European Centre for Disease Prevention and Control

Achievements, challenges and major outputs 2016

Highlights from the Annual Report of the Director

www.ecdc.europa.eu

This digest offers a small selection of key activities from 2016 but by no means represents the entire range of ECDC's accomplishments in 2016.

A detailed look at ECDC's range of activities, its organisational and administrative structures, and its work plan can be found in the unabridged version of the Annual Report

https://ecdc.europa.eu/sites/portal/files/documents/annual-report-director-2016.pdf

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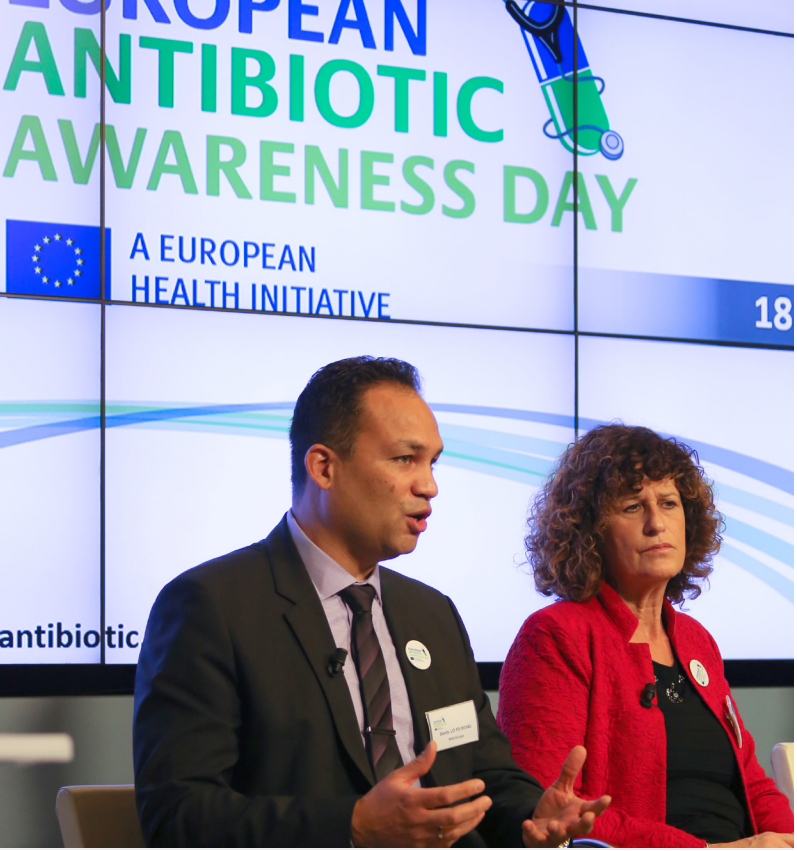
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SURVEILLANCE REPORT


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Foreword by the Chair of the Management Board

The year 2016 was marked by two major events for which ECDC provided much-appreciated support to the European Commission and the EU Member States.

First of all, the sudden outbreak of Zika virus kept ECDC busy with disease monitoring tasks, risk assessments, and the development of preparedness materials.

Second, a large multi-country outbreak of salmonellosis was detected thanks to new standard protocols for whole genome sequencing (WGS), proving once again the relevance of WGS for disease surveillance. The European Commission and the Member States quickly implemented the adopted countermeasures and thus contributed to a significant reduction of salmonellosis in Europe.

In 2016, the Management Board continued to monitor the implementation of the Board's recommendations made after the 2015 external evaluation of ECDC's work. Putting these recommendations into practice will further strengthen the Centre over the coming years.

I would like to take this opportunity to thank our former deputy Chair Tiiu Aro for her dedication during the last four years. Anni-Riitta Virolainen-Julkunen was elected as the Management Board's new deputy Chair.

Finally, I would like to thank Andrea Ammon, who in the last two years has successfully led the Centre and consistently ensured that the Centre's output met and exceeded expectations. The results presented in this report are proof of her successful leadership.

Daniel Reynders
Chair of the ECDC Management Board
24 February 2017

Introduction by the Director

2016 was another busy year for ECDC. Throughout the year, ECDC provided scientific and technical support to the European Commission, the Parliament, and the Member States. To give you just one example: during the course of the year, ECDC responded to 41 formal requests from the Commission, 19 of which were forwarded from Members of the European Parliament.

During the whole of 2016, the Zika virus outbreak demanded the full attention of our scientists. ECDC released a number of Zika virus risk assessments, teamed up with WHO and the US CDC on Zika travel advice, issued a case definition for Zika virus infection, and reviewed mosquito control measures.

A significant step toward the move to a new building was made when we signed the lease. We also finalised the ECDC work programmes for 2017 and 2018, assessed communicable disease prevention in the EU, evaluated the European microbiology infrastructure, explored the reasons behind vaccination hesitancy, and worked on lifelong vaccination strategies.

Assessing the epidemic potential of disease outbreaks, both in and outside the EU, is an important aspect of ECDC's work. This is why ECDC participated in the first mission of the newly founded European Medical Corps: in May 2016, ECDC experts travelled to Angola to assess the implications of the Angolan yellow fever outbreak for EU citizens.

It has now almost been two years since I took office as ECDC's Acting Director. I would like to express my gratitude to the Management Board and the Advisory Forum for their trust in me, their invaluable advice, and their unwavering support for the Centre.

Andrea Ammon,
Acting Director ECDC
27 February 2017

Top left and bottom: ECDC's European Antibiotic Awareness Day is now in its ninth year. The Project received the 2016 European Health Award. Top centre: EU public health assessment mission to Angola: ECDC joined a team of medical and public health experts under the European Medical Corps, in agreement with the Angolan government and in close coordination with the World Health Organization.

Keeping track of infectious diseases

Established in 2005 and based in Stockholm, Sweden, the European Centre for Disease Prevention and Control (ECDC) is the European Union agency with the responsibility to strengthen Europe's defences against infectious diseases. ECDC identifies, assesses and communicates current and emerging threats to human health posed by infectious diseases. It also supports the Member States of the European Union in their preparedness and response efforts. The Centre provides scientific advice to EU/EEA Member States and is a trusted source of information and resources in all areas related to public health.

As of 31 December 2016, ECDC had 260 permanent staff members engaged in disease surveillance, outbreak detection, scientific advice, information technology, communication, and administration.

In 2016, ECDC had a core budget of EUR 58.36 million.

Disease surveillance

One of ECDC's main strengths is its capacity to respond quickly to the changing epidemiology of infectious diseases. ECDC operates and maintains three systems, each of which is essential to one specific area of disease control: EWRS (threat detection alerts), EPIS (epidemic intelligence), and TESSy (disease surveillance).

The Early Warning and Response System (EWRS) is a confidential system allowing Member States and the European Commission to share information and send alerts about health events with potential EU-level impact and coordinate the response measures required to protect public health. The system has been successfully used since 1998, and ECDC has been connected to the EWRS since April 2005. In 2016, during the outbreak of Zika virus disease, the system proved its value again.

The Epidemic Intelligence Information System (EPIS) is a secure web-based communication platform which allows for an international exchange of epidemiological information that could be the first signals of infectious disease outbreaks.

The European Surveillance System (TESSy) is a highly flexible database system for collecting disease data. EU/EEA countries regularly report data on infectious diseases to TESSy. Data applications include the production of suerveillance reports and the interactive ECDC *Surveillance Atlas of Infectious Diseases*.

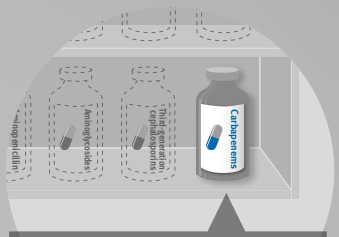
In addition, ECDC supports the work of the European Commission and Member States in the EU's Health Security Committee to ensure a constant flow of information on the latest developments and to secure the synchronisation of public health measures.

Top left: Homeless tuberculosis patient discusses his X-ray with a health community worker in Paris, France. From ECDC case studies on interventions to manage tuberculosis in vulnerable groups.
Top centre: Kateřina Konečná (GUE/NGL, Czech Republic), ECDC's liaison with the ENVI Committee of European Parliament, visited the Centre on 14 June 2016
Top right: Emergency Operations Centre, ECDC
Centre right: ECDC expert Josep Jansa meets public health workers in Angola
Bottom: Aedes *mosquito taking a blood meal*

Growing resistance to last-line antibiotics

Carbapenems are a major last-line class of antibiotics to treat bacterial infections. The spread of carbapenem-resistant infections is a threat to healthcare and patient safety in Europe as it seriously curtails the ability to cure infections.

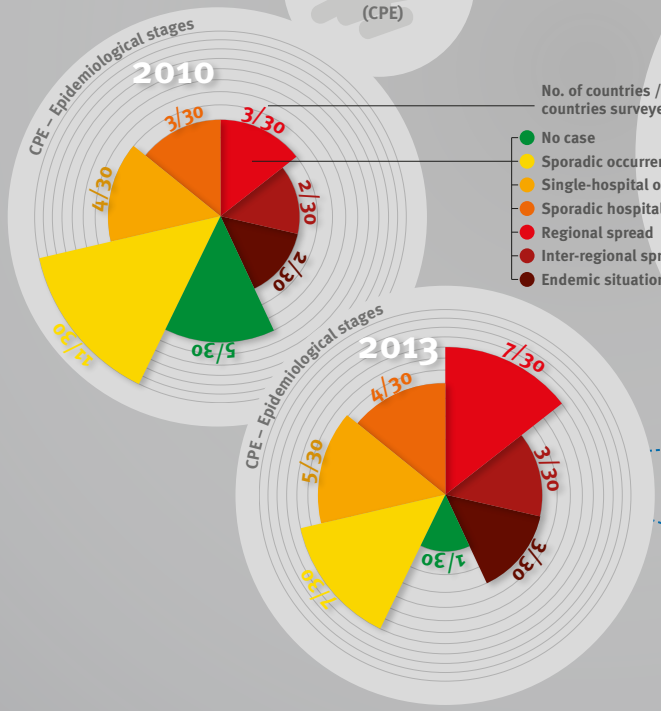
Each year, 30 EU/EEA countries report data on antimicrobial resistance to the European Antimicrobial Resistance Surveillance Network (EARS-Net) and on antimicrobial consumption to the European Surveillance of Antimicrobial Consumption network (ESAC-Net). Both networks are hosted at ECDC. For the first time, 18 countries reported data on *Acinetobacter* spp. to EARS-Net. In addition, experts in 38 European countries participated in the European Survey on Carbapenemase-Producing *Enterobacteriaceae* (EuSCAPE) done for ECDC by the University Medical Centre Groningen, in the Netherlands.

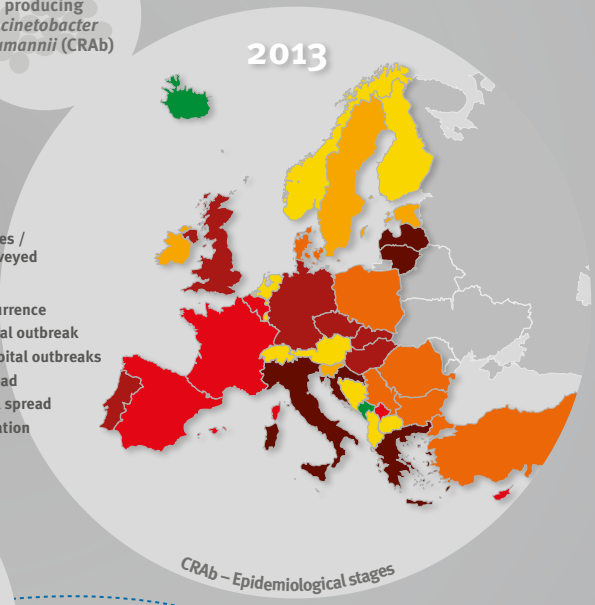


Carbapenems are one of doctors' last possible choice of antibiotics to treat infections due to bacteria resistant to multiple antibiotics.

Carbapenem-resistant *Enterobacteriaceae* (CPE)

Carbapenemase-producing *Acinetobacter baumannii* (CRAb)





13/38 countries reported an **uncertain** stage

25/38 countries reported a **certain** stage

Protecting Europe's health – ECDC disease programmes

The ARHAI Programme: antimicrobial resistance and healthcare-associated infections

According to a 2016 study by ECDC scientists, the burden of healthcare-associated infections (HAIs) is extremely high in Europe. The combined health burden of the six most prevalent types of HAIs, the study says, is higher than the total burden of the 32 communicable diseases included in the BCoDE study, an earlier ECDC study on the *Burden of Communicable Diseases in Europe 2009–2013*.

Also published in 2016 was EDCD's prospective European survey of carbapenemase-producing Enterobacteriaceae. The survey showed, based on data from 455 hospitals in 36 countries, that an average of 1.3 patients per 10 000 hospital admissions had a carbapenemase-producing *K. pneumoniae* or *E. coli* infection.

Left: ECDC infographic on last-line antibiotics

In 2016, ECDC expanded its directory of online resources for the prevention and control of antimicrobial resistance and healthcare-associated infections to improve the sharing of best practices.

Over 40 countries across Europe participated in the ninth European Antibiotic Awareness Day (EAAD) on 18 November. The Day was marked by national events and supported by a campaign on prudent antibiotic use in EU countries. Earlier, on 28 September, the EAAD was awarded the prestigious European Health Award at the European Health Forum Gastein.

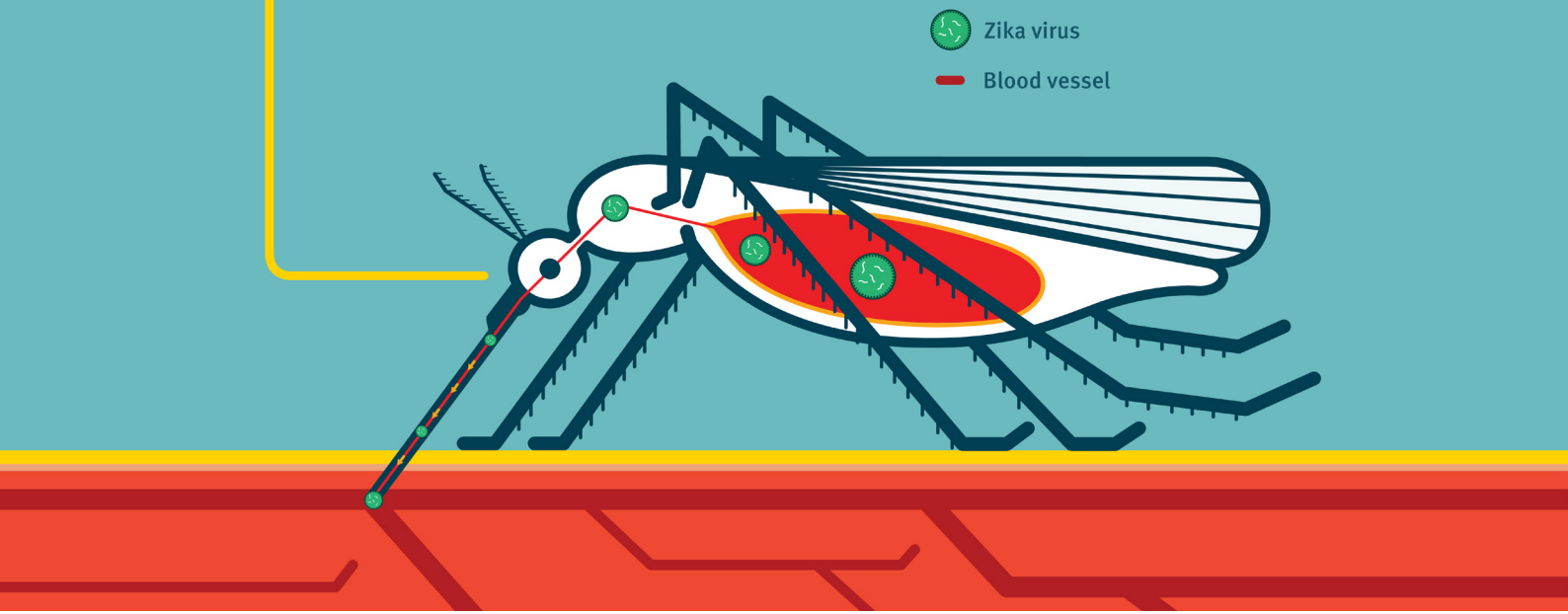
ECDC continued to act as a key contributor to TATFAR, the Transatlantic Taskforce on Antimicrobial Resistance, which was created in 2009 to improve cooperation between the US and the EU in this area.

Zika virus is transmitted to people through the bite of an infected *Aedes* mosquito. But there are other, although rare, modes of transmission.

Local transmission could occur in continental Europe during the summer in areas where the tiger mosquito (*Aedes albopictus*) is present – if the Zika virus is imported by travellers.

Mosquito-borne transmission

The mosquito gets infected by biting a person who has the Zika virus in his or her blood. Over the next several days, the mosquito can become infectious and transmit the Zika virus to healthy people by biting them.



The EVD Programme: emerging and vector-borne diseases

As the Zika virus outbreak spread, mosquito-borne diseases were pushed to the forefront of epidemiological research. Response activities ranged from the production of risk assessments to the establishment of country classifications for travel advice. Other aspects of the work on Zika included case definitions, preparedness plans, and a literature review on vector control measures for *Aedes aegypti* and *Aedes albopictus*.

Another area of research was West Nile fever. ECDC started work on a modelling tool on vector control strategies for West Nile fever in Europe. The surveillance of West Nile fever was further strengthened by adding real-time data and maps to the online ECDC *Surveillance Atlas of Infectious Diseases*.

ECDC's web-based distribution maps for mosquitoes, ticks and sandflies were expanded and now include all countries around the Mediterranean basin.

ECDC disease experts finalised the case definition for Lyme neuroborreliosis and submitted it to the EU Commission. They also reviewed a number of options for the gradual harmonisation of Lyme borreliosis surveillance in the EU and identified gaps in the current systems.

In May 2016, a new network of laboratories replaced the old ENIVD network. The new network – online slogan: 'EVD LabNet is a European expert laboratory network for emerging viral diseases' – receives funding from ECDC and provides support for the early detection and confirmation of emerging vector diseases.

EVD LabNet works in close collaboration with similar EU initiatives to avoid overlaps in work. In 2016, the network's main focus was on Zika virus diagnostics.

Left: Zika virus transmission, ECDC infographic

Listeria monocytogenes in food in the EU in 2015

3.9%
of ready-to-eat fish products were *L. monocytogenes* positive

2.5%
of ready-to-eat meat products were *L. monocytogenes* positive

1.1%
of cheese were *L. monocytogenes* positive

Source: European Union summary report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks in 2015, published by EFSA and ECDC in 2016.

The FWD Programme: food- and waterborne diseases and zoonoses

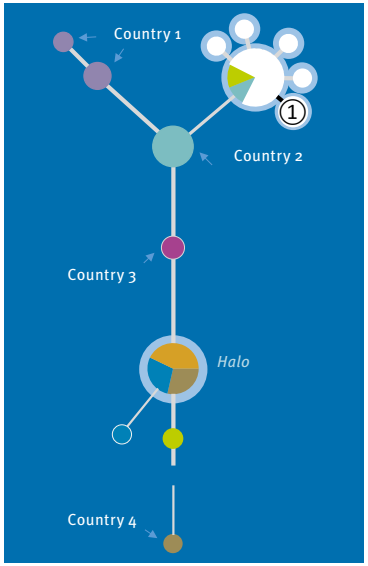
Outbreaks of food- and waterborne diseases are notoriously difficult to track and trace. When a large multi-country outbreak of *Salmonella* raised concerns in the public health community, ECDC's food-borne disease experts helped initiate a EU-wide collaboration to determine the cause of the outbreak.

Early on in the outbreak, the experts in the Member States and at ECDC used two complimentary methods to keep track of the implicated *Salmonella* strain: whole genome sequencing and MLVA. MLVA, or multiple-loci variable-number tandem repeat analysis, is a technique to generate a DNA fingerprint; it is used for the genetic analysis of certain microorganisms. Whole genome sequencing is used to map the complete DNA sequence of an organism's genome at a single time.

During the *Salmonella* outbreak, ECDC demonstrated that combining traditional methods for signal detection with a genetic approach significantly improves the detection and investigation of outbreaks of food- and waterborne diseases.

EPIS-FWD, a branch of the Epidemic Intelligence Information System, facilitates the early detection and assessment of multi-country/multinational molecular typing clusters and outbreaks of food- and waterborne diseases. In 2016, the System handled 47 *Urgent Inquiries*. The platform currently connects epidemiologists and microbiologists from 52 countries worldwide.

ECDC is still heavily involved in the ELiTE project, which continues to break ground in understanding the molecular epidemiology of listeriosis.



Above: Minimum spanning trees visualise genetic relationships between isolates (cultures of microorganisms isolated for study).

- *The circle size represents the number of isolates that have a similar genomic profile.*
- *Circles with a halo indicate a cross-border outbreak.*
- *The length and thickness of the lines represent the number of differences between two genomic profiles.*
- *Colours are randomly assigned to show the origin of the isolates; in our example, purple stands for 'Country 3'.*

Left: Lysteria monocytogenes *in food, ECDC infographic*

HIV and AIDS in Europe

HIV infection remains of major public health importance in the European Union and European Economic Area (EU/EEA) as the HIV epidemic persists largely unchanged with annually around 30 000 newly reported diagnoses.

ECDC estimates that 810 000 people are currently living with HIV in the EU/EEA – of which 122 000 (15%) do not know they are infected.

29 747
new diagnoses reported in 2015

HIV
attacks the immune system and causes lifelong illness that may show no symptoms for many years. Treatment can stop progression to severe illness and AIDS.

AIDS
indicates the end-stage of HIV infection resulting from the destruction of the immune system. It is defined by the presence of one or more opportunistic illnesses due to decreased immunity.

HIV infection → diagnosed with HIV → weak immune system → opportunistic infection → death

3 754
AIDS diagnoses reported in 2015

37% diagnosed late
12 541
Transmission through sex between men

57% diagnosed late
9 654
Transmission through sex between men & women

58% diagnosed late
1 241
Transmission by injecting drug use

1 in 2 diagnosed late
47%

HIV transmission can be prevented once status is known

Early diagnosis prolongs a healthy life and reduces healthcare costs

There is no cure for HIV: early diagnosis allows access to lifesaving treatment

Test & protect!

Early diagnosis helps to prevent further transmission and lowers the risk of severe health complications.

Find an HIV test centre: bit.ly/EuropeanTestFinder

Follow us on twitter: @ECDC_HIVAIDS

The HSH Programme: HIV, sexually transmitted infections and viral hepatitis

In March 2016, the networks for human immunodeficiency virus (HIV) and sexually transmitted infections (STI) met in Bratislava for a joint meeting with the WHO Regional Office for Europe to discuss better disease surveillance and best practices in Europe.

ECDC presented its new HIV modelling tool which uses HIV surveillance data to estimate several parameters: the number of people living with HIV, the annual number of new infections, the average time between infection and diagnosis, and the number of people in need of treatment. In a paper based on data from all EU countries, ECDC estimated the number of people living with HIV at 810 000, with one out of seven unaware of their HIV-positive status.

ECDC continues to coordinate the EU-level surveillance of HIV, STIs and viral hepatitis infections. The comprehensive annual HIV/AIDS surveillance in Europe report, prepared jointly with the WHO Regional Office for Europe, was published for World AIDS Day on 1 December.

Gonorrhoea has increasingly developed resistance to antibiotic treatments. An ECDC sentinel surveillance report on gonococcal antimicrobial resistance confirmed this trend.

ECDC published two annual surveillance reports on hepatitis B and hepatitis C. In 2016, most of the work on hepatitis was devoted to exploring alternative data sources that can describe the burden of hepatitis disease, e.g. by setting up a protocol on the seroprevalence of hepatitis C in Europe.

An expert meeting was convened to discuss options for the surveillance of HIV drug resistance in Europe. A first proposal will be released in 2017.

ECDC experts contributed to a study on the determinants of infection among sex workers, which was published in *The Lancet HIV*. It presented evidence for the negative impact that criminalisation and restrictive legislation can have on the control of transmission of HIV among sex workers.

ECDC continued to monitor the implementation of the 2004 *Dublin Declaration on Partnership to fight HIV/AIDS in Europe and Central Asia*. In the context of this work, the Centre published a report and an Evidence Brief on pre-exposure prophylaxis for HIV prevention in Europe.

In response to requests for technical support, ECDC organised country missions to Croatia, Bulgaria and Malta.

ECDC worked with the European Association of the Study of the Liver (EASL) and the International Union against Sexually Transmitted Infections (IUSTI) on two memorandums of understanding that will enable future joint projects.

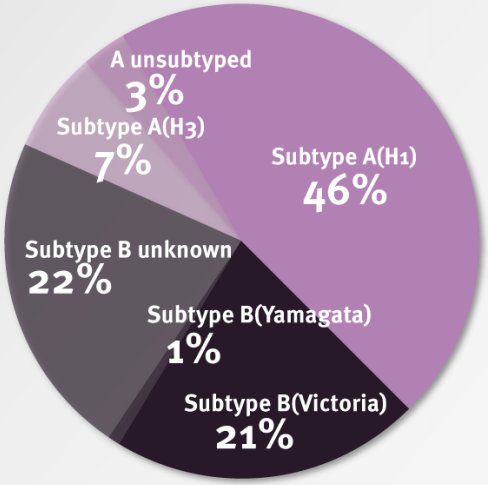
Left: HIV/AIDS, ECDC infographic

Influenza in Europe

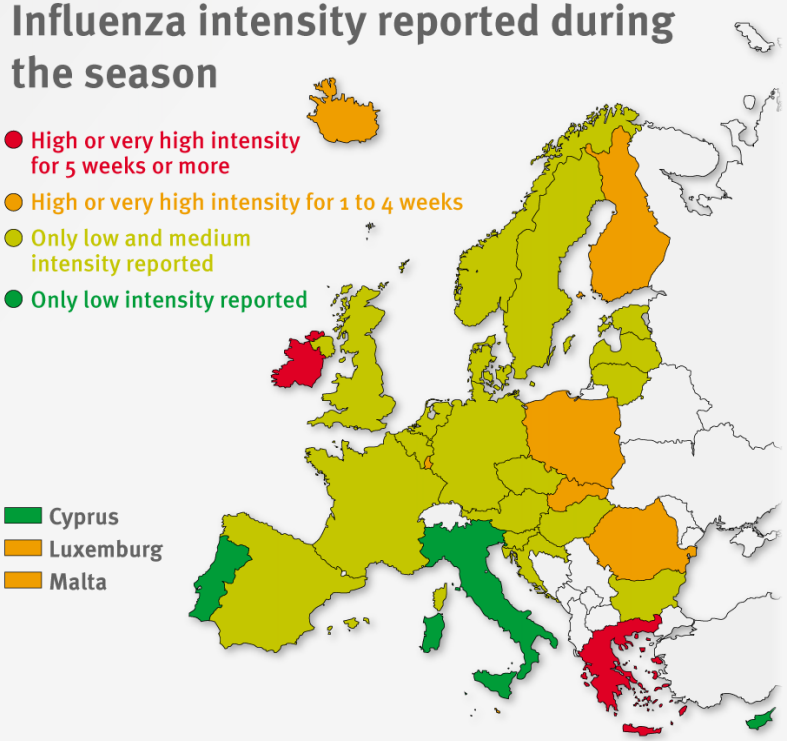
Season 2015–2016

Circulating viruses

Only sentinel specimens are included

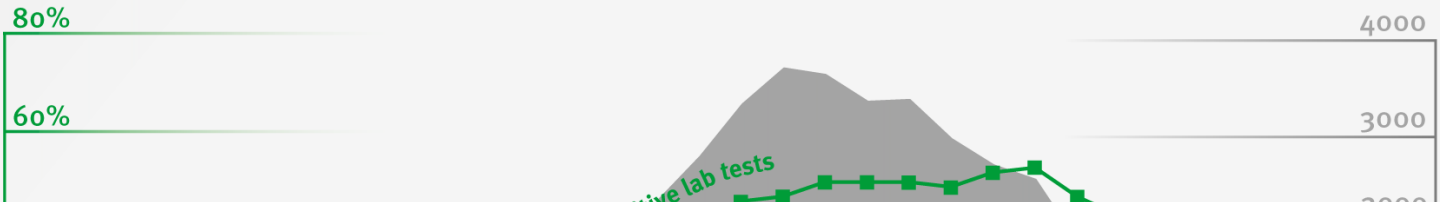


Influenza intensity reported during the season



Influenza trend

Lab test results from sentinel specimens, by week



The IRV Programme: influenza and other respiratory viruses

ECDC and the WHO Regional Office for Europe continued their joint influenza surveillance. One of the many activities in this area is the publication of a weekly influenza bulletin for Europe during the influenza season (www.flunews-europe.org).

Based on surveys conducted by the VENICE network, the Centre released a report on coverage rates and vaccination recommendations for seasonal influenza in the EU Member States.

Other activities included technical work on the surveillance of respiratory syncytial viruses, an estimation of the burden of disease attributable to influenza, a severity assessment for pandemic influenza, and support for the WHO vaccine strain selection process.

Zoonotic influenza viruses and other emerging respiratory viruses are monitored through ECDC's epidemic intelligence function. ECDC regularly assesses the risk posed by these viruses, especially when unusual or unexpected human cases are reported. In 2016, ECDC produced six risk assessments on respiratory viruses, e.g. on seasonal influenza, highly pathogenic avian influenza A(H_5N_8), and enterovirus.

ECDC arranged a technical workshop on how to achieve a higher influenza vaccination rate in healthcare workers. The Centre launched an e-learning module on this topic – aimed primarily at public health practitioners and managers – and released additional materials such as fliers, posters and brochures for healthcare workers.

Funding continued for the external I-MOVE network. I-MOVE provides estimates of seasonal influenza vaccine effectiveness. In 2016, ECDC funded several multi-country studies on the effectiveness of seasonal influenza vaccines used in Europe.

ECDC also initiated a public consultation to solicit expert opinions on the benefits of neuramidase inhibitors for the prevention and treatment of influenza. The feedback will be incorporated in an evidence-based expert opinion scheduled for publication in June 2017.

Support continued for the European Influenza Surveillance Network (EISN) and the European Reference Laboratory Network for Human Influenza (ERLI-Net).

In November, a country visit to Iceland was conducted to review the country's updated pandemic preparedness plan.

Left: Seasonal influenza overview, ECDC infographic

The TB Programme: tuberculosis

Tuberculosis is a major cause of morbidity and mortality in Europe. The disease burden is unevenly distributed across populations, varying with gender and social and economic status.

To emphasise this message, ECDC published a newly developed guidance document on tuberculosis control in vulnerable and hard-to-reach populations, accompanied by a policy briefing on the same topic. Three case studies, published as examples of interventions to manage tuberculosis in vulnerable groups, further demonstrated ECDC's continued focus on the elimination of tuberculosis in Europe.

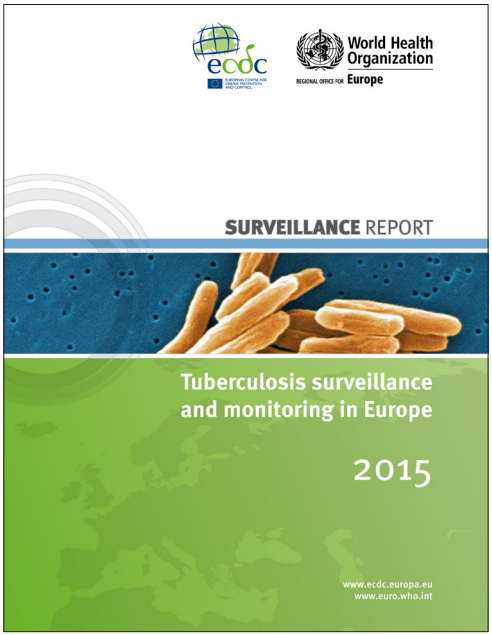
The annual joint ECDC–WHO-Europe report on *Tuberculosis surveillance and monitoring in Europe* was presented on World TB Day, 24 March.

In 2016, ECDC's TB experts presented the first report on the molecular surveillance of multidrug-resistant tuberculosis and produced a handbook for EU laboratories involved in the diagnosis of tuberculosis.

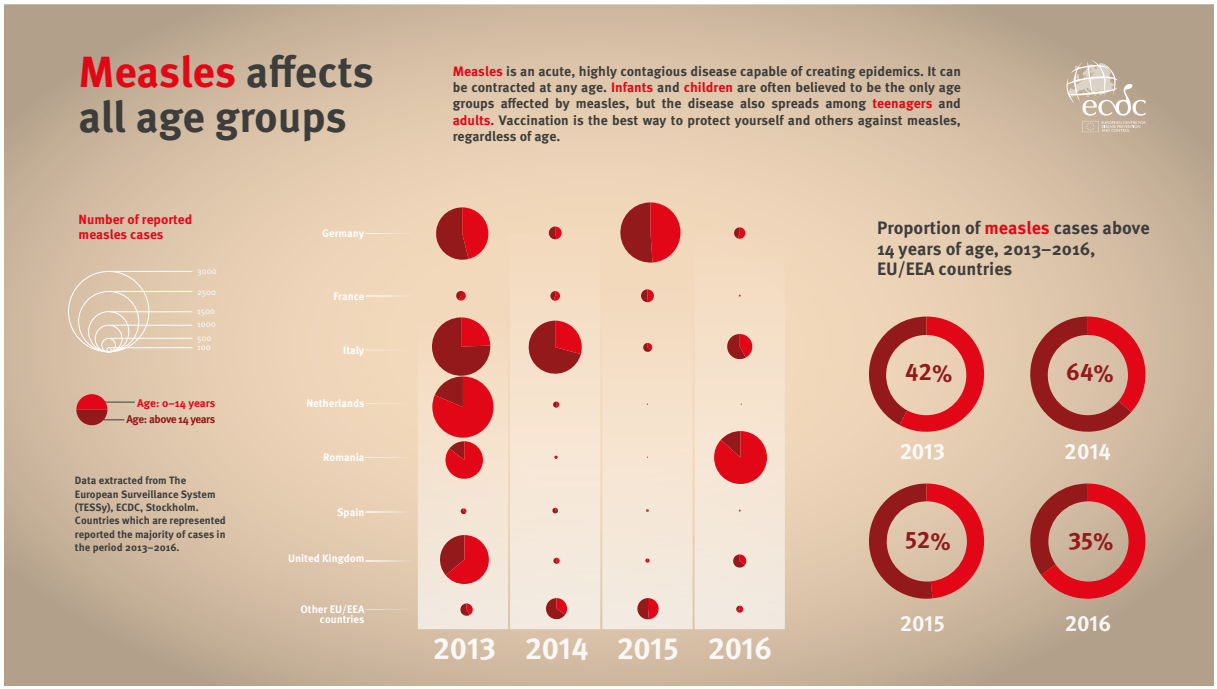
Exchange visits and training efforts continued in five WHO high-priority countries: Bulgaria, Estonia, Latvia, Lithuania, and Romania.

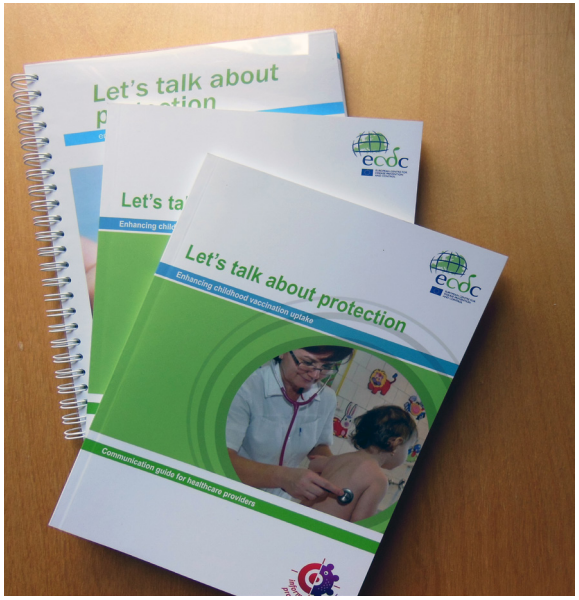
All photos from ECDC case studies on interventions to manage tuberculosis in vulnerable groups.
Top: Community healthworker and homeless tuberculosis patient, Paris
Bottom left: 'Don't miss this bus on the road to health' – TB van in London
Bottom right: TB patient in a Roma community, Slovakia

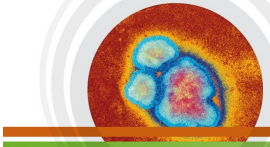
Eleven peer-reviewed scientific publications by ECDC epidemiologists were published in scientific journals. Topics included the analysis of tuberculosis surveillance data, external quality assessments for TB and drug resistance in the EU and the results of several ECDC projects.



ECDC's annual TB report is published jointly with the WHO Regional Office for Europe







ecdc

SURVEILLANCE REPORT

Measles and rubella monitoring

July 2016

Disease surveillance data: 1 July 2015 – 30 June 2016

Main developments

The ECDC measles and rubella monitoring report is published twice a year. The January issue reports on the previous calendar year, while the summer issue (July) focuses on the most recent measles and rubella season and presents the data collected over the past 12 months.

Visualised measles and rubella data are available online through the measles [1] and rubella [2] pages of the ECDC Surveillance Atlas (updated monthly). In addition, ECDC produces monthly high-resolution measles maps [3].

Measles

- Between 1 July 2015 and 30 June 2016, 1 818 cases of measles were reported by 30 EU/EEA countries. Twenty-six countries reported consistently throughout this 12-month period.
- Italy accounted for 31% of all cases reported during this period.
- Measles is targeted for elimination in Europe. The measles notification rate was below the elimination target (one case per million population) in 19 of the 30 reporting countries. Eight of these 19 countries reported zero cases. Eleven reporting countries had a notification rate above this indicator, with Lithuania reporting the highest rate (16.8 cases per million population).
- The diagnosis of measles was confirmed by positive laboratory results (serology, virus detection or isolation) in 74% of all cases

The VPD Programme: vaccine-preventable diseases

ECDC published two guidance documents during the 2016 European Immunisation Week: an updated version of 'Let's talk about protection' (on childhood immunisation) and 'Let's talk about hesitancy' (on vaccine hesitancy). So far, seven countries adapted these documents for national use. Localised versions were produced in Austria, Italy and Greece.

The dramatic decrease of human papillomavirus (HPV) vaccination coverage rates in some Member States prompted ECDC to initiate work on the determinants of HPV vaccination hesitancy and to address concerns over safety issues. As a first step, ECDC and the international HPV Prevention and Control Board have begun to monitor HPV vaccination hesitancy in social media.

ECDC held a workshop on 'Finding the balance in lifelong vaccination' and initiated a project on the observed burden of vaccine-preventable diseases in older age groups. The project collects data on the burden of vaccine-preventable diseases in adults to provide policymakers with information on how vaccination programmes could be improved and if a life-long immunisation strategy would provide better protection in Europe.

In 2016, ECDC upgraded the sentinel surveillance systems for pertussis and invasive pneumococcal disease (IPD). Surveillance is conducted through hospital-based networks in which laboratory experts, epidemiologists and clinicians work together to rapidly detect and diagnose pertussis and IPD cases. The goal is to keep track of the impact and effectiveness of vaccinations and monitor antimicrobial resistance and serotype replacement.

ECDC investigated a shortage of pertussis vaccines and published its findings in a Rapid Risk Assessment.

The increased number of cases of diphtheria in the EU/EEA (70 cases in 2015 compared with 14 in 2010), prompted ECDC to produce a Rapid Risk Assessment on a fatal case of diphtheria in Belgium and assess the availability of diphtheria antitoxin in Europe.

ECDC developed an action plan to guide activities for polio eradication and support Europe's polio-free status. The action plan focuses on containment aspects (e.g. identification of poliovirus-essential facilities and destruction of all remaining polio-type-2 viruses stored in laboratories).

The *EU Vaccine Scheduler* continued to be among the most visited features on ECDC's web portal, with 234 000 visits in 2016 (54 000 unique visitors).

Top: Measles affects all age groups, ECDC infographic
Bottom left: 2016 edition of Let's talk about protection
Bottom right: ECDC measles and rubella monitoring report

Top left: 'And the European Health Award goes to...' ECDC Director Andrea Ammon and communications expert Giovanni Mancarella at the European Health Forum in Gastein, Austria.
Top centre: Award certificate, European Health Award 2016
Top right: Also available on paper: ECDC reports
Centre right: EPIET fellows, Spetses, Greece
Bottom: Panel discussion, European Antibiotic Awareness Day 2016

Communication and training: spreading the news, passing on the knowledge

The integration of risk communication and national preparedness planning was formally laid out in ECDC's new communication strategy. The new strategy will serve as the basis of ECDC's communication efforts in the coming years.

ECDC published a total of 158 reports in 2016, including 38 Rapid Risk Assessments and 69 surveillance reports.

The Centre's presence in social media grew substantially in 2016, partly as a consequence of the strong interest in the Centre's communication on Zika.

2016 marked the 20th anniversary of *Eurosurveillance*, an occasion celebrated with a scientific seminar. In 2016, the journal received 864 submissions; 234 items were published, an acceptance rate of around 20%. The journal's impact factor in 2016 increased to 5.98, which puts *Eurosurveillance* in the top ten highest impact factor journals for infectious diseases.

EPIET and its partner programme EUPHEM were integrated into what is now called the ECDC Fellowship Programme. The Fellowship Programme will continue to offer two distinct paths (epidemiology and public health microbiology) which will share a common logistic and organisational framework.

The Programme's two-year curriculum places a clear emphasis on assignments at European public health institutes where fellows are fully immersed in the daily workings of public health.

In 2016, a cohort of 28 fellows was recruited; 36 fellows graduated. At year's end, 76 fellows were enrolled (Cohort 2015 and Cohort 2016 combined). The Programme conducted 29 training site visits, held an introductory course, and taught seven training modules. All fellows participated in field investigations.

In March 2016, ECDC signed a collaboration agreement with ASPHER, the Association of Schools of Public Health in the European Region. ASPHER represents over 100 public health schools in Europe.

A survey among ASPHER schools explored areas of common interest in the field of communicable diseases. This will lead to a first mapping of the curricula in 2017 and the creation of an extended network of schools that will engage in a number of joint activities such as faculty exchange and competency development.

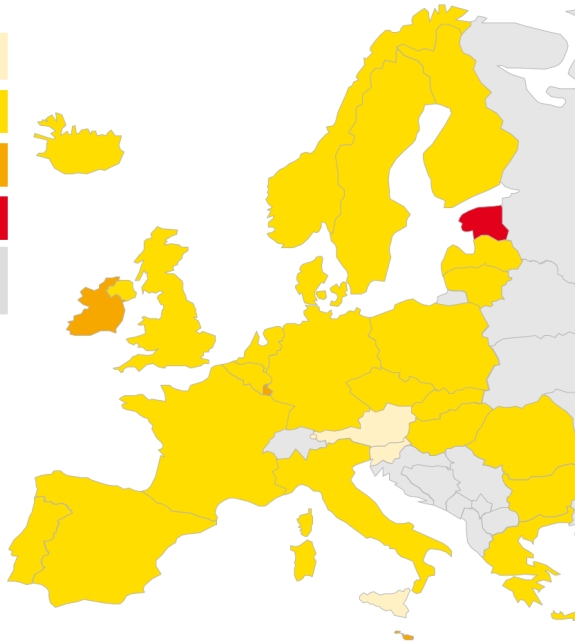
Rate per 100 000 population

- < 2
- 2 to <10
- 10 to <20
- ≥ 20
- Not included or not reporting

EU/EEA rate 5.9 per 100 000*

Non-visible countries

- Liechtenstein
- Luxembourg
- Malta



Keeping a watchful eye: disease vigilance

Epidemic intelligence and response

Since its inception, disease surveillance and monitoring has been at the very core of ECDC's mandate. The Centre sees disease surveillance as contextual and not as an isolated discipline: only in combination with other public health functions such as scientific advice, preparedness, response, training and health communication can the Centre live up to its true potential and position itself as a leading force in the protection of public health in Europe.

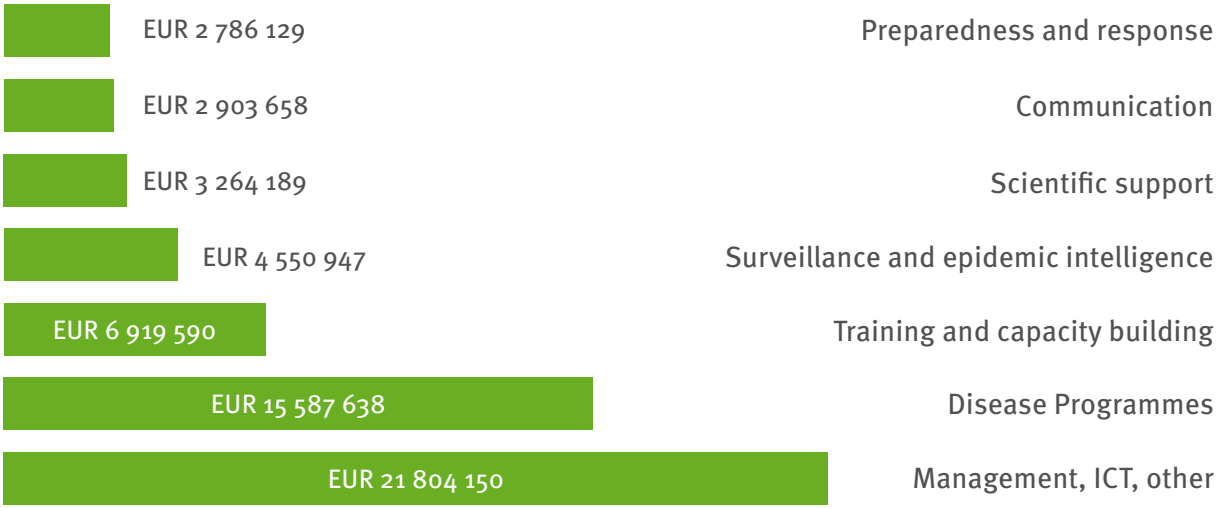
The number of Rapid Risk Assessments produced in 2016 demonstrates ECDC's ability to quickly respond to epidemiological threats: in 38 published Rapid Risk Assessments, ECDC provided valuable background information and concise threat analyses. ECDC also published 45 *Epidemiological Updates* on its website, 39 of them on the Zika virus.

ECDC started revising the methodology and procedures for Rapid Risk Assessments to further improve the consistency of methods and ensure the involvement of Member States and international agencies.

In cooperation with WHO and the US Centers for Disease Control and Prevention, Zika country classifications were reviewed and updated. The results were used to produce risk maps and provide travel advice.

Top left: Zika virus, 3D printer model
Top centre: ECDC scientists Josep Jansa and Ettore Severi join the European Medical Corps team for a mission in Angola
Top right: HIV incidence map
Centre left: ECDC staff photo
Bottom: Discussion during ECDC's daily Round Table meeting

ECDC budget for 2016



Total core budget: EUR 58.36 million

On 23 May 2016, the EU Committee on Budgets approved funding for ECDC's new headquarter.

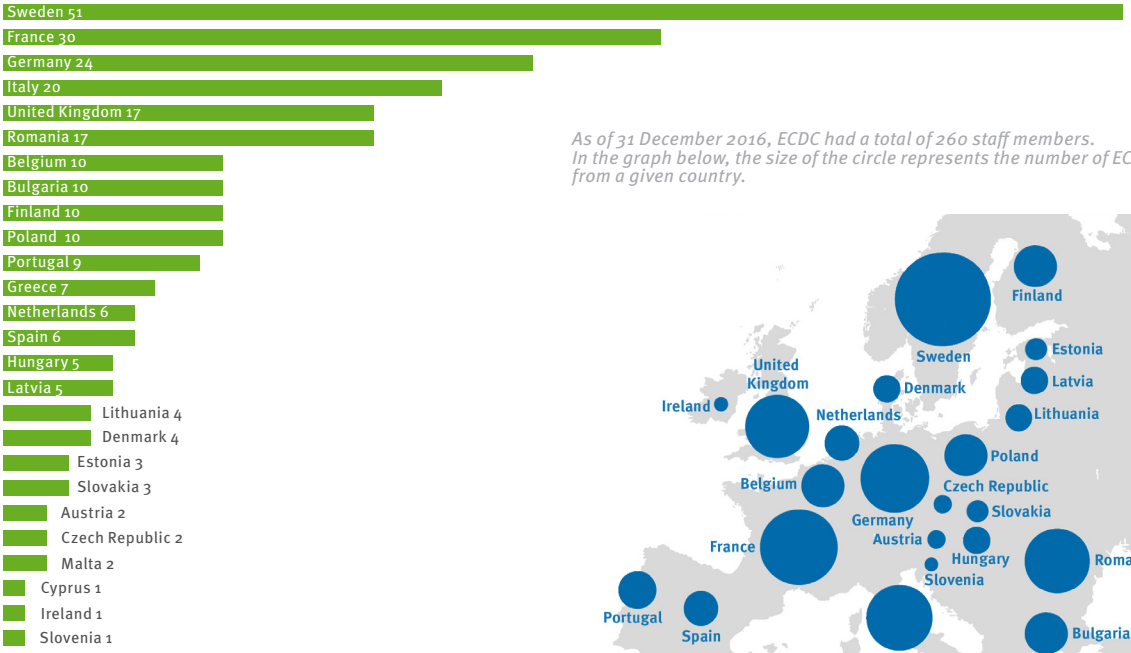
After more than ten years, ECDC will leave its old premises and move to the Frösunda neighbourhood, 2.5 km north of its current location and 5 km north of downtown Stockholm.

Preparations for the move began in late 2016, with most of the planning scheduled for 2017. The actual move will take place in spring 2018.

Completed in 1888, Tomtebodaskolan, an old school building that was retrofitted to serve as ECDC's headquarter, will be vacated in early 2018.

ECDC in numbers

ECDC staff composition by nationality



As of 31 December 2016, ECDC had a total of 260 staff members. In the graph below, the size of the circle represents the number of ECDC staff from a given country.

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European Centre for Disease Prevention and Control (ECDC)

Postal address:
Granits väg 8, SE-171 65 Solna, Sweden

Visiting address:
Tomtebodavägen 11A, 171 65 Solna, Sweden

Tel. +46 858601000
Fax +46 858601001
http://www.ecdc.europa.eu

An agency of the European Union
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