



Achievements, challenges and major outputs 2018

Highlights from the Annual Report of the Director

This digest offers a selection of key activities from 2018 but by no means represents the entire range of ECDC's accomplishments during that year. A detailed look at ECDC's range of activities, its organisational and administrative structures, and its work plan can be found in the full version of the Annual Report.

<https://ecdc.europa.eu/en/publications-data/annual-report-director-2018>

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Foreword by the Chair of the Management Board

As the newly elected Chair of ECDC's Management Board, I take great joy in introducing the Director's Annual Report 2018. Throughout the year, ECDC supported the Member States and the European Commission by:

- delivering 35 rapid risk assessments that provided input for risk management at EU and national levels;
- launching a new version of the 'Early Warning and Response System' that meets all requirements of Decision No 1082/2013/EC; and
- publishing a new EULabCap report that shows that capacity and capability gaps between laboratories in the different Member States are shrinking quickly.

ECDC also published a number of online tools that help countries process evidence-based input and support policy-making. This includes a vaccine scheduler, modeling software, evolving situations maps, an interactive disease atlas, disease databases, and several guidance documents.

In 2018, the Management Board launched a third independent external evaluation of the Centre, covering the period 2013–2017. The evaluation, which is carried out by an external contractor, is overseen by a Management Board steering committee. The final report is expected later this year.

Looking at ECDC's impressive achievements, I really look forward to the next two years at the helm of the Management Board. It will be an interesting time for the Centre, which will see the results of the Centre's external evaluation and a new long-term strategy. The Management Board will remain at the centre of the discussions and accompany these changes, ensuring that the Centre carries out its mission and tasks in accordance with the conditions laid down in the Founding Regulation.

Dr Anni-Riitta Virolainen-Julkunen
Chair of the ECDC Management Board
5 March 2019

*Top left and centre: ECDC building in Solna, Sweden
Top right: ECDC's former headquarters
Centre right: Passers-by reflected in the glass entrance doors
Bottom: International meeting in ECDC's main conference room*



Introduction by the Director

In early April 2018, ECDC relocated to a modern facility in the Solna–Frösunda neighbourhood right outside of Stockholm. Our logistics team did a great job, and before long, we were fully settled in to our new surroundings.

In addition to the physical move, we also took a number of far-reaching decisions for the future of ECDC:

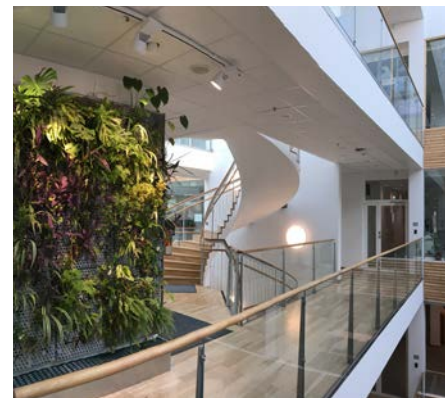
- We initiated work on ECDC's long-term strategy for 2021–2027.
- We engaged in a dialogue with our stakeholders on two new and exciting projects: *E-Health and Digital Technologies* and *Foresight*.
- The *Next Generation ECDC* initiative will give the Centre a new organisational structure.
- The Management Board initiated the third external evaluation of the Centre, which will cover the years 2013–2017.

In 2018, we kept a clear focus on three priority areas:

- **Vaccinations.** ECDC provided the European Commission with scientific evidence for a new Council Recommendation on vaccine-preventable diseases.
- **Antimicrobial resistance.** In a new study, we estimated that bacteria resistant to antimicrobials kill 33 000 Europeans every year; antimicrobial resistance also incurs costs of approximately one billion euros per year in Europe.
- **United Nations Sustainable Development Goals.** In the area of disease monitoring, ECDC aligned its monitoring work with the UN goals; HIV, hepatitis and TB surveillance are good examples for this.

In September 2018, ECDC began its term as Chair of the Network of EU Agencies. This provided a welcome opportunity to engage in a broad knowledge exchange with our sister agencies and helped us align our processes – with tangible benefits for our day-to-day work.

Dr Andrea Ammon
Director of ECDC
5 March 2019



ECDC – Europe’s agency for public health

Established in 2005 and based in Stockholm, Sweden, the European Centre for Disease Prevention and Control (ECDC) is part of a network of EU agencies. These agencies perform technical and scientific tasks that help EU institutions take decisions and implement policies. EU agencies are decentralised bodies and are found in almost all EU Member States.

The scope of ECDC’s mandate covers disease surveillance for almost 60 infectious diseases, ranging from AIDS/HIV to rare zoonotic diseases. We also promote vaccinations, identify health-relevant behaviours, ensure laboratory quality across Europe, train public health epidemiologists from all over Europe, and inform our audiences about all aspects of infectious diseases.

At the end of 2018, ECDC had 267 statutory staff members engaged in disease surveillance, outbreak detection, scientific advice, information technology, communication, and administration.

A European approach to disease surveillance

ECDC operates and maintains three major systems to monitor infectious diseases across Europe. Each system is aimed at one area of disease control:

Top left: EU flags flying over ECDC

Top right: ECDC’s new building as seen from the highway

Centre right: A green and bright interior

Bottom: The daily round table meeting is hosted by the epidemic intelligence team

EWRS (threat detection, threat alerts), EPIS (epidemic intelligence), and TESSy (disease surveillance and statistics).

- The Early Warning and Response System (EWRS), which was completely redesigned in 2018, is a confidential system allowing Member States and the European Commission to share information about health events with potential EU-level impact and coordinate response measures to protect public health. In 2018, a year marked by several severe measles outbreaks, the system again proved its value as a powerful alert service.
- The Epidemic Intelligence Information System (EPIS) is a secure web-based communication platform that lets scientists and public health experts exchange epidemiological information.
- The European Surveillance System (TESSy) is a large-scale database system for disease data. EU/EEA countries regularly report their national data on infectious diseases to TESSy. Based on these data, visitors to the online ECDC Surveillance Atlas of Infectious Diseases can generate up-to-date surveillance reports and interactive maps.

In addition, ECDC supports the work of the European Commission and the Member States in the EU Health Security Committee, which functions as an advisory group on health security at the European level.



Klebsiella pneumoniae KPC-1 carbapenemase detection kit. Gram-negative resistance could become a massive issue for treatment in the next few years. There is very little in drug company pipelines to combat these organisms

ECDC's Disease Programmes: keeping track of disease epidemiology

With data on almost 60 diseases and health topics such as antimicrobial resistance from all EU Member States, ECDC's scientists are able to paint a detailed picture of the current (and historical) epidemiological situation in Europe. The Centre

monitors disease trends and suggests measures for disease and outbreak prevention. ECDC's work on diseases is grouped into 'Disease Programmes'.

Antibiotic-resistant bacteria and Europe's rising health burden

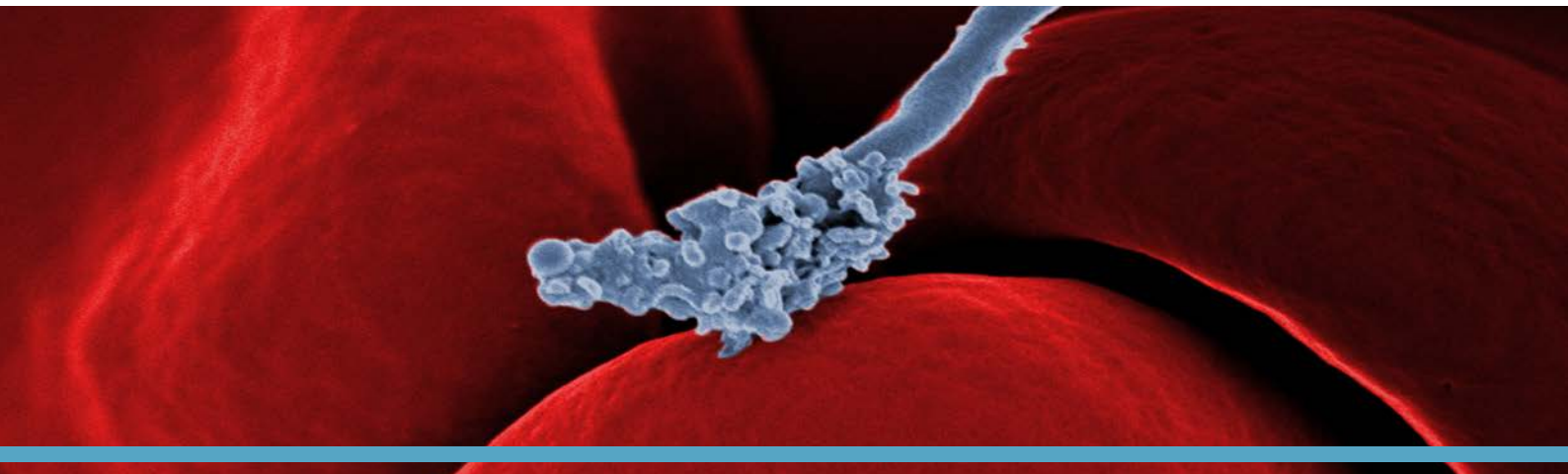
Antimicrobial Resistance and Healthcare-Associated Infections (ARHAI Programme). When ECDC began working on a new study to assess the health burden caused by infections with antibiotic-resistant bacteria in the EU/EEA, ECDC's experts looked at the latest European data sets, checked them for quality, and settled for a rather conservative estimate. The study chillingly concluded that about 33 000 Europeans die every year as a direct consequence of infections with antibiotic-resistant bacteria. Many of these infections are hospital acquired.

Two surveys published on European Antibiotic Awareness Day 2018 show that the prevalence of healthcare-associated infections and antimicrobial use varies considerably between countries. The big picture is even more disconcerting: with 8.9 million cases occurring each year in hospitals and long-term care facilities, Europe faces a problem of enormous magnitude.

On any given day, one in three patients in the EU receives at least one antimicrobial. Not all of these drugs are medically necessary, and prescribing them contributes to the spread of AMR. To work on this, ECDC brought together several surveillance networks in a conference; 300 representatives from the Member States attended.

Over the course of the year, ECDC experts visited their counterparts in Bulgaria, Norway, and the United Kingdom to discuss AMR issues.

ECDC continues to act as a key contributor to the Transatlantic Taskforce on AMR and contributed to the EU Joint Action on AMR and HAI. These activities are reflected in detail on ECDC's website.



What's a vector? And can it make me sick?

Emerging and Vector-Borne Diseases (EVD Programme). The term 'disease vector' usually refers to arthropods (mosquitoes, flies, sandflies, lice, fleas, ticks, and mites) that carry and transmit infectious microorganisms into other living organisms.

One such disease is West Nile fever, caused by a virus typically spread by infected mosquitoes. Compared with the situation only a few years ago, the numbers for West Nile fever cases increased substantially. In 2018, ECDC was monitoring the largest West Nile virus outbreak in Europe so far. European countries reported more than 2 000 locally transmitted human infections in 2018, a number that easily exceeded the combined total from the previous seven years (1 832 cases).

Weekly updates and maps on West Nile virus infections in Europe are available on the ECDC website; ECDC also publishes maps on the distribution of various species of mosquitoes, ticks and sandflies that are disease vectors for humans and animals. A field study on vector control strategies for West Nile fever in Europe, piloted in 2017, was carried out in 2018. In addition, three field studies on invasive mosquitoes control were conducted; these mosquitos can carry pathogens that cause dengue, chikungunya and Zika fever.

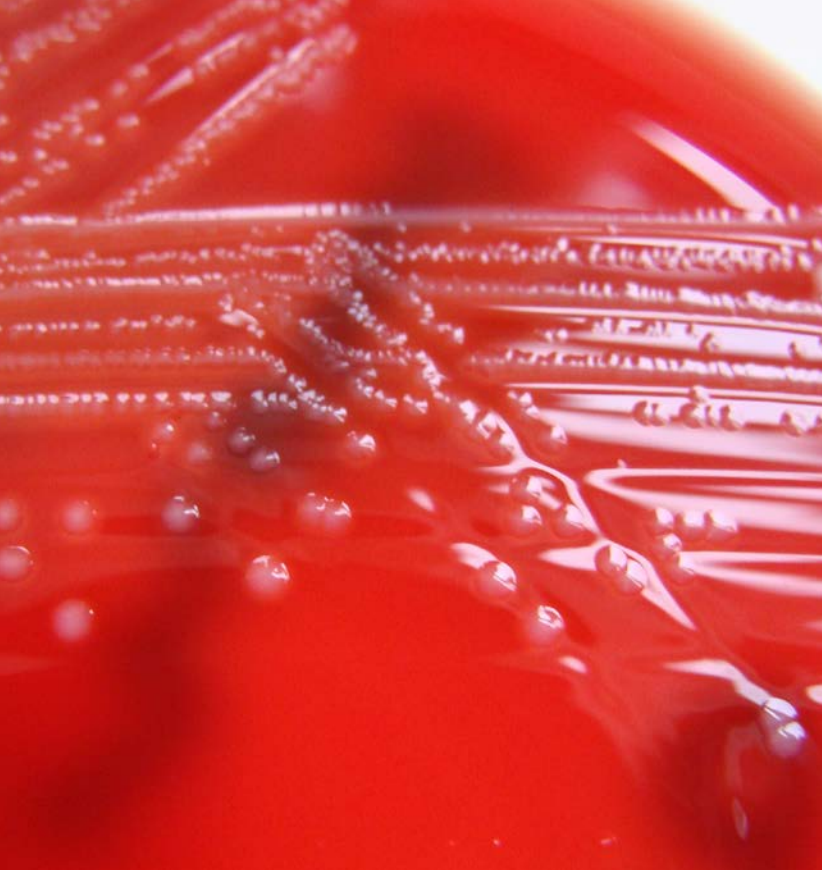
After many years with only a few reported cases, dengue fever made its way back to Europe, with more than 3 000 cases reported over the last three years. Most cases were imported, but in areas where infected *Aedes* mosquitos are present, local transmission is possible: in early October 2018, nine cases of autochthonous dengue were confirmed in the EU, three in Spain and six in France, in three separate outbreaks.

Together with the European Food Safety Authority (EFSA), ECDC continued to collect data on arthropod (insects and near relatives) vectors of human and animal diseases and published updated vector maps on its website to show their distribution and progression in Europe.

The Centre is also aware of the risk posed by diseases that so far have not caused outbreaks in Europe. For example, the Centre prepared several rapid risk assessments in connection with the Ebola outbreaks in Africa: is there a risk of importation, are European citizens in danger? The answer, in 2018, was a reassuring 'No'.

Top left: Not all mosquitoes are disease vectors

Bottom: Borreliae bacteria. Relapsing fever borreliosis is a vector-borne disease characterised by recurring high fevers, muscle aches and nausea. The disease is transmitted through the bites of lice or soft-bodied ticks; in Europe, the disease is found in parts of the Mediterranean.



Sometimes, ‘Boil it, peel it, cook it, wash it or forget it!’ is just not enough

Food- and Waterborne Diseases and Zoonoses (FWD Programme). EPIS-FWD is ECDC’s epidemic intelligence information system for food- and waterborne diseases. The number of urgent inquiries on EPIS-FWD climbed from 53 in 2017 to 77 in 2018, a small but noteworthy increase. One particularly serious outbreak was caused by *Listeria monocytogenes*, which resulted in several fatalities. To further investigate this outbreak, ECDC and EFSA joined forces and arranged for whole genome sequencing of the pathogen. The results confirmed that a batch of frozen vegetables was the likely source of the outbreak.

In another collaborative effort, ECDC and EFSA published two comprehensive reports: one on trends and sources of zoonoses, zoonotic agents and foodborne outbreaks (2017 data), and one on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals and food (2016 data).

ECDC invited participants from six countries to a preparedness workshop on multi-country food safety and public health incidents. The Centre also operates a professional exchange programme for experts in food- and waterborne diseases.

On the technological front, ECDC broke new ground by conducting the first cluster analysis with data retrieved from the TESSy molecular typing database.

ECDC funded several external quality assessments (EQAs). EQAs monitor laboratory performance by submitting identical samples to laboratories across Europe. The accuracy of results is compared, and each laboratory receives a scorecard detailing its performance. EQAs have proved to be key tools to improve laboratory performance. In 2018, ECDC organised EQAs for *Listeria*, *Salmonella*, *Campylobacter*, and STEC. In addition, the Centre organised a proficiency test for *Listeria monocytogenes* whole genome assembly.

Top left: Listeria monocytogenes on Columbia horse blood agar and the man after whom it was named, Dr Joseph Lister (1827 – 1912)

Bottom right: DNA sequence reads



Brighton Pride, 2018: Can't pass it on, won't pass it on.

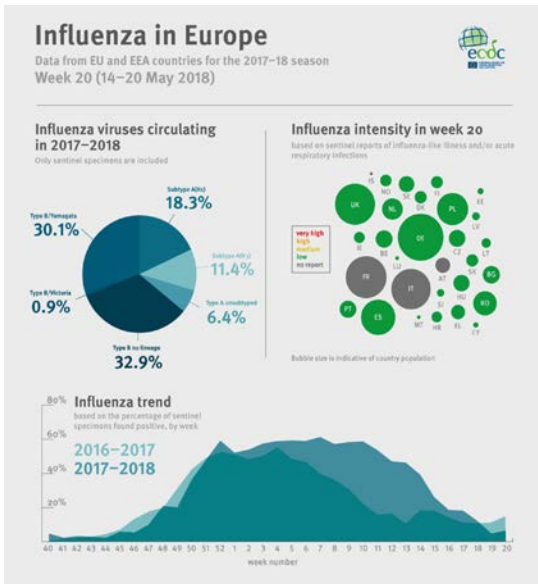


HIV prevention: prophylactics and pre-exposure prophylaxis

HIV, Sexually Transmitted Infections and Viral Hepatitis (HASH Programme). The third UN Sustainable Development Goal singles in on health and wellbeing: 'Ensure healthy lives and promote wellbeing for all at all ages.' Monitoring progress towards this goal in the area of HIV/AIDS can be a daunting task. At the 2018 HIV surveillance network meeting, ECDC and WHO, with significant involvement of UNAIDS, wanted to give disease experts an opportunity to probe deeper into the question how progress towards the third Sustainable Development Goal could be objectively measured. Similar work was conducted regarding the Dublin Declaration (which sets an ambitious agenda for HIV/AIDS): HIV response monitoring was reviewed and aligned with the targets of the Sustainable Development Goals.

The Programme also:

- launched its HIV estimates accuracy modelling tool;
- piloted a new surveillance system for HIV drug resistance in nine EU countries;
- organised, jointly with UNAIDS, an expert meeting on the delivery of pre-exposure prophylaxis;
- published an integrated HIV, hepatitis B and hepatitis C testing guidance;
- launched the first interactive online database for prevalence studies on hepatitis B and hepatitis C; and
- piloted a new seroprevalence survey protocol for hepatitis C to assess the true burden of the disease in three countries.



A vaccine for every season

Influenza and other Respiratory Viruses (IRV Programme). Every year, we need a new flu shot because different strains of influenza circulate annually. A vaccine that protects against the strains that circulated during the last flu season will not confer immunity to this year's new strain. While a universal vaccine that protects against seasonal flu for years seems to be possible, its actual introduction might be years away. In the meantime, getting the latest flu vaccine is the best we can do for our and everybody's protection.

Respiratory diseases associated with seasonal influenza claim about 40 000 lives every year in the WHO European Region. Despite these dramatic numbers, only a small portion of the population gets vaccinated. Over 75% of these deaths are among people aged 65 years or above, but vaccine uptake still remains low in this at-risk group. About half the countries in the WHO European Region are vaccinating fewer than one in three older people. Even among healthcare workers, vaccination rates are well below 50%.

Every season, ECDC and the WHO Regional Office for Europe publish weekly figures on influenza surveillance. The published data clearly support ECDC's extensive work in this field: influenza remains a major threat to public health, and vigilance is of the essence.

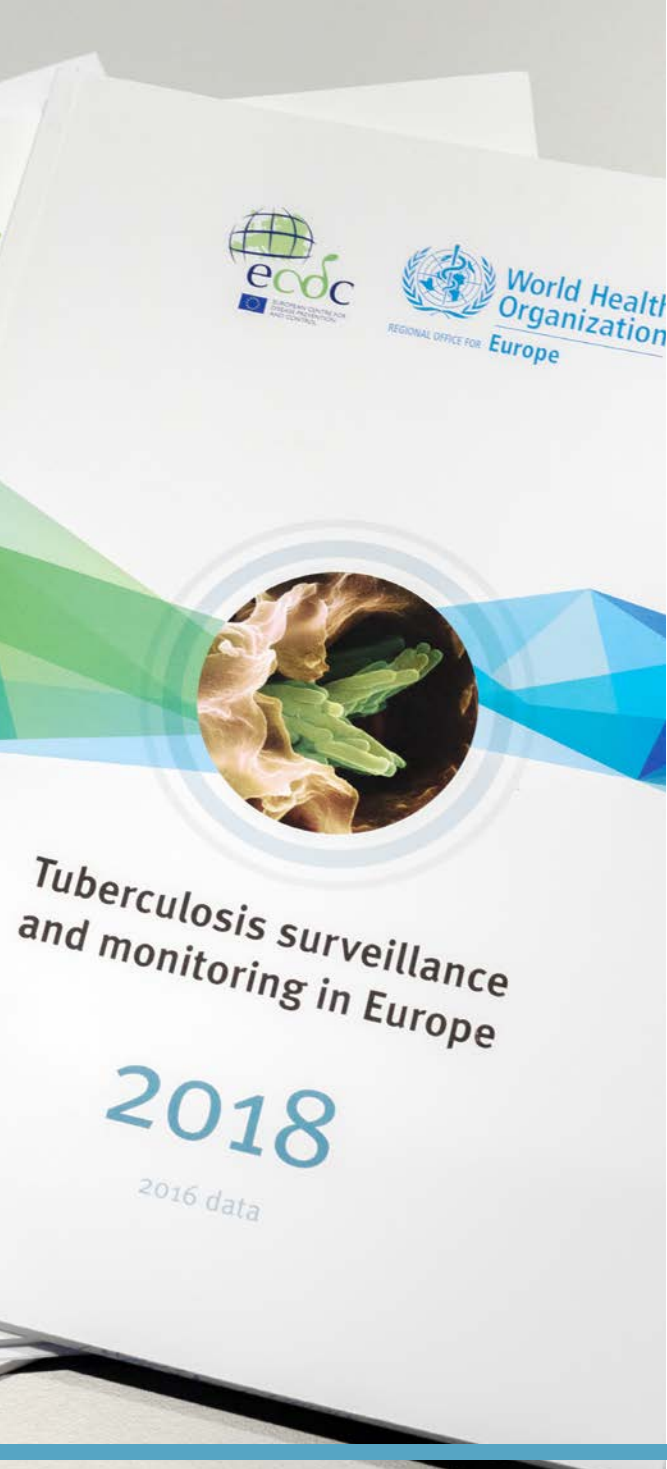
Avian influenza is another important aspect of the Programme's work. As in the years before, ECDC and EFSA published quarterly joint situation assessment reports on avian influenza. The Centre released a report on influenza vaccination policies and

coverage, which again confirmed that vaccination coverage among the elderly in Europe is too low. In another report, the Programme estimated that vaccine effectiveness between 2015 and 2018 hovered around the 40% mark.

The Centre conducted a review of national pandemic preparedness plans, pointing out shortcomings and suggesting remedial measures. Surveillance of severe disease courses and genome-based surveillance was added to routine influenza surveillance – a major boost to surveillance quality. The surveillance systems for influenza and SARS underwent an evaluation, and the Influenza and other Respiratory Viruses Programme itself was evaluated in order to track its output quality and effectiveness.

ECDC drafted an opinion on non-pharmaceutical interventions during a pandemic; most interventions, the document concluded, show only limited evidence of efficacy.

*Top: Influenza vaccination. One little jab... and done
Bottom left: Weekly influenza infographic
Bottom right: 'Kills bird flu'? If only it were so easy.*



ERS EUROPEAN
RESPIRATORY
SOCIETY
every breath counts



**European Union Standards
for Tuberculosis Care**
2017 update

Can we eradicate latent TB?

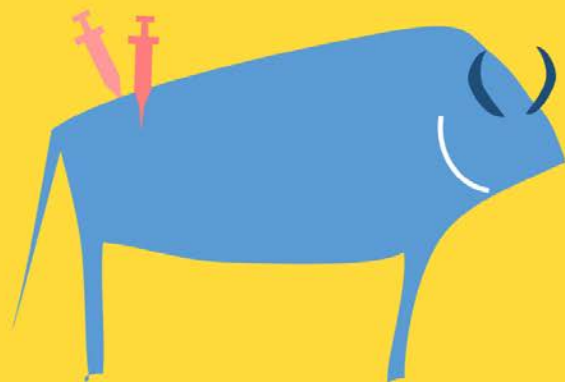
Tuberculosis (TB Programme). Latent TB infection affects every seventh person in the WHO European Region. One-tenth of infected people become ill with active TB during their lifetimes. The Centre's guidance document on programmatic management of latent TB therefore fills a critical gap in European TB prevention efforts.

A comprehensive picture of the epidemiological situation of TB can be found in the 2018 annual report on *Tuberculosis surveillance and monitoring in Europe*. The report, a joint project of ECDC and the WHO Regional Office for Europe, was released ahead of World TB Day, 24 March 2018.

As part of a three-year project, ECDC supported five TB high-priority countries (Bulgaria, Estonia, Latvia, Lithuania, and Romania) through exchange visits and training courses. The project will be continued and extended in 2019, addressing TB-related needs in additional Member States. Also directed at very tangible needs in the Member States are the updated *European Union standards for tuberculosis care*, which were published in 2018 and translated into all official EU languages.

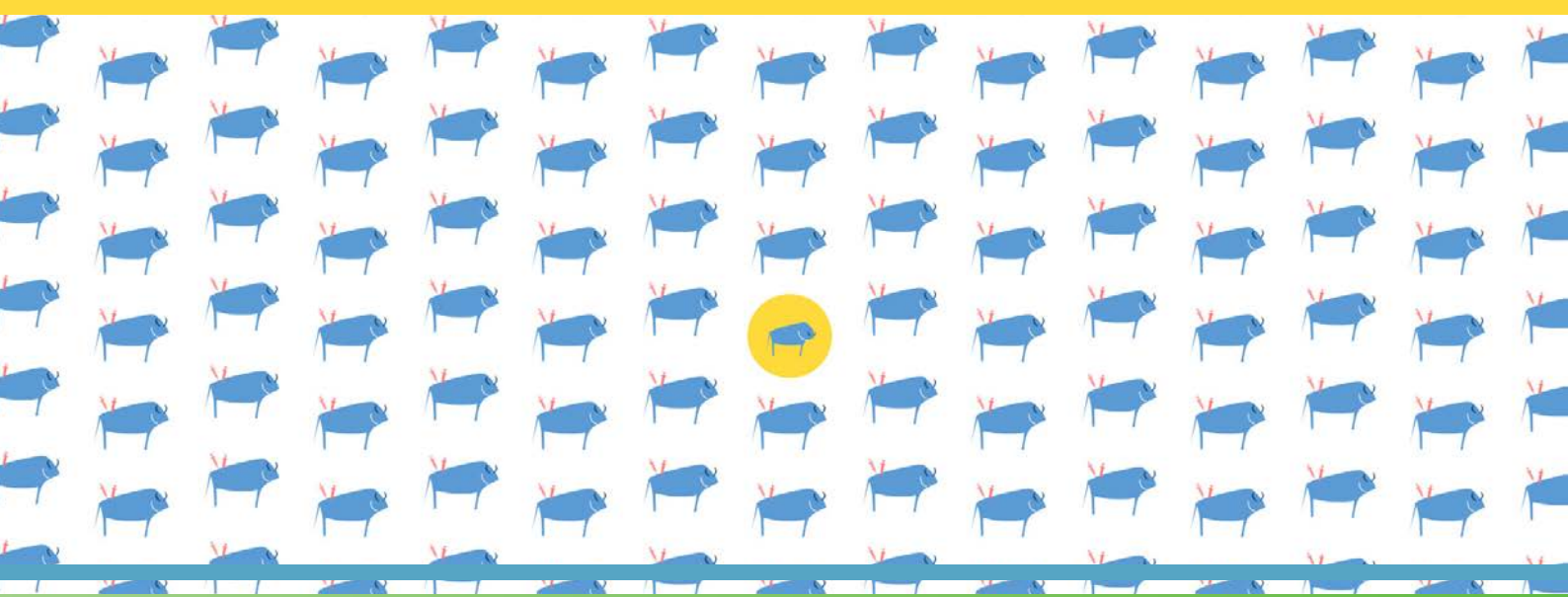
In April, ECDC launched a project collecting evidence for whole genome sequencing for tuberculosis. The project is another example of the growing use of whole genome sequencing in diagnosis and disease surveillance.

*Left: The new design of the tuberculosis report, a joint project of ECDC and the WHO Regional Office for Europe.
Right: 'Every breath counts': updated EU standards for TB care. ECDC published the document in all EU/EEA languages*



The last week of April is European Immunisation Week

Find out more at www.ecdc.europa.eu



The biggest success story ever

Vaccine-Preventable Diseases (VPD Programme).

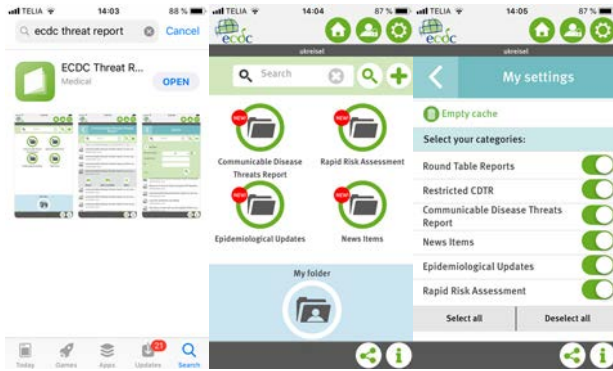
Vaccines are one of the greatest public health achievements. They have dramatically decreased the disease burden of communicable diseases, and there is reasonable hope that even more diseases will soon become vaccine preventable. Unfortunately, many vaccinations have become victims of their own success. As some vaccine-preventable diseases have declined or even disappeared, some people think that skipping a booster shot – or missing the vaccination altogether – will have no negative consequences. The many outbreaks of measles in 2018 demonstrated that this is clearly not the case. With rapid risk assessments on measles outbreaks and monthly updates of its measles and rubella monitoring reports, ECDC vocally supports the WHO measles elimination goal.

In 2018, the VPD Programme provided technical evidence and scientific input for a Council Recommendation on vaccination presented in April and adopted in December. ECDC established a collaboration process to support so-called NITAGS, national immunisation technical advisory groups, with the objective to strengthen scientific collaboration and exchange across Europe.

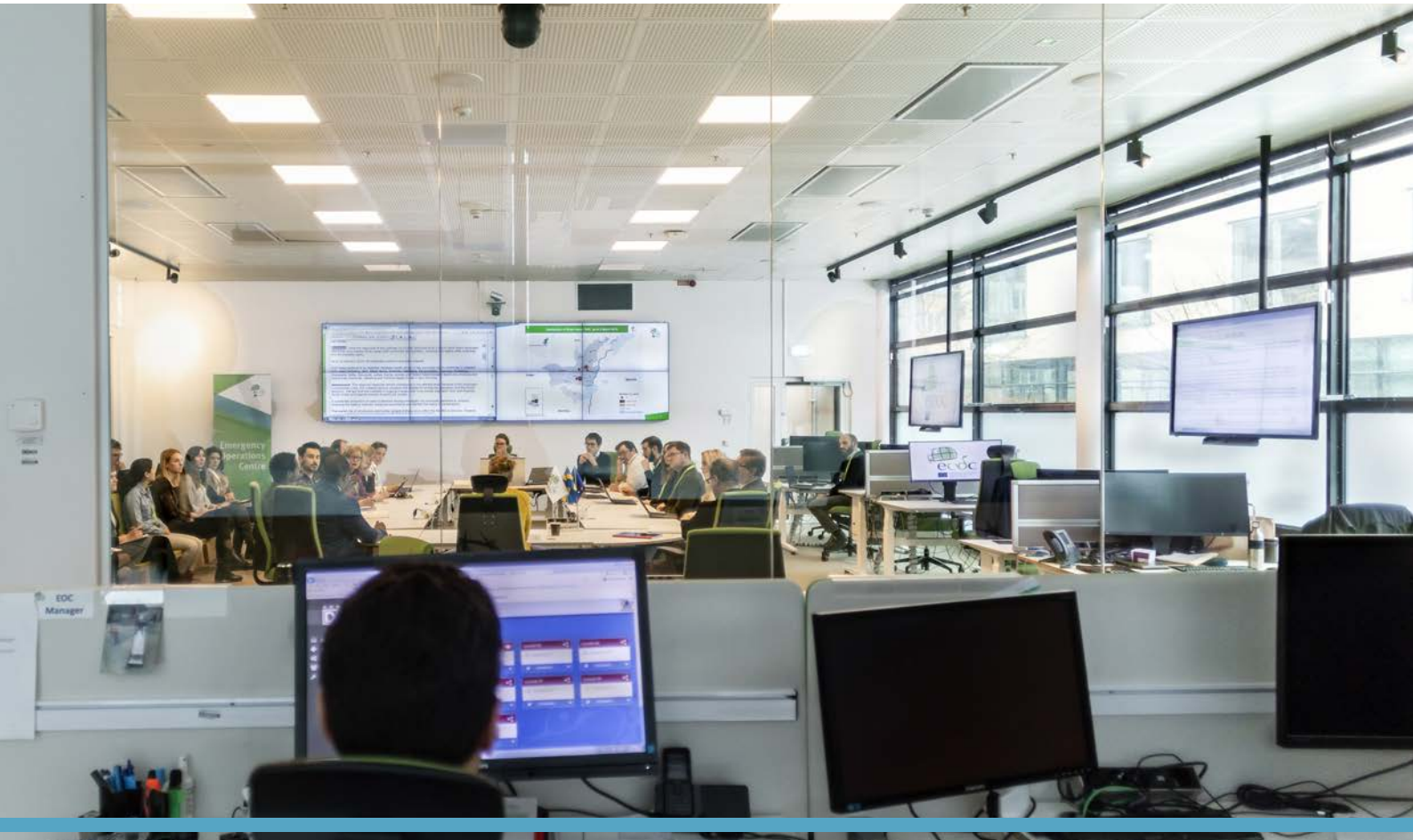
At a more practical level, ECDC published a handbook on the design and implementation of immunisation information systems and fine-tuned its surveillance system for pertussis and invasive pneumococcal disease. The EU Vaccine Scheduler continued to be one of the most visited features on ECDC website.

*Top left: Promoting European Immunization Week
Bottom left: Visualising herd immunity
Right: Video tweet*





Left: Screenshots from ECDC's mobile app Threat Report
Bottom: ECDC's new Emergency Operations Centre



A fact-driven approach to Europe's public health

Disease surveillance

The sheer amount of epidemiological data submitted by our partners requires a rock-solid IT infrastructure. To process the increasing amount of disease data and stay abreast of technological developments, ECDC launched a reengineering project for its surveillance systems in 2018.

ECDC continued the EPHESUS project. EPHESUS, which stands for *Evaluation of European Union/ European Economic Area public health surveillance systems*, assesses 52 disease surveillance systems in 30 countries. In addition to standard surveillance, the project also covers ECDC-funded laboratory services, routine molecular/geometric typing and infectious disease event monitoring.

In 2018, ECDC's interactive online Surveillance Atlas of Infectious Diseases included data on 56 diseases and disease topics. Users can select individual data sets and generate customised disease maps. In 2018, data on antimicrobial consumption were added, giving a clear – and very visual – indication of the importance of using antibiotics prudently.

ECDC experts helped with the preparation of the implementing act to Decision No 1082/2013/EU on cross-border threats to health by providing case definitions for diseases such as Lyme neuroborreliosis, dengue, chikungunya and Zika.

Whole genome sequencing (WGS) is rapidly changing the way we conduct disease surveillance and collect data. In 2018, the Centre reached an agreement with the Member States on how to analyse, exchange and store WGS pathogen data across Europe.

Epidemic intelligence

In 2018, 377 disease events were detected through epidemic intelligence. An 'event' can be a major outbreak such as Ebola in West Africa or a relatively small cluster of Legionnaires' disease on a cruise ship in Europe. Several European outbreaks would have never been detected in the absence of novel approaches: ECDC's use of social media and crowd sourcing technologies is able to detect outbreak indicators that otherwise would go unnoticed. We also engage in monitoring mass gathering events, using a similar approach.

Surveillance reports are disseminated through our website, but an increasing number of users have installed ECDC's Threat Report app for mobile devices and already downloaded over 25 000 documents since its release.



*Top: Interior shot of the new ECDC building
Bottom left: Meeting of the ECDC Advisory Forum
Bottom right: The new building offers formal and informal meeting space*



Preparedness

Preparedness is a cornerstone of public health. ECDC helps EU Member States to establish and adjust response mechanisms to prevent, respond to, and recover from public health threats, thus safeguarding Europe's public health in the area of communicable diseases.

In 2018, an ECDC team helped Romania develop a national preparedness plan for public health emergencies. ECDC also provided technical support to the European Commission on a number of tasks linked to the implementation of Article 4 of Decision No 1082/2013/EU on serious cross-border threats to health.

Preparedness at a hands-on level was demonstrated by the release of HEPESA, ECDC's Health Emergency Preparedness Self-Assessment tool that lets countries conduct an 'emergency readiness' audit.

Other activities included a community preparedness report, a training course on bio-risk awareness, and a one-day simulation exercise. The Centre also published a guidance document on how to draw best-practice recommendations from exercises, reviews and assessments.

Response

Risk assessments heavily rely on the quality of the disease data received by the Centre and the experts who analyse them.

To ensure quality, ECDC involves infectious disease specialists from affected Member States in the production of its rapid risk assessments. Enlisting external expertise used to be a rather complicated process, but after an in-depth review the Centre managed to simplify its procedures for external disease experts from the Member States. A large part of the Centre's 35 rapid risk assessments and 16

epidemiological updates produced in 2018 already benefitted from the updated procedure.

At the technological front, the Centre released a redesigned and vastly improved version of the EWRS (Early Warning and Response System) in September 2018.

Field interventions outside of Europe take place if the situation calls for it. In 2018, one of our experts went on a response mission to the Democratic Republic of Congo to support surveillance measures coordinated by the Directorate-General for European Civil Protection and Humanitarian Aid Operations.

Scientific advice

Scientific advice covers all areas of public health. Following ECDC's open-access policy, research outputs are distributed through the Centre's website, free of cost.

In 2018, ECDC received 31 requests for advice from the European Commission and the European Parliament. More than two hundred scientific documents were published on the ECDC website, including five large public health guidance documents; another 86 scientific papers written by ECDC scientists appeared in peer-reviewed journals such as *Eurosurveillance*.

Eurosurveillance, ECDC's scientific journal, was ranked fifth among infectious disease journals and reached an impact factor of 7.1 in 2018.

In November, ESCAIDE, ECDC's flagship scientific conference, attracted 600 participants from 50 countries.





Microbiology

Microbiology is one of the areas that has received a lot of attention in 2018, mainly because of rapid advances made in DNA sequencing that allow scientists to compare pathogen sequences and detect outbreaks associated with the same source. As a consequence, ECDC revised its roadmap for molecular typing; the roadmap now explores what impact molecular typing will have on European disease surveillance.

Molecular typing generates vast amounts of data and requires a high level of computational power. ECDC's microbiologists proposed a common European platform for sequence-based data management and analysis. When implemented, this will amount to a paradigm change in disease monitoring, particularly with regard to multi-country outbreak investigations here in Europe.

Another area that our microbiology team looks at is laboratory capacity and quality control. ECDC regularly assesses the quality of laboratories across Europe in so-called EQAs, external quality assessments. ECDC's EULabCap methodology offers a finely tuned set of tools that are used to assess the quality and efficiency of laboratories. In the latest EULabCap report, the performance index reached an encouraging 7.5 points out of 10, showing 'fair to high capacity levels' as well as shrinking capacity gaps between countries.

All activities in this area are based on ECDC's *Strategy for the external quality assessment of public health microbiology laboratories*. This strategy is constantly updated due to the rapid developments in the field. The last version of the Strategy was published in June 2018.

Left: CTTGACCACC... DNA sequence read



Connecting with Europe's public health community

Public health training

The **ECDC Fellowship Programme** prepares field epidemiologists (EPIET) and microbiologists (EUPHEM) to be able to intervene in cross-border outbreaks and other threats to public health. It connects many European public health organisations at a professional, and often also personal, level.

In 2018, 37 fellows graduated from the Programme, with another 434 participants attending courses through ECDC's continuous professional development activities. While some courses require physical presence, the courses of the ECDC Virtual Academy (EVA) can be taken online. In 2018, four new online courses were released, and others were updated.

The main emphasis of ECDC's training programme is on its own courses and seminars, but the Centre also monitors educational activities in the European public health sector: a survey conducted among members of the Association of Schools of Public Health in the European Region showed that offerings in the field of communicable disease prevention and control are becoming increasingly comprehensive.

Top left: Dame Sally Claire Davies, Chief Medical Officer for England, at ESCAIDE 2018 in Valletta, Malta

Bottom left: Discussing the latest hepatitis B figures

International relations and country support.

ECDC maintains an extensive professional network. Relations between the WHO Regional Office for Europe and ECDC have been traditionally strong. In 2018, co-branding was extended to all joint ECDC–WHO Europe products (reports, press releases and presentations). In 2018, ECDC received official visits from the Chinese Center for Disease Control and Prevention and the Africa Centres for Disease Control and Prevention.

Pre-accession countries are another focus of activity. When ECDC used an adapted EULabCap methodology for a capacity check, the results showed a clear need for additional laboratory capacity in this group of countries.

ECDC was instrumental in creating an action plan for Ukraine, an EU neighbourhood country. The Centre also assisted North Macedonia in developing a country plan to follow up on assessments already performed in 2015 and 2016.

ECDC's country support mechanism arranged training courses on vaccine acceptance, infection control and patient safety, and supported the production of national preparedness plans. Upon request from the European Commission, ECDC assessed the systems for communicable disease surveillance in the Kosovo*.

** This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.*

Public health communication

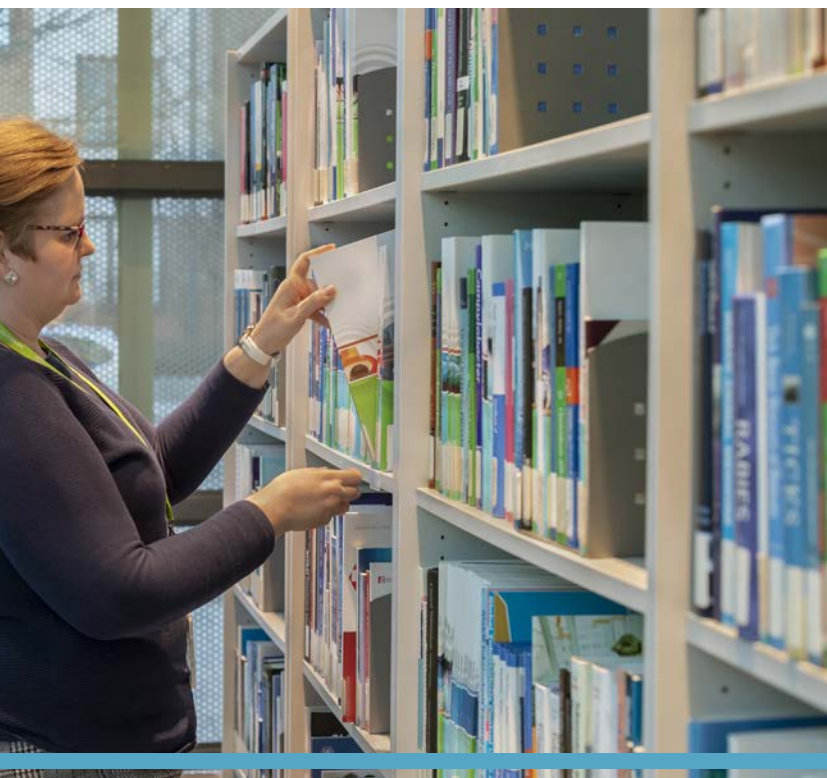
Many of our communication activities are aimed at the European public health community, mainly public health experts, scientists and journalists. In 2018, the Centre released 214 publications for this target group, in a well-balanced mix of in-depth research reports and rapid risk/evidence assessments. The Centre also runs several Twitter accounts, with a growing number of followers (plus 19% in 2018), many of them outside the public health community.

Throughout 2018, antimicrobial resistance, West Nile fever, measles and Ebola remained of high interest, and many of our publications reflected that.

The Centre's health campaigns – aimed at public audiences – centred around public awareness days: ECDC developed communication materials for European Antibiotic Awareness Day, World TB Day, European Immunization Week, and World AIDS Day.

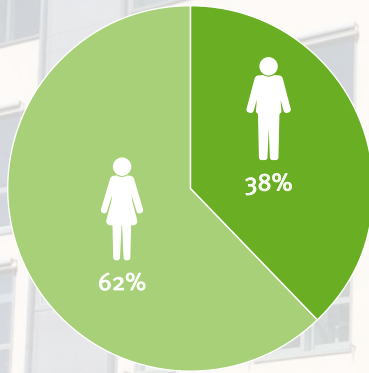
Left: In addition to the regular collection, the ECDC library houses a complete archive of ECDC reports

Right: Cross-sectoral meeting ahead of World Hepatitis Day



ECDC in numbers

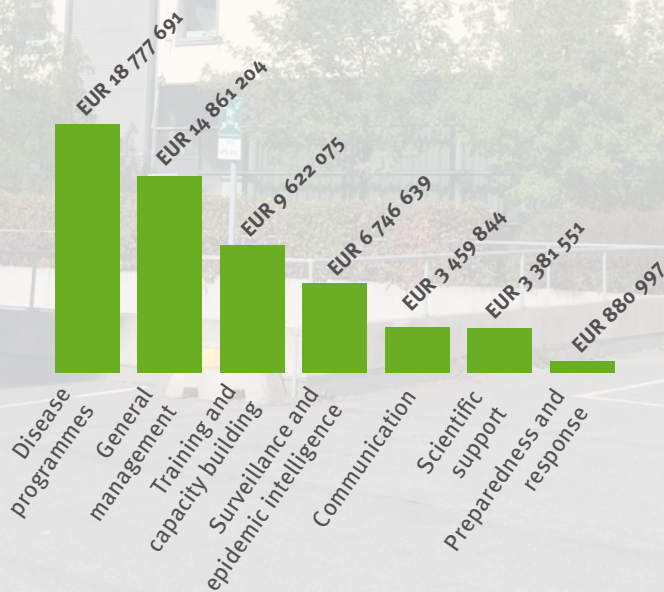
ECDC gender balance



ECDC staff by home country



2018 budget



As of 31 December 2018, ECDC had a total of 267 statutory staff members.

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