzfeldt-Jakob disease.

In the area of vector-borne diseases, an emerging threat to Europe, some of the major achievements were risk assessments of vector-borne diseases, assistance and capacity building for reference laboratories in Europe, collaboration or initiation of networks for travel medicine and entomologists, training activities, and the release of a communication toolkit on tick-borne diseases.

A major portion of ECDC's work on vaccine-preventable diseases was in pandemic-related activities, scientific guidance work and capacity building through training activities, particularly on the effectiveness and safety of vaccines.

ECDC's activities in the field of antimicrobial resistance focused on antimicrobial resistance in Europe and the need for the development of new antibiotics. For many of these activities, ECDC had teamed up with the European Medicines Agency. ECDC coordinated the second European Antibiotic Awareness Day in November. Surveillance networks for healthcare-associated infections and antimicrobial resistance were integrated into ECDC surveillance activities.

Partnerships

Partnerships with the Member States, EU institutions, neighbouring countries and WHO were further strengthened through the streamlining of cooperation principles, structures and practices. During 2009, ECDC focused on improving the coordination between the Member States and ECDC. A meeting with key national institutions involved in communicable disease prevention, surveillance and control in Europe was organised in Uppsala in October 2009, gathering 270 participants. ECDC worked closely with the European Commission, the newly elected European Parliament and the Czech and Swedish Presidencies on a number of issues. ECDC continued to work closely with WHO at all levels, in particular WHO Europe. The cooperation with EU candidate countries was further developed and extended to potential candidate countries.

ECDC's response to the H1N1 pandemic

The 2009 influenza A(H1N1) pandemic represented one of the most serious health emergencies since the establishment of ECDC. It also marked the first time ECDC activated its Public Health Event (PHE) level 2, the highest possible level. This crisis was handled according to the ECDC Public Health Event operation plan, with the full engagement of the influenza and the preparedness and response teams. But other ECDC Units were equally involved, and the entire staff put in long hours to support ECDC's coordination and response activities.

Full commitment

All Units of the Centre were heavily involved in the monitoring of the pandemic, and the subsequent response to it: the Preparedness and Response Unit, which operates the Emergency Operations Centre (EOC) and the Epidemic Intelligence System; the Surveillance Unit, which set up surveillance activities targeted at the pandemic; the Scientific Advice Unit, which provided timely scientific opinions at a time when little was known about the virus or effective preventive measures; and the Health Communication Unit, which had to respond to increased media attention, reply to hundreds of requests, and support crisis communication activities in the Member States. The Administration Unit provided support in terms of IT, logistics and additional staff support. ECDC's disease-specific programmes were also involved, particularly the Influenza Programme, which had to completely reorganise its activities in order to focus on the pandemic, and the Vaccine-Preventable Diseases Programme, which was involved in all vaccination-related issues. In total, more than 50% of the ECDC workforce was involved in one way or another in the management of the crisis between April and December 2009.

Despite the challenges imposed by the public health crisis, ECDC still managed to ensure the implementation of its work programme for most of the planned activities.

Prepared for emergencies

The pandemic did not catch ECDC unprepared. Over the years, ECDC has established:

- a tested generic Public Health Event (PHE) plan for ECDC;
- an Emergency Operations Centre (EOC), in place since June 2006;
- a set of dedicated information tools to detect, assess, track and report all potential world-wide health threats that could affect Europe on a 24/7 basis;
- epidemic intelligence routines for early threat/risk detection;
- scientific methodologies for threat and risk assessments;
- operational partnerships with organisations around the world to share information and scientific advances;
- pandemic preparedness self-assessment visits to all EU/EEA Member States and EU candidate countries (2005–2008);
- participation in six European preparedness workshops;
- a common set of pandemic preparedness indicators devised with the WHO Regional Office for Europe and the EU Health Security Committee;
- regular simulation exercises conducted to test and improve response capacities to health threats at ECDC, the European Commission, and in the Member States;
- an integrated EU surveillance system for influenza-like illness (ILI) and acute respiratory infections (ARI), based on virology and primary care: the European Influenza Surveillance Network (EISN);
- information channels through a series of web pages, published document, toolkits, 'Flu News' (a weekly publication on pandemic, seasonal and avian influenza), and the weekly EISN bulletin (now: WISO – Weekly Influenza Surveillance Overview);
- a series of guidance documents on topics such as antivirals, vaccines, planning assumptions and personal and public health measures that were easily adapted to the pandemic;
- projects on influenza vaccine effectiveness (I-MOVE) and vaccine safety (VAESCO); and
- the full engagement in the Health Security Committee Communicators' Network.

Immediate response to the crisis

At the beginning of 2009, strong seasonal influenza epidemics (largely A(H3N2) viruses) spread across Europe – among the most lethal in recent years. ECDC's European Influenza Surveillance Network (EISN) closely monitored the situation. When the severity of the seasonal virus was recognised, ECDC issued a warning, encouraging EU citizens to get immunised. Spain first reported a case of human infection with 'swine flu' (different from A(H1N1)), which led to an immediate risk assessment as well as a call for increased surveillance for this virus type in humans and animals.

Three days after the emergence of the pandemic influenza A(H1N1) virus was reported in the Early Warning and Response System (EWRS) on 21 April 2009, the Director

raised the PHE level of ECDC's Emergency Operations Centre to 1. PHE level 2, the highest level, was declared on 4 May.

According to ECDC's Public Health Event plan, several organisational adjustments had to be made: a crisis manager was appointed by the Director, a PHE Strategic Team composed of ECDC executives met daily (later bi-weekly) to discuss strategic issues, and an Influenza-Programme-led PHE Management Team met daily to discuss technical and scientific issues as well as the practical management of the crisis.

Enhanced epidemic intelligence is crucial in such a situation, especially during the early phase of an epidemic when there are many unknowns regarding the nature of the pandemic. At the early stages of the pandemic most information was coming from the Americas, followed by reports from the southern hemisphere. During spring and summer, before the pandemic progressed, Spain and the UK were the first European countries that relayed information on pandemic influenza A(H1N1) to ECDC.

From the end of April to the end of the year, ECDC produced daily influenza updates, summarising all available information on the pandemic. At the request of the Management Board, a weekly digest, the Executive

Update, was created to inform Board members and key policymakers on the Centre's work on the pandemic. ECDC also produced a series of streamed webcasts on pandemic influenza A(H1N1).

On 4 May, when PHE level 2 was declared, ECDC's Emergency Operations Centre (EOC) shifted to 24/7 operations, with a total staff of 50 working in three shifts, monitoring the epidemiological situation in the Americas. On 10 May, night shifts were discontinued and the alert level was lowered to 1. Level 1 was maintained until 19 January 2010.

In May 2009, ECDC sent an expert to the US CDC in Atlanta to act as a liaison between the European and the US emergency operations centres. Also in reply to the emerging pandemic, China CDC dispatched a liaison officer to ECDC who worked at the Emergency Operations Centre for a total of four weeks.

In July, a team led by former MB member Dr Donato carried out an independent review of ECDC's initial response to the pandemic. The report concluded that 'ECDC showed its good capability to respond to a PHE level 1 and 2, [which] also showed the great skills, capacity and motivation of the ECDC staff'. The report also recommended the development of a full business



Chinese Center for Disease Control and Prevention liaison officer Xiang Nijuan monitoring the 2009 influenza A(H1N1) pandemic at ECDC's Emergency Operations Centre in Stockholm

continuity plan to provide flexibility in order to cope with the long-term stress of limited resources, and the adaptation of procedures in human resources to better address the needs of the staff during a prolonged crisis. An action plan was prepared by ECDC to implement the recommendations of the report.

Dedicated scientific advice

ECDC issued numerous scientific outputs, including updated pandemic risk assessments, advice on measures, planning assumptions, vaccination guidance, scientific advice and public health development overviews. In preparation for the inevitable autumn and winter wave, ECDC strengthened surveillance, vaccine work, and scientific advice output: a pandemic risk assessment² consolidated all available facts about the pandemic into a single document and subsequently went through several iterations throughout the year.

Enhanced surveillance

In July 2009, an extraordinary meeting of the Working Group on Studies and Surveillance in a Pandemic^{3,4} discussed the minimum standards for a sustainable reporting system which countries would be prepared to support. This led to the creation of the Weekly Influenza Surveillance Overview, which was first published on 15 September, well ahead of the autumn and winter waves. The surveillance data for influenza (primary care and virological data) were extended significantly to include other sources of information needed to monitor the more severe aspects of the pandemic (such as mortality, hospitalisations, virological surveillance, qualitative assessments by the Member States) and to establish surveillance for severe acute respiratory illness (SARI). It was also agreed to harmonise the surveillance activities with the WHO Regional Office for Europe in order to avoid double data entries by Member States.

Strengthened communication

During the A(H1N1) pandemic, ECDC was heavily engaged in day-to-day outbreak and emergency communication, providing both proactive and reactive press and media services. This included press releases, press conferences and webcasts. ECDC dedicated a section of its website to the influenza pandemic with dozens of different pandemic-related documents covering all technical aspects of the disease. Other online documents included guidance for public health authorities, information for the general public, risk assessments, scientific advice publications, and educational material. Many of these documents were repeatedly updated as the crisis progressed.

In total, ECDC published more than 200 documents on the pandemic. In addition, the ECDC-hosted online

journal Eurosurveillance let public health scientists rapidly publish and share key findings related to the pandemic. In 2009, the journal published a total of 92 articles on the 2009 influenza A(H1N1) pandemic, more than any other peer-reviewed journal. The majority of publications on the pandemic consisted of 'rapid communications', but in October Eurosurveillance published a special issue on the pandemic situation in the southern hemisphere.

Table 1. Number of publications on pandemic A(H1N1) influenza, April 2009 to February 2010

Publication	
British Medical Journal (BMJ)	34
Eurosurveillance	96
JAMA: the Journal of the American Medical Association	13
Lancet/Lancet Infectious Diseases	39
The New England Journal of Medicine (NEJM)	42

Analysed period: 23 April 2009 to 11 February 2010.
Total number of publications: 224

Specific work on vaccination issues

Over the summer, ECDC provided support to the European Commission, which regularly convened meetings of the Health Security Committee (HSC), on topics such as public health measures and vaccination target risk groups. ECDC and the European Medicines Agency (EMA) joined an EU Task Force working on issues related to vaccines, which led to the publication of an EU plan. On this occasion, ECDC drafted or updated a number of documents and sped up the I-MOVE (monitoring vaccine effectiveness) and VAESCO (vaccine safety) projects, so they could provide outputs by the end of the year.

During autumn, the vaccine-related work intensified with weekly teleconferences with EMA, the World Health Organization (WHO) and the European Commission. ECDC also briefed the EMA Committees and produced data and analyses, including a risk-benefit assessment of pandemic vaccination. Together with WHO, ECDC produced planning scenarios on pandemic and inter-pandemic (seasonal) influenza for 2010 and beyond.

Enhanced partnerships and support to third countries

ECDC received a wealth of valuable information from its partners in the EU Member States, particularly in the area of data collection. ECDC is particularly indebted to the work carried out by Member States specialists and to Member States sharing their national experiences during various meetings with ECDC experts.

² http://ecdc.europa.eu/en/healthtopics/H1N1/Pages/risk_assessment.aspx

³ http://ecdc.europa.eu/en/publications/Publications/0908_MER_Surveillance_and_Studies_in_a_Pandemic_Meeting_Report.pdf

⁴ http://ecdc.europa.eu/en/publications/Publications/0909_TED_Overview_of_Surveillance_of_Influenza_2009-2010_in_EU-EEA.pdf

Influenza response: External evaluation

In June 2009, an external evaluation team conducted a survey among Member States. The survey, which had a response rate of 93%, showed the following results for the surveyed countries:

- 100% thought that the role of ECDC during the crisis was consistent with its mission.
- 84% said ECDC was not encroaching on their responsibilities.
- 97% appreciated ECDC's support.
- 81% had direct interaction with ECDC.
- 100% considered that contacting ECDC was easy.
- 78% received a quick response to their requests.
- 100% received the daily situation report ('Daily Update').
- 91% used ECDC's pandemic influenza website.
- 97% used ECDC documents, and 53% translated them in their own language.
- 78% of the national press offices profited from the ECDC releases.
- 94% of the national press offices found the press releases very accessible.
- 84% thought press releases were timely and up-to-date.

The report also showed that 38% of the Member States thought that ECDC was duplicating some of the work already done by WHO and the EU. To address this, the cooperation with WHO was improved by providing joint scientific and communication guidance to the Member States and by developing a joint platform for surveillance reporting.

WHO team) Ukraine. In addition ECDC organised, together with the WHO Regional Office for Europe, a workshop with several south-east European countries, in order to learn from their experiences with communication and intensive-care issues during the pandemic.

Collaboration continued with the European Commission, WHO and other EU agencies, in particular EMA. Efforts were made to avoid overlaps. Collaboration was optimised, taking into account the particular strengths of each partner.

ECDC supported the Swedish Presidency during two Council Meetings (ECDC Director briefed ministers), a joint Presidency-ECDC-Commission meeting in Jönköping in early July⁵, a meeting of Chief Medical Officers (pressures on intensive care units; decision to not impose containment measures in autumn and winter). In addition, ECDC supported the frequent meetings of the Friends of the Presidency Group and the Health Attachés in Brussels.

In late autumn 2009, ECDC led (or contributed to) three emergency missions to Bulgaria, Turkey and (as part of a

⁵ [http://www.se2009.eu/polopoly_fs/1.8266!menu/standard/file/Summary_draft_\]C3%B6nk%C3%B6ping_090705_final.pdf](http://www.se2009.eu/polopoly_fs/1.8266!menu/standard/file/Summary_draft_]C3%B6nk%C3%B6ping_090705_final.pdf)

1. Public health functions

For the years between 2005 and 2009, ECDC's 'Strategic Multi-Annual Programme 2007–2013'⁶ calls for the continued development of the Centre's public health functions. It should therefore not come as a surprise that ECDC placed heavy emphasis on surveillance, scientific advice, preparedness and response, and health communication. By the end of 2009, all these public health functions – as well as the operational principles behind them – were fully in place, giving ECDC the time and resources to implement a shift towards targeting specific diseases. In the coming years this will become increasingly more evident as ECDC will embark on a systematic, coordinated and effective fight against communicable diseases in the EU.

1.1 Communicable disease surveillance

Improving surveillance

Surveillance plays a crucial role when addressing communicable diseases. The overall goal is to contribute to reducing the incidence and prevalence of communicable diseases by providing, at the European level, relevant public health data and information to decision-makers, professionals and healthcare workers, in an effort to promote actions that will result in the timely prevention and control of communicable diseases in Europe. High validity and good comparability of communicable disease data from the Member States are imperative to reach this goal.

Key products 2009

- Enhanced surveillance; further integration of the dedicated surveillance networks (DSN).
- Proposal for the integration of molecular subtyping into datasets.
- More regular updates and feedback of surveillance data.
- New process for mapping data quality of surveillance systems in the Member States.
- Extended partnerships with organisations engaged in data collection.
- Procedure approved that governs access to TESSY (The European Surveillance System) data.

Before ECDC was established, 17 EU-wide surveillance networks funded by the EU Commission were in operation (Dedicated Surveillance Networks, DSNs). It was

agreed that after ECDC's evaluation of every network, the DSN's would become part of the ECDC surveillance system. In 2009, ECDC made further progress in integrating the DSN databases into its TESSy database system.

Strategy 1. Improving data collection

Implementation of the European surveillance strategy

A long-term vision and strategy on the future surveillance of communicable diseases in the EU was developed and adopted in 2008 to help direct the decisions for the long-term development of the European Surveillance System. In 2009, ECDC emphasised data collection and reporting activities (Strategies 2.1, 2.2 and 2.3 of the 'Strategic Multi-Annual Programme 2007–2013'), as well as quality assurance elements (Strategy 2.4).

Evaluation of Dedicated Surveillance Networks (DSNs) and disease-specific strategies for future surveillance

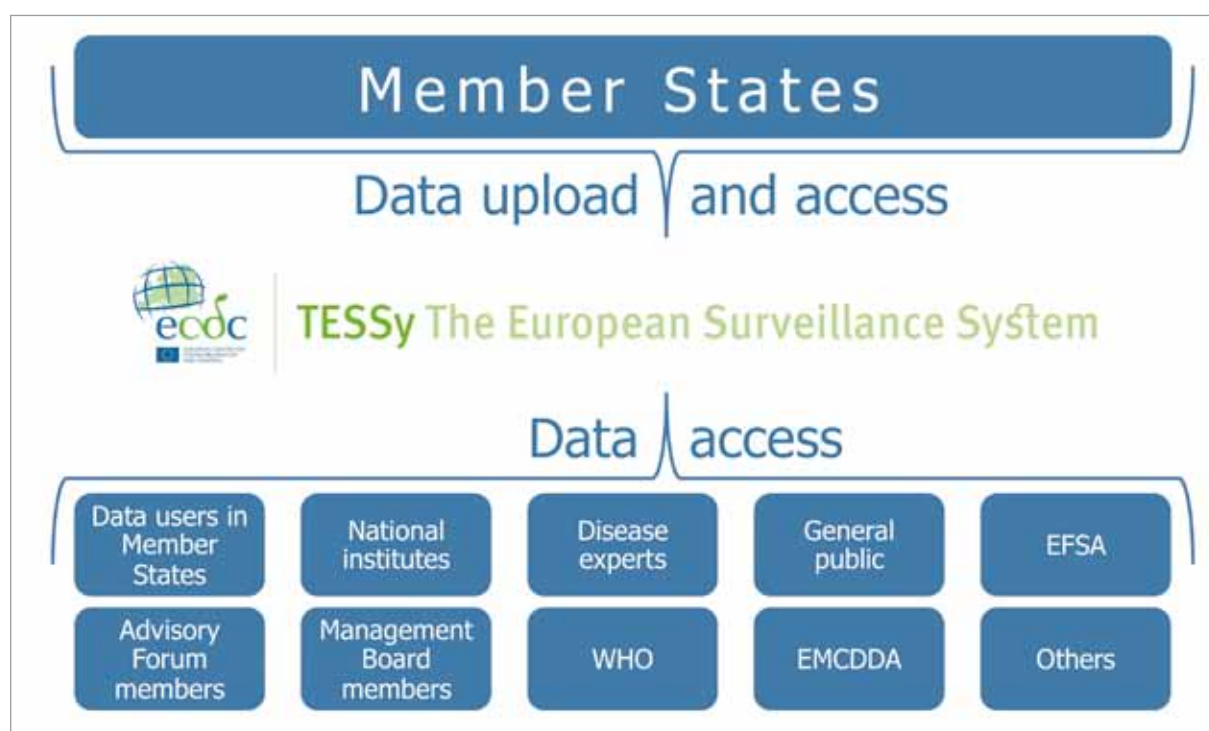
2009 saw the end of a three-year evaluation process on Europe's Dedicated Surveillance Networks (DSNs). DIPNET (see Table 1) was the last network to be formally evaluated. In addition to the eight networks already transferred to ECDC before 2009, another three transfers were planned for 2009 (DIPNET for diphtheria surveillance, EARSS for antimicrobial resistance, and EWGLINET for travel-associated legionnaire's disease). These transfers require intense collaboration between the respective DSN hub and ECDC, and involve the transfer of databases, historical data and website content. Further transfer issues include the establishment of variables to be collected in TESSy, the training of experts from Member States, the outsourcing of laboratory work, and the nomination of disease-specific contact points together with the Competent Bodies for surveillance.

Due to the influenza pandemic, the transfer of EWGLINET to ECDC was postponed until 2010. Also, parts of the DIPNET and EARSS transfers were postponed, specifically the transfer of historical data and the training of Member States experts. Some activities had to be outsourced as ECDC has not developed sufficient expertise in these areas. ECDC is working with experts from all transferred networks on the future development of disease-specific surveillance through annual meetings and workshops.

⁶ http://ecdc.europa.eu/en/aboutus/Key%20Documents/07-13_KD_Strategic_multiannual_programme.pdf

Table 2: Overview of the evaluation and status of the 17 Dedicated Surveillance Networks (DSNs)

Network	Current status
DIVINE (Norovirus)	Surveillance discontinued
ESAC (antimicrobial consumption)	Outsourced until December 2010
EUCAST (harmonisation of antimicrobial susceptibility testing)	Outsourced until September 2011
EuroCJD (vCJD)	Outsourced until May 2011
EUVACNET (measles, rubella, mumps, pertussis, varicella)	Outsourced until January 2011
EWGLINET (travel-associated legionnaires' disease)	Transfer to ECDC planned for the end of 2009 (postponed until April 2010)
EARSS (antimicrobial resistance)	Transfer to ECDC by the end of 2009 (postponed)
ENIVD (imported viral infections)	Outsourced as Outbreak Assistance Laboratories
DIPNET (diphtheria)	Transfer to ECDC planned for the end of 2010
ESSTI (STI)	ECDC, transferred in January 2009
EISS (influenza)	ECDC, transferred in September 2008
IPSE (healthcare-associated infections)	ECDC, transferred in July 2008
EuroTB (tuberculosis)	ECDC, transferred at the end of 2007
EuroHIV (HIV/AIDS)	ECDC, transferred at the end of 2007
EU-IBIS (invasive meningococcal and <i>Haemophilus influenzae</i> infections)	ECDC, transferred in October 2007
Enter-net (food-borne infections)	ECDC, transferred in October 2007
BSN (core set: all diseases)	ECDC, transferred at the end of 2006

Figure 1. TESSy development: more enhanced surveillance and several newly integrated DSN databases

After the launch of TESSy in January 2008, the system was further improved in 2009 and fine-tuned to the needs of enhanced influenza surveillance (including pandemic influenza), sexually transmitted infections (STIs), travel-associated legionnaires' disease, antimicrobial resistance, and healthcare-associated infections.

Although ECDC had already taken over EISS in 2008, the final steps of integrating influenza surveillance into TESSy were not taken until 2009.

A two-day training for the National Contact Points for Surveillance was conducted on 16 and 17 February 2009

for STI surveillance, and on 4 and 5 June 2009 for influenza surveillance.

Disease experts were nominated for STI, legionnaires' disease, antimicrobial resistance, diphtheria, measles, rubella, pertussis and healthcare-associated infections. In the Member States, these experts will act as official contact points for the surveillance of the above diseases.

Some statistics on TESSy usage in 2009

- 585 active users from 53 countries (up from 115 in 2008).
- 3.8 million unique records in the database* (up from 1.3 million in 2008).
- 2.2 million updates of existing records performed.
- 49 diseases covered.
- Enhanced surveillance covering 20 diseases (up from 12 in 2008).

* HIV surveillance for the European Region is jointly conducted by ECDC and WHO/EURO, with TESSy as the database of choice.

Development of on-line query tool

This activity was postponed until 2010 due to the influenza pandemic. Once completed, this tool will allow remote users to rapidly search and access TESSy data.

Support of TESSy users in Member States

By the end of 2009, more than 800 experts from Member States and collaborating organisations were participating in the European Surveillance System. With the introduction of TESSy, all users in the Member States had been offered training (mostly on-site, but also through online training). Additionally, ECDC conducted a TESSy orientation session for its in-house team of experts.

The TESSy training programme offers an introduction to the TESSy database and focuses on data exchange and data conversion tools.

A new TESSy helpdesk assists users in Member States with data upload, variables and coding, coordination of user account nominations, and training materials. The helpdesk also collaborates with ECDC's disease-specific experts on technical and epidemiological questions.

Priority list of diseases for surveillance

With a mandate covering 49 communicable diseases, ECDC has to prioritise its surveillance activities. Therefore ECDC identified a number of priority diseases for which additional surveillance information is needed. This list of priority diseases needs to be continually revised and updated. While some preparatory steps toward updating the list were taken in 2009, this activity had to be moved to 2010 because of the heavy workload imposed by the influenza pandemic.

Finalisation of data sharing model

In 2009, the ECDC Management Board adopted a procedure for sharing surveillance data from TESSy with third parties. According to this new procedure, nominated TESSy users will be granted access to certain EU disease data, provided they have proper authorisation for those diseases. Direct access to TESSy data will only be granted if users have previously participated in an ECDC training session. Third parties are defined as persons or institutions which are not part of the nominated TESSy user group. Authorised individuals from the European Commission, EU agencies, Competent Bodies (CB) and WHO will be given direct access, provided they have

received proper training. Universities, academic institutions, non-EU public health agencies, NGOs, and commercial companies would need to fill in a request form. This form will be assessed by ECDC and then forwarded to a peer-review group consisting of three persons nominated by the National Surveillance Coordinators, and two persons from ECDC nominated by the ECDC Director. If the applicants are granted access, they have to sign a formal contract before the requested data will be extracted from TESSy (no direct access).

Proposal on the integration of molecular subtyping

After broad consultation with the Member States and molecular typing experts, a proposal on how to add molecular typing data to EU-level surveillance was finalised. Two preliminary steps were taken in 2009:

- ECDC drafted initial plans for the implementation of a pulsed field gel electrophoresis (PFGE) platform for the national laboratories in order to detect and investigate *Salmonella* and VTEC clusters/outbreaks.
- Preparations were completed for a study on the role of molecular typing in surveillance and control of MRSA in hospitals and the community.

A consultant has already defined the technical specifications and support requirements for the PFGE project. A second expert has started work on the development of molecular surveillance, with the goal of implementing the PFGE project in 2010. A contractor has been assigned to work on the MRSA molecular typing project.

Strategy 2. Data analysis

Regular data analysis and data quality

In order to ensure the quality of submitted data, particularly the core data and data from enhanced surveillance, the TESSy team reviewed and improved its validation rules. General and disease-specific data checks are now sent to the reporting country prior to the actual data upload – an approach that greatly improved the quality of received data. In addition, the TESSy team conducted a host of standard and disease-specific data quality checks on received data in 2009.

The following data collections were conducted in 2009 (continued from 2008):

- All diseases specified by ECDC's mandate (Annual Epidemiological Report for 2007).
- Zoonoses (EFSA report for 2008).
- Zoonoses (quarterly reports for 2009).
- HIV/AIDS (annual report for 2008).
- Tuberculosis (annual report for 2008).

The following data collections were new for 2009:

- *Haemophilus influenzae* and meningococcal disease (annual report for 2008).
- Sexually transmitted diseases (STIs) for 2008.
- Healthcare-associated infections for 2008.

- Influenza, for weekly reports for 2009 (initially only seasonal influenza, later expanded to information relevant for the influenza pandemic).

Development of new methodological approaches

Development of new methodological approaches for the analysis and selection of algorithms to detect multi-national outbreaks: these two activities had to be postponed until 2010 due to the influenza pandemic.

Strategy 3. Reporting and outputs

Periodic information on disease surveillance

Surveillance data collected in 2009 were tied to the production of ECDC's periodic reports. Online TESSy reports, which give a more up-to-date overview of the data present in the system, were extended. Some of these online reports on influenza data were made available to the public. Due to additional workload caused by the influenza pandemic, the development of the web-based outputs still needs further work.

The following reports were published in 2009:

- Annual Epidemiological Report (2007 data).
- EFSA zoonoses report (2007 data; ECDC provided data and analysis on human infections).
- Tuberculosis annual report for 2008.
- HIV/AIDS annual report for 2008.
- 28 weekly influenza bulletins/weekly influenza surveillance overviews for 2009.

Another publication format introduced in 2009 was the 'Weekly Influenza Surveillance Overview' (WISO). In order to guarantee up-to-date output, a TESSy reporting module for influenza activity was developed. This module greatly helped ECDC's authors to generate publishable documents, complete with figures, charts and analyses.

In the second half of 2009 the tool was developed further to accommodate extended datasets that were collected to keep track of the pandemic. This update also gave the authors the option to change, add, and remove reporting elements (graphs, tables, etc.) depending on the available data and current information needs.

Because of the heavy workload imposed by the influenza pandemic, the production of the reports on healthcare-associated infections, food- and waterborne diseases, and invasive bacterial infections was delayed.

Online interface for TESSy

This project had to be moved to 2010 due to the influenza pandemic.

Strategy 4. Quality assurance of surveillance data

Improved TESSy validation (automated quality checks)

Before each data submission to TESSy, a set of disease-specific validation rules is automatically applied and feedback given to the data provider as to whether the data contain errors (then the submission is rejected) or

minor implausibilities (a warning is given, but submission is not blocked). These validation rules will be refined over time to increase the quality of the incoming data.

Each data record submitted now contains a reference to the data source, which facilitates data interpretation. There is, however, still no true data comparability, but thanks to this source indicator, differences are now more transparent.

Mapping of quality assurance in the Member States surveillance systems

Epidemiological surveillance systems aim at producing meaningful indicators for public health. In order to achieve this goal, data quality is essential. This is reflected in ECDC's long-term surveillance strategy which calls for improved and updated methodologies as well as quality assurance of epidemiological data. ECDC will also identify best practices which should lead to better data quality in the Member States.

In 2009, ECDC started a data quality assurance project that will run until mid-2011. The objectives are to:

- map the current activities to ensure data quality in the public health communicable disease surveillance systems of the Member States;
- develop a tool that can be used by the Member States and ECDC to assess the data quality of surveillance systems; and
- conduct a pilot study to evaluate the use of this tool in three Member States and ECDC.

Determining the needs of surveillance systems in Member States

As specified in ECDC's long-term strategy for surveillance of communicable diseases, ECDC and the Competent Bodies for surveillance will develop a tool for assessing the needs of national surveillance systems and identifying the best way of supporting the Member States. ECDC and the Competent Bodies for surveillance will consider developing a set of minimum standard criteria for operating effective national surveillance systems that meet the EU demands.

Due to unsuccessful procurement the project will be re-launched in 2010.

Assessment of under-ascertainment/under-reporting, with a focus on timeliness and completeness of reporting

This is a long-term activity, but some aspects were already addressed in 2009.

Completeness of reporting was assessed in several surveillance projects: proportion of 'unknown' and/or 'blank' for each collected variable was calculated for *Haemophilus influenzae*, meningococcal infection as well as for HIV surveillance data. In the coming years, these analyses will be extended to other diseases.

A new project has been initiated to assess the true incidence of salmonellosis and campylobacteriosis in the

population. This project is conducted by the Programme for Food- and Waterborne Diseases and Zoonoses.

1.2 Scientific support

ECDC's 'Strategic Multi-Annual Programme 2007–2013' sums up the vision for the Scientific Advice Unit (SAU) in one sentence: 'By the year 2013, ECDC's reputation for scientific excellence and leadership is firmly established among its partners in public health, and ECDC is a major source for scientific information and advice on communicable diseases for the Commission, the European Parliament, the Member States and their citizens'.

One of the key tasks of ECDC is to provide the European Parliament, the European Commission and the Member States with the best possible scientific advice on questions and issues related to public health. SAU initiates and coordinates the delivery of high-quality scientific advice on topics ranging from disease-specific questions to broader issues such as the impact of climate change on public health or strengthening capacity in public-health microbiology.

The delivery of scientific advice by SAU is facilitated by the fact that SAU senior experts run four of the six Disease-Specific Programmes (DSPs) at ECDC: the Respiratory Tract Infections Programme (RTI), the Vaccine-Preventable Diseases Programme (VPD), the Programme on Antimicrobial Resistance and Hospital-Acquired Infections (AMR), and the Programme on Emerging and Vector-Borne Diseases (EVD). Other experts in the Unit are key team members in the two remaining DSPs. In addition to this, SAU is in charge of coordinating activities in the areas of climate change, burden of disease, and microbiology.

In 2009, SAU extended its capacity in mathematical modelling, programme evaluation, evidence-based approaches, knowledge management tools and the ECDC library, all of which serve the efforts of the entire Centre.

Key products 2009

- More than 50 scientific opinions produced on various topics in the area of communicable diseases.
- Several scientific guidance papers produced, mostly related to pandemic influenza⁷.
- Third European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE) held in October 2009 in Stockholm, with more than 500 participants.
- Workshop on 'Grading of evidence for scientific advice in the area of public health/communicable disease'⁸.
- Fourth and fifth meetings of the National Microbiology Focal Points, held in March and September 2009⁹.

Strategy 1. Becoming a public health research catalyst

As part of its scientific support activities, ECDC is dedicated to catalysing public health research. The aim is to identify research needs and to coordinate the application of results between the different stakeholders. This involves advising DG Research on research gaps and needs in the area of communicable diseases.

⁷ See e.g. pandemic risk assessment at: http://ecdc.europa.eu/en/healthtopics/H1N1/Pages/risk_assessment.aspx

⁸ http://ecdc.europa.eu/en/publications/publications/0906_cor_ecdc_insight.pdf

⁹ http://ecdc.europa.eu/en/activities/microbiology/Pages/Activities_MicrobiologyCooperation.aspx.

ESCAIDE

From 26 to 28 October 2009, 500 health experts gathered at the third European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE) in Stockholm. Four keynote plenary sessions addressed issues related to ageing and infectious diseases, the A(H1N1) influenza pandemic, genotyping, and new methods for analysing outbreaks. Over 250 abstracts were presented in 21 oral and poster presentations, including a late-breaker session on the H1N1 virus. The European Accreditation Council for Continuing Medical Education (EACCME) accredited ESCAIDE, permitting delegates to receive CME credits. Planning is already underway for ESCAIDE 2010, to be held in the autumn of 2010. More information can be found at: <http://www.escaide.eu/>.



Mathematical modelling of infectious disease

Based on observed characteristics of infectious diseases, epidemiologists attempt to construct mathematical models that can accurately predict the spread of a communicable disease in the population. An expert meeting was held in preparation of a training course aimed at increasing the capacity for the mathematical modelling of communicable diseases. In addition, a new project on estimating the effects of introducing varicella (chickenpox) vaccination in EU Member States was started. The 2009 influenza pandemic led to the creation of a pandemic influenza modelling working group which includes leading mathematical modellers in the EU. Ongoing liaison activities with modelling groups and projects in the EU and US were intensified, particularly with those that focus on pandemic influenza.

Strategy 2. Promoting, initiating and coordinating scientific studies

ECDC initiates and coordinates studies on its own initiative, taking into account European priorities and European added value.

European Environment and Epidemiology (E3) Network

ECDC conducts and/or funds several projects on climate change and health. An ECDC-funded project on 'Assessing the impact of climate change on food- and waterborne (FWB) diseases in Europe', conducted in collaboration with the WHO collaborating centre in Bonn, will assist ECDC and the Member States in identifying and assessing the anticipated impact of climate change

on the transmission patterns of food- and waterborne diseases.

In order to support Member States in assessing their vulnerabilities and adaptation options related to climate change, ECDC developed a climate change handbook. To support the development of this handbook and to obtain feedback from across the EU, ECDC hosted the first meeting of the ECDC Expert Group on Climate Change in September 2009.

In 2009, ECDC continued the development of the European Environment and Epidemiology Network (E3) that attempts to link climatic, environmental and infectious disease data in order to strengthen European capacity in forecasting, monitoring and eventually addressing the threats posed by new and emerging diseases that might be directly related to climate change.

For more details, please refer to: http://ecdc.europa.eu/en/healthtopics/Pages/Climate_Change.aspx.

Present and future Burden of Communicable Disease in Europe (BCoDE)

Any attempt to estimate the existing and future burden of disease poses profound challenges. ECDC is addressing these challenges by providing baseline figures for planning and prioritising, both at the EU and national levels. After completing a pilot study, ECDC's BCoDE project kicked off in 2009 with two workshops that were instrumental in planning project activities and developing the methodology for the initial field testing study, scheduled to start next year in three EU Member States.



New arrivals at the ECDC scientific library

The project aims to develop a methodology for measuring and reporting the current and future burden of communicable diseases in EU and EEA/EFTA countries and attempts to cover the maximum possible number of infectious diseases from Decision No 2119/98/EC. Key stakeholders of the project include ECDC, the Member States, the European Commission, and WHO.

These are but a few examples of the developments in 2009. SAU also made progress with several scientific studies, including a large-scale study on migrant health in the context of communicable diseases.

Strategy 3. Producing guidelines, risk assessments, scientific advice

The key function of the Scientific Advice Unit (SAU) is the provision of scientific advice, risk assessments and scientific guidance.

Scientific advice: Overview

In 2009, the Unit produced more than 50 scientific opinions, risk assessments and other documents in response to 22 requests from the European Commission, 12 from the EU Member States, one from a non-EU country, two from EU and non-EU international agencies, and six from the general public. On media inquiries, SAU collaborated closely with the Health Communication Unit of ECDC.

At the early stages of the influenza pandemic, most of SAU's scientific output was related to updated pandemic risk assessments, vaccination guidance, scientific advance and public health development overviews. Please refer to ECDC's website for details on pandemic risk assessment: http://ecdc.europa.eu/en/healthtopics/H1N1/Pages/risk_assessment.aspx.

Process for scientific advice delivery

In 2009, the Scientific Advice Unit formalised the process for delivering scientific advice. Components of this process include:

- a new formal internal procedure for scientific advice;
- further improvement of the priority setting procedure for scientific advice to inform the ECDC Work Plan; and
- a workshop on 'Grading of evidence for scientific advice in the area of public health/communicable disease'.

Evidence-based public health

SAU started an important new project directed at improving the quality of scientific advice by applying evidence-based methods. Evidence-based methods are increasingly used in clinical medicine, but have so far not been common in public health. This project was launched in part to support ECDC scientific advice outputs, but also to provide EU Member States with tools for developing scientific advice nationally.

Strategy 4. Becoming the prime repository for scientific advice on communicable diseases

As part of this strategy, ECDC has been working on becoming a 'one-stop shop' for relevant published sci-

entific studies/reports as well as internally produced scientific advice.

ECDC scientific library

In 2009 the ECDC Library increased its collection and its informational resources. The usage of library services and resources rose: the number of checked-out materials doubled, the number of journal downloads increased and ECDC experts made frequent use of the various services offered. The library is increasingly positioning itself as a 'hybrid library', offering media both online and on location in Stockholm.

During the influenza pandemic, the library gave support to the New Influenza Scientific Group (NISG), and was involved in several in-house projects, for example the 'Evidence-Based Public Health' project and the impact-assessment study of peer-reviewed publications.

Knowledge management

In 2009 the Knowledge Management (KM) Team developed and operated a range of knowledge management services: the 'terminology service' ensures that scientific and administrative terminology is used in a consistent way across the organisation, and the 'document repository' guarantees that thousands of legacy scientific documents remain internally available. An 'expert directory' that hosts and validates profiles of the external expert community is currently in testing phase.

The Knowledge Management Team operates various workspaces (e.g. the New Influenza Science Group) and assists and supports ECDC staff by developing internal interoperability standards and writing/editing internal procedures.

The Knowledge Management Team was also active internationally and participated in various conferences; a KM team paper won the 'best paper award' at the Second European Conference on eHealth (ECEH'07) in Oldenburg, Germany.

The Knowledge Management Team also developed a range of new services, including a 'knowledge navigation and semantic enterprise search' that permits comprehensive searches across different ECDC applications. Other products include a tool that maps staff competencies and a management system that covers scientific answers and response.

Progress has been made in the design and planning of the European Expert Database in the area of public health/communicable diseases.

KM activities related to the mapping of the microbiology laboratories are covered in the following section.

Strategy 5. Microbiology coordination

Microbiological laboratories are essential for the surveillance and early detection of an outbreak. An important part of the ECDC remit is to build up collaboration between the Centre and the microbiological laboratories in the EU. ECDC does not and will probably never have laboratory capacity of its own and therefore needs to



ECDC's microbiology strategy relies on effective working relations with external laboratories

establish close working relations with external laboratories or laboratory networks. ECDC's strategy for collaboration with microbiological laboratories was developed in 2006 and 2007, and its implementation continued in 2009.

1.3 Preparedness and response functions

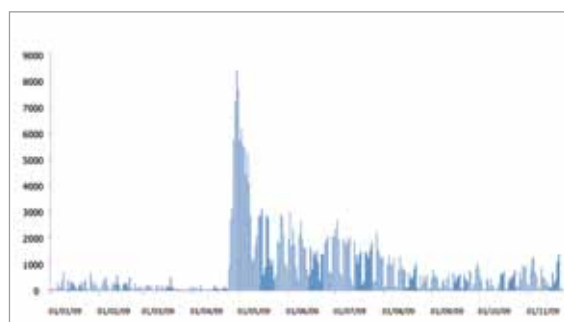
Strategy 1. Detecting and assessing threats

Detecting public health threats

In 2009, national health authorities exchanged 509 messages through the Early Warning and Response system (EWRS) which resulted in 820 comments and 721 exchanges among Member States. This represents a five-fold increase compared with 2007. 89% of the messages were related to pandemic influenza. Access to EWRS is now also possible via mobile phone. The implementation

of EPIS, a new communication platform for risk assessment that connects to a database of health threats, was delayed because of the influenza pandemic. The launch of the EPIS platform is scheduled for 22 February 2010.

Figure 2. EWRS access by day, January to November 2009



Working with the National Microbiology Focal Points

A key element of microbiology coordination at ECDC is the close cooperation with the Member States via a forum of National Microbiology Focal Points (NMFPs). This forum was established in 2007. Five (bi-annual) meetings have been held to date. Key outcomes for 2009 include:

- The definition of 'public health microbiology' and how public health microbiology is organised in the EU.
- Laboratory quality: which systems are in place and how do the Member States achieve/maintain high-quality laboratory services?
- Technical guidance on the requirements and core functions for reference laboratories.

More information on ECDC microbiology-related activities is available on the ECDC web portal, as is a list of the NMFPs and their biographies.



In 2009, 191 emerging threats were monitored through regular epidemic intelligence activities. This represents a 24% decrease compared with 2008. This decrease is related to the emergence of the new pandemic influenza A(H1N1) virus in April 2009, which prompted a huge worldwide response. Two thirds of all emerging threats monitored originated in EU and EFTA countries. 48% percent of these threats were related to clusters of travel-associated cases of legionnaire's disease.

Key products 2009

- A(H1N1) pandemic: risk assessment and support for Member States.
- Daily pandemic updates (after 25 April 2009).
- 191 threats monitored using the Threat Tracking Tool (TTT).
- 52 weekly threat reports on communicable diseases.
- Provision of support to epidemic intelligence for five large mass-gathering events.
- Preparation of 25 original threat assessments and six threat updates.
- Conducted two simulation exercises.

During the influenza A(H1N1) pandemic special attention was devoted to the monitoring of threats at large mass-gathering events: the 12th World Championship in Athletics in Berlin, the Universiade in Belgrade, the EXIT

and Guca festivals in Serbia, and the 6th Francophone Games in Beirut. For the duration of these events, ECDC produced a daily bulletin addressing the optimal detection of emerging threats.

Assessing health threats

Following the detection of potential communicable disease threats for the EU, ECDC prepared 25 original threat assessments, six of which were updated later. Of the 25, eight were done upon request from the European Commission, 12 were the result of an EWRS notification from Member States, and five originated from other sources.

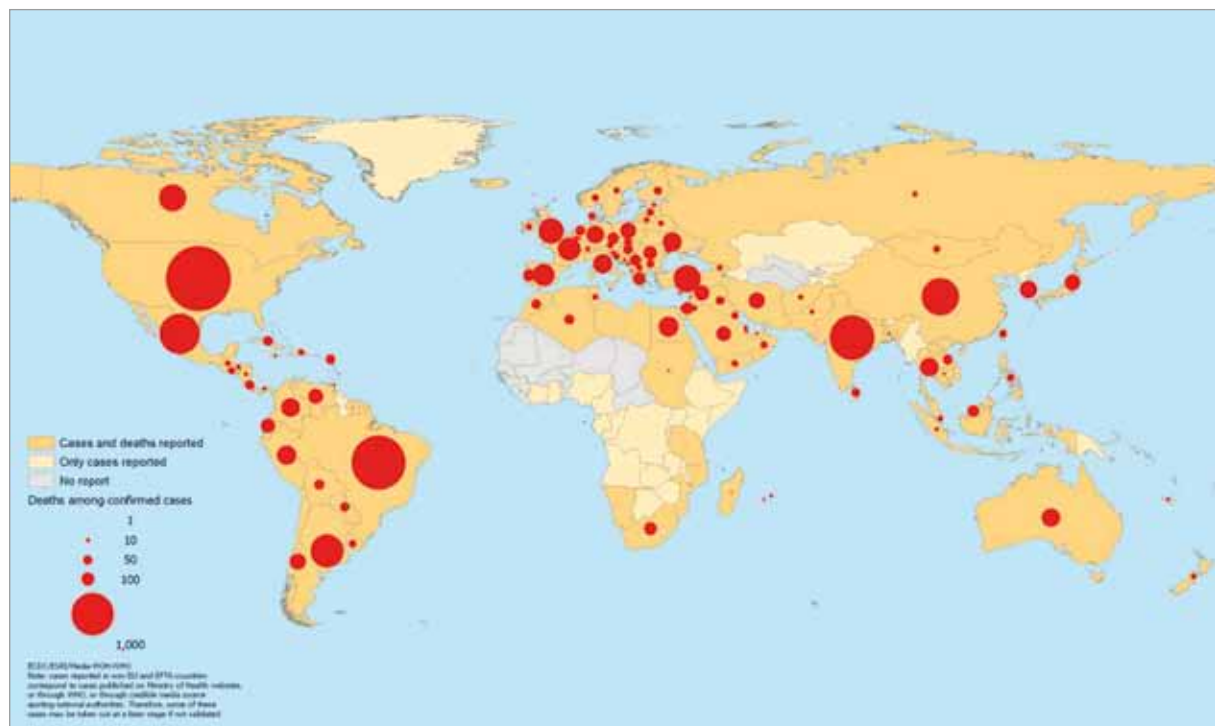
Ten of the threat assessments were related to influenza: five to the pandemic influenza A(H1N1) virus, five to other influenza strains.

Strategy 2. Support and coordination of investigation and response

Coordination support and response activities for the pandemic influenza A(H1N1) dominated in 2009. The pandemic situation required enhanced epidemic intelligence, especially in April 2009 when information was sparse and no definitive statements were available from the countries that were affected first. ECDC started releasing daily updates on the pandemic at the end of April and continued this practice until the end of the year.

Upon request from the WHO Regional Office for Europe, ECDC provided staff to assist the Ukrainian national health authorities in responding to the influenza A(H1N1) pandemic. Five additional requests for assistance were

Figure 3. Reported cumulative number of confirmed fatal cases of 2009 pandemic influenza A(H1N1) and country status, by country, as of 18 January 2010, 16.00 CEST



received from WHO. ECDC identified experts for all requests through its Competent Bodies network and the European Commission.

The preparation of standard operating procedures for 'outbreaks of unknown origin' was initiated in 2009. The full set will be finalised in 2010.

Coordinating emergency operations

In response to the emergence of the influenza A(H1N1) virus, ECDC raised its alert level (internally known as 'PHE level', public health emergency level) from zero to one on 24 April 2009. PHE level 2 was declared on 4 May, when ECDC's Emergency Operations Centre (EOC) shifted to 24/7 operations, with a total staff of 50 working in three shifts, monitoring the epidemiological situation in the Americas. On 10 May, night shifts were discontinued and the alert level was lowered to 1. Level 1 was maintained until 19 January 2010.

In May 2009, ECDC sent an expert to the US CDC in Atlanta to act as a liaison between the European and the US emergency operations centres. In reply to the emerging pandemic, China CDC dispatched a liaison officer to ECDC who worked at the Emergency Operations Centre for a total of four weeks.

In 2009, mapping capacity was added to the Emergency Operations Centre. A mapping training session was conducted and disease distribution maps were subsequently added to ECDC's daily output. A crisis-management tool was implemented, which contributed to the mobilisation of resources during the pandemic.

Strategy 3. Strengthening preparedness

Response capacities

ECDC continued its engagement in preparedness for influenza pandemics with the Member States.

In December 2009, ECDC co-organised a meeting in Romania to address specific needs for eastern European countries facing the pandemic.

Upon request from the Maltese public health authorities, ECDC conducted a risk assessment for vector-borne diseases in Malta in April 2009. ECDC also published risk assessment guidelines for infectious diseases transmitted on aircraft, particularly tuberculosis, meningitis and SARS.

ECDC provides the opportunity for delegates from Member States to spend one week at ECDC and gain a deeper understanding of the methods used in threat detection and response activities. This is achieved through a series of comprehensive briefings on ECDC in general and PRU activities in particular. In 2009, 17 public health experts from partner institutes in the Member States participated in the programme.

ECDC strengthened its preparedness for public health events related to the intentional release of biological agents by collaborating with EUROPOL. Operating procedures for the assessment of emerging threats were modified to include a systematic assessment of the possibility of an intentional threat.

Simulations exercises

ECDC conducted two simulation exercises in 2009. The aim of 'Exercise Orange Circle' (April 2009) was to explore procedures and functions regarding early detection, assessment and communication associated with events related to vaccine-preventable diseases. 'Exercise Purple Octagon', conducted in September 2009, was designed to test the resilience of communication systems run by Member States, international organisations and third countries. The exercise also provided an opportunity for the evaluation and development of preparedness plans



EPIET: Cohort 15 introductory course in Mahon, Spain

for public health events during mass gatherings. Finally, it provided an opportunity to test ECDC's ability to tackle two parallel threats: the real-life influenza pandemic and the simulated Purple Octagon health emergency.

1.4 Training

ECDC training activities are conducted according to a training strategy developed with the Member States in 2005. All training activities are reviewed yearly.

Key products 2009

- EPIET programme: 78 fellows coached.
- 346 public health experts from 30 EU/EEA countries participated in ECDC short-training modules.
- 16 trainers engaged in training-of-trainers activities.
- EPIET external evaluation launched.
- Provision of support to two Member States: assessment of training needs and resources.

Strategy 1. Development of European Union capacity

European Programme for Intervention Epidemiology Training (EPIET)

EPIET provides training and practical experience in intervention epidemiology. Fellowships last for two years. In 2009, EPIET coached a total of 78 fellows: 23 were enrolled in cohort 13 (2007–2009); 26 in cohort 14 (2008–2010); and 29 in cohort 15 (2009–2011). At the end of 2009, with the recruitment of the 15th cohort, 55 fellows were enrolled in the programme. A three-week introductory course was held for the new cohort in Mahon, Spain. In addition, six one-week modules were organised for EPIET fellows. These modules were also open to external participants.

EPIET fellows participated in 11 field missions to assist countries: three in connection with the influenza A(H1N1) pandemic, one in Malta, one in the former Yugoslav Republic of Macedonia. The remaining missions took place in African countries.

The scientific coaching of the fellows is conducted through a framework partnership agreement with Spain, France, Germany and the UK.

EPIET fellows delivered 40 oral presentations during the ESCAIDE conference and presented 23 scientific posters.

An external EPIET evaluation was launched in 2009. Results will be available in the spring of 2010.

More information on EPIET is available at <http://ecdc.europa.eu/en/epiet>.

Short training modules

In 2009, a total of 346 public health experts from EU Member States and EEA countries participated in ECDC

training modules. Participants came from all 30 EU/EEA countries.

Table 3. Participants in short training modules in 2009, by topic

Short course title	Participants
Introduction to epidemiology (three weeks, two sessions)	34
Epidemiological and microbiological aspects of outbreaks (one week, two sessions)	31
Epidemiological aspects of outbreak investigations (one week)	111
Managerial aspects of outbreaks (one week)	28
Time-series analysis (one week)	13
Epidemiological aspects of vaccine-preventable diseases (one week)	28
Learning groups (one day)	26
GSS-WHO-ECDC course on salmonellosis surveillance (one week)	75
Total	346

The number of participants in short training courses rose continually, from 174 in 2007, to 268 in 2008, and 346 in 2009.

Strategy 2. Networking of training programmes

EPIET fellows participated in 11 field missions to assist countries: three in connection with the influenza A(H1N1) pandemic, one in Malta, one in the former Yugoslav Republic of Macedonia. The remaining missions took place in African countries.

ECDC maintains strong relations with its fellows through national training programmes in field epidemiology. There are now 30 EPIET-associated fellows, 24 from Germany, one each from Norway and Slovenia, and two each from Finland and Austria.

In 2009, ECDC supported Portugal and Malta in reviewing field epidemiology training activities. ECDC contributed to the meeting of the training programmes in field epidemiology (TEPHINET) in June, in Lyon, France. The ECDC training strategy was discussed further with the EU Member States during the ECDC Competent Bodies meeting in Uppsala, 12–14 October 2009. The EPIET Training Site Forum meeting was held in Stockholm on 29 October.

Sixteen trainers were involved in training-of-the-trainers activities in 2009.

Strategy 3. Creation of a training centre function

ECDC developed this strategy in 2009. The training team is comprised of four technical/scientific experts and two administrative support staff. In 2009, EPIET migrated its website to the ECDC web portal.

EPIET's field epidemiology training manual was developed in a wiki environment and is now ready for input from the field epidemiologist community. A framework contract was signed in 2009 to ensure the development

of new case studies in field epidemiology. A training curriculum on threat assessment is currently being developed. Two more curriculums were commissioned for completion in 2010: 'Point-prevalence surveys for healthcare-associated infections' and 'EU course on antimicrobial resistance'.

A mobile training library was developed to enable access to essential epidemiology manuals when conducting training sessions in EU Member States.

1.5 Health communication

Key products 2009

- Launch of the new ECDC web portal, the ECDC intranet and several extranets.
- Launch of the ECDC Knowledge and Resource Centre on Health Communication.
- A total of 43 scientific publications released in 2009.
- Journal *Eurosurveillance* accepted and listed for a Thomson Reuters 'impact factor'.
- Second European Antibiotic Awareness Day organised, with participation of 34 countries.
- Development and management of a number of products in response to the 2009 influenza pandemic: dedicated website, webcast of press conferences and education sessions, daily media monitoring, science updates, etc.
- New visual identity for all ECDC publications and communications material.
- Development of two toolkits dedicated to country support: one to support communication planning on vaccines, one on tick-borne diseases; report on the evaluation of previous toolkits.
- Strengthening of relations with the European Public Health Association and the European Association of Public Health Schools (ASPHER) by participating in the ASPHER annual conference and ASPHER projects.
- Development of a new health communication strategy.

The Health Communication Unit (HCU) is responsible for communicating the scientific and technical outputs of the Centre to European health professionals and to the general European public, as well as supporting the Member States' communication activities.

2009 was a difficult year, as the Communication Unit had to meet the communication demands imposed by the influenza A(H1N1) pandemic, while at the same time trying to meet the targets of the 2009 Work Plan which called for the technical implementation of sophisticated internet, intranet and extranet sites that were designed to

accommodate health professionals (internet), the general public (internet), external partners (extranet) and ECDC staff (intranet).

A target group approach was adopted in order to promote the dissemination of scientific/technical information. In this respect, the scientific journal *Eurosurveillance* is already of strategic importance. A 'Knowledge and Resource Centre in Health Communication' was started to further enhance country support, as ECDC will increasingly support Member States in evidence-based health communication.

Strategy 1. Communicating ECDC's scientific and technical output to professional audiences

Scientific publications in 2009

A total of 43 scientific publications were released in 2009, up from 22 in 2008, all of which are available electronically from ECDC's website; selected reports are available in hard copy. Starting in September 2009, ECDC's publication team was also involved in the production of the Weekly Influenza Surveillance Overview (WISO).

All publications available from the web portal now have a short description of their content, and meeting reports use a more concise, more reader-friendly format. Executive summaries of key publications were translated into all 23 official EU languages, plus Icelandic and Norwegian. A summary of the Annual Report of the Director 2008 has also been translated.

A new visual identity for ECDC

A new visual identity for all ECDC communication products was developed and applied to all publications, presentations and visual materials. A detailed description of the new brand concept was made available as an internal publication ('Visual and design guidelines').

Work has started on assembling a core library of images for publication and education purposes.

The above activities are part of an effort to make ECDC's output more consistent and reader-friendly. This reflects a shift from previous years when most activities were primarily aimed at increasing awareness of ECDC's scientific output.

Web portal

The new ECDC portal was launched in mid-August. The visibility of ECDC's materials on the 2009 pandemic improved thanks to new graphics, better maps and charts, and the use of metadata and keywords. The portal contents can now be distributed through RSS feeds and accessed via other portals, for example <http://www.health.europa.eu>.

2009 also saw the launch of three special thematic pages devoted to tuberculosis, vaccination, and HIV/AIDS. All health-topic pages were reviewed in late 2009, including those on the influenza A(H1N1) pandemic. The Web Team also developed a multi-lingual website for the European Antibiotic Awareness Day.



ECDC info stand on 9 May (EU Day), Kulturhuset, Stockholm

An extranet platform was developed as part of the portal project. Extranets will be used as cooperative workspaces for the stakeholders and ECDC workgroups.

Strategy 2. Communicating key public health messages and information to the media and the European public

Within the scope of this strategy, ECDC promoted both proactive and reactive press and media services which included a number of press releases on a wide variety of issues. Several public health issues were managed via

the ECDC 'press query' mailbox, which was heavily tested during the influenza A(H1N1) pandemic with over 350 journalist requests received and answered since May 2009. Another e-mail inbox, the ECDC 'info' mailbox, proved to be a relevant communication channel through which over 400 questions and queries were answered in 2009.

Over the course of the year the press team continued to develop strong ties with journalists by organising press seminars and live webcasts.

Eurosurveillance

The weekly scientific journal Eurosurveillance is ECDC's flagship publication. It was integrated into the Centre in 2007 and is devoted to the epidemiology, surveillance, prevention and control of communicable diseases. Articles are available online and most are also published in a quarterly print compilation.

Eurosurveillance was selected for coverage by Thomson Reuters in 2009 and is now abstracted and indexed in the Science Citation Index Expanded (also known as SciSearch) and in the Journal Citation Reports/Science Edition. The first official impact factor is expected to be allocated in 2011, after a two-year evaluation period.

In 2009, the journal closely followed the development of the influenza A(H1N1) pandemic, publishing a total of 92 articles. The majority of publications on the pandemic consisted of 'rapid communications', but in



October a special issue on the pandemic situation in the southern hemisphere was published. During the pandemic, the geographical scope of the journal widened as findings and reports from other continents became increasingly relevant for Europe.

The number of subscribers for Eurosurveillance is still rising by about 20 to 30 per week. Non-European readers and contributors hail from all over the globe.

In 2009, Eurosurveillance published 368 articles, 156 peer-reviewed rapid communications, and 112 peer-reviewed long articles. The remaining articles fall in the categories of editorial, news, letters, and meeting reports.

With a total of 15 info stands, ECDC maintained a strong presence at scientific conferences/meetings.

In 2009, the Unit continued its quarterly newsletters: 'ECDC Insight' (launched in 2007) is ECDC's official newsletter, while 'Executive Science Update' is primarily targeted at policy makers.

ECDC expanded its multilingual information offerings to include executive summaries of key publications in all 23 official EU languages (plus Norwegian and Icelandic).

Audio-visual materials

In 2009, ECDC produced 17 audiovisual products highlighting different aspects of its scientific activities. Six press conferences and one videoconference related to the 2009 influenza A(H1N1) pandemic were recorded and edited. ECDC produced a video showing how ECDC was helping Europe with the influenza pandemic. In connection with ECDC's surveillance and guidance activities on tuberculosis and chlamydia, ECDC commissioned two videos. Four TV spots for the European Antibiotic Awareness Day and World AIDS Day were broadcast by pan-Euro News and watched by over 5 million viewers. In addition, important meetings were showcased through videos.

Intranet and document management system

The ECDC intranet was launched in the summer of 2009, replacing an initial version which had been launched at the beginning of the influenza A(H1N1) health crisis in order to improve internal communication.

ECDC's DMS (document management system) project is well under way. As a first step the mail registration system was launched in autumn.

Strategy 3. Supporting the Member States' health communication capacity

ECDC plays an important role in promoting and supporting professional and specialised health communication efforts across Member States, in particular through long-term processes for sharing good practice and evidence on health communication activities and research.

In 2008, ECDC initiated a coordinated approach to develop country cooperation on health communication activities. To further develop this, ECDC hosted a meeting co-organised with the European Public Health Association (EUPHA) in May 2009, bringing together experts involved in public health policy issues and health communication from both Europe and the US. On this occasion, the current status of practice and research dedicated to promoting health communication in the EU was discussed. A report presented at the meeting pointed out opportunities and challenges associated with developing communicable disease-related health communication based on published research and evidence on effectiveness. It was in this context that ECDC decided to establish the 'Knowledge and Resource Centre on Health Communication' (KRC) in October 2009. KRC will share scientific knowledge and provide Member States with scientific research and evidence-based practice.

Initially, KRC will focus on the development of resources, particularly toolkits. Two new communication toolkits were developed in 2009, one on tick-borne diseases, one on MMR vaccination, while older toolkits were subject to an external evaluation.

KRC was also involved in the European Antibiotic Awareness Day, which took place on 18 November across 34 different European countries, including all EU Member States and Norway and Iceland. Together with the Swedish EU Presidency and national public health authorities, ECDC organised a launch seminar and webcast in Stockholm in order to generate media coverage on antibiotic resistance and the prudent use of antibiotics in the EU.

During the A(H1N1) pandemic, ECDC was heavily engaged in outbreak and emergency communication. Despite the challenges imposed by the pandemic, HCU managed to strengthen its position as an integral part of the EU's Health Security Committee (HSC) Communicators' Network, developed its own internal guidance on crisis communication, developed training opportunities for ECDC staff, and made provisions for a 2010 workshop on crisis communication for Member States representatives.

2. Disease-specific programmes

ECDC's disease-specific activities are managed in seven Disease-Specific Programmes (DSPs). In December 2009, SAU and SUN entered into a twinning arrangement in order to improve programme management and the allocation of human resources. Monthly meetings between programme coordinators ensure the smooth collaboration between the individual DSPs.

The DSPs represent the cornerstone of the Centre's disease-specific scientific output and cover all diseases and health topics under EU-wide coverage. In 2009, ECDC continued to build the tools, databases, networks and methodologies for the scientific work related to specific diseases.

As the 'Strategic Multi-Annual Programme 2007–2013' sets only general objectives common to all the Disease Specific Programmes, there was a lack of clarity regarding the long-term specific objectives of each disease programme. In November 2009, the Management Board decided to fill this gap and adopted a document presenting key long-term strategies for the individual Disease-Specific Programmes. These strategies clarify what is expected from ECDC in each disease group.

2.1 Influenza

The influenza pandemic dominated 2009 and thoroughly disrupted the Influenza Programme's work plan, which had to be completely reorganised in order to focus on the pandemic. ECDC's Work Programme for 2009 was revised by the Management Board in June 2009. As a result a number of new activities had to be added to the Influenza Programme's work plan. Other activities were dropped or adapted, for example the 'survey on national pandemic preparedness', which was replaced by a 'lessons learnt' exercise. A planned review of data on antiviral resistance was replaced by enhanced monitoring of antiviral resistance. Activities on seasonal influenza and a 'protocol for outbreak investigation in a pandemic' had to be postponed.

The pandemic served as a real-life test of European pandemic preparedness and hastened the safe transition of the European Influenza Surveillance Scheme (EISS) to ECDC. As ECDC primarily focused on pandemic vaccines, in particular vaccine effectiveness (I-MOVE project) and vaccine safety (VAESCO project), the update on scientific and public health advice on avian influenza vaccines, originally scheduled for 2009, is now behind schedule.

In December, the EU Health Council approved a recommendation on seasonal influenza immunisation, for which ECDC had provided input for the European Commission.

2.2 Tuberculosis

In the EU, the incidence of tuberculosis (TB) has declined steadily over the past decades, with the EU having one of the world's lowest incidence rates. However, in the last years there was a re-emergence of the disease fuelled by the HIV epidemic, multidrug-resistant TB (MDR TB) and the aggregation of burden among vulnerable populations. Therefore, at the request of the European Commission, ECDC developed its 'Framework Action Plan to Fight Tuberculosis in the EU' in 2007.

In 2009, further progress was made towards advancing and developing the implementation and monitoring of the TB Framework Action Plan, a medium-term key strategic outcome.

'Framework Action Plan to Fight Tuberculosis in the EU': strategic progress towards medium-term outcomes (two to three years)

The TB Programme prepared a draft proposal for the monitoring and implementation 'Framework Action Plan to Fight Tuberculosis in the EU', as per request of the Commission. The preparation of the proposal was supported by epidemiological experts in a technical workshop on epidemiological monitoring and TB eradication in the EU. In addition, ECDC consulted key experts in monitoring and evaluation and received input from its stakeholders. A working draft of the monitoring document will be shared with the Member States for consultation and input in 2010.

Surveillance of tuberculosis in the EU

Following the transfer of TB surveillance activities to ECDC in 2008, the first ECDC/WHO joint TB surveillance report for Europe was presented in 2009. Several activities in support of the joint TB surveillance system were carried out, including a meeting of National Correspondents.

MDR TB molecular surveillance project

Launched in 2009, the project intends to continue and expand the former Commission-sponsored project on MDR TB molecular surveillance. The project presents an opportunity to enhance surveillance and pilot the expansion of TB molecular monitoring activities.

TB-HIV surveillance situation analysis

The project was launched in 2009 and aims at assessing TB-HIV surveillance throughout the EU, identifying gaps and key areas for improvement.



Access to laboratory services is essential for TB control

EU TB laboratory network

Following exploratory work conducted in 2008, the ERLN-TB (European Reference Laboratory Network for TB) was established in 2009. This is a milestone in the strategic progress towards the optimisation of TB control in the EU. The network covers all Member States and EU candidate countries and plans to scale up activities over the coming three years.

Scientific output and advice

ECDC continued to provide scientific advice and guidance on specific TB topics. Work on social determinants, the assessment of specific interventions, and vulnerable populations resulted in several peer-reviewed publications that are now being used by Member States for the development of local and national guidance. ECDC also piloted areas such as in-depth epidemiological analysis and the development of an analytical framework and presented the results in several scientific gatherings, including the World Lung Health Conference 2009.

Two specific projects were initiated:

- TB and MDR TB case management: A survey of TB case management and case studies was launched and interim results were analysed. This will support the further development of guidance for MDR TB control.
- New tools for better effectiveness (IGRA): Two systematic reviews were initiated; the results will be communicated in 2010. IGRA addresses the effectiveness of new diagnostic tools for identifying TB infection and disease.

Risk assessment and outbreak response

ECDC continued to provide support in assessing threats to international travellers with TB and the risks of related outbreaks. In 2009, eight TB-related threats were assessed by ECDC.

Guidance for the management of TB-related events in aircrafts was developed and launched as part of the RAGIDA project¹⁰.

Country visits

Together with the WHO Regional Office for Europe, two country visits (Romania, Portugal) were conducted in 2009.

Partnerships

The Programme collaborates and liaises closely with the European Commission, particularly in areas that relate to the 'Framework Action Plan to Fight Tuberculosis in the EU'.

The ECDC Tuberculosis Programme established a close and fruitful collaboration with their counterparts at the WHO Regional Office for Europe, conducting successful joint work in the field of surveillance, country visits and several other TB-related activities.

ECDC is continuing its support to the development of a monitoring framework for the 2007 Berlin Declaration on Tuberculosis. Together with the Commission and WHO Regional Office for Europe, ECDC co-hosted a follow-up meeting to the declaration and contributed to the high-level follow-up session organised during the World Health Summit in Berlin.

Finally, the ECDC Tuberculosis Programme was involved in several international task forces under the auspices of the Stop TB Partnership and WHO, contributing to numerous aspects of TB control. In particular, ECDC actively contributed to, and participated in, the 2009 high-level consultations on MDR TB organised by WHO

¹⁰ 'Risk assessment guidelines for infectious diseases transmitted on aircraft'. Available from http://ecdc.europa.eu/en/publications/Publications/0906_TER_Risk_Assessment_Guidelines_for_Infectious_Diseases_Transmitted_on_Aircraft.pdf

and the Gates Foundation in Beijing, addressing issues related to TB drug resistance in the EU and its neighbouring countries.

2.3 Sexually transmitted infections, including HIV/AIDS and blood-borne viruses

The HIV epidemic remains of major public health importance in Europe, with evidence of continuous transmission of HIV in many countries. In 2009, ECDC took over responsibility of the European surveillance of sexually transmitted infections (STI). ECDC also tracks the progress of the Member States' commitments in the fight against HIV/AIDS in Europe and Central Asia.

HIV/AIDS

Surveillance activities

As of 2008, the HIV/AIDS case reporting in Europe was carried out jointly by ECDC and WHO EURO. The annual surveillance report was published on the occasion of World AIDS Day on 1 December 2009. Each year around 27 000 newly diagnosed HIV infections are reported in EU/EFTA countries. This number is a crude underestimate because of incomplete reporting and reporting delays. In 2008, the predominant mode of HIV transmission in the EU/EFTA is among men who have sex with men (MSM). A special issue on sexually transmitted infections and HIV/AIDS in MSM was published in *Eurosurveillance* in December. The themed issue on STI was in line with several World AIDS Day 2009 events organised by ECDC and aimed at drawing attention to the

epidemiological importance of MSM in HIV and STI and directing ECDC activities to focus on main risk groups.

In 2009, for the first time, the annual meetings of the surveillance networks for STI and HIV/AIDS (organised jointly with WHO EURO) were held back-to-back in December. A scientific seminar 'STI and HIV in men who have sex with men' was organised for both surveillance networks. Speakers and contributors from several countries shared experiences and addressed the issues affecting the changing epidemiology of STI and HIV in MSM. Discussions were held on future changes to HIV and AIDS surveillance.

Improving knowledge and practices on HIV/AIDS policies

ECDC published a systematic review updating the current knowledge about HIV/STI preventive interventions targeted at MSM in Europe, summarising the effectiveness of interventions as well as gaps in the evidence base. The results point to possible short-term effects of interventions. Despite the maturity of the HIV epidemic, more outcome evaluations of behavioural HIV/STI intervention for MSM are needed.

In 2008, ECDC initiated a project on HIV testing. In 2009, the first results regarding HIV testing policies, practices, outcomes and barriers in the EU were reported. A concise report will be published in 2010. A technical consultation was held in 2010, attended by selected Member States, the US CDC, WHO EURO, and members of civil society. The results will be used for preparing evidence-based guidance on HIV testing in the EU.



Annual meeting of the HIV/AIDS surveillance network, Stockholm, December 2009

Preliminary results of the project on HIV- and STI-related behavioural surveillance, initiated in 2008, were discussed with experts, UNAIDS, WHO and EMCDDA (European Monitoring Centre for Drugs and Drug Addiction) during an expert meeting in Montreux in February 2009. The final results were presented to all Member States in a meeting in September 2009. The report, also published in September, presents the results of an EU-wide survey on available behavioural surveillance and covers eight sub-populations. Because of the pandemic, the development of a toolkit for behavioural indicators was postponed.

Three reports were published on migrant health in 2009:

- a background note on migration and infectious diseases in the EU;
- an epidemiological review determining the burden of HIV/AIDS in migrant communities and ethnic minorities; and
- a review of the practices and barriers in access to HIV prevention as well as treatment and care among migrant populations (including undocumented migrants) in the EU.

In December 2009, a project was launched on developing a framework for HIV incidence studies in Europe with the objective to contribute to a more accurate picture of the HIV epidemic. The three-year project will present its first temporary results in July 2010. A pilot study of HIV incidence will focus on men who have sex with men (MSM) as the major risk group in EU/EFTA countries.

The development and implementation of a user-friendly model for HIV national prevalence estimates in Member States (including country support and training) was postponed until 2010, due to an unsuccessful tender (no offer received).

Monitoring of the Dublin Declaration on HIV/AIDS

ECDC continued its work monitoring the 'Dublin Declaration on Partnership to Fight HIV/AIDS in Europe and Central Asia', a political declaration adopted, among others, by the 55 member countries of the UN Economic Commission for Europe and high-level representatives from the European Commission in 2007. Three advisory group meetings were held to prepare a questionnaire. In addition, a workshop was organised in June 2009 to prepare the Dublin Declaration countries in the EU and Central Asia to respond to the questionnaire. Results are currently being analysed and the final monitoring report is expected to be published in September 2010.

Sexually transmitted infections

Surveillance activities

As of 2009, ECDC has taken over responsibility for the European surveillance of sexually transmitted infections (STI), including case-reporting, STI microbiology, and STI alert reporting. The national contact points for STI surveillance were given a two-day training course in February 2009. A technical consultation was held on the future of STI alert reporting. An additional consultation was held on chlamydia surveillance with selected experts from the Member States. Data collection deadlines for STI had to be extended because of the 2009 pandemic, with the surveillance report to be published in 2010.

Improving knowledge and practices on sexually transmitted infections

ECDC started an STI microbiology project which will focus on surveillance of antimicrobial resistance in *Neisseria gonorrhoeae*. A proposal for resistance surveillance and a laboratory survey was discussed in the annual meeting of the European network for STI surveillance. A first report on gonococci resistance will be published in 2010.

A technical expert group prepared evidence-based guidance for chlamydia prevention and control in the EU, based on the review of chlamydia control activities in Member States (May 2008). The guidance document for chlamydia control in Europe was launched at the International Congress for Sexually Transmitted Diseases Research in a special seminar on 'Challenges for chlamydia control in Europe' in June 2009 in London.

The evaluation of the public health benefits of partner notification as a key prevention strategy launched in 2008 was continued. An inventory of policies, legal frameworks, professional guidelines and recommendations was carried out in an EU-wide survey. First results were discussed in a meeting with selected experts in October 2009. The final report will be published in 2010.

HIV/STI country visits

In 2007/2008, ECDC embarked on a series of country visits during which ECDC experts – together with local experts – reviewed the status of HIV/STI surveillance, prevention, and control, in order to identify priority areas where ECDC can provide support, propose actions for improvement, and identify good practices in HIV/STI prevention and control. In 2009, the three planned country visits were cancelled because of the pandemic.

Viral hepatitis

ECDC started to prepare for the surveillance of hepatitis in Europe by reviewing the current systems for surveillance of hepatitis B and C and the epidemiological situation across Europe. An EU-wide survey was carried out to update and validate the available information on surveillance and prevention of hepatitis B and C. Furthermore, a literature review was carried out to review hepatitis B and C prevalence, burden of disease, national screening policies and effectiveness in EU/EFTA countries. Technical reports on hepatitis B and C will be published in 2010.

2.4 Food- and waterborne diseases and zoonoses

Activities in 2009 included preparing a strategy for the Food- and Waterborne Diseases Programme, consolidating the surveillance for six priority diseases (salmonellosis, campylobacteriosis, VTEC¹¹ infection, shigellosis, listeriosis, and yersiniosis), preparing a new communication platform for the Urgent Inquiry Network (early detection of dispersed international clusters/outbreaks), intensifying the collaboration with the stakeholders (European Commission, Community Reference Laboratories (CRLs), and European Food Safety Authority (EFSA), and the preparation of the human-related part of the EFSA's Community Summary Report on Zoonoses 2008. A project assessing the true incidence of salmonellosis and campylobacteriosis was launched, followed by a project on the drafting of recommendations for the prevention of Creutzfeldt-Jakob disease (CJD) in healthcare settings. ECDC also supported the SHIPSAN TRAINET project (Ship Sanitation Training Network).

European food- and waterborne diseases and zoonoses surveillance network

The Programme's surveillance experts held their second annual meeting in Malta in September 2009. The meeting covered surveillance issues, national and multinational outbreak investigations, source attribution, and external quality assurance results for *Salmonella* and VTEC typing. Germany detected an emergence of monophasic *Salmonella* Typhimurium DT. Since 2005, 193 cases were detected, for which ECDC coordinated the case finding through the Urgent Inquiry Network. The source of infection was eventually identified in cattle feed during an outbreak in livestock in Germany. The investigation provided further evidence of how important multidisciplinary collaboration is when preventing the spread of *Salmonella* from animals to humans.

Coordination of urgent inquiries

In 2009, the Food- and Waterborne Diseases Programme continued to coordinate the Urgent Inquiry Network. A total of 28 urgent inquiries were posted during the year. Of these 28, 12 were identified as international outbreaks. For the majority of urgent inquiries (61%) the causative agent was *Salmonella*, however, inquiries associated with STEC/VTEC, shigellosis, hepatitis A and cyclosporiasis were also distributed. One urgent inquiry from Hungary about an unusual increase in *Salmonella* Goldcoast cases triggered an outbreak investigation between six EU countries which was coordinated by ECDC.

External collaboration

The collaboration between ECDC and the European Food Safety Agency (EFSA) now includes the new Emerging Risks Unit, in addition to the production of the joint zoonoses report. Preparations for a joint *Listeria* typing study in connection to EFSA's *Listeria* food survey in 2010 were initiated.

The first joint ECDC-WHO/EURO-WHO Global Salm-Surv (GSS) Advanced Workshop on 'Intersectoral

collaboration for detection, surveillance and response to foodborne diseases' was held in May in Poland. The GSS network was renamed to 'Global Foodborne Infections Network (GFN)', and ECDC is a member of the Steering Committee. Collaborations continue with WHO INFOSAN on sharing information on potential food- and waterborne disease outbreaks of international relevance that either start within the EU, or originated outside the EU, but have an impact on EU citizens.

In 2009, the Food- and Waterborne Diseases Programme participated for the first time in a meeting of Community Reference Laboratories for VTEC infections and thus established an important communication link with national food and veterinary laboratories.

Surveillance reports

Data for EFSA's zoonoses report 2008 were collected from the Member States within the framework of TESSy. The report was published on 28 January 2010. The Food- and Waterborne Diseases Programme also contributed to the preparation of the Annual Epidemiological Report 2007 by providing data on 20 diseases. The first quarterly reports for 2008 on salmonellosis, campylobacteriosis and VTEC infection have been produced and the remaining are awaiting the development of automated reports.

Seroepidemiology study

ECDC initiated a project assessing the true incidence of salmonellosis and campylobacteriosis in the population through sero-epidemiological tools. The usefulness of the applied tools and methods will be also assessed.

Creutzfeldt-Jakob disease (CJD)

A project was launched for the drafting of recommendations for the prevention of Creutzfeldt-Jakob disease infections in healthcare settings. The recommendations will be finalised in 2010. ECDC participates in a joint working group with EFSA to prepare a joint scientific opinion on any possible epidemiological and molecular association between animal and human transmissible spongiform encephalopathies (TSE) cases.

2.5 Emerging and vector-borne diseases

The Programme on Emerging and Vector-Borne Diseases (EVD) focuses on a wide range of pathogens and diseases, notably vector-borne and travel-related diseases.

The programme team works in close collaboration with the relevant bodies of the European Commission, EU Member States, relevant international organisations such as the World Health Organization (WHO), as well as many experts from various institutes, universities, research projects and public health networks across the EU. Further, ECDC aims to actively involve European experts in international outbreak investigations as a way to maintain field expertise.

EVD contributes to a strengthening of EU-wide preparedness and response capabilities by providing Member

¹¹ verotoxin-producing *Escherichia coli*

States with access to expertise, a wide range of decision support tools, and the latest scientific knowledge.

Vector-borne diseases are a specific group of infections that represent an emerging (or re-emerging) threat to Europe, requiring particular attention. The increase of international travel is one important factor for the importation of new pathogens and/or vectors. Changes in climate may enhance the probability of vectors appearing in Europe, or spread vectors previously present only in limited locations. These environmental factors, in combination with behavioural and socio-economic factors could contribute to an increased risk of transmission of vector-borne disease and represent a threat for the health of European citizens.

Risk assessment of vector-borne diseases

The Programme on Emerging and Vector-Borne Diseases supported the preparation of several threat assessments on vector-borne diseases issued by the Preparedness and Response Unit in 2009 (e.g. West Nile, Ebola, plague, malaria).

On request of the Maltese public health authorities, in April 2009 a field mission was carried out with public health experts and entomologists specialising in mosquitoes, sandflies and ticks. In addition, the Programme identified priority diseases and made several proposals for public health action.

Outbreak assistance and support laboratories

ECDC continues to collaborate with the Laboratory Response Network of the European Network for Diagnostics for Imported Viral Diseases (ENIVD) on capacity building issues such as epidemic intelligence, response, quality assurance, and training.

Pilot programme for public health microbiology training (EUPHEM)

A pilot training programme for public health microbiology was started in 2009. The first two trainees were selected in collaboration with the European Programme for Intervention Epidemiology Training (EPIET). The training took place at four laboratory sites: Rijksinstituut voor Volksgezondheid en Milieu (The Netherlands), Health Protection Agency (UK), Robert Koch Institut (Germany) and Institut Pasteur (France).

Network of travel medicine clinics

ECDC started collaborating with the European Collaborative Network of Clinical Experts in Tropical and Travel Medicine (EuroTravNet) in January 2009. The objectives are to assist ECDC in the detection, verification, assessment and communication of communicable diseases that can be associated with travelling – particularly tropical diseases – and to provide ad hoc response to specific queries regarding potential outbreaks or trends in travel-related infections.

Network of medical entomologists and public health experts on arthropod vector-borne diseases (VBORNET)

In September 2009, ECDC started the VBORNET network, bringing together entomologists and public health experts that represent all aspects of vector-borne

disease-related research and public health activities in Europe. The networks main tasks will be to produce distribution maps of the major arthropod disease vectors, outline related surveillance activities, define priority strategic topics concerning the public health perspective of vector-borne diseases and vector surveillance, and develop a European strategy for the surveillance of the major human-disease vectors of public-health importance.

Tick-borne disease communication toolkit

In response to the increasing concern about diseases transmitted by ticks in Europe, ECDC prepared a 'Tick Communication Toolkit'. It provides background information and practical advice on the prevention and control of tick-borne diseases (Lyme disease, tick-borne encephalitis).

Expert consultation on West Nile fever

After confirmed cases of West Nile fever in Romania, Hungary and Italy in September 2008, ECDC organised an expert consultation on West Nile fever in April 2009 in which experts assessed the epidemiological situation of the disease in Europe and explored existing needs for the prevention and control of West Nile fever in the EU. A report on the expert consultation is available on the ECDC website.

Specific needs for the Overseas Countries and Territories (OCTs)

Overseas Countries and Territories are vulnerable to infectious disease importation, outbreaks and threats posed by vectors. In addition to day-to-day infectious disease control, OCTs need to develop the capability to respond effectively to uncommon events. Most of these territories have only limited epidemiological/public health expertise and microbiological laboratory capacity. While well established regional networks already provide communicable disease epidemiology and risk assessment support, there remains a need to strengthen OCTs capacity to respond to infectious diseases, particularly by sharing information and expertise. Therefore ECDC started the preparation of a strategy in order to address these issues.

Legionella TALD¹² cluster detection and response: EWGLINET transferred to ECDC

The transfer of EWGLINET¹³ to ECDC was postponed to April 2010 due to the influenza pandemic.

Research on emerging infectious diseases

ECDC experts participated in research workshops on vector-borne diseases and in evaluation panels for calls regarding DG Research's Framework 7 programme. Collaborating with EU-funded projects is a productive method of connecting with scientists that work with pathogens and diseases relevant for the Programme on Emerging and Vector-Borne Diseases.

Some planned projects could not be conducted in 2009: the development of risk maps for priority tick-borne diseases (project now initiated through VBORNET), the

¹² Travel-associated legionnaires' disease

¹³ European Surveillance Scheme for Travel Associated Legionnaires' Disease

quantitative risk assessment for two priority vector-borne diseases (calls for tenders for Lyme, TBE and rickettsiosis were launched in December 2009 and January 2010), and the development of enhanced surveillance for priority vector-borne diseases.

2.6 Vaccine-preventable diseases

In spite of the H1N1 pandemic, several important projects were carried out in the area of vaccine-preventable diseases.

Scientific output and advice

Regarding childhood vaccination, a guidance document on 'DTP Childhood Vaccination' was published, and a new scientific panel on childhood pneumococcal vaccination was established.

A document on 'Conducting Communication Campaigns on MMR¹⁴ Vaccination' was developed in order to support the Member States' health communication capacities. It presents ideas on strategies for planning and implementing national communication initiatives on MMR vaccination. A tool for evaluating the MMR vaccination programme was also developed.

Improving knowledge on vaccine-preventable diseases at the EU level

New activities started under an agreement with the VENICE network¹⁵, which promotes and shares knowledge and best practices in vaccination among European states: the website was redesigned, and now features a new document repository and a virtual library. All materials are in the public domain. New surveys were started (on tick-borne encephalitis, pneumococcal and meningitis vaccines, among others) and a report from the second study on seasonal influenza vaccination was produced. Issues related to the economic evaluation of vaccination programmes and to vaccination in risk groups were included.

The first Eurovaccine Conference, organised and fully funded by ECDC, took place in December: it was entirely webcasted, and more than 300 people attended the conference online. Eurovaccine will provide a regular independent platform for information and practice exchange between professionals working in the fields of regulation, policy, implementation, and monitoring and evaluation of immunisation activities in European countries. A second Eurovaccine conference is planned for 2010.

In 2009, the ECDC Consultation Group on Vaccination (EVAG) was established and will serve as a standing group of experts that will advise on any matter related to vaccines and immunisation, supporting ECDC in establishing priorities and improving the quality of its deliverables in this area.

¹⁴ MMR: measles, mumps, rubella

¹⁵ Vaccine European New Integrated Collaboration Effort (VENICE and VENICE II)

Training and capacity building in Member States

The second training module on epidemiological aspects of vaccination was delivered in Helsinki. A desktop exercise focusing on vaccine-preventable diseases took place at ECDC.

External quality assurance schemes (EQAs) were organised for national reference laboratory experts working on *H. influenzae* and *N. meningitides*. The main results were presented in a meeting in June, organised jointly with the European Society for Meningococci (EMGM).

Surveillance of vaccine preventable diseases in the EU

Surveillance of invasive bacterial diseases (IBD) was completely merged into TESSy and the collaboration between national epidemiologists and laboratory experts was further strengthened. In March, the first annual IBD meeting took place in Stockholm, with more than 80 experts covering both epidemiological and laboratory issues.

The first IBD data call coordinated by ECDC was launched in 2009. The 'IBD 2007 Annual Report' will be published at the beginning of 2010.

The transfer of the EU network on diphtheria (DIPNET) to ECDC is planned for 1 February 2010. In 2009, a transition plan as well as the preparatory work needed for the transition phase, including strengthening laboratory diagnostic capacities for diphtheria surveillance in EU was finalised.

Surveillance activities on other vaccine-preventable diseases (measles, rubella, congenital rubella, mumps and pertussis) were outsourced to the EUVAC network. Discussions on the outsourcing of surveillance for rotavirus, varicella, human papillomavirus were postponed due to the pandemic.

Activities related to the H1N1 pandemic

The 2009 influenza A(H1N1) pandemic had a major impact on vaccine-related activities. Thanks to the experience, networking and collaborations established during the past years, ECDC could quickly produce several important deliverables. Several projects were accelerated because of the pandemic.

An interim guidance document entitled 'Use of specific pandemic influenza vaccines during the H1N1 2009 pandemic' was published as a support tool for decision-makers on vaccination strategies. In addition, specific topics that were of interest to professionals and the general public were addressed by using a Q&A format.

During the pandemic, ECDC was in continuous communication with the European Medicines Agency (EMA), the European Commission (DG SANCO) and the Member States, in order to address the numerous issues raised with regard to the start of the influenza A(H1N1) vaccination campaigns. ECDC also kept close ties with international stakeholders like WHO and the US Center for Diseases Control (US CDC). As a result of a joined effort between ECDC and EMA, a document entitled 'European

strategy for influenza A(H1N1) – vaccine benefit-risk monitoring’ was produced.

Vaccine safety monitoring

Thanks to collaboration with the VAESCO consortium, a document on ‘Background rates of specified events of interest’ (like Guillain-Barré syndrome, anaphylaxis, convulsions) was produced for a professional audience, together with a report on ‘Monitoring of the possible association between pandemic influenza vaccination and Guillain-Barré syndrome’.

The experience gained during the pandemic crisis will prove helpful in strengthening the EU systems for vaccine safety monitoring. During the pandemic, ECDC built the basis for a future European vaccine safety data system that will improve the ability to investigate potentially adverse events following immunisation.

2.7 Antimicrobial resistance and healthcare-associated infections

Antimicrobial resistance in Europe and the need for new antibiotics

Since 2007, ECDC and the European Medicines Agency (EMA) have worked together on a joint report on the burden of infections due to multidrug-resistant bacteria in the EU and the lack of new antibiotics to tackle the problem.

A joint technical report on this topic was published on 17 September 2009: ‘The bacterial challenge: time to react’. It confirms that the burden of bacterial resistance in the EU is already substantial and likely to increase. Resistance to antibiotics is high among Gram-positive and Gram-negative bacteria that cause serious infections in humans, reaching 25% or more in several Member States. Moreover, resistance is increasing in the EU among certain Gram-negative bacteria, as recently observed for *Escherichia coli*.

This report also includes a detailed analysis of the development pipeline for new antimicrobial agents performed by the EMA, which confirms the gap between the high and increasing burden of infections due to multidrug-resistant infections and the lack of novel agents with new targets or new mechanisms of action that could be used to tackle antimicrobial resistance, in particular multidrug resistance in Gram-negative bacteria.

European Antibiotic Awareness Day

In 2009, ECDC coordinated the second European Antibiotic Awareness Day, an annual European public health initiative that gives EU Member States the opportunity to raise public awareness about the risks associated with inappropriate use of antibiotics and how to take antibiotics responsibly. 34 European countries marked the Day by organising activities on antibiotic awareness. On 18 November, a launch seminar and a webcast were organised at ECDC, together with the Swedish EU Presidency and Swedish national public health authorities. An evaluation of this second European Antibiotic

Awareness Day campaign is being carried out. ECDC supported the Commission in the preparation of a special Eurobarometer survey on antimicrobial resistance, which took place in November and December 2009. A report on over-the-counter use of antibiotics in the EU will be produced in 2010, once the results of the Eurobarometer survey will become available.

The burden of antimicrobial resistance

In 2009, ECDC published its first estimates of the human and economic burden of multidrug-resistant bacteria in the EU, Iceland and Norway. The joint ECDC/EMA report was published under the title ‘The bacterial challenge: time to react’.

The authors estimate that each year approximately 25 000 patients die as a direct consequence of an infection with those multidrug-resistant bacteria that are frequently responsible for healthcare-associated infections, i.e. methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus faecium*, third-generation cephalosporin-resistant *Escherichia coli* and *Klebsiella pneumoniae*, and carbapenem-resistant *Pseudomonas aeruginosa*.

About 37 000 patients die as a direct consequence of hospital-acquired infections, and an additional 111 000 patients die as an indirect consequence of hospital-acquired infections. As a comparison, road traffic accidents kill about 48 000 people each year in the EU.

Infections due to the multidrug-resistant bacteria covered in the report were estimated to result in extra healthcare costs and productivity losses of at least EUR 1.5 billion each year.

Integration of surveillance networks

Surveillance networks on antimicrobial resistance and on healthcare-associated infections are gradually being integrated into ECDC surveillance activities. Following transition of the surveillance network of healthcare-associated infections, the first results of the ECDC collection of surveillance data on surgical site infections and intensive-care-unit-acquired infections were published as part of the Annual Epidemiological Report 2009. ECDC organised the first annual meeting of the surveillance network and started a specific surveillance network for healthcare-associated infections in nursing homes for the elderly. ECDC developed a draft protocol for a pilot EU-wide point prevalence survey on healthcare-associated infections, which will take place in 2010. The final protocol will be available in 2010.

During 2009, European antimicrobial resistance surveillance was transferred from RIVM to ECDC, in cooperation with the European Antimicrobial Resistance Surveillance System (EARSS). Starting 1 January 2010, coordination and administration of European antimicrobial resistance surveillance will be based at ECDC. The network was

transferred in its current form, and the priority for ECDC is to maintain the previous functionalities and availability of data to the users. In parallel, ECDC worked at further developing surveillance definitions for multi-drug-resistant (MDR), extensively drug-resistant (XDR) and pandrug-resistant (PDR) bacteria. These definitions will be available in 2010.

Standard operating procedures were developed for antimicrobial resistance and healthcare-associated infection events for integration into EPIS¹⁶. ECDC did not develop a European disk test and guidance for antimicrobial susceptibility testing, as originally planned, since this work had already been carried out by EUCAST¹⁷.

In 2009, ECDC completed its European *Clostridium difficile* infection survey (ECDIS). This survey, which also contributed to building capacity for the diagnosis and typing of *C. difficile* infections, will serve as the basis for future surveillance of *C. difficile* infections in the EU. A similar project was developed for MRSA¹⁸: 'Molecular typing in surveillance and control of MRSA in hospitals and the community'.

Scientific output, guidance and training

Inter-agency collaboration on antimicrobial resistance issues resulted in the publication of an ECDC/EFSA/EMA Joint Scientific Report on MRSA in livestock, pets and foods, and an ECDC/EFSA/EMA/SCENIHR joint opinion on antimicrobial resistance focused on zoonotic infections. ECDC is preparing a guidance document on MRSA control and prevention in human medicine, which will be available in 2010.

A planned first European short course on the control of multidrug-resistant microorganisms in healthcare settings did not take place (no responses to call for tender). ECDC is currently considering other alternatives to make this training available.

ECDC will not develop a framework plan for improving hand hygiene practices in European healthcare since this activity is already covered by WHO. Instead, ECDC will promote WHO work in this area at its meetings.

Coordination and country support

ECDC relies on a network of National Focal Points for antimicrobial resistance issues (one per country). Two meetings of the National Focal Points were organised in 2009 to discuss and coordinate activities in Member States. The WHO First Global Patient Safety Challenge on improving hand hygiene practices was presented to the National Focal Points at their meeting in October 2009.

Country visits to discuss issues of antimicrobial resistance are an important activity of ECDC. Indicators were developed and are used as a basis when discussing antimicrobial resistance with stakeholders during country visits. ECDC emphasises the coordination of national, regional and local efforts on antimicrobial resistance

surveillance, prevention and control. Feedback of surveillance data on antimicrobial usage and antimicrobial resistance is essential. Systems for evaluating adherence to guidelines and prudent use of antibiotics are advocated. In total, twelve countries have been visited since the start of the project. During 2009, visits were conducted in Denmark, Malta, Slovenia, Croatia (first visits) and Hungary (follow-up visit). In addition, ECDC provided support for training in surveillance of healthcare-associated infections in two countries (Bulgaria and Hungary).

¹⁶ ECDC's Epidemic Intelligence Information System

¹⁷ European Committee on Antimicrobial Susceptibility Testing

¹⁸ Methicillin-resistant *Staphylococcus aureus*

3. External relations, partnerships and country cooperation

Key products delivered in 2009

- Strengthened collaboration with relevant EU institutions, in particular DG Enlargement of the European Commission, the newly elected European Parliament, and the network of the European Commission's Agencies.
- Further development of the cooperation with Member States, including the organisation of the Competent Bodies meeting in Uppsala in October 2009.
- Further development of support activities for EU candidate and potential candidate countries (in collaboration with the European Commission).
- Effective working relationship with WHO, including the joint publication of surveillance reports and joint missions.
- Strengthened collaboration with key public health stakeholders in Europe.
- Comprehensive country missions conducted in a number of Member States on their request.
- Further improvement in inventory of communicable disease capacities (for countries included in the IT tool for country cooperation) and further expansion of the ECDC institutional contact database.

ECDC External Relations and Country Cooperation aim to develop activities with relevant partners to contribute to the prevention and control of communicable diseases. The 2009 influenza A(H1N1) pandemic demonstrated how the close collaboration between EU institutions and national and international partners added value at the European and global levels during a public health crisis.

Establishing active partnerships that thrive on the shared strengths of their participants has been increasingly important in recent years in the public-health sector – health problems are not solved by health professionals alone. Effective collaboration with other EU institutions as well as relevant stakeholders, including non-governmental organisations, is imperative. In 2009, ECDC identified the need to foster a number of strategic relationships with institutions and associations that have complementary or overlapping missions and tasks.

3.1 External relations and partnership programmes

Further strengthening of inter-institutional relations

In 2009, ECDC developed close and effective working relations with the European Parliament, the Council

of Ministers (including the EU Presidencies) and the European Commission.

The elections for the European Parliament took place in summer 2009, and more than 50% of the members of the European Parliament's Environment, Public Health and Food Safety (ENVI) Committee were new when the ECDC Director briefed the Committee on 1 September 2009 on the influenza A(H1N1) pandemic and ECDC's role. ECDC established good links with the Coordinator of the ENVI Committee as well as the nominated ECDC liaison Member of the European Parliament in 2009. This will be a good basis for further collaboration in 2010.

ECDC continued to work closely with the European Commission, particularly with DG SANCO and its Luxembourg-based Health Threats Unit (C3). Regular co-ordination meetings with DG SANCO are held by video link. ECDC worked closely with the Council of Health Ministers and in particular with the Czech and Swedish EU Presidencies in all areas under its mandate. Because of the influenza A (H1N1) pandemic, ECDC supported Council Presidencies in preparing expert meetings, and the ECDC Director has briefed Ministers of Health in all Council meetings (EPSCO) since April 2009.

During 2009, ECDC was part of the three-member group of EU Agencies (ECDC, EFSA¹⁹ and EMCDDA²⁰) that led the inter-institutional debate on the future of Agencies. This troika also developed a joint 'visibility strategy' and was involved in the follow-up to the evaluation of Agencies. It is planned that ECDC will be coordinating the network of Agencies starting in March 2011 for the duration of one year.

Relations with WHO and other key international partners

ECDC continued to build upon the foundations laid in 2005 to maximise the synergies from close working relations and a strengthened partnership with WHO. In 2009, the main focus was to further consolidate the work, overcome some practical obstacles, and to start planning for the new strategic partnership as the existing memorandum of understanding will expire at the end of 2010. ECDC continues to work closely with WHO at all levels, including the WHO Country Offices within the European Region. Joint activities in 2009 included HIV and TB surveillance for all 53 WHO/EURO countries and the publication of two surveillance reports. A similar initiative for joint influenza surveillance was developed in 2008 and is expected to be operational in 2010.

ECDC visited several institutions in 2009 with which ECDC memoranda of understanding are in place: the Chinese Centre for Disease Control and Prevention

¹⁹ European Food Safety Agency

²⁰ European Monitoring Centre for Drugs and Drug Addiction

(China CDC), the Public Health Agency of Canada and the US CDC. The 2009 influenza A(H1N1) pandemic led to intense collaboration between these institutions in 2009. In the early phase of the pandemic, ECDC seconded staff to the US CDC, and the China CDC seconded an expert to ECDC, a fact that showed the value of these partnership agreements in facilitating the exchange of information. Liaison officers from WHO/EURO and the US CDC continue their work at ECDC's headquarters in Stockholm.

3.2 Country cooperation with the Member States

Country relations and coordination with Member States

In 2009, ECDC improved the coordination between the Member States and ECDC. An analysis of the working relationships with ECDC's Competent Bodies was carried out in 2009 through working groups established by the Management Board. ECDC updated its 'Contacts and Organisations Database' (part of its Customer Relationship Management system, CRM) which provides ECDC staff with an inventory of communicable disease capacities and resources in the Member States.

Cooperation with Member States

As in the years before, several country missions were conducted at the request of some Member States to address particular issues of relevance to them but also to identify specific needs and prioritise their delivery with the aim to improve the collaboration between the Member States and ECDC. Tailored missions, coordinated internally with ECDC teams, were carried out in Belgium, Bulgaria, Malta, Poland, Romania and Slovenia.

October 2009: Competent Body Meeting, Uppsala

A meeting with key national institutions involved in communicable disease prevention, surveillance and control in Europe was organised in Uppsala in October 2009. The main purpose of this conference entitled 'Strengthening Europe's Defences against Communicable Diseases' was to discuss the role of the Competent Bodies in fighting communicable diseases in Europe and to reflect on ways to strengthen and improve the working relations between ECDC and the Member States. 270 participants from the Competent Bodies of the Member States, the ECDC Management Board and Advisory Forum as well as the WHO country offices and other international organisations were present.

Country Information System and Customer Relationship Management (CRM) database

The Country Information System (CIS) started in 2008 with the aim of building an ECDC-wide country information repository with high-quality country information in an easily accessible format. In 2009, an inventory of national structures and organisations (e.g. Competent Bodies, reference laboratories, experts, medical libraries, and national media) was added.

The aim of the Customer Relationship Management (CRM) database is to provide ECDC with a tool to store structured information about countries, organisations, people, documents and activities. In 2009, the CRM system was configured and customised to interface with

other in-house systems to act as the central tool for ECDC contact management.

Country Information Project

Launched in 2008, the Country Information Project aims at 1) producing relevant and updated information on a given (EU/EFTA) country's activities on communicable disease activities, 2) providing quality control for translations of documents to be published, and 3) disseminating ECDC outputs and information in the countries involved. This project was piloted in nine Member States: Austria, Bulgaria, Estonia, Hungary, Lithuania, Portugal, Romania, Slovenia, and Sweden. In case of a positive evaluation, the project will be continued, and possibly extended to cover further countries in 2010.

Cooperation with EU candidate and potential candidate countries

In 2009, ECDC continued working with Croatia, Turkey, and the former Yugoslav Republic of Macedonia by implementing a programme to conduct training sessions, inviting experts to ECDC meetings, and by organising study visits to national institutes in the EU Member States in order to exchange experiences. These activities were implemented with the budgetary support of the European Commission's DG Enlargement²¹.

Since April 2009, follow-up actions on the strengthening of disease prevention and control capacities have been conducted with additional countries²²: Croatia, the former Yugoslav Republic of Macedonia, Turkey, Albania, Bosnia and Herzegovina, Kosovo, Montenegro, and Serbia.

In summer 2009, ECDC's Director visited all three candidate countries to follow up on activities. She also visited five potential candidate countries and established links and partnerships. During the second half of 2009, ECDC started to develop a programme for these five countries to support them in the areas of surveillance, preparedness and response, and capacity building, in the view of their possible future accession. At the request of the European Commission, ECDC participated in a November 2009 meeting organised by EMCDDA²³ entitled 'EU Agencies – partners in accession' and established procedures with the relevant Commission services to further develop these and related activities in 2010 and beyond.

²¹ Budget support from DG Enlargement to ECDC was entitled 'ECDC strengthening disease prevention and control capacities in the surveillance, detection and response to emerging communicable disease threats and strengthening health systems capacities in Turkey, the former Yugoslav Republic of Macedonia and Croatia' under the IPDA Council regulation (EC) No. 1085/2006; this budget line was successfully implemented by September 2009.

²² 'Progress towards accession: ECDC strengthening disease prevention and control capacities in the surveillance, detection and response to emerging communicable disease threats and strengthening health systems capacities in Croatia, The former Yugoslav Republic of Macedonia, Turkey, Albania, Bosnia and Herzegovina, Kosovo under UNSCR1244/99, Montenegro, and Serbia'. This action is scheduled for 24 months under the Contribution Agreement Nr.2009/202-963.

²³ European Monitoring Centre for Drugs and Drug Addiction

4. Leadership

4.1 The Director and the Director's Cabinet

Strategic focus

The Director's Cabinet ensures that ECDC has

- a clear long-term strategy for its programme development, based on its founding regulation and the needs of the EU and its Member States;
- a short- and medium-term programme (planning, implementation and evaluation) which turns that strategy into effective operational outcomes;
- an efficient management of its human and financial resources;
- an effective cooperation with the EU Member States and institutions;
- a wise choice of international partnerships; and
- a close and harmonious collaboration with its governing bodies.

Organisation

The Director has overall responsibility for the operations, resources and management of the Centre. The Executive Committee (EXC) advises the Director on strategic issues, ensures managerial coordination, and promotes effectiveness, efficiency, teamwork and a supportive work environment. The Executive Committee consists of the Director (chair), the Coordinator of the Cabinet, and the five Heads of Unit managing the Surveillance, Scientific Advice, Preparedness and Response, Health Communication and Administrative Services Units.

The Director's Cabinet supports the Director in the overall leadership function. The Cabinet's sections are assigned different areas of work:

- Governance is responsible for organising all meetings with the Management Board and the Advisory Forum.

- Planning and Monitoring provides the overall organisational framework for ECDC's short-, medium- and long-term planning, monitoring and evaluation, and is responsible for ensuring that managerial tools and processes meet ECDC's needs.
- Country Relations and Coordination makes sure that systems, tools and best practices for ECDC's country work are in place and implemented and that ECDC's support to individual Member States is well coordinated.
- External Relations and Partnerships is responsible for coordinating ECDC's inter-institutional cooperation, collaboration with WHO and other important stakeholders. It also covers the early stages of programme development aimed at providing support for candidate and potential candidate countries.
- The new Corporate Communication function supports the Director and all of ECDC in keeping stakeholders informed on ECDC's activities. It also ensures ECDC's visibility at external forums.

Key products delivered in 2009

- Quality support to ECDC governing bodies through efficient preparation of meetings; improved communication with the Management Board, the Advisory Forum and Member States.
- Work Programme for 2010 adopted in accordance with the 'Strategic Multi-Annual Programme 2007–2013'; monitoring and indicators in place.
- Management system upgraded and improved management performance.
- Improved working methods for the EXC.
- Successful implementation of the Management Information System.



The ECDC Management Board in November 2009, Stockholm



The ECDC Advisory Forum in September 2009, Stockholm

4.2 Governance

In accordance with its Founding Regulation, ECDC's governance structure consists of a Management Board with one representative designated by each Member State, two by the European Parliament and three by the European Commission. In addition, an Advisory Forum supports the Director of ECDC in ensuring the scientific excellence and independence of activities and opinions of the Centre.

The Director's Cabinet provides comprehensive support to the Management Board (MB) and Advisory Forum (AF) through timely preparation and efficient execution of meetings (including auxiliary meetings and workshops) and maintains excellent communication with the Member States.

In conjunction with the new ECDC web portal, new collaborative workspaces ('extranets') will be developed to communicate and share information more effectively with members of the Management Board and the Advisory Forum.

Management Board

The ECDC's Management Board met in March, June and November 2009. Dr Hubert Hrabcik, Chief Medical Officer of Austria, continued as the Chair of ECDC's Management Board, and Professor Jacques Scheres, the EP Representative, was chosen as Deputy Chair. The second Management Board meeting of 2009 was held in Warsaw, Poland, at the invitation of the Polish Ministry of Social Affairs and Health.

In 2009, the Management Board:

- approved ECDC's Annual Work Programme 2010;
- approved the Strategy for ECDC Disease-Specific Programmes 2010–2013;
- approved the ECDC Health Communication Strategy;
- approved ECDC's appraisal of the Director, subject to agreement by the European Commission;
- approved the Budget and Establishment Table for 2010;
- approved a request for the internal transfer of EUR 1.8 million in the 2009 budget and the related revision of the Work Programme 2009;
- approved the Director's Annual Report on the Centre's activities in 2008;
- adopted the results for 2007 and 2008 of the indicators for the 'Strategic Multi-Annual Programme 2007–2013';
- approved the Strategic Audit Plan for ECDC 2008–2010;
- approved the supplementary and amending budget 2009, as well as the proposed allocation of additional funds;
- adopted the revised version of ECDC's Multi-Annual Staff Policy Plan 2009–2011; and
- established the joint Management Board/ECDC Working Group to assess the needs, expectations and capacities of the Member States.

Advisory Forum

The Director of ECDC convened four meetings of the Advisory Forum (AF) in 2009: in February, May, September and December. A list of the 2009 members of the Advisory Forum is included in the Annex. The minutes of the meetings of the Advisory Forum are available on ECDC's website. The Advisory Forum was closely involved in advising the Director on technical and scientific issues that were dealt with by the Centre in 2009.

4.3 Management and strategic planning

ECDC Work Programme 2010

In November 2009, the Management Board adopted ECDC's Work Programme for 2010. The Work Programme is based on the 'Strategic Multi-Annual Programme 2007–2013', as adopted by the Management Board in 2008. The discussion on the Annual Work Programme started in February, with the priorities for scientific advice being ranked by the Member States and approved by the Advisory Forum. Based on these discussions, a document summarising ECDC's priorities for 2010 was approved by the Management Board in June 2009.

The detailed Work Programme was prepared during summer and added to the new Management Information System. The Work Programme was reviewed by all Units through a peer review process which was open to all members of the Advisory Forum. A meeting took place in October with the European Commission (DG SANCO), to avoid overlaps and to ensure that the priorities were in line with the Commission's priorities. The Management Board adopted the Work Programme for 2010 in November.

The Work Programme progress for 2009 was monitored quarterly. Indicators related to the implementation of the 'Strategic Multi-Annual Programme 2007–2013' were documented for the first time in 2009, and will be reviewed each year in March by the Management Board.

Launch of the new Management Information System

In September 2009, ECDC launched its new Management Information System (MIS), just in time for the planning of the activities of its work programme for 2010. The user-friendly application helps all users to better plan and monitor the implementation of their activities. All ECDC activities are stored in the system, which acts as a 'single point of truth'. The MIS facilitates the transparent sharing of information across projects and Units and fosters efficient collaboration. It helps project managers to monitor all aspects of their activities and provides ECDC management with a better overview of the implementation of the Annual Work Programme. Customisable reports offer an in-depth, real-time view of all current or completed projects.

Figure 4. ECDC's new Management Information System

The screenshot shows the MIS interface with a header bar containing 'MIS' and navigation tabs. Below is a large table with columns for 'Activity Code', 'Activity Name', 'Status', 'Start', 'End', 'Priority', 'Responsible', 'Budget', 'Actual Cost', and 'Budget Variance'. The table contains numerous rows of data, representing various projects and their financial and operational details.

Management

The Executive Committee (EXC) – the advisory body to the Director, chaired by the Director and comprised of the five Heads of Unit and, since April 2009, the Coordinator of the Cabinet – met weekly in 2009. The EXC is the main discussion forum for major strategic, technical, managerial and financial matters. EXC meetings were regularly extended to include the seven Disease-Specific Programme (DSP) Coordinators as well as the Heads of Sections in order to review the implementation of the 2009 Work Plan and discuss budget execution. A systematic flow of information from the EXC to unit meetings and monthly general staff assemblies ensured that important developments were communicated throughout ECDC.

At the end of 2009, the EXC initiated a review of the internal decision-making process. In this context, the procedures and working methods of the EXC were revised. As a result, the Disease-Specific Programmes were brought closer to the decision-making process and given a more formal role in regard to ICT, training and microbiology. Implementation of these decisions will take place in 2010.

5. Administration

The mission of the Administration Unit is to provide ECDC with the necessary expertise to ensure the Centre's efficient, effective and stable operation. Additionally, the Administration Unit supports the development and growth of the operational units so that they can achieve the objectives set forth in the Founding Regulation. In particular, the Administration Unit is in charge of the Centre's resource management – staff, finance and facility – as well as its legal advice and internal controls. In order to meet these objectives, the Administration Unit is organised in four sections: finance and accounting, human resources, missions/meetings/logistics, information and communication technologies/ICT project office. There is also an office for legal advice and procurement and an office for internal control coordination.

5.1 Finance and accounting

The principal objective is to ensure that the financial resources of the Centre are well managed and reported in a clear and comprehensive manner.

One major achievement was the implementation of ABAC (Accrual-Based Accounting, the EC integrated budgetary and accounting system) in May 2009. This new system reinforces compliance with the accrual accounting rules and ensures that ECDC's financial systems will be updated with future changes in the financial regulation. The first review of the internal procedures for payments and commitments was concluded and the updated procedures reflect both the changes in the organisation and the financial systems.

The core budget of the Centre increased from EUR 40.2 million in 2008 to EUR 50.7 million in 2009. In addition,

the cooperation with the European Commission on the gradual integration of candidate and potential candidate countries for EU accession to ECDC programs led to the signature of a second grant agreement with DG Enlargement with a duration of two years and a subsequent budget increase of EUR 0.4 million over 2009 and 2010. Budget execution at year-end 2009 reached 95% in terms of commitment appropriations. The Finance section verified more than 750 commitments throughout the year, an increase of 63% compared to 2008 (460 commitments). The total number of payment orders issued by the Director (and authorised officers) during 2009 exceeded 5 700 (compared to approximately 4 600 in 2008), while the total amount of payments executed increased by 32% and reached EUR 43.9 million (EUR 33.2 million in 2008).

In its June meeting, the Management Board issued a positive opinion on the Annual Accounts of the Centre for 2008. The European Court of Auditors concluded two visits in 2009: The first one in March focused on the Certification on the Annual Accounts 2008 and resulted in a positive opinion for both the presentation of the accounts and the legality and regularity of the underlying transactions. The second visit in October focused on specific transactions and included a review of recruitment and procurement files for the year 2009. The identified issues will be discussed by the Audit Committee in its March 2010 meeting and are part of the action plan of the Centre.

The inter-institutional discussions of the 2010 Budget were closely monitored. The Finance and Accounting Section contributed with detailed budget calculations and clarifications to the discussions held by the



ECDC staff in December 2009

institutions. The Budget for 2010 was approved by the Management Board in November and adopted by the European Parliament in December 2009.

5.2 Human resources

The principal tasks in the area of human resources (HR) are to ensure the recruitment of staff (temporary agents, contract agents, seconded national experts, interims and trainees), provide complete HR administration for all areas, organise and support learning and development activities, and offer advice and guidance to staff on these and related matters. This work is carried out in close cooperation with the management team of the Centre. The human resources section also drafts procedures to ensure transparency and a harmonised approach to carrying out all tasks. The Human Resources Section also drafts implementing rules for the Centre, under the supervision of the legal advisor and based on the Commission's 'model decisions'.

During 2009, the SAP Personnel Administration system improved, but the SAP Time Management system is still a challenge to work with.

For a significant part of the year, the Centre operated in a Public Health Event emergency mode, which prompted HR to take a series of steps to ensure staff well-being: HR arranged for an in-house doctor for staff members, offered counselling and training sessions on working in a crisis situation, and provided stress management classes. Vaccination for the pandemic A(H1N1) influenza and for seasonal influenza were provided in-house.

Staff development was further improved with targeted trainings in areas such as performance management, procurement and project management. The aim is to provide project management training for all staff and establish an 'ECDC way of working' that adheres to a common methodology and framework.

In autumn, the first annual staff satisfaction survey was carried out. The results of the staff survey were presented to all staff, and separately to all units. In December, the management drafted steps to address issues identified by staff survey, mainly in the areas of career development, communication and ECDC values.

An e-recruiting tool (SAP) was developed and tested. The finished application will be launched in 2010.

In 2009, a total of 46 staff members (temporary agents, contract agents and seconded national experts) and six trainees started working in the Centre. 41 new staff members will commence their employment in the first quarter of 2010. A monthly plan for recruitments necessitated by ECDC's establishment table and employee turnover was drafted by the recruitment team. The plan was welcomed by the management and will be implemented as from January 2010.

Table 4. Number of staff and number of selection procedures, 2007–2009

	Total staff	Number of selection procedures*
2007	131	76
2008	154	97
2009	199	119

* The number of selection procedures is higher than the total number of newly hired staff members as the former also includes recruitment for replacement staff and re-advertised job vacancies.

5.3 Missions, meetings and logistics

This section covers a wide range of services, including the organisation of travel and hotel arrangements for staff, interviewees and meeting participants and experts invited to ECDC, as well as the budget verification and reimbursement of these expenses. Work areas also include office space allocation, security and reception, technical assistance in meeting rooms, physical inventory, office equipment and supplies, and building maintenance.

In August 2009, the mail services (mail distribution/registration and archiving) was transferred to Logistics. A new cafeteria was opened, servicing staff and meeting participants. The cafeteria also serves as a meeting point for staff and venue for small informal meetings. The SAP Inventory Management module became fully operational at the end of 2009, and the SAP blueprint for the Missions and Meetings workflows was completed.

Videoconferencing facilities (including multi-language capabilities) were installed in the Management Board room. A project to enhance the facilities of meeting rooms was initiated and is expected to be completed in early 2010.

Due to the strong growth of ECDC, office space is becoming scarce. A survey on the office space situation was launched late in 2009. The results will be presented to the Management Board in March 2010 and will serve for the notification of the project to the Budgetary Authority (European Parliament and Council).

Table 5. Missions, meetings and ECDC meeting participants, 2008–2009

	2008	2009
Missions	983	1230
Number of Meetings	322	352
Number of external participants attending ECDC meetings or interviews	2089	2624

5.4 Information and communication technologies (ICT) and project support

In November 2009, the ICT Section was renamed 'ICT and Project Support Section' to emphasise the Section's role in project management.

Information and communication technologies

The ICT Section covers the development, maintenance and operation of computer and communications networks, back- and front-office infrastructure, and support for the development of integrated corporate applications.

The section grew in 2009 and is now in a much better position to provide a stable IT infrastructure and better support, both for ongoing IT projects and the operational units.

The number of IT servers was increased from 100 to 210 in 2009. 6386 support requests were handled in 2009. 53 support requests were taken care of outside office hours by ICT Section staff on stand-by duty.

IT service level uptime at ECDC in 2009

- Early Warning and Response System (EWRS): 99.90%
- ECDC network and general IT service: 99.80%
- ECDC mail services and other external available applications: 99.78%

System downtime was caused by two power outages in the Stockholm area. The EWRS was not affected thanks to a mirror site located at an external service provider.

Early in 2009 a new server room became operational and critical IT services are now duplicated with clustering or load balancing between multiple servers in two rooms. Each server room can be operated independently, thus ensuring IT service continuity.

ICT Project Office

In 2009, the ICT Project Office realised various projects: a new Eurosurveillance mailing list server, the new ECDC portal system (which involved migrating the externally hosted website to ECDC's servers), the Intranet environment, the Management Information System, and several crises management tools. A new version of Microsoft Office was installed for internal use. An e-recruitment application was developed and will be launched in 2010. A new test environment was created for pre-release testing, thus guaranteeing the integrity of existing systems while new ones are released. A major step toward consistent IT services was taken with the launch of a security framework composed of a Single Sign-On (SSO) solution with user self-service for passwords combined with an identity management application.

During the public health crisis all ICT applications were able to process all additional requests without problems. 178 such requests were processed between 24



The new ECDC cafeteria

May and 31 December 2009, based on standby policies and incident procedures that had been specifically designed for the handling of crisis situations.

5.5 Procurement and legal advice

In 2009, the procurement office supported 50 open procedures and 18 negotiated procedures as well as eight calls for proposals. Most of the procurement procedures are reviewed by an internal consultative committee, the CPCG (Committee on Procurement, Grants and Contracts) which gives advice to ensure compliance with relevant rules and regulations.

Further data protection measures were implemented, following procedures set up by the European Data Protection Supervisor (EDPS). Data processing operations in the EU administration likely to present specific risks to the rights and freedoms of individuals must be notified to the EDPS for prior checking. As a rule, notifications should be submitted prior to the processing. However, prior checks have initially also been performed ('ex post') to ensure compliance of existing systems. ECDC's latest measures in this area specifically addressed ex-post notifications.

The legal office further provided advice and assistance in legal and financial issues to all units and contributed to the Centre's input to the evaluation of the agency system commissioned by the Commission. In the field of business continuity, it proposed a methodology to the management team for having a business continuity plan in place by mid-2010.

5.6 Internal control coordination

In early 2009, the new role of Internal Control Coordinator was established in the Administration Unit in order to better assist the organisation in the design, implementation and assessment of internal control systems and other related matters. In 2009, the Internal Control Coordinator focussed on assessing and revising the internal control standards, performing two ex-post verification missions to grant beneficiaries, organising risk assessment work, coordinating the relations with the Audit Committee and the Internal Audit Service, and giving advice on internal-control-related matters such as new internal procedures.

Annexes



Annex 1: ECDC budget summary 2009

Title 1 – Staff

Title Chapter	Heading	Appropriations 2010	Appropriations 2009	Outturn 2008
1 1	Staff in active employment	24 305 000	18 434 000	13 252 615,23
1 3	Missions and travel	1 200 000	1 000 000	713 385,25
1 4	Socio-medical infrastructure	130 000	110 000	63 195,91
1 5	Exchanges of civil servants and experts	980 000	420 000	515 438,10
1 7	Representation expenses	35 000	35 000	27 000,00
1 8	Insurance against sickness, accidents and occupational disease, unemployment insurance and maintenance of pension rights	780 000	561 000	403 139,11
Title 1 – Total		27 430 000	20 560 000	14 974 773,60

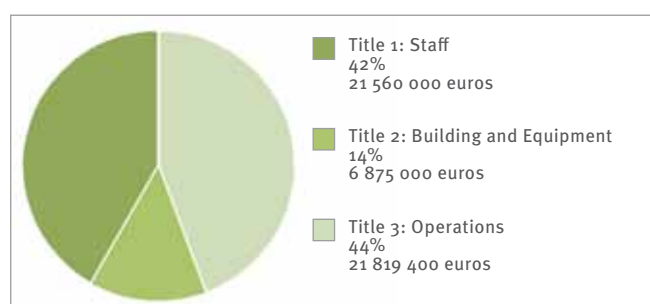
Title 2 – Buildings, equipment and miscellaneous operating expenditure

Title Chapter	Heading	Appropriations 2010	Appropriations 2009	Outturn 2008
2 0	Investments in immovable property, renting of buildings and associated costs	2 790 000	2 613 000	2 610 198,97
2 1	Data processing	2 625 000	3 170 000	2 041 050,33
2 2	Movable property and associated costs	190 000	200 000	62 494,84
2 3	Current administrative expenditure	420 000	192 000	164 120,40
2 4	Postage and telecommunications	260 000	250 000	212 962,03
2 5	Expenditure on meetings and management consulting	450 000	450 000	444 352,11
Title 2 – Total		6 735 000	6 875 000	5 535 178,68

Title 3 – Operations

Title Chapter	Heading	Appropriations 2010	Appropriations 2009	Outturn 2008
3000	Networking, surveillance and data collection on Communicable diseases	4 944 000	4 120 000	3 541 830,42
3001	Preparedness, response and emerging health threats	1 678 500	1 410 000	1 178 127,47
3002	Scientific opinions and studies	3 836 000	4 923 000	3 244 232,47
3003	Technical assistance and training	2 920 000	1 970 000	2 510 828,49
3004	Publications and Communications	1 975 000	1 865 000	2 087 451,17
3005	ICT to support projects	5 042 000	5 176 400	2 965 566,62
3006	Build up and maintenance of the Crisis Centre	200 000	100 000	165 159,13
3007	Translations of scientific and technical reports and documents	680 000	420 000	399 912,55
3008	Meetings to implement the work programme	2 005 000	1 625 000	1 221 024,61
3009	Country operation and partnership	294 500	125 000	337 362,04
3010	Scientific Library and Knowledge services	160 000	85 000	461 135,32
Title 3 – Total		23 735 000	21 819 400	18 112 630,08
Grand Total		57 900 000	49 254 400	38 622 582,28

Figure 5. Budget expenditures 2009



Annex 2: ECDC staff summary 2009

Table 6: Number of temporary agents (TA), contract agents (CA) and seconded national experts (SNE) per unit (as of 31 December 2009)

	SAU	SUN	PRU	HCU	ADM	DIR	TOTAL STAFF
TA	23	25	26	15	28	12	129
CA	9	7	9	12	21	4	62
SNE	3	1	1	1	0	2	8*
TOTAL	35	33	36	28	49	18	199

* Including one official seconded from the Commission as liaison officer

Table 7: Number of temporary agents (TA), contract agents (CA) and seconded national experts (SNE) per unit (as of 31 December 2009); nationality balance in percent (temporary agents and contract agents only)

Nationality	Number	%
Austrian	2	1
Belgian	4	2
British	11	6
Bulgarian	6	3
Czech	2	1
Danish	2	1
Dutch	8	4
Estonian	1	1
Finnish	11	6
French	17	9
German	16	8
Greek	5	3
Hungarian	5	3
Irish	2	1
Italian	17	9
Latvian	4	2
Lithuanian	3	2
Luxembourgian	1	1
Maltese	2	1
Polish	4	2
Portuguese	5	3
Romanian	10	5
Slovakian	1	1
Slovenian	1	1
Spanish	9	5
Swedish	42	22
TOTAL	191	

Annex 3: Organisational structure

As of December 2009, ECDC’s matrix organisation was composed of four technical units, an administrative unit, and seven ‘horizontal’ Disease-Specific Programmes (DSPs). The Centre is lead by the Director and the Cabinet.

On 1 December 2009, the organisational structure was modified in order to provide the Disease-Specific Programmes with better access to management issues, programme management and human resources. A twinning arrangement between SAU and SUN was approved and implemented at the end of 2009, with the DSPs now connected across the SAU and SUN units.

Structure

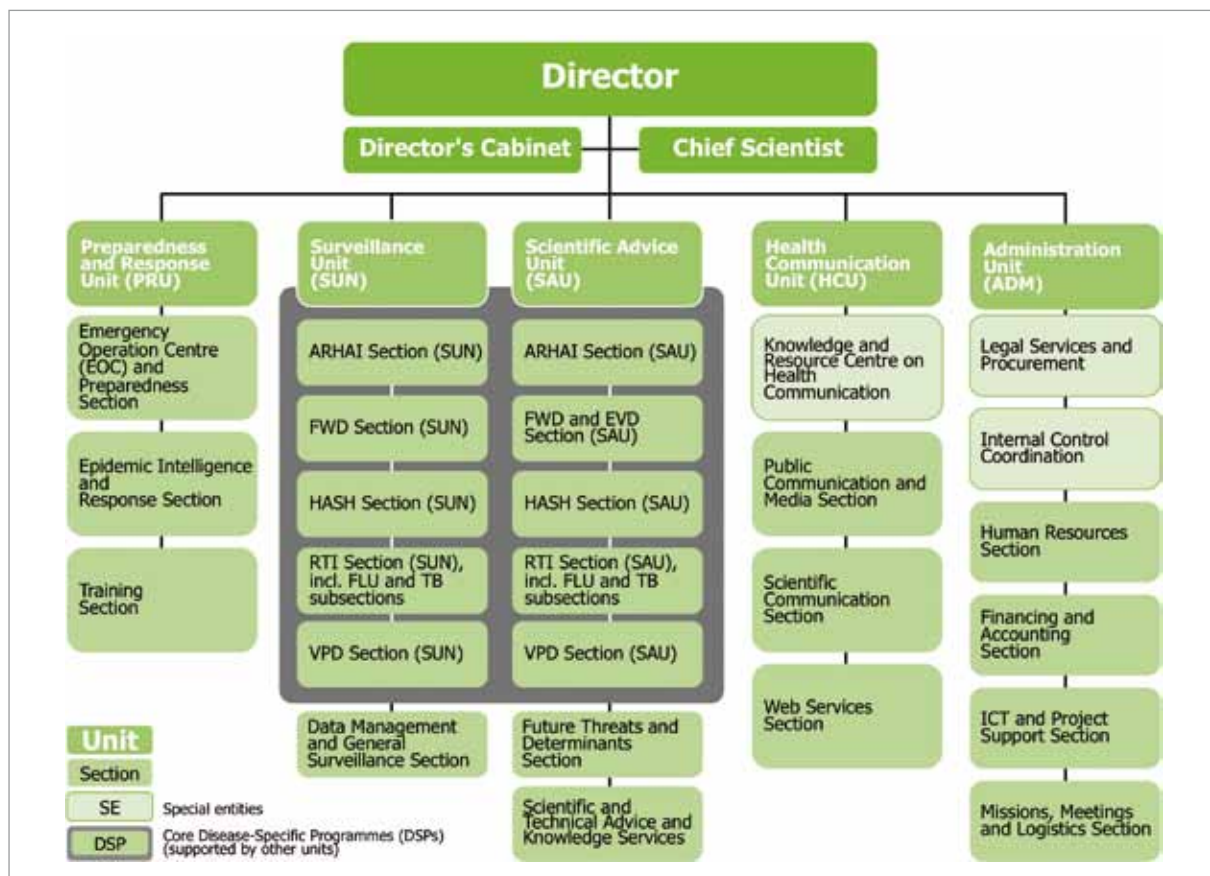
The Centre has a matrix structure in which the public health functions are placed vertically as operational units (Surveillance Unit, Scientific Advice Unit, Preparedness and Response Unit, Health Communication Unit). ECDC’s Administration Unit, as a support unit, is placed parallel to the operational units. The Disease-Specific

Programmes are connected horizontally to the scientific units, sharing staff and resources. This ensures the optimal use of staff resources and allocates expertise both to the units with public health functions and the Disease-Specific Programmes.

This structure corresponds to the ‘Strategic Multi-Annual Programme 2007–2013’ and the related two entry points to the Centre’s work:

- The public health functions, which are essential preconditions for a systematic, coordinated and effective fight against the communicable diseases in the EU.
- The disease-specific work: in a first step, the DSPs set up the basic tools for scientific work, created networks and databases, and established methodologies; as a second step, the DSPs now focus on evidence-based communicable disease prevention, disease control measures, analyse communicable disease determinants, and exchange best practices.

Figure 6. ECDC organisational chart



Director

The Centre is managed by a Director, who is the legal representative of the Centre.

In accordance with the Centre's Founding Regulation, the Director is responsible for:

- (a) the daily management of the Centre;
- (b) draft work programmes;
- (c) preparation of discussions with the Management Board;
- (d) implementing the work programmes and decisions adopted by the Management Board;
- (e) ensuring the provision of appropriate scientific, technical and administrative support for the Advisory Forum;
- (f) ensuring that the Centre carries out its tasks in accordance with the requirements of its users, in particular with regard to the scientific excellence and independence of activities and opinions, the adequacy of the services provided and the time taken;
- (g) preparing the statement of revenue and expenditure and executing the budget of the Centre; and
- (h) all staff matters, and in particular the exercise of powers as appointing authority.

Each year, the Director shall submit to the Management Board for approval:

- (a) a draft general report covering all the activities of the Centre in the previous year;
- (b) draft work programmes;
- (c) the draft annual accounts for the previous year; and
- (d) the draft budget for the coming year.

Cabinet

The Director is assisted by the Cabinet (DIR). The Coordinator of the Cabinet ensures the smooth day-to-day running of the Cabinet and therefore works closely with the Director. Within the Cabinet there are horizontal and cross-cutting functions linked to Governance, External Relations and Partnerships, Country Relations, Strategic Management, and the Director's Secretariat.

The Cabinet assists the Director in preparing and conducting meetings as well as visits of the Director and high-level visitors to ECDC. The Cabinet is the central hub to follow up on the Director's correspondence; prepare and follow up on the Management Board and the Advisory Forum meetings; coordinate the relations with the Member States as well as the external partners; guide the process of planning, monitoring and evaluation; support the Director to prepare and follow up on

the EXC meetings and other internal managerial issues such as the General Staff Meeting.

Executive Management Committee (EXC)

The Executive Management Committee (EXC) is an advisory committee to the Director of ECDC. Permanent members of the EXC are the Director, the Heads of Unit, the Coordinator of the Director's Cabinet, and the spokesperson for the DSP coordinators.

The EXC is the main forum for policy, strategic planning and programme development, but also serves as a management forum for consultations and coordination of the daily activities of the Centre, including follow-up of the budget and work plans.

Management EXC meetings take place weekly. They ensure the coordinated action of the Centre, advice for the Director on matters linked to ongoing activities of the Centre, and timely consultation at the level of senior management on issues that need urgent decisions.

Strategic EXC meetings take place once a month. The objective of these meetings is to allow the senior management to have in-depth discussions on issues which could have a major influence on the internal work of the Centre, its budget, and its human resources.

Units

The Centre is comprised of five units:

Scientific Advice (SAU), Surveillance (SUN), Preparedness and Response (PRU), Health Communication (HCU), and Administration (ADM).

Structure of units

Each unit is led by a Head of Unit who is assisted by a Deputy Head of Unit. Units are divided into sections to cover specific functions. Each Head of Unit shall define the responsibilities and methods of work within his/her unit in accordance with the Chart of Responsibilities. In each unit, a Resource Officer will provide support on the administrative and financial aspects of the implementation of the unit's work plan.

SAU, Scientific Advice Unit

The main task of the Scientific Advice Unit is to foster research for evidence-based public health action in the EU, provide scientific advice to the Commission, the European Parliament and Member States, link ECDC to the scientific and public health communities, and uphold the scientific quality of work performed by the ECDC.

SAU maintains a Microbiology Coordinator and the following sections:

- Future Threats and Determinants Section
- Scientific and Technical Advice and Knowledge Services Section

- Antimicrobial Resistance and Hospital-Associated Infections Section (AMR Section, SAU)
- Emerging and Vector-borne Diseases/Food- and Waterborne Diseases Section (EVD/FWD Section, SAU)
- Respiratory Tract Infections Section (RTI Section, SAU)
- Sexually Transmitted Infections, HIV/AIDS and Blood-Borne Viruses Section (HASH Section, SAU)
- Vaccine-Preventable Diseases Section (VPD Section, SAU)

SUN, Surveillance Unit

The main task of the Surveillance Unit is to integrate existing surveillance networks and thus gradually assume responsibility for the surveillance of communicable diseases at the EU level. In close collaboration with the experts of the national surveillance institutes, ECDC builds customised database and surveillance systems, analyses data and disseminates information to European decision-makers in public health.

SUN is comprised of the following sections:

- Data Management and General Surveillance Section
- Antimicrobial Resistance and Hospital-Associated Infections Section (AMR Section, SUN)
- Food- and Waterborne Diseases Section (EVD/FWD Section, SUN)
- Respiratory Tract Infections Section (RTI Section, SUN)
- Sexually Transmitted Infections, HIV/AIDS and Blood-Borne Viruses Section (HASH Section, SUN)
- Vaccine-Preventable Diseases Section (VPD Section, SUN)

PRU, Preparedness and Response Unit

The main task of the Preparedness and Response Unit is to keep track of emerging health threats inside and outside the EU, provide rapid risk assessment, and coordinate a timely response to such threats. This is done by operating the Early Warning and Response System (EWRS), organising training programmes for public health, and supporting outbreak missions of Member States experts.

PRU consists of the following sections:

- EOC and Crisis Preparedness Section
- Epidemic Intelligence and Response Section
- Training Section

HCU, Health Communication Unit

The Health Communication Unit is responsible for communicating the scientific and technical outputs of the Centre to European health professionals and to the general European public, as well as supporting the Member States on communications activities. Sections of the Unit are in charge of the scientific journal Eurosurveillance,

press/media, the ECDC website, information services and ECDC publications.

HCU maintains a Knowledge and Resource Centre on Health Communication and the following sections:

- Scientific Communication Section
- Public Communication and Media Section
- Web Services Section

ADM, Administration Unit

The Administration Unit facilitates the operational activities of ECDC by ensuring that its human and financial resources are properly managed and that EU staffing and financial control regulations are adhered to. It provides information technology, logistics support, and legal advice.

ADM maintains a Legal and Procurement Office, an Internal Control Coordinator and the following sections:

- Human Resources Section
- Finance and Accounting Section
- ICT and Project Support Section
- Missions, Meetings and Logistics Section

Disease-Specific Programmes (DSPs)

The ECDC disease-specific activities are organised within six Disease-Specific Programmes (DSPs) with team members from all technical units:

- 1) Respiratory Infections (including subgroups for influenza and tuberculosis)
- 2) STI, including HIV and Blood-borne Viruses,
- 3) Vaccine-Preventable Diseases
- 4) Antimicrobial Resistance and Healthcare-Associated Infections
- 5) Food- and Waterborne Diseases and Zoonoses
- 6) Emerging and Vector-borne Diseases

Specific functions and structures

A Chief Scientist reports to the Director. Terms of reference are approved separately.

A Microbiology Coordinator reports to the Chief Scientist.

An Internal Control Coordinator reports to the Head of Administration.

Annex 4: ECDC publications in 2009

This list only includes official ECDC publications for 2009. All publications are available from the Centre's website, and many are also available as print versions. The months listed below always refers to the latest, most up-to-date edition of a particular publication.

In 2009, ECDC staff members published, or contributed to, many scientific articles, for example in *Eurosurveillance*. These publications are not listed here. Also not listed are short communication materials related to the influenza pandemic, e.g. risk assessments and planning assumptions. These materials are available as downloads from ECDC's website.

Technical reports

May

Development of *Aedes albopictus* risk maps

June

Risk assessment guidelines for infectious diseases transmitted on aircraft

Guide to public health measures to reduce the impact of influenza pandemics in Europe – 'The ECDC Menu'

Surveillance and studies in a pandemic in Europe

July

Migrant health series: Background note

Migrant health series: Epidemiology of HIV and AIDS in migrant communities and ethnic minorities in EU/EEA countries

Migrant health series: Access to HIV prevention, treatment and care for migrant populations in EU/EEA countries

September

Mapping of HIV/STI behavioural surveillance in Europe

ECDC/EMA Joint Technical Report: The bacterial challenge: time to react

November

Effectiveness of behavioural and psychosocial HIV/STI prevention interventions for MSM in Europe

ECDC Guidance

May

Interim ECDC public health guidance on case and contact management for the new influenza A(H1N1) virus infection

June

Chlamydia control in Europe

Mitigation and delaying (or 'containment') strategies as the new influenza A(H1N1) virus comes into Europe

Public health use of influenza antivirals during influenza pandemics

August

Use of specific pandemic influenza vaccines during the H1N1 2009 pandemic

November

Scientific panel on childhood immunisation schedule: Diphtheria-tetanus-pertussis (DTP) vaccination

Risk assessment guidelines for diseases transmitted on aircraft – Part 2: Operational guidelines for assisting the evaluation of risk for transmission by disease

Surveillance reports

March

Tuberculosis surveillance in Europe – 2007

June

Analysis of influenza A(H1N1)v individual data in EU and EEA/EFTA countries

Preliminary report on case-based analysis of influenza A(H1N1) in EU and EEA/EFTA countries

October

Annual epidemiological report on communicable diseases in Europe – 2009

December

HIV/AIDS surveillance in Europe – 2008

Meeting reports

March

Expert meeting on chikungunya modelling (April 2008)

Consultation of the ECDC Competent Bodies for preparedness and response (October 2008)

Consultation on Crimean-Congo haemorrhagic fever prevention and control (September 2008)

Training strategy for intervention epidemiology in the European Union (October 2008)

ECDC workshop on social determinants and communicable diseases (March 2009)

April

Technical meeting on hepatitis A outbreak response (November 2008)

May

European pandemic influenza planning assumptions (January 2009)

June

Expert consultation on rabies post-exposure prophylaxis (January 2009)

Scientific Consultation Group – second meeting (December 2008)

August

Surveillance and studies in a pandemic: Fourth meeting of the SSiaP working group (July 2009)

Expert consultation on West Nile virus infection (April 2009)

October

First meeting of ECDC Expert Group on Climate Change (September 2009)

November

Ensuring quality in public health microbiology laboratories in the EU: Quality control and areas in need of strengthening (September 2009)

December

Joint ECDC/EUPHA meeting on health communication for innovation in the EU: a focus on communicable diseases (May 2009)

Technical documents**July**

Web service technical documentation, TESSy, Version 1.1

Transport Protocol Specification XML – Extensible Markup Language, TESSy, Version 2.6

Transport Protocol Specification CSV – Comma Separated Value, TESSy

September

Overview of surveillance of influenza 2009/2010 in the EU/EEA

November

Protocols for cohort database studies to measure influenza vaccine effectiveness in the EU and EEA Member States

Protocols for case-control studies to measure influenza vaccine effectiveness in the EU and EEA Member States

December

Protocol for cluster investigations to measure influenza vaccine effectiveness in the EU/EEA

Corporate publications**Quarterly (March, June, September, December)**

ECDC Insight

Executive Science Update

June

Annual Report of the Director: 2008

Summary of key publications

August

Annual Report of the Director: 2008. Summary

Annex 5: Members of the ECDC Management Board

Members and Alternates		
Austria	Professor Dr Hubert Hrabcik (Chair)	Member
	Dr Reinhild Strauss	Alternate
Belgium	Dr Daniel Reynders	Member
	Mr Chris Vander Auwera	Alternate
Bulgaria	Dr Snejana Altankova	Member
	Ass. Professor Mira Kojouharova	Alternate
Cyprus	Dr Chrystalla Hadjianastassiou	Member
	Dr Irene Cotter	Alternate
Czech Republic	Professor Dr Roman Prymula	Member
	Dr Jan Kynčl	Alternate
Denmark	Dr Else Smith	Member
Estonia	Dr Tiiu Aro	Member
	Mr Martin Kadai	Alternate
Finland	Dr Merja Saarinen ¹	Member
	Dr Kristiina Mukala ²	Alternate
France	Dr Françoise Weber	Member
	Ms Anne Catherine Viso	Alternate
Germany	Mr Franz J. Bindert	Member
	Dr Lars Schaade	Alternate
Greece	Nomination awaited ³	Member
	Profesor Athanasios Skoutelis	Alternate
Hungary	Dr Melinda Medgyaszai	Member
	Dr Márta Melles	Alternate
Ireland	Dr Tony Holohan ⁴	Member
	Mr Brian Mullen ⁵	Alternate
Italy	Dr Fabrizio Oleari ⁶	Member
	Dr Maria Grazia Pompa ⁷	Alternate
Latvia	Ms Dace Viluma	Member
	Ms Gunta Grīle	Alternate
Lithuania	Dr Audrius Ščeponavičius	Member
	Ms Loreta Ašoklienė	Alternate
Luxembourg	Dr Pierrette Huberty-Krau	Member
	Dr Pierre Weicherding	Alternate
Malta	Mr Mario Fava	Member
	Mr Renzo Pace Ascjak	Alternate
Netherlands	Dr Dirk Ruwaard	Member
	Dr Philip van Dalen	Alternate
Poland	Dr Pawel Gorynski	Member
	Dr Pawel Grzesiowski	Alternate
Portugal	Dr Maria da Graça Gregorio de Freitas	Member
	Dr Arlinda Frota	Alternate
Romania	Dr Alexandru Rafila ⁸	Member
	Ass. Professor Daniela Pitigoi ⁹	Alternate
Slovak Republic	Dr Margareta Sláčiková	Member
	Mr Ján Mikas	Alternate
Slovenia	Dr Mojca Gruntar Činč	Member

¹ Appointed Member in replacement of Dr Tapani Melkas as of October 2009.

² Appointed Alternate in replacement of Dr Merja Saarinen as of October 2009.

³ Nomination expected (in replacement of Dr Aristidis Calogeropoulos-Stratis as of October 2009).

⁴ Appointed Member in replacement of Dr Eibhlin Connolly as of June 2009.

⁵ Appointed Alternate in replacement of Dr Colette Bonner as of June 2009.

⁶ Appointed Member in replacement of Dr Donato Greco as of March 2009.

⁷ Appointed Alternate in replacement of Dr Fabrizio Oleari as of March 2009.

⁸ Appointed Member in replacement of Professor Dorel Lucian Radu as of May 2009.

⁹ Appointed Alternate in replacement of Professor Emilian Popovici as of May 2009.

Members and Alternates		
	Dr Marija Seljak	Alternate
Spain	Dr Ildefonso Hernández Aguado	Member
	Dr Karoline Fernández de la Hoz Zeitler	Alternate
Sweden	Ms Iréne Nilsson-Carlsson	Member
	Ass. Professor Johan Carlson	Alternate
United Kingdom	Ms Elizabeth Woodeson	Member
	Dr Ailsa Wight	Alternate
European Parliament	Professor Minerva-Melpomeni Malliori	Member
	Professor Dr Jacques Scheres (Deputy Chair)	Member
	Mr Ronald Haigh	Alternate
European Commission	Dr Andrzej Jan Rys	Member
	Mr John F. Ryan	Member
	Ms Isabel de la Mata	Alternate
	Ms Patricia Brunko ¹⁰	Alternate
	Mr Alain Vanvossel	Member
	Dr Anna Lönnroth	Alternate
Observers		
EEA/EFTA		
Iceland	Dr Sveinn Magnússon	Member
	Mr Helgi Már Arthursson	Alternate
Liechtenstein	Dr Sabine Erne	Member
Norway	Mr Jon-Olav Aspås	Member
	Mr Jan Berg	Alternate

¹⁰ Appointed Alternate in replacement of Mr Tapani Piha as of January 2009.

Annex 6: Members of the ECDC Advisory Forum

Members and Alternates		
Austria	Professor Dr Manfred P. Dierich	Member
	Professor Dr Franz Allerberger	Alternate
Belgium	Professor Dr Herman Van Oyen	Member
	Dr Sophie Quoilin	Alternate
Bulgaria	Dr Angel Kunchev	Member
	Dr Radosveta Filipova	Alternate
Cyprus	Dr Olga Kalakouta-Poyiadji	Member
	Dr Despo Pieridou-Bagatzouni	Alternate
Czech Republic	Dr Jozef Dlhý	Member
	Dr Pavel Slezak	Alternate
Denmark	Dr Kåre Mølbak	Member
	Dr Steffen Glismann	Alternate
Estonia	Dr Kuulo Kutsar	Member
	Dr Natalia Kerbo	Alternate
Finland	Professor Petri Ruutu	Member
	Dr Outi Lytyikäinen	Alternate
France	Dr Jean-Claude Desenclos	Member
	Professor François Dabis	Alternate
Germany	Dr Gérard Krause	Member
	Dr Osamah Hamouda	Alternate
Greece	Professor Helen Giamarellou	Member
	Dr Sotirios Tsiodras (1 April 2009: Dr Evaggelia Kouskouni)	Alternate
Hungary	Dr Ágnes Csohán	Member
	Dr István Szolnoki	Alternate
Ireland	Dr Darina O'Flanagan	Member
	Dr Derval Igoe	Alternate
Italy	Dr Stefania Salmaso	Member
	Dr Giuseppe Ippolito	Alternate
Latvia	Dr Jurijs Perevoscikovs	Member
	Dr Irina Lucenko	Alternate
Lithuania	Dr Kestutis Zagminas	Member
	Dr Rolanda Valinteliene	Alternate
Luxembourg	Dr Robert Hemmer	Member
	Dr Danielle Hansen-Koenig	Alternate
Malta	Dr Charmaine Gauci	Member
	Ms Tanya Melillo Fenech	Alternate
Netherlands	Professor Roel Coutinho	Member
	Dr Marianne van der Sande	Alternate
Poland	Professor Andrzej Zielinski	Member
	Dr Malgorzata Sadkowska-Todys	Alternate
Portugal	Dr Maria Teresa d'Avillez Paixão	Member
	Dr Ana Maria Correia	Alternate
Romania	Dr Florin Popovici	Member
	Professor Doina Azoicăi (May 2009: Dr Ioan Bocsan)	Alternate
Slovak Republic	Dr Mária Avdičová	Member
	Professor Henrieta Hudečková	Alternate
Slovenia	Dr Irena Klavs	Member
	Dr Marta Vitek Grgic	Alternate
Spain	Dr Pedro Arias Bohigas (July 2009: Dr Maria José Sierra Moros)	Member
	Dr Odorina Tello Anchueta	Alternate
Sweden	Professor Ragnar Norrby	Member
	Professor Anders Tegnell	Alternate
United Kingdom	Professor Mike Catchpole	Member
	Professor John Watson	Alternate

Members and Alternates		
Observers		
EEA/EFTA		
Iceland	Dr Haraldur Briem	Member
	Dr Gudrun Sigmundsdottir	Alternate
Liechtenstein	Dr Sabine Erne	Member
Norway	Dr Preben Aavitsland	Member
	Dr Hanne Nøkleby	Alternate
Non-governmental Organisations		
Standing Committee of European Doctors	Professor Dr Reinhard Marre	Member
Pharmaceutical Group of European Union	Mr José Antonio Aranda da Silva	Alternate
European Public Health Association	Dr Ruth Gelletlie	Member
European Society of Clinical Microbiology and Infectious Diseases	Dr Elisabeth Nagy	Alternate
European Patient Forum	Ms Jana Petrenko	Member
European Federation of Allergy and Airways Disease Patient's Association	Dr Anna Doboszyńska	Alternate
European Commission	Dr Paolo Guglielmetti	Member
WHO Regional Office for Europe	Dr Nedret Emiroglu	Member

Annex 7: List of Competent Bodies

Austria	Austrian Agency for Health and Food Safety Spargelfeldstraße 191 A-1220 Vienna http://www.ages.at/	Scientific Advice
	Medical University Vienna Institute of Social Medicine, Centre of Public Health Rooseveltplatz 3/1 A-1090 Vienna http://www.univie.ac.at/sozmed/	Scientific Advice
	Federal Ministry of Health Public Health and Pharmaceutical Products Service Radetzkystr 2 A-1030 Vienna http://www.bmg.gv.at	Communication Preparedness Preparing Guidelines Response Surveillance Threat Detection Training
Belgium	Scientific Institute of Public Health rue J.Wytsmanstraat 14 B-1050 Brussels http://www.iph.fgov.be/	Preparing Guidelines Scientific Advice Surveillance Threat Detection Training
	Federal Public Service Health, Food Chain Safety and Environment Directorate-General Primary Healthcare and Crises Management Eurostation, Bloc II Victor Horta Place, 40 box 10 B-1060 Brussels https://portal.health.fgov.be/portal/page?_pageid=56,512473&_dad=portal&_schema=PORTAL	Communication Preparedness Response
	Flemish Agency for Care and Health Department of Public Health Surveillance Ellipse building, Koning Albert II-laan 35 box 33 B-1030 Brussels http://www.zorg-en-gezondheid.be/	Communication
	Ministry of the French Community Boulevard Leopold II, 44 1080 Brussels http://www.cfwb.be/	Communication
	Ministry of the German-Speaking Community Gospertstraße 1 4700 Eupen http://www.dglive.be/	Communication
Bulgaria	National Center of Infectious and Parasitic Diseases 26, Yanko Sakazov Blvd. 1504 Sofia http://www.ncipd.org	Scientific Advice Surveillance Training
	Ministry of Health Chief State Health Inspection Sveta Nedelja Sq. 5 1000 Sofia http://www.mh.government.bg/	Communication Preparedness Preparing Guidelines Response Threat Detection
	National Center of Health Informatics 115 Ivan Ev.Geshov Blvd. 1431 Sofia http://www.nchi.government.bg	Surveillance
	Ministry of Health Directorate of Public Health Communicable Diseases Surveillance 5, Sveta Nedelja Sq. 1000 Sofia	Communication Response Surveillance HIV/AIDS Threat Detection
Cyprus	Ministry of Health Directorate Medical and Public Health Services Unit for Surveillance and Control of Communicable Diseases Medical and Public Health Services 1, Prodromou str 1448 Nicosia http://www.moh.gov.cy/moh/moh.nsf/index_en/index_en	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Czech Republic	National Institute of Public Health Srobárova 48 100 42 Praha 10 http://www.szu.cz	Preparing Guidelines Surveillance Training
	School of Military Health Sciences Faculty of Military Health Sciences Třebesska 1575 CZ - 500 01 Hradec Kralove www.pmfhk.cz	Scientific Advice Training
	Ministry of Health Palackeho namesti 4 128 01 Prague 2 http://www.mzcr.cz	Communication Preparedness Preparing Guidelines Response Threat Detection

Denmark	Statens Serum Institute Artillerivej 5 DK-2300 Copenhagen S http://www.ssi.dk	Response Scientific Advice Surveillance Threat Detection Training
	National Board of Health Islands Brygge 67 2300 Copenhagen S http://www.sst.dk	Communication Preparedness Preparing Guidelines Response
	National Food Institute Moerkhoej Bygade 19 2860 Soeborg http://www.food.dtu.dk	Scientific Advice
Estonia	Health Board Paldiski Road 81 10617 Tallinn http://www.terviseamet.ee/	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	National Institute for Health Development Hiiu 42 11619 Tallinn http://www.tai.ee/?lang=en	Surveillance TB and HIV/ AIDS national programme management
	Ministry of Social Affairs Gonsiori 29 15027 Tallinn http://www.sm.ee	Communication Training
Finland	National Institute for Health and Welfare P.O. Box 30 FI-00300 Helsinki http://www.thl.fi	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	Ministry of Social Affairs and Health Department for Promotion of Welfare and Health PO BOX 33 FIN-00023 Helsinki http://www.stm.fi	Communication Preparedness Preparing Guidelines Response Training
France	National Institute for Public Health Surveillance 12 rue du Val d'Osne 94410 Saint-Maurice cedex http://www.invs.sante.fr/	Communication Scientific Advice Surveillance Threat Detection Training
	Ministry of Health and Sport Health General Directorate 14, avenue Duquesne 75350 Paris 07 SP http://www.sante.gouv.fr	Communication Implementing Guidelines Preparedness Preparing Guidelines Response
	National Institute for Prevention and Health Education 42 boulevard de la Libération 93203 Saint Denis Cedex http://www.inpes.fr/	Communication
Germany	Robert Koch Institute Nordufer 20 D 13353 Berlin http://www.rki.de	Communication Communicable diseases Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	Federal Centre for Health Education Ostmerheimer Str.220 51109 Koln http://www.bzga.de	Communication Public campaigns
Greece	Ministry of Health and Social Solidarity Directorate of Public Health 17, Aristotelous Street GR-101 87 Athens http://www.yyka.gov.gr/	Communication Scientific Advice Threat Detection
	Hellenic Center for Disease Control and Prevention 3-5 Agrafon St. 15123 Athens http://www.keelpno.gr/en/	Preparedness Public Health Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	Hellenic Organization Against Drugs 21 Averof Street 10433 Athens http://www.okana.gr	Communication General Public

Hungary	National Centre for Epidemiology Gyáli street 2-6 H-1097 Budapest http://www.oek.hu	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	Koranyi National Institute of Tuberculosis and Pulmonology Pihenó út 1 1121 Budapest http://www.koranyi.hu/	(For TB only) Communication Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Iceland	Centre for Health Security and Infectious Disease Control Directorate of Health Austurströnd 5 170 Seltjarnarnes http://www.landlaeknir.is	Communication Implementing Guidelines Policy Issues Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Ireland	Health Protection Surveillance Centre (HPSC) 25-27 Middle Gardiner Street 1 Dublin http://www.ndsc.ie	Communication Communicable diseases Implementing Guidelines Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Italy	National Health Institute Viale Regina Elena 299 00161 Rome http://www.iss.it	Response Scientific Advice Surveillance HIV/AIDS Threat Detection Training
	Ministry of Labour, Health and Social Policies Directorate General of Health Prevention Communicable Diseases Unit; National Centre for Disease Control Viale Giorgio Ribotta 5 00144 Rome http://www.lavoro.gov.it	Communication Preparedness Preparing Guidelines Response Surveillance other diseases Threat Detection Training
	National Institute for Infectious Diseases "L. Spallanzani" Viale Portuense, 292 00149 Rome http://www.inmi.it	Scientific Advice Training
Latvia	State Agency "Infectology Center of Latvia" Linezera str. 3 LV-1006 Riga http://www.infectology.lv/	Communication Preparing Guidelines Scientific Advice Public health; TB Surveillance TB Threat Detection Training TB
	State Emergency Medical Service Pilsonu str. 13, building 21 LV-1002 Riga http://www.emergency.lv/	Communication Preparedness Response for disasters Training
Liechtenstein	Office of Public Health Aeulestrasse 51, Postfach 684 FL-9490 Vaduz http://www.llv.li	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Lithuania	Ministry of Health Institute of Hygiene Didzioji str. 22 LT-01128 Vilnius http://www.hi.lt	Scientific Advice HCAI & AMR Training
	Ministry of Health Center for Communicable Diseases and AIDS Nugalėtojų g. 14 D LT-10105 Vilnius http://www.ulac.lt/	Communication Communication on CD Preparing Guidelines Surveillance Threat Detection
	Ministry of Health Health Emergency Situations Centre Didzioji str. 7 LT-01128 Vilnius http://www.essc.sam.lt	Preparedness Response

Luxembourg	Ministry of Health Health Directorate Villa Louvigny-Allée Marconi L-2120 Luxembourg http://www.ms.etat.lu/	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	National Health Laboratory 42, Rue du Laboratoire L-1911 Luxembourg http://www.lns.public.lu/	Scientific Advice Surveillance
	Central Hospital of Luxembourg National Service of Infectious Diseases 4 Rue Barble L-1210 Luxembourg http://www.retrovirology.lu	Scientific Advice Surveillance
Malta	Ministry of Health Public Health Regulation Division Health Promotion and Disease Prevention Infectious Disease Prevention and Control Palazzo Castellania, Merchants Street VLT 2000 Valletta http://www.sahha.gov.mt/	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Netherlands	Ministry of Health, Welfare and Sport Public Health Department P.O. Box 20350 2500 EJ The Hague http://www.minvws.nl/	Policy Issues Preparedness Influenza
	National Institute for Public Health and the Environment Centre for Infectious Disease Control PO Box 1 3720 BA Bilthoven http://www.rivm.nl/en/	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Norway	Norwegian Institute of Public Health PO BOX 4404 Nydalen N-0403 Oslo www.fhi.no	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
Poland	National Institute of Public Health National Institute of Hygiene Chocimska 24 00-791 Warsaw http://www.pzh.gov.pl	Preparing Guidelines Scientific Advice Surveillance Threat Detection Training
	Centre for Postgraduate Medical Training School of Public Health Kleczewska 61/63 00-826 Warsaw http://www.cmkp.edu.pl/	Training
	Chief Sanitary Inspectorate Długa 38/40 00-238 Warsaw www.gis.gov.pl	Communication Preparedness Response Threat Detection
	National Tuberculosis and Lung Disease Institute Plocka 26 01-138 Warsaw http://www.igichp.edu.pl/	Scientific Advice TB
	National Medicines Institute National Reference Centre on Antimicrobial Resistance Chelmska 30/34 00-725 Warsaw http://www.il.waw.pl	Preparing Guidelines Scientific Advice Antimicrobial resistance and molecular epidemiology Surveillance Training
	Centre for Quality Monitoring in Health Care Kapelanka 60 30-347 Krakow http://www.cmj.org.pl	Preparing Guidelines
	National Medicines Institute Prevention of Infection and HCAI Chelmska Street 30/34 00-725 Warszawa http://www.il.waw.pl	Preparing Guidelines Scientific Advice Health care associated infections and vaccinology Surveillance Training

Portugal	Ministry of Health Directorate General of Health Disease Prevention and Control Alameda D. Afonso Henriques, 45 1049-005 Lisboa www.dgs.pt	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	Ministry of Health National Health Institute Ricardo Jorge Av. Padre Cruz 1649-016 Lisbon http://www.insa.pt	Scientific Advice Threat Detection Laboratory issues
	Ministry of Health High Commissionariate of Health Avenida João Crisóstomo, 9-1º piso 1049-062 Lisbon http://www.acs.min-saude.pt	Surveillance HIV / AIDS
Romania	National Institute of Research and Development for Microbiology and Immunology "Cantacuzino" Splaiul Independentei 103, sector 5 50096 Bucuresti http://www.cantacuzino.ro	Response Scientific Advice Surveillance
	Ministry of Health Press Department Christian Popisteanu street, No.1-3, Sector 1 10024 Bucuresti http://www.ms.ro	Communication Preparedness Preparing Guidelines Response Threat Detection Training
	Centre for Communicable Diseases Prevention and Control Institute of Public Health Bucharest Str. Dr. A. Leonte Nr. 1-3, sector 5 50463 Bucuresti http://www.cpcbt.ispb.ro	Response Surveillance Threat Detection Training
	National Institute for Infectious Diseases "Prof.Dr.Matei Bals" Str.Dr.Grozovici nr.1, sector 2 021105 Bucuresti http://www.mateibals.ro	Surveillance HIV / AIDS
	Institute of Pneumology "Marius Nasta" Sos. Viilor nr. 90, sector 5 50159 Bucuresti http://www.mariusnasta.ro/	Surveillance TB
Slovak Republic	Comenius University Jessenius Faculty of Medicine Department of Public Health Sklabinska 26 03753 Martin http://eng.jfmed.uniba.sk/	Implementing Guidelines Preparing Guidelines Scientific Advice
	Ministry of Health Department of EU Affairs Limbova 2 837 52 Bratislava 37 http://www.health.gov.sk	Communication Implementing Guidelines Preparedness Response Threat Detection
	Public Health Authority of Slovak Republic Trnavská 52 826 45 Bratislava http://www.uvzsr.sk	Communication Implementing Guidelines Response Surveillance Threat Detection
	National Institute for Tuberculosis, Lung Diseases and Thorax Surgery National Register of Tuberculosis 05984 Vysne Hagy http://www.hagy.sk/alias_admin/english/index.htm	Surveillance TB
	Slovak Medical University Limbova 12 83303 Bratislava http://www.szu.sk	Training
	Regional Public Health Authority Cesta k Nemocnici 1 97556 Banska Bystrica http://www.vzbb.sk	Surveillance
Slovenia	National Institute of Public Health Centre for Communicable diseases Trubarjeva, 2 1000 Ljubljana http://www.ivz.si	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	University Clinic Golnik University Clinic for Pulmonary and Allergic diseases Golnik Golnik 36 4204 Golnik http://www.klinika-golnik.si	Surveillance TB
Spain	Ministry of Health and Social Policy General Directorate of Public Health and Foreign Health Affairs Paseo del Prado 18-20, 7 planta 28071 Madrid http://www.msps.es	Communication Implementing Guidelines Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training

Sweden	National Board of Health and Welfare Rålambsvägen 3 SE-106 30 Stockholm http://www.socialstyrelsen.se	Communication Preparedness Preparing Guidelines Response Scientific Advice Threat Detection Training
	Swedish Institute for Infectious Disease Control Nobels vag 18, Solna 171 82 Stockholm http://www.smittskyddsinstitutet.se	Communication Scientific Advice Surveillance Threat Detection Training
United Kingdom	Health Protection Agency HPA Central Office 7th Floor, Holborn Gate, 330 High Holborn WC1V 7PP London http://www.hpa.org.uk	Communication Preparedness Preparing Guidelines Response Scientific Advice Surveillance Threat Detection Training
	Department of Health Richmond House Richmond House - 79 Whitehall SW1A2NS London http://www.dh.gov.uk	Policy Issues

Annex 8: Management and internal control systems

1. Inherent nature and characteristics of ECDC's risk and control environment

Scientific advice

One of the main objectives of ECDC is to deliver scientific advice to the Member States, the European Commission and the European Parliament. The main risk ECDC faces in this context is that its advice could be considered irrelevant by the stakeholders, or that ECDC's scientific independence would be questioned. ECDC has therefore established an internal procedure for the delivery of scientific advice. Scientific independence is guaranteed by strict selection criteria for external experts and a system that rules out any potential conflict of interest. The relevance of the scientific advice is assessed by frequent consultations with the Advisory Forum, the Competent Bodies for scientific advice and with various other stakeholders. These consultations also ensure that ECDC's work does not duplicate work already conducted in the Member States and that ECDC's advice does not conflict with nationally produced advice on the same topic.

Surveillance

The main objective of surveillance is to integrate data collection systems and to establish European standard case reporting. All surveillance data are analysed to monitor trends and provide decision-makers with timely and reliable data as a basis for public-health decisions. Errors in surveillance and data transmission are reduced by accepting data only from authorised persons (nominated by the Competent Bodies), by validating the data before entering them into TESSy, by using client-side data verification, by carefully planning data calls long in advance, by closely following all data submissions, and by ensuring that reminders are sent when deadlines were missed.

Preparedness and response

The main objectives for preparedness and response are to detect emerging threats, assess them, and support the Member States when responding to these threats. The Preparedness and Response Unit also supports the European Commission by operating the EWRS. There are several risks associated with these functions: the risk of not detecting a threat, the risk of not assessing a threat correctly, the risk of not providing Member States with the required support, the risk of the interruption of EWRS service to the European Commission and the Member States. Therefore, the Unit has developed a thorough methodology to monitor and assess threats, and implemented a clearance process for assessments. Standard operating procedures were developed and corresponding tools implemented. Finally, a high level of

redundancy was implemented to assure the continuity of EWRS operations.

Health communication

Another important ECDC objective is to communicate scientific content (including risk communication) to public health professionals, policy makers, the general public and other stakeholders across Europe. The three potential pitfalls are 1) ECDC communicates incorrect or misleading information, 2) risk communication activities are not properly coordinated with those of the European Commission or the Member States, and 3) ECDC communication activities are seen not to be in line with the mandate of ECDC. In order to address these risks ECDC has clear internal procedures for clearance of items to be communicated, ensuring that the information is factual and correct. ECDC also works within the Risk Communicators' Network under the European Commission's Health Security Committee and has a system in place to provide advance information to the European Commission and the Member States on major communication outputs. Finally, ECDC has a health communication strategy in place (adopted by the Management Board in November 2009) which outlines the ECDC communication work.

External relations

An important task for ECDC is to ensure cooperation and coordination with the EU, the Member States, third countries, international partners, and other relevant stakeholders. There is a reputational risk dependant on how ECDC and its collaboration with external partners is perceived. There is a risk that the cooperation creates more burden than it adds value, and that ECDC fails to strike the right balance between countries. ECDC runs the risk of choosing the wrong partners for collaboration in terms of mandate, outputs and resources. To mitigate these risks ECDC has an internal procedure in place on country visits as well as a strategy for external relations, which was endorsed by the Management Board. There is also ad hoc guidance in place regarding stakeholder management, which will be developed into a fully fledged strategy in 2010.

Administration

The main objective of the Administration Unit is to provide ECDC with the necessary expertise and support for the efficient functioning of the Centre so the operational units can meet their objectives and carry out the Centre's mandate. The risk of failing to deliver the right support (e.g. human and financial resources, ICT infrastructure and services, mission and meetings, buildings and logistics, legal advice and internal control coordination) is counteracted by a number of procedures and reporting

requirements which ensure that support is provided correctly and timely. These procedures include a detailed recruitment plan, monthly reporting for commitments and payments, a steering group for building projects and a committee for procurement, contracts and grants (see also description of Internal Control System below).

ECDC is a rapidly developing agency. In 2009, the staff (TAs, CAs and SNEs) increased from 154 to 199 persons. This fast growth necessitates a variety of measures concerning the induction of new staff, the provision of an appropriate infrastructure, resources for recruitments, staff training, and the development of new policies and procedures.

ECDC deals with only direct expenditures. There are no Member States or implementing bodies involved in the execution of the budget. Most of ECDC's expenditures, apart from salaries and salary-related expenditure is therefore implemented through procurement procedures performed directly by ECDC.

2. Management and control systems

Management supervision

ECDC has five Units and a Director's Cabinet. The Heads of Unit are responsible for the activities in their Unit. During 2009 a new level of middle management was introduced in all Units (Head of Sections). The Management structure was updated at the end of the year, giving more weight to the Disease-Specific Programmes.

ECDC has an Executive Committee (EXC), consisting of the Director and all Heads of Unit, which plays an important role in the management of ECDC.

Planning and monitoring is a crucial part of the ECDC management and control system. ECDC has a Multi-Annual Strategic Work Programme for the period 2007–2013. An Annual Work Programme is adopted each year by the Management Board in order to implement the Multi-Annual Programme objectives. A set of indicators is reported each year to the Management Board to assess the implementation of the Multi-Annual Programme. The Annual Work Programme is monitored internally on a quarterly basis and its implementation reported to the Management Board in the Annual report of the Director. Discrepancies are discussed between the Director's Cabinet and the Units and Programmes, and corrections are made as necessary. In 2009, the Management Information System was launched to provide a single point of truth across the organisation on the Work Programme implementation.

Furthermore, a limited set of indicators, in the form of a dashboard, is under development for management purposes and should be in place in Q1 2010. Key data such as commitments, payments and recruitments are regularly reported to the EXC. These data will be included in the dashboard.

In 2009, the Director of ECDC, as Authorising Officer (AO), delegated financial responsibility to the five Heads of Unit (Authorising Officers by Delegation (AOD)). In their absence, the Heads of Unit delegate to the Deputy Heads of Unit. Should a Deputy Head of Unit be unavailable, the authority returns to the Director. Thus, a very limited number of persons act as AO/AODs in ECDC. The AODs can enter into budgetary and legal commitments and authorise payments. However, all contracts over EUR 60 000 need to be countersigned by the Director.

For the expenditure of 2009, the AODs (Heads of Unit) signed a declaration of assurance to the AO (Director), similar to the one signed by the AO herself, for the area for which they have been delegated responsibility.

Internal control system

The internal control system (ICS) can of course not be described in its entirety but some key components, particularly concerning the controls in place, are mentioned below.

Internal control standards

ECDC has a set of 24 internal control standards in place. They specify the necessary requirements, actions and expectations that are required when establishing an effective system of internal control. These control standards were developed along the lines of the European Commission's internal control standards, which are based on the international COSO standards. The standards cover the areas of control environment, performance and risk management, information and communication, control activities, and audit and evaluation.

A review of the implementation of the ICS was performed at the end of 2009. The results were discussed and validated by ECDC management. Two of the standards have not been implemented, regarding identifying sensitive posts and introducing an internal procedure for reporting improprieties. Others standards were not fully implemented. Appropriate actions were identified and improvements will be put in place.

ECDC is also following the example of the European Commission and will be introducing the revised set of 16 internal control standards. These control standards are more detailed in their requirements and increase the internal control, especially in the areas of staff allocation and mobility, business continuity, external communication and accounting and financial reporting.

Each ICS is made up of a number of requirements to be met. For each such requirement ECDC has identified what is already in place, which actions have to be taken, who will be responsible and when the ICS should be in place.

The revised internal control standards were discussed in the Audit Committee in November 2009 and will be proposed for adoption by the Management Board in March 2010.

Internal procedures, director's decisions and implementing rules

The internal control system also includes a number of internal procedures. The internal procedures are approved by the Director of the Centre and include, for example, financial workflows for commitments and payments, guidance on conflicts of interests, a code of good administrative behaviour and procurement procedures. In 2009, a number of new procedures were introduced including procedures for authorisation and exceptions and hand-over files. Internal procedures are revised in regular intervals. In 2009, a number of internal procedures were revised, e.g. the procedures for working hours, learning and development, communicating with the media, and posting on the website.

There are also a number of Director's decisions made regarding policies/rules. In 2009, decisions were introduced regarding rules governing EPIET fellowships, rules applicable to national experts on secondment to ECDC, and on an ECDC pandemic protection plan for staff and their families.

Certain implementing rules on the staff regulations are also adopted. These cover issues such as pensions, allowances and leave. In 2009, implementing rules were adopted on the engagement and use of temporary/contract staff and on middle management.

Centralised support and control functions

ECDC has a number of centralised support and control functions in place, the most important one being the centralised procurement function and the Committee on Procurement, Contracts and Grants (CPCG), and the financial verification officer.

The centralised procurement function is responsible for coordinating everything regarding procurement, including the ECDC procurement plans, and is directly involved in all tenders over EUR 60 000. The CPCG ensures that ECDC public procurement procedures and grants are carried out in accordance with the Centre's financial rules. It provides a verification function on legality and regularity. It also verifies financial issues related to procurement procedures, grants, and contracts/agreements prior to the authorisation by the authorising officer, and provides a reporting function on exceptions or deviations.

The financial verification officer performs centralised ex-ante controls and is responsible for verifying all commitments and payments that exceed EUR 25 000.

Internal control coordinator

The internal control system was reinforced by establishing the new role of Internal Control Coordinator in 2009. This role includes designing, promoting, facilitating and monitoring the implementation of systems for internal control and risk assessment.

Risk assessments and risk management

In November 2009, ECDC performed a management risk self-assessment exercise, including its top-management, based on the IAS standard methodology. The exercise included a follow-up of the exercise performed in October 2008 and of the subsequent action plan. An updated action plan is being finalised.

The risk assessment showed that improvements were made regarding the controls to manage reputational risk. There were deficiencies regarding the planning process and the continuity of operations. Appropriate remedies, such as the business continuity plan, are already being implemented.

Data protection

The Centre has also appointed a data protection officer in charge of ensuring compliance with data protection requirements. The main objective in this field is to develop data protection awareness through events and training and ensure proper notification of data processing operations to verify adequate personal protection measures.

Ex-post verifications

In 2009, ECDC introduced ex-post verifications of grant contracts. Two such verifications were performed. The results were carefully monitored and the lessons learnt will be incorporated into the control systems for grant expenditure.

Audit committee

The Management Board set up an audit committee in order to assist the Management Board in fulfilling its oversight responsibilities for the financial reporting process, the system of internal control, and the audit process.

The audit committee's overall responsibility is to provide oversight of the internal control systems, management risk assessments, and internal and external audits. It reports back to the Management Board on any serious shortcomings or deficiencies.

In 2009, the audit committee had three meetings. In each of these meetings it received, among other things, an update on performed audits, including management response and taken actions, as well as an update on the status of all open observations.

3 Follow-up of audit work and previous reservations

European Court of Auditors (ECA)

ECDC is audited every year by the European Court of Auditors (ECA). The audit provides a statement of assurance as to the reliability of the accounts of the Centre and the legality and regularity of the underlying transactions.

ECDC has received an unqualified opinion every year, indicating that the accounts are reliable and the

transactions underlying the accounts are legal and regular.

The ECA audit of the 2009 annual accounts is ongoing. The draft report will be available in June 2010. The first part of the audit was performed in October 2009.

The two remaining open observations regarding the audit of the 2008 annual accounts, covering the carry-forwards and the seat agreement/personal identification numbers, are being followed up and are expected to be resolved in 2010.

Internal Audit Service (IAS)

The ECDC is also audited by its Internal Auditor (Internal Audit Service of the European Commission). The audit work is defined in the risk-based annual IAS strategic audit plan. All observations and recommendations are taken into account and appropriate action plans are developed. The implementation of these actions is monitored regularly.

In 2009, the IAS performed an audit on Financial Management, which resulted in five (one very important and four important) observations. It also performed a follow-up audit of previous findings.

At the end of 2009 there were no open critical findings. One very important finding and six important findings remain open. Five of those originate from the report on Financial Management received in September 2009, and are all expected to be closed in Q1 2010. The two other important findings involve the introduction of new computer systems, which are expected to be in place in Q3 2010.

Previous reservations in annual reports

No reservations have been made in the previous annual reports.

Annex 9: Director's Declaration of Assurance

Building blocks of Director's Declaration of Assurance

The main building blocks of the Director's Declaration of Assurance are:

- The Director's own knowledge of the management and control system in place.
- The declarations of assurance made by each Authorising Officer by Delegation to the Director.
- The results of the assessment of the Internal Control Standards in place.
- The results of the management Risk Self-Assessment exercise.
- The results of the ex-post verification missions.

- The list of recorded exceptions.
- The absence of identified Internal Control Weaknesses reported.
- The observations of the Court of Auditors known at the time of the declaration.
- The observations of the Internal Audit Service known at the time of the declaration.

Conclusion

Judging from the information attained from the building blocks above and the lack of critical findings from the Court of Auditors and the Internal Audit Service at the time of the declaration, there is no reason to question the efficiency or effectiveness of the control system in place.



2009 Declaration of Assurance by the Director of ECDC

I, the undersigned, Zsuzsanna Jakab, Director of ECDC,

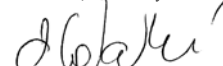
In my capacity as authorising officer,

Declare that the information contained in the Annual Report of the Director give a true and fair view¹,

State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions. This reasonable assurance is based on my own judgement and on the information at my disposal such as the findings and recommendations of the Internal Audit Service and of the Court of Auditors for the year prior to the year of this declaration,

Confirm that I am not aware of anything not reported here which could harm the interests of the Centre and the institutions.

Stockholm, 27 January 2010



Zsuzsanna Jakab
Director

¹ True and fair in this context means a reliable, complete and correct view on the state of affairs in the service.

Annex 10: Management Board's analysis and assessment of the authorising officer's (director) annual report for the financial year 2009

The Management Board has analysed and assessed the authorising officer's (director) annual report for the financial year 2009, in accordance with Article 40(2) of the ECDC Financial Regulation.

The Management Board highly appreciates the results achieved by the Centre and notes in particular the following:

On the content of the report:

- ECDC showed its excellent capability to respond to the A(H1N1) pandemic, which reflects both a good preparation and an appropriate response to the situation.
- ECDC managed, while devoting part of its resources to the pandemic, to ensure the implementation of its Work Programme for most of the initially planned activities.

2009 saw the consolidation ECDC activities:

- ECDC further strengthened its infrastructures and modes of operation of the Public Health Functions (surveillance, scientific advice, preparedness and response, health communication), which, as a result, are fully in place and in routine operation at the end of 2009.
- ECDC also continued building up the tools methodologies and networks of its Disease-Specific Programmes. Their role in the organisation has been strengthened and their long-term strategies further clarified, in order to give them more visibility as of 2010.

- ECDC delivered increased output, further developed its partnerships and consolidated its internal structures in order to address the needs for a strengthened response to the threat of communicable diseases in Europe.

On the structure of the report:

- Satisfactory improvements were made to the Annual Report regarding the risks associated with the Centre's operation and the efficiency and effectiveness of the internal control system, including the building blocks of the Director's Declaration of Assurance.
- The Annual Report suitably reflects achievements set in the Work Programme for 2009. However, further improvement could be made in future reports in order to indicate in a more systematic and transparent way what activities were carried out or not.

The Management Board would like to discuss in its next meeting the structure of the report in order to agree on a final format.

More generally speaking, the Management Board notes that ECDC achieved impressive results in the short amount of time since its establishment and praises the outstanding work of its first Director, Zsuzsanna Jakab, in starting up ECDC and establishing it as an internationally recognised centre of excellence.

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