ECDC PUBLIC HEALTH TRAINING SECTION

Catalogue of ECDC training courses for Public Health professionals in EU/EEA and enlargement countries (2013-2014)

Introduction

According to its Founding Regulation ECDC *shall, as appropriate, support and coordinate training programmes in order to assist Member States and the Commission to have sufficient number of trained specialists, in particular in epidemiological surveillance and field investigations, and to have a capability to define health measures to control disease outbreaks.*

During the Meetings with ECDC the Competent Bodies for Training to discuss the implementation of the ECDC Work Plan on training and further strategy it was surmised that the series of short courses that have been organised on different topics for the support of continuous education of epidemiologists and other public health professionals in the Member States have high added value, allowing networking and exchange of experiences. Priorities highlighted, also during country visits to the MS for training resources and needs assessment, include: Introduction to Intervention Epidemiology, Outbreak investigation, Risk assessment, Public health surveillance and Risk Communication. The ECDC Training Programme for professional development in applied epidemiology responds to these expectations.

The training needs identified by the ECDC Disease Specific Programmes are addressed by a set of courses that include Epidemiological aspects of vaccination, Intersectoral collaboration for detection, surveillance and response to foodborne diseases, Health care associated infections and resistance to antibiotics and more.

ECDC applies for accreditation of each individual course by the European Council of Continuing Medical Education (EACCME). More information at www.eaccme.eu

The selection of participants involves the ECDC Coordinating Competent Bodies, and - when nominated – the National Focal Points for Training. Depending on the topic covered, and more specifically in the case of courses organised or co-organised by the ECDC Disease Programmes, the representatives of the respective Disease Networks are also invited to contribute to the selection. All courses are delivered in English.

The training courses in this catalogue cover most of the areas or domains ECDC core competencies for public health epidemiologists working in the area of communicable disease surveillance and response in the European Union. The catalogue includes first the 9 courses of the Training Programme for professional development in applied epidemiology; and continues with courses organised together with the ECDC Disease Programmes, Microbiology Coordination and other teams.

To contact us regarding this catalogue, please send an e-mail to ECDC.Courses@ecdc.europa.eu

Training Section of ECDC

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Calendar

2013			
Course	**Location**	**Month**	**Target audience/seats**
Outbreak investigation principles and computer tools	Veyrier du Lac, France	25-27 Febr 2013	PH Professionals Member States (30 seats)
Legionnaires' disease risk assessment, outbreak investigation	Budapest, Hungary	25-28 Febr 2013	PH Professionals Member States – Disease Programme Networks (15 seats)
Summer School **- Induction workshop** **- Technical workshops**	ECDC	10-13 June	EPIET/EUPHEM Supervisors =15 seats ECDC Disease Programme Networks = 15 seats ECDC= 15 seats Medi-PIET=10 seats
Epidemiological and microbiological investigation of *L. monocytogenes* clusters	Paris	12-13 March	Elite participants
Development, implementation and evaluation of prudent antibiotic use campaigns	Stockholm	First week July	Multidisciplinary audience comprising health professionals, such as infectious disease specialists, microbiologists and pharmacists, as well as communication experts and press officers responsible for the design and implementation of the EAAD campaigns at national levels in the EU Member States.
Laboratory diagnostics and susceptibility testing for gonorrhoea	Stockholm?	September	Microbiologists and laboratory experts from EU/EEA member states working in the field of sexually transmitted infections, particularly gonorrhoea or who are considering developing N. gonorrhoeae susceptibility testing in their laboratories or joining the European Gonococcal Antimicrobial Surveillance Programme.
ESCMID ECDC Observers	Stockholm	2-6 Sept	As a Collaborative Centre of the European Society for Clinical Microbiology and Infectious Diseases (ESCMID), ECDC offers to host five Observers during 2013. This initiative targets professionals within the field of clinical microbiology and infectious diseases, who have an interest in public health. This initiative is open to full members of ESCMID. The application period is 18 June to 2 July 2013. More details on the observerships and application procedure can be found at www.escmid.org

Train the trainers Foodborne parasites (Multidisciplinary), WHO-GFN/ECDC Course	Amsterdam?	Sept 2013?	Multidisciplinary
Risk communication in the prevention and control of communicable diseases. Focus on measles vaccination	TBD	Sept 2013	PH Professionals Member States (30 seats); ECDC experts
Rapid assessment complex emergencies	Veyrier du Lac, France	28 Oct-1 Nov	PH Professionals Member States (30 seats)
Legionnaires' disease risk assessment, outbreak investigation	Croatia	Dec 2013	EU Enlargement

2014 (Tentative)			
Course	**Location**	**Month**	**Target audience/seats**
Epidemiological aspects of Vaccine Preventable Diseases - Train the trainers		February?	S (20-30 seats)
Outbreak investigation - Managerial skills		March?	S (20-30 seats)
Multi Drug Resistant Organisms (MDRO)		March?	S (20-30 seats)
Introduction to field epidemiology		April?	S (20-30 seats)
Outbreak investigation – microbiological and epidemiological aspects		June?	S (20-30 seats)
Outbreak investigation principles and computer tools		?	EU Enlargement (20 seats)
TSA-Principles Surveillance		October?	S (20-30 seats)

This Catalogue presents the courses of this programme as they are tentatively planned for 2013 and 2014. While those in 2013 are part of the ECDC Work Plan 2013, approved by the Management Board, courses in 2014 will depend on budget availability and expectations and requests from the Member States.

If you want to suggest your priorities, related with training needs in your country, you could share your suggestions with us contacting ECDC.Courses@ecdc.europa.eu

Courses of the ECDC Training Programme for professional development in applied epidemiology

In 2012 ECDC is establishing a Training Programme for Professional Development in Applied Epidemiology that will consolidate the offer of short courses with a multiannual perspective. Most courses have two components (self-learning modules and face-to-face training).

The goal of this programme is to create a platform for strengthening technical, teaching and mentoring skills and support career development through continuing education (life-long-learning) for European public health professionals.

Supervisors of the European Programme for Intervention Epidemiology Training (EPIET) may benefit from this support. In general, public health officials responsible for capacity building activities in their country will have priority.

This Training Programme for Professional Development in Applied Epidemiology is composed by the following 9 courses, covered in the first pages of the Catalogue:

- Rapid Assessment in Complex Public Health Emergencies
- Introduction to Intervention epidemiology course
- Principles and computer tools for outbreak investigation
- Management and logistics of outbreak investigation
- Microbiological and epidemiological aspects of public health surveillance and outbreak investigation
- Control of Multidrug-resistant micro-organisms in health care settings
- Principles of public health surveillance and time series analysis
- Epidemiological methods applied to vaccine preventable diseases
- ECDC Summer School – Train the trainers in applied epidemiology

These will be complemented by access to training materials, tools and mentoring activities.

1. Public health

Rapid Assessment in Complex Public Health Emergencies	
Scheduled for	28 October-1 November 2013, Veyrier du Lac, France
Previous editions	This is the first edition. It belongs to the ECDC Training Programme for professional development in applied epidemiology.
Target Group	Public health microbiologists and epidemiologists, working at the national or at the sub-national level in the EU, EEA/EFTA countries and EU enlargement countries
Prerequisites	See target
Learning Objectives	Complex emergencies occur after natural or man-made disasters and create profound disturbance in society, including impact on health. This course aims to prepare epidemiologists to contribute to the multidisciplinary and international response to such complex emergencies, and to apply their epidemiological skills to serve public health interventions.
Content	In 2010, Haiti experienced two major disasters. A massive earthquake affecting more than 3,000,000 people (1/3 of the country) in January was followed, ten months later, by a very large cholera epidemic. The international response involved an important number of partners and activities. This unfortunate series of events appeared to provide an interesting frame for a case study that could include most of the elements required by epidemiologists going on a complex emergency setting mission. The one-week training of rapid assessment in complex emergency setting uses this Haiti story. Participants will be given the chance to simulate going on three different missions: • Initial rapid assessment after the earthquake with OCHA • Setting up of a cholera surveillance system as a GOARN coordinator • Retrospective mortality survey with Epicentre In addition to these main activities, the participants are asked to think about real-life situations all throughout week, including managerial, social mobilization, communication and security issues.
Duration	5 days
Methods	Participants are divided in three teams of 6-8 participants and the teams remain the same throughout the course. The teaching methods will associate interactive case studies based on real crisis interventions.
Competencies to be acquired	From the list of ECDC core competencies for public health epidemiologists working in the area of communicable disease surveillance and response in the European Union, the domains addressed are: Domain 1.1.1.: Public health science Domain 1.1.2.: Public health policy

2. Introduction to Intervention Epidemiology

Introduction to Intervention epidemiology	
Scheduled for	April 2014 (tentative)
Previous editions	2 Into Epi Courses delivered in Veyrier, France
Target Group	Epidemiologists working in the public health administration in the 27 MS and the EEA/EFTA countries, proposed by the ECDC competent bodies
Prerequisites	Epidemiologists with short experience in field epidemiology at national or sub-national level in the EU/EEA countries; good command in English
Learning Objectives	The objective of the course is to strengthen participant common understanding of epidemiological concepts of surveillance and outbreak investigation and control activities. A further objective is to share training approach and expertise with new trainers. **Knowledge objectives** include: • Elements of descriptive epidemiology: person, time, space • Epidemiological concepts: indicators, measures and causal inference • Principles of surveillance: concepts, design, surveillance data analysis and surveillance evaluation. • Outbreak investigations: theoretical aspect, practical issues, study concepts, questionnaire design, sampling theory, choice of reference group and operational aspects of outbreak investigation. • Analytical epidemiology: study design, bias, confounding, selection of a reference group, cohort vs. case-control, controlling confounders and study design; • Advanced methods: stratification and multivariate analysis, matching and logistic regression, alternative designs • Information about ECDC, IHR, epidemic intelligence **Skills to be acquired** involve learning how to: • Describe event of epidemiological relevance • Use of indicators and measures in surveillance • Design, analyse and evaluate surveillance - basics • Define objectives of an outbreak investigation; • Generate an hypothesis for the source, vehicle, risk factors; • Create a case definition for outbreak investigation; • Choose the type of study design for the analytical investigation after having conducted the epidemiological descriptive study; • Design a questionnaire and data entry form for the epidemiological study; • Enter, validate and analyse outbreak investigation data • Create epidemic curves and work with dates and times; • Get acquainted with sampling methods in a analytical study; • Interpret the data from cohort and (matched) case-control studies, including stratified and multivariable analysis; • Epidemiological survey: steps, questionnaires, means of data entry, sampling techniques • Communication of information – surveillance, outbreak investigation, survey, presentation, publication, critical review **Training the trainers objective:** • To get acquainted with facilitation of training sessions for Public Health professionals

Content	Basic epidemiology concepts, principles of surveillance, outbreak investigation and analytical epidemiological methods, Descriptive epidemiology (person, space and time) module, applied to surveillance and outbreak situations; Study design in analytic epidemiology module; Data collection in epidemiological survey and outbreak investigation; Data analysis; Report (communication) writing
Duration	70 hours over 2 weeks (10 days face to face)
Methods	**Blended format** (self-learning module to be done by participant one month in advance and three day face to face workshop) The course will combine theoretical lectures and exercises using case studies and computer sessions.
Competencies to be acquired	In the list of ECDC core competencies for public health epidemiologists working in the area of communicable disease surveillance and response in the European Union, the domains addressed are: 1.2.2. Public health surveillance 1.2.3. Outbreak investigation 1.2.4. Epidemiological studies 2.1.2. Inferential statistics 2.1.3. Sampling 2.2.2. Statistical and other data analysis 2.3.2. Written communication 2.3.3. Oral communication

3. Outbreak investigation

Outbreak investigation principles and computer tools	
Scheduled for	25-28 February 2013, Veyrier du Lac, France
Previous editions	5 Regional modules (1 in Madrid- National School of Health, ISCIII; 2 in Amsterdam - Netherlands School of Public and Occupational Health and 2 in Debrecen University, Faculty of Public Health) - Editions (2007, 2008, 2009)
Target Group	Epidemiologists working in the public health administration in the 27 MS EU/EEA countries, proposed by the ECDC Coordinating Competent Body
Prerequisites	Epidemiologists, working at the national or at the sub-national level in the EU/EEA countries and proposed by their countries; Good command in English
Learning Objectives	The objective of is to strengthen participant knowledge and skills related to the investigation of communicable disease outbreaks affecting their country. Knowledge objectives include: • Elements of descriptive epidemiology: person, time, space; • Analytical epidemiology: case-control studies, cohort studies, stratification and multivariate analysis, bias, selection of a reference group, controlling confounders and study design; • Operational aspects of an outbreak investigation: composition of the team, preparation, logistic, field activities; • Use of complementary investigations (microbiological, food, environment, etc). Skills to be acquired involve learning how to: • Create a case definition and adjust it along the investigation if needed; • Define objectives of an outbreak investigation; • Design a questionnaire for the descriptive epidemiological study; • Create epidemic curves and work with dates and times in Epi Info and Excel; • Choose different types of maps depending on the data; • Choose the type of study design for the analytical investigation after having conducted the epidemiological descriptive study; • Generate an hypothesis for the source, vehicle, risk factors; • Randomly select controls in a case-control study; • Interpret the data from cohort and (matched) case-control studies, including stratified and multivariable analysis. This interpretation should be in terms of statistical significance and strength of the association; • Produce a report of the outbreak study, interpreting results of the various analyses.
Content	The curriculum for the module should include at least: • Components of an outbreak investigation; • Descriptive epidemiology (person, space and time), applied to outbreak situations; • Study design in analytic epidemiology, applied to outbreak situations; • Data collection; • Data analysis and • Report writing
Duration	5 full days

Methods	**Blended format** (self-learning module to be done by participant one month in advance and three day face to face workshop) The teaching methods for the face to face workshop associate formal presentations, case studies and practical sessions on software tools used in outbreak investigations: EPIDATA (http://www.epidata.dk/) and MS-Excel.
Competencies to be acquired	Competencies to be acquired should enable participants, at the end of the training, to conduct the following activities independently: • Plan and conduct a descriptive study of an outbreak investigation: create epidemic curves, line-listing and summary tables of person characteristics and maps with distribution of cases (spot maps or incidence maps); • Choose between different designs to conduct an analytical epidemiological investigation of an outbreak; • Communicate the results of an outbreak investigation. From the list of ECDC core competencies for public health epidemiologists working in the area of communicable disease surveillance and response in the European Union, the domain covered is 1.2.3 Outbreak investigation. Competencies 25 to 30

Microbiological and epidemiological aspects of outbreak investigation	
Scheduled for	June 2014 (tentative)
Previous editions	23- 29 June 2008, Bilthoven, The Netherlands 8-12 June 2009, Bilthoven, The Netherlands
Target Group	Mid-career microbiologists and epidemiologists, proposed in pairs by each country's ECDC Coordinating Competent Body
Prerequisites	Involved, or potentially involved, - in outbreak investigation at national and regional levels in the public health administration; good command in English
Learning Objectives	The goal is improving communication between laboratory specialists and epidemiologists, with the long term vision of creating an integrated laboratory-field epidemiology network for outbreak detection, investigation and response. **Knowledge objectives** include understanding: • Roles/needs of/for the partners from the laboratory and the epidemiology in outbreak detection and response as a member of the outbreak team; • Concepts of virology, bacteriology, immunology related to the different test formats; • Use and limitation of laboratory tests; • Sampling strategies for disease surveillance and outbreak detection and control; • Biosafety issues in laboratories and shipment of infectious material; • Importance of information sharing and communication during outbreaks • Surveillance systems (syndromic and laboratory based) **Skills to be acquired** involve learning how to: • Interpret surveillance data and laboratory results during an outbreak investigation and advice on prevention and control strategies; • Use a laboratory information system to monitor epidemiological data • To recognise common laboratory challenges/errors and their impact on outbreak response • To set up basic epidemiological and laboratory databases for different purposes (surveillance and outbreak response) • To communicate laboratory and epidemiological data/results: write a joint report • Competencies to be acquired should enable participants, at the end of the training, to conduct the following activities independently: • Interpret the diagnostic and epidemiological significance of reports from laboratory tests • Be familiar with different methods for diagnosis and typing, including molecular tests • Communicate effectively with the laboratory team
Content	• Communication, roles and responsibilities of epidemiologists in outbreak detection, investigation and response; • Interpretation of laboratory tests (including molecular typing) • Integrated laboratory-epidemiology surveillance
Duration	21 hours over 3 days
Methods	The teaching methods for the course associate: formal presentations, interactive case studies based on real outbreak investigations, and presentations from participants and working groups.
Competencies to be acquired	In the list of ECDC core competencies for public health epidemiologists working in the area of communicable disease surveillance and response in the European Union: Domain 1.2.3 Outbreak investigation. Competencies 25 to 30 Domain 1.2.6. Laboratory issues. Competencies 36 to 38

Management and logistics in outbreak investigation	
Scheduled for	March 2014 (tentative)
Previous editions	October 2006 in Sigtuna, Sweden; January 2007 in Sigtuna; April 2008 in Rimbo, Sweden; June 2008 in Veyrier du Lac, France; April 2009 in Barcelona, Spain; May-June 2009, Brussels, Belgium
Target Group	Epidemiologists working in the public health administration in the 27 MS and the EEA/EFTA countries, proposed by the ECDC competent bodies of response
Prerequisites	Good knowledge and experience in outbreak investigation, preferably also in coordination of field investigations. The course is intended for epidemiologists that will have the opportunity to lead outbreak investigation teams both in their own country and at the EU level. Good command in English
Learning Objectives	The objective of this course is to strengthen participant knowledge and skills related to the management/coordination of a team for the investigation of a communicable disease outbreak affecting their country or at the EU level. Knowledge objectives should include: • Multidisciplinary aspects of outbreak investigation and team composition • Logistics in an outbreak investigation • Methods for rapid and evidence-based decision making, including situational analysis and priority setting • Selection of best adapted means of communication according to the purpose • Ensure implementation and follow up of a decision Skills to be acquired involve learning how to, in the context of an outbreak investigation: • Chair meetings (face-to-face, video and teleconference) • Address the media • Ensure the functioning of an efficient team • Assign and supervise tasks • Achieve rapid team building and collective intelligence • Negotiate and handle conflict • Identify and handle stress
Content	The curriculum for the workshop should include at least: • Decision making • Communication • Team management • Operational and logistic aspects of outbreak investigation
Duration	35 hours over 5 days
Methods	The teaching methods associate: • Formal presentations on topics. They will represent not more than 20% of the total time dedicated. Each presentation will last 30 minutes or less; • Interactive case studies based on real outbreak investigation • Presentations from participants and working groups.

Competencies to be acquired	Competencies to be acquired should enable participants, at the end of the training, to conduct the following activities: • Planning and use of resources (plan, prioritise and schedule tasks in a project; monitor progress and quality against specific targets, adjust schedules and make changes if necessary; manage available resources (staff, time, budget, etc) effectively; conduct epidemiological activities within the financial and operational planning context; prepare an activity report) • Team building and negotiation be an effective team member, adopting the role needed to contribute constructively to the accomplishment of tasks by the group (including leadership) and • Promote collaborations, partnerships and team building to accomplish epidemiology programme objectives and develop community partnerships to support epidemiological investigations and mutually identify those interests that are shared, opposed or different from the other party's to achieve good collaborations and conflict management) In the list of ECDC core competencies for public health epidemiologists working in the area of communicable disease surveillance and response in the European Union: Domain 2.4. Management. Competencies 64 to 72 Domain 1.2.3 Outbreak investigation. Competencies 25 to 30

Control of Multi-Drug resistant micro Organisms in Health Care Settings	
Scheduled for	October 2013/March 2014 (tentative)
Previous editions	-
Target Group	The target audience includes health care professionals with responsibility for prevention and control of Healthcare Associated Infection (HAI). Typically they are mid-career professionals involved in programmes to prevent HAI at hospital level.
Prerequisites	Field experts (infection control specialists) working in the public health administration in the 27 MS and the EEA/EFTA countries, proposed by the ECDC competent bodies of response
Learning Objectives	To offer a flexible and dynamic programme to strengthen the capacity in the European Union (EU) member states for control of HAI caused by MDRO in acute healthcare settings and to promote the broadest possible implementation of appropriate methods. To facilitate team building between colleagues with similar responsibilities in control of nosocomial spread of MDRO in EU member states and at ECDC and to share training approaches knowledge and best practices with expert leaders in the field A further objective is to share training approach and expertise with new trainers. **Knowledge objectives** will include: 1. Understanding the most significant mechanisms of antibiotic resistance in healthcare-associated micro-organisms and their accurate detection by appropriate diagnostic and confirmation methods 2. Understanding the global epidemiology and mechanisms of transmission of MDROs in hospital settings 3. Understanding the risk factors for development, acquisition and infection with MDROs including host, environment and therapeutic factors 4. Short reminder of the principles of antibiotic stewardship interventions designed to reduce the emergence and spread of MDROs in acute care settings **Skills** to be acquired: • Ability to develop and adapt a local microbiological surveillance and early warning system for monitoring epidemiologically important MDROs and inform control actions • Understanding the principles and ability to develop, implement and evaluate a system of patient isolation and other transmission-based precautions, in health care settings.

Content	Session 1: Introduction to Programme and consolidation of pre-programme materials Introduction to MDRO education programme Consolidation and review of microbiological and epidemiological perspectives Session 2: Laboratory Investigations Diagnostics typing and susceptibility testing Good laboratory practice Session 3 Antibiotic Stewardship Antibiotic policies Measures for improvement of prescribing Session 4 Infection Control Principles and evidence based practice Effective infection control interventions Session 5: Surveillance Session 6: Application to practice Application of interventions to control MDROs in health care settings Transparent reporting of outbreaks and interventions Session 7: Evaluation
Duration	3 days
Methods	The programme will be delivered by **blended learning**, with 20 direct contact teaching hours (ie: three day residential training course) complemented by a pre-programme CD-ROM resource which will contain all pre-programme reading and teaching materials, the students will require for completion of the programme, to be made available and accessed by participants prior to programme attendance. This pre-programme learning will utilise the expertise of the participants and enhance their experiences within the taught component of the sessions.
Competencies to be acquired	Competencies to be acquired should enable participants, at the end of the training, to conduct the following activities independently: • Diagnostics typing and susceptibility testing and Good laboratory practice • Antibiotic Stewardship • Antibiotic policies • Measures for improvement of prescribing • Infection Control • Principles and evidence based practice • Effective infection control interventions • Surveillance • Application of interventions to control MDROs in health care settings • Transparent reporting of outbreaks and interventions

4. Public health surveillance

Time series analysis - Principles Surveillance	
Scheduled for	October 2014 (tentative)
Previous editions	21-25 April 2008, Veyrier du Lac, France; 4-8 May 2009, Santorini, Greece
Target Group	Epidemiologists who are involved at any level of the public health administration in the analysis of surveillance data with the objective of detecting aberrations which may reflect a change in frequency of occurrence requiring public health action
Prerequisites	Basic knowledge of statistics and mathematics is required, comprehension of basic linear regression techniques is an advantage. A basic knowledge of STATA commands is required. Good command of English
Learning Objectives	The objective of this course is to strengthen participant knowledge and skills related to the public health surveillance and times series analysis, with the objective of detecting aberrations which may reflect a change in frequency of occurrence requiring public health action Knowledge objectives should include understanding: • The principles of public health surveillance and data quality • Methods for evaluation of surveillance systems • The different components of a Time Series • The methods for modelling Time Series Skills to be acquired involve learning how to: • To identify the key attributes of a surveillance system • Design a plan to evaluate a surveillance system • To identify the needs of TS analysis • To interpret the results of a TS analysis
Content	The curriculum for the workshop should include at least: • Data quality • Evaluation of surveillance systems • Laws on surveillance and reporting of communicable diseases at national, EU level and globally (International Health Regulations) • Time series analysis (Objectives, definitions, software, descriptive techniques, stationary process, filtering, smoothing, regression techniques, Time Series models (Linear Models, Autoregressive Models) and forecasting
Duration	3 days (face to face workshop)
Methods	Blended format (self-learning module to be done by participant one month in advance and three day face to face workshop) The teaching methods for the face to face workshops associate formal presentations, case studies and practical sessions on software tools

Competencies to be acquired	Competencies to be acquired should enable participants, at the end of the training, to conduct the following activities independently: • Perform descriptive analysis of surveillance data • Interpret disease and public health events trends from time series analysis • Identify key findings from surveillance data analysis and draw conclusions • Evaluate surveillance systems • Recognise the need to set up a new surveillance system Domain 1.2.2. Public Health Surveillance. Competencies 19 and 20 – from the list of ECDC core competencies for public health epidemiologists working in the area of communicable disease surveillance and response in the European Union

5. Epidemiological studies, vaccine preventable diseases

Epidemiological methods applied to vaccine preventable diseases- Train the trainers	
Scheduled for	February 2014 (tentative)
Previous editions	Epidemiological aspects of vaccination 14-18 April 2008, Bilthoven, The Netherlands 20-24 April 2009 Helsinki, Finland 21-23 February 2012, Florence, Italy (Train the trainers)
Target Group	Epidemiologists/public health experts from EU member states (MS) and EEA, who are involved in surveillance of vaccine preventable diseases and immunisation issues in their regular activities at national or regional level.
Prerequisites	Minimum work experience of two years in this field and good command of English
Learning Objectives	The objective of this course is to give an overview of the main aspects of vaccination issues in public health and strengthen participant knowledge and skills related to epidemiological methods applied to vaccine preventable diseases, including public health surveillance, outbreak investigation and epidemiological studies, strengthening participant knowledge and skills related to the investigation of communicable disease outbreak affecting their country. Knowledge objectives should include: • European and global VPD networks and disease control targets • Basic concepts of public health surveillance and special aspects relevant for VPD • Vaccine coverage monitoring/surveillance • Outbreak investigation applied to VPD Skills to be acquired involve learning how to: • Apply the epidemiological concepts of clinical vaccine trial design including vaccine efficacy • Evaluate vaccination programmes • Conduct surveillance of vaccine preventable diseases, • Estimate vaccine uptake, • Evaluate vaccine safety and vaccine effectiveness, • Conduct sero-epidemiology studies and vaccine effectiveness • Conduct outbreak investigation of VPD
Content	The curriculum for the workshop should include • Surveillance of Vaccine Preventable Diseases (VPD) • Surveillance of vaccine coverage in a VPD • Outbreak investigation of a VPD • Surveillance of adverse events • Evaluation of Immunization programs • Communication to the population
Duration	21 hours over 3 days
Methods	Lectures, case studies, group discussions and practices to design lesson plans.
Competencies to be acquired	Competencies to be acquired should enable participants to: • Conduct surveillance of vaccine preventable diseases • Conduct an outbreak investigation of a vaccine preventable disease • Conduct sero-epidemiology studies From ECDC core competencies for Public Health Epidemiologists in the area of communicable disease surveillance and response in the EU, the domains: 4. Public health surveillance, 5. Outbreak investigation, and 6. Epidemiological studies

6. Training and mentoring

ECDC Summer School 2013 – Train the trainer on applied epidemiology and public health microbiology	
Date, venue	10-13 June 2013; at ECDC premises
Target Group	Professionals with public health background who have an interest in mentoring and training junior professionals. This includes: • 15 seats for Supervisors of EPIET and EUPHEM fellowships (main supervisor, co-supervisors and those that for specific projects) • 15 seats for ECDC experts • 15 seats for Member State experts from EU Disease Specific Networks • 10 seats for professionals establishing Medi-PIET
Prerequisites	Education and expertise in prevention and control of communicable diseases; experience and/or willingness to train junior professionals. Willing/planning to suggest and supervise projects with an EU dimension (related to ECDC work plan) to EPIET or EUPHEM fellows
Learning Objectives	The goal is Sharing experience and views on supervision, coaching and creating collaborations between PH microbiologists and epidemiologists, and other relevant experts in prevention and control of communicable diseases. Bring the ECDC core activities and the fellowship network closer together, enhancing competencies for supervision also among the ECDC experts, having in mind projects of EPIET and EUPHEM fellows that have an EU dimension and can be supervised by them.
Trainers	ECDC Experts from PHT Section and other Units, including Scientific Coordinators of EPIET and EUPHEM; Contact persons: Carmen Varela Santos, Marion Muehlen and Sonsoles Guerra Liaño
Methods	Participative methods will be used including: peer learning, problem-based solving, role play, group discussions, portfolio, case studies, etc. Before the Summer School participants will receive the full agenda and –for some workshops - recommendations for readings. One day workshops run in parallel and are led by EPIET Coordinators and other ECDC experts from different Units.
Content	The course is composed of a series of parallel workshops, and tentatively include: 1. Induction workshop for supervisors 1.1. Mentoring, didactics and management 1.2. Acquisition and Assessment of Skills and Competencies 1.3. Scientific review: Surveillance projects and operational research 1.4. Scientific writing: The argument matrix and abstract writing 2. Technical workshops 2.1. Monitoring and evaluation of public health programmes 2.2. Scientific review: Outbreak investigation 2.3. Monitoring data quality and evaluating surveillance systems 2.4. Burden of communicable diseases in Europe 2.5. Introduction to Stata 2.6. Methods for evidence-based public health 2.7. Analytical epidemiology in outbreak investigation 2.8. Monitoring and evaluation of public health programmes 2.9. From Evidence to Action in Public Health 2.10. Public health policy making: the role of scientific evidence and ethics 2.11. Geographic Information Systems in infectious disease epidemiology 2.12. Role of health communication in disease prevention and control

Competencies to be acquired	Participants are expected to strengthening their competences in: • Supervision/mentoring on the job • Applied epidemiology (risk assessment, laboratory issues, outbreak investigation, epidemiological studies, public health surveillance) • Public health microbiology (risk assessment, outbreak investigation, public health surveillance) • Communication • Management • Training (Didactics) Competency Domains 1, 2, 4, 5, 6, 8, 9, 14, 16, 17, 22, 23 and the Area of Ethics – from ECDC core competencies for Public Health Epidemiologists and Public Health Microbiologists working in the areas of communicable disease surveillance and response in the EU.
Contact to apply	Learning & Development – learning@ecdc.europa.eu Public health training section – ECDC.Courses@ecdc.europa.eu

Courses and activities with ECDC Disease Programmes, Microbiology Coordination and other teams

7. Legionnaires´ disease

Legionnaires' disease risk assessment, outbreak investigation	
Scheduled for	25-28 February 2013, Budapest - for EU/EEA Member States December 2013, Zagreb - for EU enlargement countries and Croatia
Previous editions	June 2011, October 2012 (London)
Target Group	Multidisciplinary: public health professionals involved in the prevention and control of Legionnaires' disease, in the three disciplines: public health microbiology, epidemiology and environmental health/inspections
Learning Objectives	The goal of this training is to strengthen the participant's 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.
Content	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.
Duration	3,5 days
Methods	The course incorporates different teaching methods: short presentations, group work, risk assessments using photographic material and field visits to understand potential sources of outbreaks (e.g. cooling tower, spa pool and water systems).
Competencies to be acquired	From ECDC core competencies for Public Health Epidemiologists working in the areas of communicable disease surveillance and response in the EU, the domains covered are: 1.1.1.Public health science 1.2.1. Risk assessment 1.2.2. Public health surveillance 1.2.3. Outbreak investigation 1.2.4. Epidemiological studies 1.2.6. Laboratory issues 2.3.1. Risk communication

8. Food-borne diseases

Epidemiological and microbiological investigation of L. monocytogenes clusters – Joint pilot workshop EFSA/ECDC/EURL	
Scheduled for	12-13 March 2013, Paris, France
Target Group	Multidisciplinary groups of four experts per each participating country covering the following areas; public health epidemiology, public health microbiology, food safety and food microbiology. Seats for 12 participants from three different EU/EEA Member States. Selection is done by ECDC FWD Disease Programme, EFSA and the EURL, through invitation letters to EFSA's Task Force on Zoonoses Data Collection, ECDC's Food- and Waterborne Diseases and Zoonoses network and the network of National Reference Laboratories for *L. monocytogenes*.
Prerequisites	Expert from a national level public health laboratory with skills to perform or supervise PFGE typing of *Listeria monocytogenes* isolates. Expert from a national reference laboratory for food with skills to perform or supervise PFGE typing of *Listeria monocytogenes* isolates Expert in public health epidemiology and with an interest in listeriosis Expert in food safety and with an interest in *Listeria monocytogenes* in foods
Learning Objectives	The aim is to strengthen multidisciplinary collaboration in detection, investigation, and reporting of *L. monocytogenes* outbreaks. The pilot training workshop on epidemiological and microbiological investigation of *L. monocytogenes* clusters uses molecular typing data (PFGE) as a clustering tool.
Content	Current activities by the different EU PH stakeholders: • Update on activities related to foodborne outbreak investigations - EC • Updates on surveillance of listeriosis, Listeria monocytogenes and launch of molecular surveillance pilot - ECDC • Listeria baseline food survey, data collection and plans for molecular typing data collection - EFSA • Lm molecular typing database development and external quality assessment support - EURL Perspectives about the disease: • Listeriosis in humans and Listeria monocytogenes as a food safety problem • Listeriosis in humans, clinicians view • Listeria monocytogenes - food hygiene problem in food processing industry Investigations of Listeria monocytogenes outbreaks and clusters (country presentations) Introduction to cluster analysis • PFGE typing of Lm and quality assessment (EURL) • Introduction of the ELiTE study (ECDC) • Cluster analysis and introduction of cluster analysis plan (ECDC) Need for additional descriptive analyses; useful variables to be covered in the ELiTE study; and need for additional comparisons Specific aspects in classification and reporting of listeriosis foodborne outbreaks (EFSA)
Duration	2 days
Methods	The training workshop is eminently practical. There will be presentations, and participants will - in working groups - practice cluster analysis and receive orientation to the tasks and study questions of the ELiTE study; Afterwards participants will present group results and discussions on major findings.
Competencies to be acquired	Competencies to be acquired should enable participants, at the end of the training, to conduct the following activities independently: • Defining and identifying clusters; • Selection of clusters for further analysis • Descriptive analysis of clusters • Statistical comparisons

Diagnostics and public health surveillance prevention and control of Foodborne parasites - Train the trainers jointly organised by WHO GFN/ECDC	
Scheduled for	September 2013 (Tentative)
Target Group	Multidisciplinary: lab technicians, MD, epidemiologists and veterinarians
Prerequisites	Education in a discipline where parasitology of foodborne diseases is a relevant aspect; experience in this field and possibility to disseminate the information (i.e. training others)

Learning Objectives	Acquire knowledge and skills on
	• Differential diagnosis and public health aspects of
	  ○ Protozoa: Giardia and Crypto (together), toxoplasmosis. Trichinella, Cyclospora
	  ○ Trematodes: Fasciola spp., Opisthorchis spp, Clonorchis sinensis, Paragonimus spp.
	  ○ Echinococcus granulosus, Echinococcus multilocularis (together)
	  ○ Cestodes: Taenia solium, Taenia saginata (together)
	• Advanced methods for microscopic diagnosis
	• Molecular diagnosis of intestinal protozoa

Content	Clinical, Diagnostic and Public Health Aspects of Foodborne and Intestinal Parasitic Infections, including:
	• Pathogen description of priority parasites and lifecycle; short description of the human disease, epidemiology and surveillance in humans and control programmes in animals (all attendees: laboratory personnel and epidemiologists. This should cover the human, veterinary and food sectors).
	• Diagnosis, including all steps: microscopy, species and genotype characterization as well as serology
	• Management option considerations (these will have diverse veterinary or environmental contributions):
	  ○ Surveillance
	  ○ Prevention (treatment in animals where appropriate)
	  ○ Control (including EU control programmes in animals to prevent spread)
	  ○ Elimination

Duration	3 days
Methods	Blended delivery i.e. a combination of eLearning for the introductory as well as face-to-face lab, epidemiology and integrated sessions in the classroom, followed by a post-training implementation project. Train-the-trainer module, so that there are trainer materials for dissemination at the course and designing the module using adult learning methods. Demos and practical exercises on new diagnostic methods, combined with working group discussions. The first edition is a pilot.
Competencies to be acquired	From the ECDC core competencies for Public Health Epidemiologists working in the areas of communicable disease surveillance and response in the EU, the domains: 4. Public health surveillance, 1.2.5. Infectious diseases, 1.2.6. Laboratory issues

9. Sexually transmitted infections

Laboratory diagnostics and susceptibility testing for gonorrhoea	
Scheduled for	September 2013
Previous editions	2012, 2011, London
Target Group	Microbiologists and laboratory experts from EU/EEA member states working in the field of sexually transmitted infections, particularly gonorrhoea or who are considering developing *N. gonorrhoeae* susceptibility testing in their laboratories or joining the European Gonococcal Antimicrobial Surveillance Programme.
Prerequisites	See Target
Learning Objectives	The course objectives are to give participants a good working knowledge and understanding of N. gonorrhoeae diagnostics, culture, identification and susceptibility testing.
Content	• Isolation and identification of N. gonorrhoeae • Antimicrobial resistance in gonorrhoea – mechanisms and detection • Surveillance of gonococcal antimicrobial resistance • Susceptibility testing of N. gonorrhoeae • Use of NAATS for GC testing • Molecular typing of N. gonorrhoeae • Microscopy for STIs • European STI Surveillance
Duration	Three days
Methods	Combination of lectures and laboratory bench work
Competencies to be acquired	• Surveillance of gonorrhoea and antimicrobial resistance • Laboratory management • Microbiology knowledge • Specimen collection • Specimen transportation • Laboratory Methods • Molecular Methods

10. Communication

Development, implementation and evaluation of prudent antibiotic use campaigns	
Scheduled for	First week of July
Previous editions	This is the first edition.
Target Group	This course targets a multidisciplinary audience comprising health professionals, such as infectious disease specialists, microbiologists and pharmacists, as well as communication experts and press officers responsible for the design and implementation of the EAAD campaigns at national levels in the EU/EEA Member States and EU enlargement countries.
Prerequisites	See target
Learning Objectives	The course will provide appropriate learning opportunities so that the participants can acquire: Knowledge on • Basic concepts regarding BCC campaigns, including theoretical underpinnings and planning frameworks; • Key elements of a social marketing plan for development of BCC campaigns on prudent antibiotic use; • Strategies to overcome implementation barriers related to resources limitations (budget, time and staff constraints); • Basic concepts on monitoring and evaluation methods and tools. Skills related to • Stepwise design and implementation of a social marketing plan for a BCC campaign on prudent antibiotic use, including but yet not limited to market research (formative research and segmentation) and marketing mix formulation (product, price, place, promotion); • Stepwise planning for monitoring and evaluation of a BCC campaign on prudent antibiotic use.
Content	The main domains of the course are: • Health communication approaches, more specifically, behaviour change communication (BCC), focusing on prudent antibiotic use campaigns; • Monitoring and evaluation, with emphasis on prudent antibiotic use campaigns.
Duration	2.5 days
Methods	The course includes 3 parts: A pre-course package A 2.5-day face-to-face course divided into 3 modules: Module 1: Introduction to development of campaigns on prudent antibiotic use Module 2: Implementation and process-evaluation of campaigns on prudent antibiotic use Module 3: Development of outcome/impact indicators for campaigns on prudent antibiotic use A post-course package

Competencies to be acquired	Learning outcomes are classified according to Bigg's structure of the observed learning outcomes (SOLO) taxonomy: (Level 1) uni-structural, (Level 2) multi-structural, (Level 3) relational, and (Level 4) extended abstract. At the end of this course, the participants will be able to: • Understand and explain the rationale, key elements and steps required to develop a behaviour change communication campaign focusing on prudent antibiotic use (SOLO-Level 2); • Understand and apply basic social marketing concepts in the development, implementation and evaluation of behaviour change communication campaigns focusing on prudent antibiotic use (SOLO-Level 2); • Design and implement a site-specific behaviour change communication campaign focusing on prudent antibiotic use (SOLO-Level 3); • Understand and explain the different monitoring and evaluation conceptual approaches and frameworks (SOLO-Level 2); • Identify and select appropriate indicators, methods and tools to monitor and evaluate behaviour change communication campaigns focusing on prudent antibiotic use (SOLO-Level 3); • Design and implement a monitoring and evaluation work plan for a site-specific behaviour change communication campaign focusing on prudent antibiotic use (SOLO-Level 3).

Risk communication in the prevention and control of communicable diseases. Focus: measles	
Scheduled for	September 2013
Previous editions	January 2013 (Pilot training for ECDC Experts)
Target Group	Public health programme managers and practitioners involved in the prevention and control of communicable disease threats on regional, national and/or local level.
Prerequisites	Expertise in monitoring and evaluation of public health programmes (e.g. addressing specific groups and populations); involvement in health education and health promotion programmes at national and/or local levels; possibility/ability to apply risk communication concepts, principles and approaches to the prevention and control of communicable disease at national and/or local levels; interest in health-related behavioural and social science.
Learning Objectives	The central aim of the training is to improve participants' understanding of and action capacities related to different ways of addressing risk communication challenges and to develop the capacities to understand, analyse and apply risk communication concepts, principles and approaches to the prevention and control of communicable disease threats on regional, national and/or local levels.
Content	Risk communication concepts (Introduction to risk communication) Applying concepts in everyday professional/ institutional practice Risk perception and behaviour Using risk communication concepts to reframe approaches to measles vaccination challenges
Duration	2 days
Methods	The training course is structured to help participants reflect on various concepts and a strategy related to risk communication. It offers a forum to test innovative approaches and engages participants in an active learning process rather than the provision of oversimplified "how-to communicate" bullet points and lists of "universally" easy to apply tricks. The course puts an emphasis on addressing continuous infectious risk communication challenges e.g. vaccination and multi-drug resistance rather than working exclusively on outbreak scenarios and early communication to prepare for these outbreaks and other health crises. The course using discussion, lectures, case studies, work on concrete scenarios, group assignments.
Competencies to be acquired	This training aims to help workshop participants to think differently about risk communication by introducing them to new ways to: Analyse a variety of risk communication approaches and concepts Understand and reflect on the implications of these approaches and concepts for addressing public health challenges, in particular measles vaccination Apply these approaches to their own daily practice

11. Public Health Microbiology

ESCMID ECDC Observers

Scheduled for	2-6 September 2013
Previous editions	This is the first edition.
Target Group	As a Collaborative Centre of the European Society for Clinical Microbiology and Infectious Diseases (ESCMID), ECDC offers to host five Observers during 2013. This initiative targets professionals within the field of clinical microbiology and infectious diseases, who have an interest in public health. This initiative is open to full members of ESCMID. The application period is 18 June to 2 July 2013. More details on the observerships and application procedure can be found at www.escmid.org
Prerequisites	See target
Learning Objectives	The main objectives of a one-week visit are: • to provide the ESCMID Observers with a good understanding of the European public health roles and responsibilities of ECDC in supporting infectious disease prevention and control and the interplay with expert and competent bodies in the Member States; • to become acquainted with EU surveillance and epidemic intelligence systems; • to be informed about ECDC's Public Health Microbiology Programme; • to initiate contact with ECDC's disease-specific experts; • to receive an overview of projects of relevance to their work and find an opportunity for possible collaborations.
Content	Day 1: General introduction to ECDC, including an overview of the EU institutions with functions in communicable disease prevention and control, presentation of ECDC's mandate and the way it operates; Brief introduction of the ESCMID Observers – invited to present their own country and institution, professional background and interests; area of work and research activities and their expectations of the visit; Information about the core functions of Centre, including highlights of recent projects and on-going work; Visit to ECDC's Round Table – cross-disciplinary daily review of most recent epidemic intelligence information on potential threats to human health; Presentation of the joint vision of the European Commission and ECDC on human pathogen laboratories and the Centre's Public Health Microbiology programme, with focus on initiatives relevant to the background of the ESCMID Observers (harmonised antimicrobial resistance monitoring, molecular surveillance, etc.); Discussions on the topics of the day Day 2: Presentation of ECDC's Disease programmes and thematic discussions; Antimicrobial Resistance and Healthcare-associated Infections, Emerging and Vector-borne Diseases, Food- and Waterborne Diseases and Zoonoses, Influenza, Sexually Transmitted Infections, including HIV and Blood-borne Viruses, Tuberculosis Programme, Vaccine Preventable Diseases, Scientific advice, health inequalities and migrant health Day 3 – Day 5: Selected topics / projects; Presentations by ESCMID Observers on their current professional activities and projects; Presentations by EUPHEM fellows; Stay at specific sections/units and discussions with ECDC experts on specific topics or projects depending on the interest of the ESCMID Observers; The visit will conclude with an interactive session to exchange personal reflections and suggestions for future Observer's visits and other areas of academic – public health collaborations.
Duration	5 days
Methods	Interactive presentations, multi-disciplinary discussions, visits of different units/sections at the Centre, selected technical discussions depending on the area of interest
Competencies to be acquired	See learning objectives