



ECDC PUBLIC HEALTH TRAINING

Continuous professional development training activities

Course listing 2019

Introduction

Continuous professional development activities at ECDC aim to meet the institutional needs of the Coordinating Competent Bodies of Member States to sustain a competent workforce that is sufficiently skilled to effectively address cross-border health threats.

The legal basis for ECDC's activities in this area are the Centre's Founding Regulation (EC) No 851/2004 and Decision (EU) No 1082/2013 on Serious Cross-Border Threats to Health. The ECDC Public Health Training Strategy, endorsed by the ECDC Management Board in June 2015, presents continuous professional development as one of the two core training efforts of ECDC, the other being the ECDC Fellowship Programme (EPIET/EUPHEM).

ECDC continuous professional development training activities for 2019

ECDC's offerings for continuous professional development are directed at professionals in the Member States engaged in communicable disease control with cross-border relevance. These training activities seek to improve the capacities and competencies of the workforce of the national public health institutions in order to improve their response to public health threats from infectious diseases in EU/EEA countries. Public health aspects covered are preparedness, prevention, detection, assessment and control, and communication.

This document presents ECDC's continuous professional development activities to inform ECDC's primary stakeholders about the 2019 course offerings. The list is not exhaustive and can be subject to changes.

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What can I find in this document?

A general overview and a detailed outline of existing and planned learning activities are presented even if they are in the very early stages of planning (see box below). Every activity is coordinated by an ECDC team, and many activities are cross-cutting through the Centre.

Most e-learning activities are free and open to anyone. However, most face-to-face trainings are targeted to professionals in ECDC Disease Programmes and functional area networks. Participation in these activities is through the proposal of the focal point of the respective Disease Programme or functional area within the framework of how ECDC works with the Coordinating Competent Bodies of the Member States.

Categories of CPD offerings

- Face-to-face training
 - Short courses
 - Simulation exercises
- E-learning
 - E-learning courses
 - Webinars
- Professional exchange visits
- Training materials for trainers

Who can benefit from our trainings?

ECDC's activities in the area of continuous professional development are targeted at public health professionals identified by ECDC Coordinating Competent Bodies (CCB), with the aim to build public health capacity in the Member States. Proposals to participate in continuous professional development are always channelled via the CCB (see box below).

Key terms explaining the process of interaction between EU/EEA Member States and ECDC

Coordinating Competent Body (CCB): a CCB is a dedicated contact point for collaboration between Member States and ECDC.

Each Member State has a CCB Director and a CCB National Coordinator, who serves as the overall coordinator and point of contact between the Member State and ECDC for all communication on technical and scientific issues.

Other key players of the CCB are National Focal Points for disease Groups and for public health functions.

The National Coordinator may further identify Operational Contacts Points with special expertise.

National Focal Points for Training (NFPT) are the point of contact for training activities.

Rationale of our activities

Activities are based on training needs as expressed (and prioritised) by the countries through the Coordinating Competent Body and the National Focal Points.

ECDC develops and uses European-wide competency-based frameworks in specific fields of communicable disease prevention, preparedness, detection, assessment and control of public health threats with a cross-border dimension.

The activities seek to be complementary to, and supportive of, the training activities of other national actors, including institutes of public health, universities and schools of public health, and add European value to national efforts.

The offerings are designed by experts at ECDC (domain-specific ECDC Disease Programmes and public health function sections) or through collaboration of external experts.

ECDC routinely applies for course accreditation from the European Council of Continuing Medical Education (EACCME, <http://www.eaccme.eu/>) and the Agency for Public Health Education Accreditation (APHEA; <http://aphea.net/>).

Ultimately, ECDC's continuous professional development activities strive to encourage knowledge transfer, and participants are given access to all training materials. Materials can be adapted and translated to meet the needs of the Member States.

All courses are delivered in English.

For updates, please visit EVA (ECDC Virtual Academy) at <https://eva.ecdc.europa.eu/> and the ECDC website at <https://ecdc.europa.eu/en/training>.

Feel free to contact us at courses@ecdc.europa.eu.

Follow us on Twitter@ECDC_EU.

Like our Facebook page at www.facebook.com/ECDC.EU.

Overview of ECDC continuous professional development activities and training materials

Face-to-face short courses

Title	Duration	Date	Location
Winter workshop first edition The science of using science to support policymaking for prevention and control of communicable diseases	3 days	6-7 February 2019	Stockholm, Sweden
ECDC Summer School 2019 – advocacy and qualitative methods in the area of communicable disease prevention and control	5 days	10-14 June 2019	Stockholm, Sweden
Control of multidrug-resistant microorganisms in healthcare settings	3 days	17-19 September 2019	Stockholm, Sweden
Public health genomics workshop	2 days	23-24 October 2019	Stockholm, Sweden
Cross-sectoral biorisk awareness and mitigation training	1.5 days	5-6 June 2019	Budapest, Hungary
ECDC outbreak investigation questionnaire tool – Voozanoo (response and emergency operations)	TBD	TBD	TBD
Tuberculosis, large capacity building workshop	2 days	18-20 February, 2019	Bucharest, Romania
Tuberculosis, small capacity building workshop	TBD	TBD	TBD
ECDC laboratory trainings in the areas of invasive bacterial diseases and pertussis	TBD	TBD	TBD
Emerging and vector-borne diseases – LabNet course	TBD	TBD	TBD
Wet lab course – Influenza and other Respiratory Viruses Programme	TBD	TBD	TBD
ECDC rapid risk assessment training	TBD	September 2019	TBD
Ad hoc training (only as needed) during emergencies (pandemic clause) – Influenza and other Respiratory Viruses Programme	TBD	TBD	TBD

Simulation exercises

Title	Date	Location
Simulation exercise for an emerging threat (regional) – Decision (EU) No 1082/2013	TBD	To be announced

E-learning courses

Availability	E-learning courses
On EVA	Introduction to outbreak investigations
	Introduction to rapid risk assessment
	Epidemic intelligence; available on the ECDC website
	Writing and reviewing scientific abstracts: a field epidemiology focus
	Cross-border sharing of health data
	PRECEPT – a framework for assessing and grading evidence in public health
	Influenza vaccination campaigns targeting healthcare workers
Coming in 2019	Influenza bioanalytics
	Non-pharmaceutical countermeasures against pandemic influenza
	Simulation exercise training

Webinars

Title	Date
Healthcare-Associated Infections Network (HAI-Net): surgical site infection surveillance webinar series (surveillance wave September–November 2019)	September–November 2019 (tentative)
Using EPIS-FWD (Epidemic Intelligence Information System for Food- and Waterborne Diseases and Zoonoses)	To be announced

Professional exchanges

Title	Duration	Location
Senior Exchange Initiative 2019 – in technical areas where ECDC contributes to capacity building to address communicable diseases	1–2 weeks	Exchanges with the European Union (EU) and European Economic Area (EEA) Member States
Food- and Waterborne Disease Expert Placement Programme	2–5 days	Placements with the European Union (EU) and European Economic Area (EEA) Member States
Emerging and Vector-borne Disease Programme (EVD) – twinning visits	2–5 days	Exchanges with the European Union (EU) and European Economic Area (EEA) Member States
Immunisation information systems twinning	2–5 days	Exchanges with the European Union (EU) and European Economic Area (EEA) Member States
ECDC laboratory twinning in the areas of invasive bacterial diseases and pertussis	2–5 days	Exchanges with the European Union (EU) and European Economic Area (EEA) Member States
Tuberculosis: staff exchange visits	2–5 days	Exchanges with the European Union (EU) and European Economic Area (EEA) Member States

Training materials for trainers

Availability	Training materials
On EVA	Development, implementation and evaluation of prudent antibiotic use campaigns
	Legionnaires' disease: risk assessment, outbreak investigation and control
	Epidemiological aspects of vaccine-preventable diseases
	Point prevalence survey training of healthcare-associated infections and antimicrobial use in acute care hospitals
	Control of multidrug-resistant microorganisms in healthcare settings
Coming in 2019	Simulation exercises, training materials
Subject-specific wiki spaces	Resources in wiki format

Detailed description of continuous professional development activities

Short courses

ECDC winter workshop 2019, first edition	
Scheduled for	6-7 February 2019, Stockholm, Sweden
Target audience and prerequisites	Public health specialists, who as part of their professional responsibility, are informing policymakers in the area of communicable diseases and who commit, as one step towards strengthening the capacity of institutional structures and processes guiding evidence-informed decision-making, to cascade knowledge gained from the course in their professional setting.
Objectives/intended learning outcomes	<p>The overall aim is to strengthen capacity in the application of scientific principles and concepts to inform and influence policymaking decisions related to the prevention and control of communicable diseases among public health specialists.</p> <p>The objectives are as follows:</p> <ul style="list-style-type: none"> • Identify research evidence as one of many factors that can influence policymaking • Describe and interpret the main challenges public health professionals encounter in their Member States to use science to inform policymakers at the national or local level • Share examples, from their own experience, of interventions that have effectively informed policymaking for detection/assessment, preparedness, response/control or recovery in the field of infectious diseases • Identify relevant resources and tools to identify and evaluate different kinds of evidence, especially systematic reviews and high-quality single studies • Identify evidence-based mechanisms to enhance and support the use of research evidence in policymaking, including communication strategies • Design contextually appropriate KTE strategies to enhance and support the use of research evidence to inform policymaking in their Member State, integrating communication approaches • Prepare an activity to cascade learning in their institutions or country of origin based on the content of the workshop.

ECDC winter workshop 2019, first edition	
Description	<p>This blended course is practical and activity-based, centred on participants' own experience in the domain of public health policy. The EVA (ECDC Virtual Academy) will be used for communication and administrative purposes, as it is a blended training.</p> <p>The full course comprises three modules focused on core activities and key concepts aligned with the learning objectives.</p> <ul style="list-style-type: none"> • Module 1 (pre-workshop online package) • Module 2 (workshop designed to run for three consecutive days) • Module 3 (post-workshop online package).
Selection	Participants proposed by National Focal Points for Training
Coordination	Public Health Training Section

ECDC Summer School 2019	
Scheduled for	10-14 June 2019, Stockholm, Sweden
Target audience and prerequisites	<ul style="list-style-type: none"> • Professionals with public health background who have an interest in refreshing their knowledge in prevention, preparedness, surveillance and response to cross-border health threats, and intention to transfer knowledge and skills in their setting, nationally or subnationally. • Supervisors of the ECDC Fellowship Programme (EPIET and EUPHEM): main supervisors, co-supervisors and also those that support fellows in specific projects.
Objectives/intended learning outcomes	<p>The goal of the Summer School is to strengthen the technical skills of both ECDC experts and professionals within ECDC networks, in a recurrent setting of scientific exchange on methods for communicable disease prevention and control.</p> <p>The summer school combines two different objectives corresponding to two parallel tracks:</p> <ul style="list-style-type: none"> • Track 1: Expand the skills needed to supervise and coordinate fellows. Prepare for the delivery of the introductory course content for Cohort 2019. • Track 2: Gain a better understanding of how to use advocacy and qualitative methods to improve public health outcomes as well as share and exchange experiences while creating interdisciplinary collaborations within EU Member States.
Description	<ul style="list-style-type: none"> • Track 1: Activities will focus on participants becoming familiar with the content of the introductory course and developing the skills to facilitate case studies, using concepts of adult learning and sharing teaching experiences and facilitation methods with colleagues • Track 2: Two main themes will be identified and a two-day workshop will be offered for each of the themes. Advocacy and qualitative methods for public health are the areas of interest for this year. Scientific writing will also be part of the workshops.
Selection	<ul style="list-style-type: none"> • Track 1: Supervisors and coordinators who will be facilitating the introductory course of the ECDC Fellowship Programme (EPIET and EUPHEM): supervisors, co-supervisors and professionals that support fellows in specific projects. • Track 2: Selection of participants from Member States is made through official invitation letters to the National Focal Points for Public Health Training, who are in turn invited to propose the candidates from their respective Member States.
Coordination	Public Health Training Section

Control of multidrug-resistant microorganisms in healthcare settings	
Scheduled for	17-19 September 2019: Stockholm, Sweden
Target audience and prerequisites	The target audience includes healthcare professionals with current or future responsibility for prevention and control of healthcare-associated infections working at a national or subnational level. Mid-career professionals involved in programmes to prevent healthcare-associated infections at the hospital level such as infection control practitioners, hospital physicians/specialist physicians, hospital epidemiologists, etc.
Objectives/intended learning outcomes	The aim of this three-day course is to strengthen capacity in EU Member States for control of healthcare-associated infections due to multidrug-resistant organisms (MDROs) in acute healthcare settings and to promote the broadest possible implementation of appropriate methods. The goal is to achieve team building between colleagues with similar responsibilities in control of nosocomial spread of MDROs and to share training approaches, knowledge and best practices. The objectives are to: <ul style="list-style-type: none"> • understand the most significant mechanisms of antibiotic resistance in healthcare-associated microorganisms and their accurate detection by appropriate diagnostic and confirmation methods • explain the global epidemiology and mechanisms of transmission of MDROs in hospital settings • demonstrate the risk factors for development, acquisition and infection with MDROs, including host, environment and therapeutic factors • assimilate the principles of antibiotic stewardship interventions designed to reduce the emergence and spread of MDROs in acute care settings.
Description	Three days using a blended learning format. Participative methods will be used. The self-learning component will be hosted on EVA (ECDC Virtual Academy) and completed with face-to-face activities including lectures, peer learning, problem based solving and case studies.
Coordination	Antimicrobial Resistance and Healthcare-Associated Infections Programme with Public Health Training Section

Public health genomics workshop	
Scheduled for	23-24 October 2019, Stockholm, Sweden
Target audience and prerequisites	The target audience is a mix of 20 trainees, including pairs of epidemiologists in charge of surveillance and National Reference Laboratory (NRL) microbiology experts in charge of molecular surveillance in the 10 Member States that lack whole genome sequencing (WGS) capability (NMFP 2017 survey) and/or have been asking ECDC for an opportunity to take WGS training (ECoSuM survey 2018).
Objectives/intended learning outcomes	The training objectives are to: <ul style="list-style-type: none"> • update the knowledge on public health genomics (the integration of pathogen genomic analysis for surveillance, outbreak detection and investigation) • acquire basic skills for use of open- access WGS data analytical tools applicable to national and EU genomic surveillance activities.
Description	Training is composed of: <ul style="list-style-type: none"> • principles, applications and limits of WGS for surveillance of infectious diseases and antimicrobial resistance at national level and in related ECDC operational work • practical sessions with exercises of online sequence data analysis and visualisation and interactive multidisciplinary discussions aiming at using integrated epidemiological analysis tools to contextualise and interpret WGS data for public health risk assessment. • basics of viral/microbial genomics, structure and evolution • next generation sequencing (NGS), principles of sequence comparisons, single nucleotide polymorphism (SNP) and multilocus sequence typing (MLST) analysis • principles of phylogeny: different types of trees, how to read a tree • epidemiological and phenotypic inference from WGS data • public health benefits of real-time WGS-enhanced surveillance for outbreak detection • surveillance and outbreak case studies using online visualisation tools: food- and waterborne diseases, tuberculosis, antimicrobial resistance.
Selection	Participants are proposed by National Focal Points through the National Coordinator.
Coordination	Microbiology Coordination Section with Public Health Training Section

Cross-sectoral biorisk awareness and mitigation training	
Scheduled for	5-6 June 2019, Budapest, Hungary
Target audience and prerequisites	The target audience includes representatives of the following main areas of activity: civil protection (e.g. firefighters), law enforcement (e.g. police, border control, customs) and health emergency services (e.g. paramedics, nurses, emergency physicians, Red Cross). The participants should have a role as training managers or as trainers.
Objectives/intended learning outcomes	The objectives are as follows: <ul style="list-style-type: none"> • Develop the ability to provide cascade training in the national institution for a wide audience of first- and second-line responders • Increase familiarity with the training material, developing the ability to tailor the material for a specific national or local context • Develop a specific plan on how the future training in their country will be deployed in order to train others, in the following technical areas: <ul style="list-style-type: none"> – Understanding the specific requirements of effective staff biorisk protection, from the perspectives of different disciplines or sectors – Achieving a comprehensive view on available options when conceiving an occupational safety system for different scenarios (pharmaceutical and non-pharmaceutical countermeasures); • Understanding the capabilities and limitations of basic protective equipment in case of a biorisk involving event.
Description	Jointly organised by Europol and ECDC, the one-and-a-half-day train-the-trainers course involves presentations, scenario-based discussions in groups of multidisciplinary teams, demonstrations and practice about correct use of PPE and exchange of experience, working groups activities and short trainings mock-delivered by the attendees. This training will also include practical 'how to' information on the planning, organisation and execution of this type of learning activity.
Selection	This training is based on the regional approach introduced in 2017. This year it will involve experts in biorisk training from 14 EU Member States (Estonia, Latvia, Lithuania, Bulgaria, Hungary, Slovakia, Austria, Czech Republic, Romania, Croatia, Greece, Cyprus, Poland, Slovenia) (up to three per country) and from the seven EU candidate countries (Albania, Bosnia and Herzegovina, North Macedonia, Kosovo (this designation is without prejudice to positions on status, and is in line with UNSC 1244 and the ICJ Opinion on the Kosovo Declaration of Independence), Montenegro, Serbia and Turkey) (up to three per country). The participants will be jointly selected by ECDC and EUROPOL.
Coordination	Country Preparedness Support Section

ECDC outbreak investigation questionnaire tool – Voozanoo	
Scheduled for	To be determined
Target audience and prerequisites	Health professionals from the ECDC networks
Objectives/intended learning outcomes	Learn how to use the Voozanoo tool to create a questionnaire for use during an outbreak investigation.
Description	Voozanoo is a web-based open source information system/creation platform to construct health information systems. This platform can be used to create outbreak investigation questionnaires.
Coordination	Response and Emergency Operations Group

Tuberculosis, large capacity building workshops	
Scheduled for	18-20 February, 2019, Bucharest, Romania
Target audience and prerequisites	Open to appointed network members or their alternates.
Objectives/intended learning outcomes	The overall aim is to strengthen capacity in the Member States with regard to laboratory diagnosis of tuberculosis, i.e. isolation and characterisation of mycobacteria in order to support public health activities (e.g. molecular typing) and coordinate national TB laboratory networks.
Description	Under the European Reference Laboratory Network for Tuberculosis (ERLTB-Net; ECDC/GRANT/2018/001), the consortium of partners managing the implementation of activities will develop a training programme based on identified needs of the network.
Selection	Participants are identified within the network.
Coordination	Tuberculosis Programme

Tuberculosis, small capacity building workshops	
Scheduled for	To be determined
Target audience and prerequisites	The training activities are only open to appointed network members or their alternates.
Objectives/intended learning outcomes	The overall aim is to strengthen capacity in the Member States with regard to laboratory diagnosis of tuberculosis, i.e. isolation and characterisation of mycobacteria in order to support public health activities (e.g. molecular typing) and coordinate national TB laboratory networks.
Description	Under the European Reference Laboratory Network for Tuberculosis (ERLTB-Net; ECDC/GRANT/2018/001), the consortium of partners managing the implementation of activities will develop a training programme based on identified needs of the network.
Selection	Participants are identified within the network.
Coordination	Tuberculosis Programme

ECDC laboratory trainings in the areas of invasive bacterial diseases and pertussis	
Scheduled for	To be determined
Target audience and prerequisites	Primarily laboratory operational contact points of the disease network relevant to the area of pertussis and invasive bacterial diseases (IBD) as well as appointed experts from the Member States.
Objectives/intended learning outcomes	Build capacity of laboratories that could benefit from learning new techniques.
Description	In 2019, ECDC Vaccine-Preventable Disease (VPD) Programme is planning to implement hands-on laboratory training activities in the areas of pertussis and invasive bacterial diseases (IBD). The individual training needs will be determined by the distribution of a questionnaire survey. A strong demand for training on the application of whole genome sequencing for IBD surveillance is expected. A survey will be sent out by the coordinators to assess laboratories that offer training and identify training needs.
Selection	Participants are identified within the network.
Coordination	Vaccine-Preventable Disease Programme

Emerging and vector-borne diseases – EVD-LabNet course	
Scheduled for	To be determined
Target audience and prerequisites	Members of the emerging and vector-borne diseases network – EVD-LabNet
Objectives/intended learning outcomes	The aim is to improve the diagnostic capability of EU expert laboratories in the area of emerging viral diseases. The specific topic is yet to be determined.
Description	As in past years, Emerging and Vector-borne Diseases (EVD)-LabNet will give a laboratory focused training in 2019 based on a topic decided in consultation with network members. Historically, courses have been accredited by the European Accreditation Council for Continuing Medical Education for European CME credits. <ul style="list-style-type: none"> In 2017, the first EVD-LabNet course on 'Diagnostics of emerging viral infections of the central nervous system' was held in Thessaloniki, Greece. In 2018, the second training course on 'Laboratory diagnostics and surveillance of emerging rodent-borne viral infections' was held in Hanko, Finland.
Selection	EVD-LabNet
Coordination	Emerging and Vector-borne Diseases Programme

Wet lab course – Influenza and other Respiratory Viruses Programme	
Scheduled for	To be determined
Target audience and prerequisites	One person per network laboratory and a maximum of 10 selected representatives of the national influenza reference laboratories from EU/EEA countries.
Objectives/intended learning outcomes	Build capacity in the specific areas of wet lab knowledge, skills, and techniques, with a focus on influenza and other respiratory viruses.
Description	Wet lab course focusing on virus detection, virus characterisation, virus isolation and bioinformatics.
Selection	Through the European Reference Laboratory Network for Human Influenza (ERLI-Net)
Coordination	Influenza and other Respiratory Viruses Programme

ECDC rapid risk assessment training	
Scheduled for	September 2019
Target audience and prerequisites	Health professionals from the ECDC Response Networks.
Objectives/intended learning outcomes	The objectives are to: <ul style="list-style-type: none"> recognise components (steps) in rapid risk assessment production describe what is expected to be done in each step contribute to a team effort for rapid risk assessment production.
Description	The course focuses on planning, conducting and generating rapid risk assessments and introduces basic concepts, principles and the succession of actions. At the end of the course, the learner will have sufficient knowledge and basic skills to be involved in a team producing rapid risk assessments. The course will use a basic teaching model: introduction, demonstration, exercise and reflection.
Selection	Through the Response Network
Coordination	Response and Emergency Operations Group

Ad hoc training (only as needed) during emergencies (pandemic clause) – Influenza and other Respiratory Viruses Programme	
Description	Training during emergencies, pandemics or outbreaks is provided as needed for ECDC professional networks. To be activated in unusual situations, based on ECDC assessment and request.
Coordination	Influenza and other Respiratory Viruses Programme

Simulation exercises

Simulation exercise for an emerging threat (regional) – Decision (EU) No 1082/2013	
Scheduled for	Fourth quarter 2019
Description	Regional simulation exercise based on an emerging hot topic for the preparedness community. Will involve a group of EU Member States, EU enlargement countries and European neighbourhood Policy (ENP) countries working together to respond to an emerging crisis. The exercise will involve public health and other sectors, dependent on the scenario; has an additional training day on how to design and implement a simulation exercise (in delegates' own countries).
Coordination	Country Preparedness Support Section

Professional exchanges

Senior Exchange Initiative 2019	
Scheduled for	Multiple exchange visits planned to take place during the year
Target audience and prerequisites	The Senior Exchange Initiative is open to experts and institutions from all EU/EEA Member States belonging to formal ECDC networks, such as disease programmes, core function networks, including EPIET/EUPHEM supervisors and Coordinating Competent Bodies. Professional profiles of applicants may include: epidemiologist, microbiologist or any other public health expert fulfilling the national interest for capacity building.
Objectives/intended learning outcomes	The objectives are to: <ul style="list-style-type: none"> familiarise public health experts with working methods of other EU countries and share good practices foster mutual learning, and encourage networking among colleagues within the EU improve Member States' national, regional and local capacity and competence towards incommunicable disease prevention and control.
Description	The Senior Exchange Initiative is a multilateral exchange of senior public health experts from Member States of EU/EEA countries. Individual experts have a chance to spend a period of one to two weeks in a selected host site with experiential learning. The initiative is organised around one or several specific topic/s. More details for hosting institutes and applicants can be found at: https://ecdc.europa.eu/en/training-programmes/continuous-professional-development/senior-exchange
Selection	Selection of participants from Member States is done through an official call for expression of interest to the National Focal Points for Public Health Training, who are then invited to propose candidates from their respective Member States.
Coordination	Public Health Training Section

Food- and Waterborne Disease Expert Placement Programme (FWDEPP)	
Scheduled for	Multiple ad hoc visits to take place during the entire year
Target audience and prerequisites	The relevant ECDC networks under the auspices of ECDC's Food- and Waterborne Disease Programme, namely FWD-Net, the European Legionnaires' Disease Surveillance Network (ELDSNet), and the European Creutzfeldt-Jakob Disease Surveillance Network (EuroCJD). Professional profiles of applicants may include epidemiologist, microbiologist, laboratory technician, bioinformatician, quality assurance expert or any other public health expert fulfilling the national interest for capability building.
Objectives/intended learning outcomes	The aim is to have a flexible and sustainable programme for public health experts to develop their skills and competences when the need arises in the country. The objectives are to: <ul style="list-style-type: none"> • develop high-quality analytical and technical capacity and capability in experts that serve national public health institutes and reference laboratories • foster networking by sharing knowledge and expertise between the host country and the beneficiary • improve the detection, investigation and response to emerging outbreaks of food- and waterborne diseases and zoonotic diseases.
Description	Individual experts will have a chance to spend two to five days at a selected host site (on-the-job training). The exchange is expected to cascade newly gained knowledge to colleagues in the home country of the participant and/or have a significant impact on improving public health laboratory capability, disease surveillance and detection, and response to food- and waterborne/zoonotic disease outbreaks. The applicant selects the host site in advance by using a free match approach. The host institute of the exchange must be an EU/EEA Member State public health entity, for example, a public health institute or public health laboratory. Exchange visits must be between two EU/EEA countries. The candidate presents a plan on how the acquired skills/knowledge will be cascaded further within his/her country, and how participating in this activity will add public health value in the EU/EEA.
Selection	All technical experts working in a public health institute/organisation or a laboratory at the national, regional or local level in the EU/EEA are eligible to apply. Relevant National Focal Point must support the application. A site that has previously hosted an expert will have priority when sending their expert to visit another institute.
Coordination	Food- and Waterborne Diseases and Zoonoses Programme

Emerging and vector-borne diseases – twinning visits	
Scheduled for	To be determined
Target audience and prerequisites	Members from the Emerging and Vector-borne Diseases (EVD)-LabNet
Objectives/intended learning outcomes	The focus for these visits are to build capacity of laboratories that could benefit from learning new techniques in laboratories that have established more advanced technologies.
Description	Visiting countries bring their samples and generate their own data in a hosting laboratory.
Selection	Announcement during the EVD-LabNet annual meeting. However selections are made depending on the applicants requests/needs (by ECDC)
Coordination	Emerging and Vector-borne Diseases Programme

Immunisation information systems – twinning	
Scheduled for	To be determined
Target audience and prerequisites	Members of the vaccine-preventable diseases network. Twinning of countries that run similar immunisation information systems or can share relevant experiences.
Objectives/intended learning outcomes	Provide technical ad hoc support to countries planning to introduce or upgrade their electronic immunisation systems as well as sharing evidence on good practice from other EU/EEA Member States.
Description	This process is building upon the experience in mapping the state of immunisation information systems in the EU/EEA; process also draws on ECDC's 2018 technical guidance on the design and roll-out of such systems.
Selection	Participants are identified within the VPD network.
Coordination	Vaccine-Preventable Diseases Programme

ECDC laboratory twinning in the areas of invasive bacterial diseases and pertussis	
Scheduled for	To be determined
Target audience and prerequisites	Primarily target laboratory operational contact points of the disease network relevant to the area of pertussis and invasive bacterial diseases (IBD) as well as appointed experts from the Member States.
Objectives/intended learning outcomes	Build capacity of laboratories that could benefit from learning new techniques.
Description	The past training activities have shown that laboratory visits/twinings are often the most suitable option to fulfil the training needs.
Selection	Participants are identified within the network.
Coordination	Vaccine-Preventable Diseases Programme

Tuberculosis: staff exchange visits	
Scheduled for	To be determined
Target audience and prerequisites	Training activities are only open to appointed network members or their alternates.
Objectives/intended learning outcomes	The overall aim is to strengthen capacity in the Member States with regard to laboratory diagnosis of tuberculosis, i.e. isolation and characterisation of mycobacteria in order to support public health activities (e.g. molecular typing) and coordinate national TB laboratory networks.
Description	Under the European Reference Laboratory Network for Tuberculosis (ERLTB-Net) the consortium of partners supports the exchange based on identified needs of the network.
Selection	Participants are identified within the network.
Coordination	Tuberculosis Programme

E-learning courses

Introduction to outbreak investigation	
Availability	Available on EVA (ECDC Virtual Academy)
Target audience and prerequisites	This course targets public health professionals with no prior knowledge in outbreak investigation. It may also be used as a refreshment module prior to advanced courses in outbreak investigation.
Objectives/intended learning outcomes	The objectives are to: <ul style="list-style-type: none"> • be able to recognise the steps necessary to conduct an outbreak investigation • describe what is expected to be done in each of the 10 steps • discuss different application of steps for different situations.
Description	This course focuses on the basics of outbreak investigation; it introduces knowledge of concepts, basic principles, and the succession of actions. At the end of the course, the learner will have sufficient knowledge and basic skills to work in an outbreak investigation team. The course uses a basic teaching model: introduction, demonstration, exercise and reflection. Course design is modular, with text, graphics, media (video lectures) and quizzes embedded in each module. The total estimated duration is from 6 to 8 hours of active learning. The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go.
Coordination	Public Health Training Section with Epidemic Intelligence and Response Section

Introduction to rapid risk assessment	
Availability	Available soon on EVA (ECDC Virtual Academy)
Target audience and prerequisites	Public health professionals with no prior knowledge in rapid risk assessment methodology.
Objectives/intended learning outcomes	The objectives are to: <ul style="list-style-type: none"> • recognise components (steps) in rapid risk assessment production • describe what is expected to be done in each step • contribute to a team effort for rapid risk assessment production
Description	<p>The course focuses on planning, conducting and generating rapid risk assessments and introduces basic concepts, principles and the succession of actions. At the end of the course, the learner will have sufficient knowledge and basic skills to be involved in a team producing rapid risk assessments.</p> <p>The course uses a basic teaching model: introduction, demonstration, exercise and reflection. Course design is modular, with text, graphics, media (video lectures) and quizzes embedded in each module. Two case studies are introduced to exemplify the various steps.</p> <p>This course consists of the following modules:</p> <ul style="list-style-type: none"> • Overview • Definitions and ECDC context • From signal to RRA • Step 0 – Preparation • Step 1 – Collecting event information • Step 2 – Literature search • Step 3 – Extract relevant evidence • Step 4 – Appraise evidence • Step 5 – Estimate risk • Follow-up <p>This course is designed to take approximately 3 to 5 hours of active learning.</p> <p>The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go.</p>
Coordination	Public Health Training Section with Epidemic Intelligence and Response Section.

Epidemic intelligence	
Availability	Available on the ECDC web portal at http://external.ecdc.europa.eu/EI_Tutorial/course.htm
Target audience and prerequisites	Professionals with public health background who have an interest in becoming familiar with the tools, standards and practices adopted at the technical level for early detection of health threats at EU and international level.
Objectives/intended learning outcomes	The objectives are to: <ul style="list-style-type: none"> • understand the process of early detection of health threats at ECDC • identify epidemic intelligence tools and platforms • share best practices on epidemic intelligence among the experts in prevention and control of communicable diseases.
Description	The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go.

Writing and reviewing scientific abstracts: a field epidemiology focus	
Availability	Offered yearly and on an ad hoc basis on EVA (ECDC Virtual Academy)
Target audience and prerequisites	Epidemiologists working at the national or subnational level in an EU/EEA country.
Objectives/intended learning outcomes	The objective is to strengthen skills in writing, reviewing and editing scientific abstracts, with a focus on field epidemiology topics.
Description	This course is based on online lectures, exercises and participation in forum discussions. Course is moderated and partially self-paced. The only elements that have a fixed time frame are the deadlines for the peer-review assignments (writing and reviewing an abstract).
Coordination	Public Health Training Section

Cross-border sharing of health data	
Availability	Available on EVA (ECDC Virtual Academy)
Target audience and prerequisites	Epidemiologists working at the national or subnational level in an EU/EEA country.
Objectives/intended learning outcomes	<p>The objectives are to:</p> <ul style="list-style-type: none"> understand the basic concepts of Regulation (EU) No 2016/679 and its impact on management and analysis of health data in the context of communicable disease surveillance understand the relationship between EU legislation and national legislation applicable for public health data have an overview of the challenges in data sharing during essential public health operations such as outbreak investigations and public health surveillance understand the concept of 'open access' and how it is applied to scientific publications and research data identify a question related to data sharing in public health and consult a legal expert for advice.
Description	<p>This course will focus on the legal context of data sharing in communicable disease prevention and control, particularly on issues relating to the exchange of health data in joint databases and between different legal systems. The course will provide the participants with essential knowledge in overcoming these challenges. The course uses a basic teaching model: introduction, demonstration, exercise and reflection. Course design is modular, with text, graphics, media (video lectures) and quizzes embedded in each module. The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go.</p>
Coordination	Public Health Training Section with Legal Services Section

PRECEPT – a framework for assessing and grading evidence in public health	
Availability	Available on EVA (ECDC Virtual Academy)
Target audience and prerequisites	Public health professionals from all career levels with limited or no experience in evidence-based methods, in particular professionals involved in the conduct of evidence appraisals and development of public health guidance. The course can be useful for any professional or student in a health-related line of work. Basic knowledge of different study designs and possible sources of bias is helpful.
Objectives/intended learning outcomes	<p>The objectives are as follows:</p> <ul style="list-style-type: none"> Understand, name and explain the different steps and domains of PRECEPT Identify and frame relevant questions in the different domains Understand the concept of study validity and apply quality appraisal for different study designs in different domains Apply the GRADE approach to different domains to determine the strength of a body of evidence.
Description	<p>PRECEPT (Framework for Rating Evidence in Public Health) was initiated by ECDC to help translating the concepts and principles of evidence-based medicine into the area of public health, in particular infectious disease epidemiology, prevention and control. PRECEPT presents a methodology for assessing and grading the strength of the evidence in such decision-relevant domains as burden of disease, risk factors, diagnostics and interventions. The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. In total, the course takes approximately 2–3 hours to complete. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go. A knowledge assessment tool is available in a mini-simulation format.</p>
Coordination	Public Health Training Section with Scientific Advice Coordination Section

Influenza vaccination campaigns targeting healthcare workers	
Availability	Available on EVA (ECDC Virtual Academy)
Target audience and prerequisites	Public health professionals who organise vaccination campaigns for healthcare workers
Objectives/intended learning outcomes	The objectives are to identify the elements necessary to create informative and effective seasonal influenza vaccination campaigns
Description	<p>This online course has been developed in response to the fact that although seasonal influenza vaccination of healthcare workers (HCWs) is recommended in Europe, vaccination uptake remains low in most countries. The course presents information about influenza disease, protection against influenza, and tools to assess vaccine uptake and address barriers to vaccination. The course also shows examples of successful campaigns aimed at healthcare workers.</p> <p>The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go.</p>
Coordination	Public Health Training Section with Influenza and Other Respiratory Infections Programme

Influenza bioanalytics	
Availability	Available on EVA (ECDC Virtual Academy)
Target audience and prerequisites	Public health professionals, laboratory scientists, epidemiologists working on influenza surveillance. There are no prerequisites in terms of academic qualifications.
Objectives/intended learning outcomes	<p>This course aims to enhance knowledge of the basic bioinformatics tools available for the analysis of sequencing data and the interpretation, comparison and analysis of influenza sequence data, with a focus on haemagglutinin and neuraminidase genes.</p> <p>The objectives are to:</p> <ul style="list-style-type: none"> • Understand Sanger and next generation sequencing data analysis pipelines for HA and NA gene sequences • Retrieve sequences from public databases (GISAID and GenBank) • Understand HA and NA gene sequence alignments, mutations and SNP analysis for resistance (BioEdit) • Use phylogeny software: basic concepts and instructions for phylogenetic analysis (MEGA) • Visualise and annotate phylogenetic trees.
Description	<p>The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go.</p> <p>The course has the following modules and takes approximately 2–3 hours to complete:</p> <p>Module 1: Sanger sequencing data analysis: from raw to finished sequences</p> <p>Module 2: NGS data analysis: from raw to finished sequences</p> <p>Module 3: Public databases and retrieval of references</p> <p>Module 4: Alignments and amino acid substitution analysis of HA and NA sequences</p> <p>Module 5: Phylogeny software: basics concepts and instructions for phylogenetic analysis</p> <p>Module 6: Visualisation and annotation of phylogenetic trees</p>
Coordination	Public Health Training Section with Influenza and Other Respiratory Infections Programme.

Non-pharmaceutical countermeasures against pandemic influenza	
Availability	Available soon on Q2 2019 on EVA (ECDC Virtual Academy)
Target audience and prerequisites	Laboratory and public health scientists
Objectives/intended learning outcomes	<p>This course aims to provide the latest scientific information on the use of non-pharmaceutical countermeasures, summarising the lessons learned from the 2009 influenza pandemic.</p> <p>The objectives are to:</p> <ul style="list-style-type: none"> • understand the process of responding to seasonal and pandemic influenza in communities through the knowledge of the availability and effective use of non-pharmaceutical countermeasures • identify how and when non-pharmaceutical countermeasures may be applied to the specific community settings to help slow the spread and reduce the impact of a pandemic virus.
Description	<p>Information about the influenza virus, non-pharmaceutical countermeasures used for protection against influenza and triggers for the implementation of such interventions, as well as aspects of pandemic planning will be presented.</p> <p>The course is designed as an unmoderated, self-paced course, i.e. participants can set their own schedule. The different sections of the course are meant to be done sequentially, but the course does not need to be completed in one go.</p>
Coordination	Public Health Training Section with Influenza and Other Respiratory Infections Programme

Webinars

Healthcare-Associated Infections Network (HAI-Net): surgical site infection surveillance webinar series	
Availability	Second quarter 2019 (tentative)
Description	<p>Webinar 1. SSI surveillance general session</p> <p>Webinar 2. SSI prevention indicators</p> <p>Webinar 3. HelicsWin.Net SSI module and hospital reports</p> <p>Webinar 4. Reporting SSI surveillance results</p>
Selection	Self-enrolment
Coordination	Antimicrobial Resistance and Healthcare-Associated Infections Programme

Using the Epidemic Intelligence Information System for Food- and Waterborne Diseases and Zoonoses (EPIS-FWD)	
Availability	To be announced and provided on an ad-hoc basis when new users are appointed.
Description	Webinars – How to use EPIS-FWD
Selection	Self-enrolment
Coordination	Food- and Waterborne Diseases and Zoonoses Programme

Training materials

Training materials on development, implementation and evaluation of prudent antibiotic use campaigns	
What you will find	You will find course material that you may use to offer a training course for your target audience. Your target audience could include health communicators with an interest in antimicrobial resistance and prudent use of antibiotics.
Objectives/intended learning outcomes	The aim of this course is to provide planners and implementers of prudent antibiotic use campaigns with the basic knowledge and skills required to plan, conduct and evaluate such campaigns. Learning objectives of the course material are to: <ul style="list-style-type: none"> • understand and explain the rationale, key elements and steps required to develop behaviour change communication campaigns on prudent antibiotic use • understand and apply basic social marketing concepts in the development implementation and evaluation of behaviour change communication campaigns on prudent antibiotic use • design and implement behaviour change communication campaigns on prudent antibiotic use • identify and select appropriate indicators, methods and tools for evaluation of behaviour change communication campaigns on prudent antibiotic use • design and implement an evaluation work plan for behaviour change communication campaigns on prudent antibiotic use
Description	These materials can be used as a basis to hold further training courses at the national level and to strengthen participants' knowledge and skills on prudent antibiotic use campaigns.

Training materials on Legionnaires' disease: risk assessment, outbreak investigation and control	
What you will find	You will find materials that you may use to offer a training course for your target audience. Your target audience could be multidisciplinary, consisting of mid-career and/or senior experts in the area of public health, particularly those dealing with Legionnaires' disease.
Objectives/intended learning outcomes	The goal of this training is to strengthen the participants' knowledge and skills in order to improve the collaboration and communication among the different disciplines (microbiology, environmental health and epidemiology) involved in a Legionnaires' disease outbreak investigation and control.
Description	The course incorporates different teaching methods: short presentations, group work, risk assessments using photographic material. It proposes to organise field visits to understand potential sources of outbreaks (e.g. cooling towers, spa pools and water systems). Contents include clinical, epidemiological and environmental aspects of Legionnaires' disease, water systems and control measures, diagnostics, principles of outbreak investigation in different settings (community, travel-related and nosocomial outbreaks), risk assessment and communication.

Train-the-trainer materials on epidemiological aspects of vaccine-preventable diseases	
What you will find	You will find training material that you may use to offer a training course for your target audience. Your target audience could include senior epidemiologists working in surveillance and outbreak investigation of vaccine-preventable diseases (VPD). The expectation is that the course materials will improve the capacity of the participants to become trainers in vaccinology.
Objectives/intended learning outcomes	The objectives of this course material are to: <ul style="list-style-type: none"> • become familiar with interactive and adult learning methods, e.g. case studies • be able to lecture on surveillance, outbreak investigation and applied epidemiological research of VPD • be able to facilitate case studies in these areas • be able to define the target audience and to adjust material/contents • mobilise resources (human, budget, etc.) to organise training in this area.
Description	Training materials from a three-day course organised as a train-the-trainers activity aiming at preparing senior professionals to organise, manage and conduct a course covering the epidemiological aspects of vaccination. Epidemiological methods for VPD are divided into three themes: surveillance, outbreak investigation and applied epidemiological research. Lectures, case studies and group exercises are available.

Train-the-trainer materials for point prevalence survey training of healthcare-associated infections and antimicrobial use in acute care hospitals	
What you will find	You will find training materials that you may use to offer a training course for your target audience. Your target audience could include national coordinators of point prevalence surveys (PPS).
Objectives/intended learning outcomes	<p>The objectives of this training material are to:</p> <ul style="list-style-type: none"> • appreciate aims, objectives and methodology of EU PPS • recognise healthcare-associated infections (HAI) using standard EU PPS case definitions • understand measures the validity and reliability of PPS data on HAI • enter and export data EU PPS data in HELICS-Win • describe the best approach, organisation and training techniques to deliver training on the ECDC protocol for PPS for a short course aimed at hospital staff • describe and discuss the principles of and approaches to training with adult learners and the importance of learning styles • critically evaluate the training approaches for working with groups including questioning strategies to ensure engagement and understanding • identify and utilise approaches to evaluation of training.
Description	<p>Training materials from a daylong course with 10 lectures, 8 short case studies and ice-breaking exercises are available. This set of training materials includes participants' and facilitators' versions for case studies. Contents include:</p> <ul style="list-style-type: none"> • the methodology of the EU PPS • the systems required for data collection at the local and national level • the training materials for those involved in the local collection of data • approaches to learning and teaching: andragogy • the principles of, and approaches to, delivering effective training with small and large groups • planning for success: environment and facilitation.

Training materials on 'Control of multidrug-resistant microorganisms in healthcare settings'	
	<p>The target audience includes healthcare professionals with responsibility for prevention and control of healthcare-associated infection. Typically, they are mid-career professionals involved in programmes to prevent HAI at the hospital level:</p> <ul style="list-style-type: none"> • infection control practitioners • specialist hospital physicians • hospital epidemiologists • clinical microbiologists • public health microbiologists.
Objectives/intended learning outcomes	The goal of this training is to strengthen the participants' knowledge and skills required for the control of MDRO (multidrug-resistant microorganisms) through the consolidation and review of microbiological and epidemiological perspectives in this field, covering: laboratory investigations, antibiotic stewardship, infection control, surveillance, application of interventions to control MDROs in healthcare settings, and transparent reporting of outbreaks and interventions.
	The aim of the course is to offer a flexible and dynamic programme to strengthen the capacity in the Member States for control of HAI caused by MDRO in acute healthcare settings and to promote the broadest possible implementation of appropriate methods.

Subject-specific wiki spaces	
What you will find	FEM Wiki is an open information-sharing platform for public health experts, hosted and funded by ECDC. Available at: https://wiki.ecdc.europa.eu/
Objectives/intended learning outcomes	The aim of the FEM Wiki is to create a library of training materials for training programmes for all disciplines in disease prevention and control.
Description	The content of FEM Wiki is provided by users of the platform and does not necessarily represent the opinion of ECDC. The philosophy of sharing and building knowledge (in particular training materials) led to the idea and creation of a collaborative information space for the epidemiological training community – the FEM Wiki. In recent years, articles on other key disciplines for disease prevention and control such as public health microbiology, informatics and public health law have been added.