



**EpiSouth Project
WP5 Strategic Document**

**Training in Public Health and Applied Epidemiology
in the Mediterranean Countries and Balkans**

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WP5 Training in Public Health and Applied Epidemiology in the Mediterranean Countries and Balkans

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1. Evidence of the problem to be addressed

The connected world changes more and more rapidly. Persisting communicable diseases, emergent pathogens, even the climate change effects raise continuous challenges worldwide against which the states, the institutions and the professionals of public health have to be prepared for a timely and efficient public health response.

IHR 2005 is a global commitment to face international public health risks with all the available means. Further than changes of legal, resources, governance or political concern, the common bases for optimising existing conditions is to set up the core competencies and to update the public health workforce in order to improve global surveillance.

IHR implementation implies common efforts for empowering and harmonising surveillance systems in order to accomplish the common interest. If the inequality in capacities among surveillance systems in different countries persists the common benefit will not be reached.

Funded by EC-DG SANCO, DG RELEX, Italian MoH-EpiMed Project, and TAIEX, EPISOUTH (2006-2010) set up a framework of collaboration on epidemiological issues aiming at improving communicable diseases surveillance, communication and training across the countries of the Mediterranean and the Balkans. EPISOUTH Network involves 26 countries, 29 public health institutions, more than 770 public health professionals for an area covering 515,4 million people¹.

EPISOUTH countries share a common epidemiological environment and public health threats and risks. However, there is a great heterogeneity between these countries in terms of size of the country, population (the 55% of the EPISOUTH region population is concentrated in four countries while 15 countries (58%) gather 11% of the population of the EPISOUTH Region), competency of the national institutions in charged of surveillance, number of public health professionals, access to training, diagnostic and laboratory capacity, information systems and resources allocated to public health. The majority of countries have centralised PH systems but there are also important differences in the administrative and political decision making pyramid.

The work package 5 of EPISOUTH is devoted to training. This document reflects the proposed strategy related to training after analysis and reflexion based on information provided by participants in the project trough a Training

¹ Elaborated from UNFPA 2009, in http://www.unfpa.org/swp/2009/es/pdf/ES_SOWP09_DemSocialEcon.pdf visited 29/12/2009 and Wikipedia , in the site <http://es.wikipedia.org/wiki/Kosovo> Visited 03/01/2010

Needs Assessment (TNA), the evaluation of the training activities and the group discussions carried out during the period of the project and the general activities of EPISOUTH such as WP5 Steering Team meetings, Steering Committee Meetings and General Project Meetings.

The starting point of the activities was to assess perceived institutional training needs in the area of the project. A survey was carried out in June-July 2007 among the participating countries at that moment. A self administered, semi-structured questionnaire was sent to decision-makers/senior epidemiologists. The core part of the questionnaire allowed for prioritisation of training topics of interest for training activities foreseen in the project. The complete report on Training Needs Assessment (TNA) can be found at http://www.episouth.org/outputs/wp5/WP5-survey_Report_v_Fin.pdf.

Results of the TNA are summarised here below. Public Health Services tend to be understaffed at central, peripheral and local levels. In addition an unequal distribution of the public health workforce is observed. Five hundred and forty five out of the 779 professionals (70%) working in surveillance are concentrated in 4 countries, out of 22 respondents. Other relevant results are out of 127 medical doctors' epidemiologists working in the respondent institutions, (58.2%) work in four countries. Eleven respondent institutions have less than five medical doctors' epidemiologists. Eight institutions (40%) reported having only one person as support staff at central level while three respondents (15.7%) reported having 10 or more supported staff.

Eleven (52%) of respondent institutions provide training courses for keeping their personnel updated, in seven countries advance training in epidemiology and public health is available, 14 offer a master degree in public health and epidemiology and six countries implement a Field Epidemiology Training Programme (FETP) or similar (Egypt, France, Italy, Jordan, Spain and Turkey). Sporadic training courses are carried out in most countries. However, in 6 out of 19 respondent countries, less than 50% of the personnel working in surveillance received training in the two years previous to the survey.

Training topics of interest as prioritised by the respondents were "risk assessment", "modelling and infectious diseases dynamics", "epidemic intelligence" and "advanced data analysis". On one side these results overlap with ECDC areas of core competencies of: Public Health, Applied Epidemiology, Biostatistics, Applied informatics, Communication². On the other side, they also coincide with those domains of the core competencies with associated core learning activities (epidemiology, communication and information technology) suggested by TEPHINET for continuous quality improvement of training process³. Coordination among institutions and coordination of activities facing cross border health risks were aspects to deal with suggested by the TNA results.

Aiming at harmonizing technical approaches among participant institutions and at exchanging expertise, three one-week training modules/ workshops were implemented during the WP5 activities in the period 2007-2009. The modules included a wide introduction to the main topics identified in the TNA. Participants were key professionals working at central level of their national surveillance institutions selected by EPISOUTH participating countries through their project focal point.

Training modules were address to a limited number of key participants with responsibility in cross- border issues and risk assessment & communication at central level. Modules included a broad introduction to the topics of interest and specific countries related issues were discussed from the international point of view. An in-depth training on the priority topics addressing or covering specific national training needs were not in the scope of the project.

² Reference 13

³ Reference 9

WP5 activities covered the training objectives foreseen for the network, allowed for a better training needs identification and training planning and help to build up a real network of public health professional within the EPISOUTH region.

The activities of the network have generated awareness regarding the necessity of specific capacity building and its importance for effective internal and cross border surveillance and response at national level. Improving collaboration and communication with neighbouring countries and complying with IHR 2005 requirements are perceived as a public health necessity among EPISOUTH partners.

A common regional training strategy would enhance surveillance capacity in the EPISOUTH region.

2. Scientific rationale for action

Effective training programmes are crucial to improve public health systems and epidemiological surveillance. However, the effectiveness of training programmes is dependent on broader strategies addressing deficiencies in health infrastructures, the availability of essential financial, technical and human resources, the application of scientific methods for investigation and decision making in surveillance and response and coordinated action at national and international level⁴.

Efficacy in surveillance, research and risk management at regional level require exchange of knowledge, experiences and tools for improving PH routine work at international level and allowing coordinated and timely responses facing Public Health events of cross- border concern. However because of administrative and political reasons, exchange of experiences between PH institutions, practitioners, researchers, universities and policy makers in the EPISOUTH region is limited.

To train and position sufficient PH staff at different administrative levels would allow for improving evidence base decision making. On the other hand, to avoid the brain drain is one of the challenges for some countries within the EPISOUTH region.

Adapting training programmes and strategies accounting for special characteristics of the region would help to solve both problems mentioned above.

Since the second half of the twentieth century different approaches to PH and epidemiology training strategies have been proposed world wide to cover a diversity of institutional interests, going from academic to hands on the work training. The relevant approaches could be summarized as follows⁵:

University-based public health training programmes:

The university-based model of postgraduate training in public health. Promote high level theoretical training usually expensive and restricted to a small number of professionals. Use to focus on research aspects of epidemiology and public health. This model has been widely implemented in South Asia and African continent, with low PH impact.

The Streamed training model used by WHO, UNICEF, targets junior health workers with limited PH competencies. The model train low positioned PH workers aiming at assuring an acceptable level in key activities

⁴ Reference 6

⁵ Reference 6

in public health practice at local level. This model has been widely implemented in low and medium incomes countries.

Field-based training models:

Field Epidemiology Training Programmes (FETP). Trainees are confronted with real needs at a workplace under the supervision of programme coordinators and supervisors at the hosting institutes. The origin of these models is the Epidemic Intelligence Service of the US-CDC (1951) also known as “learning by doing”. With some variations is the base for training programmes in over forty countries, including the five national FETP existing in the Episouth region. Those programmes mainly target junior professionals with little working experience in the field of PH and Epidemiology.

Central America regional model, proposed by the US- CDC. It covers a geographical area of five countries. A pyramidal programme was established (low, medium and advance level) and core competencies common for the five countries established at each level⁶.

EPIET Programme. A FETP aiming at professionals in European countries tries to build up a network of epidemiologists sharing common methods, view and language within the EU⁷. It has been considered as a successful programme in achieving the main goals of developing capacity to respond to public health crisis by strengthening workforce among EU member states.

Australian model:

A Master of Applied Epidemiology Programme combining academic and field approaches. Students have academic and field supervisors. A collaborative platform including high level professionals (from health and non-health sectors) was created and discussion fora about emerging problems, outbreaks and policy development were open. This “learning by collaborative problem solving” model was perceived by public health seniors as challenging. It showed as a good strategy for developing and reinforcing surveillance systems and PH policies.

All the three approaches to training in public health target mainly young public health professionals willing to get involved in their national PH systems and/or international institutions. The three models produce well trained professionals that may be available for working at public health institutions. However, all three approaches need important financial and technical resources affecting the number of trainees and quality of training in different countries. The limited access to high level training in public health policy and planning in other countries may generate expectations for accessing high decision making level positions among graduates reducing programme impact in routine surveillance and response systems.

Public health institutions need adapted ongoing training and updating of epidemiologists and public health professionals with functions in surveillance and response. This training should help in building up institutional networks both at national and regional level. Public health activities carried out by these institutions should not be affected by training strategies.

The number of PH professionals formed through such programmes is increasing year by year. However increasing number of graduates doesn't mean a rapid impact on the Surveillance and Response Systems' workforce. The impact

⁶ Reference 7

⁷ Reference 3

of the above mentioned training programmes has to be evaluated in order to compare the effectiveness of the different strategies.

To assure the accessibility of current workers from peripheral, local, national and decision making levels to specific training programmes could help to improve on the routine work of Surveillance institutions at country level.

Incorporating graduates from these training programmes to PH institutions and a carefully design professional careers would assure long term quality of the PH work.

3. Objectives

A capacity building strategy for the EPISOUTH region should to establish pillars for developing actions that indeed strengthen systems for a real improvement of the alert and response capacities.

Main goal: This Strategic Document on Field Epidemiology and PH Training proposes the strategic framework for strengthening the Public health workforce at local, peripheral, national and international level and sets a Route Map in order to strengthen surveillance and response systems, public health capacities and epidemiological research in the Mediterranean and the Balkans.

The Training Strategy focuses on five strategic lines: to strengthen existing resources, to promote collaborative initiatives, to promote the use of innovative training technology and to integrate a multidisciplinary approach to public health and epidemiology training, and evaluation.

This strategy considers training the followings targets: the new public health workforce; updating of current public health staff, the specific training for senior professionals and decision makers and the integration of public health related professionals from other fields of knowledge.

The implementation of this strategy should involve a wide range of health related sectors and policy areas working together in synergy at the country and regional level for greater coherence.

4. Potential audience and roles

This document is addressed to different audiences depending on the different roles in developing partially or wholly the strategic lines proposed (Table 1).

Table 1: Potential audience and roles

AUDIENCES' ROLES	POTENTIAL AUDIENCE
<p>Technical Players: partners participating as programmes and services providers and also trainers, experts, supervisors, training materials providers, etc.</p>	<p>EpiSouth, Institutes of Public Health in the region MoH in the region, WHO (EURO, EMRO, AFRO, Ly Off, HQ), ECDC, EPIET, EpiNorth, Universities, Schools of Public Health, ASPHER, TEPHINET, UNESCO, UNAIDS, Agriculture National institutions, Veterinarian Authorities, Food Authorities, Environment Authorities, Reference Labs, Institut Pasteur, Other Public Health Networks existing in the region, NGO's, National and Regional Associations of Epidemiologists</p>
<p>Financial Players: partners participating as donors (budget contribution or facilities for training)</p>	<p>European Commission –DG SANCO, AIDCO, others; ECDC, UNESCO, UNAIDS, World Bank,</p>

	Arab League, OCDE, International Cooperation Agencies
Political Players: partners who assure high decision making, agreements and conditions for developing actions contained in this document.	MoH in the region, Union for the Mediterranean, WHO (EURO, EMRO, AFRO, Ly Off, HQ), European Commission – DG SANCO, UNESCO UNAIDS, International Cooperation Agencies
Monitoring and evaluating Players: external individuals in charged of developing set of indicators and carrying out assessments. Should be different for each strategic line.	WHO, EC, ECDC, Institutes of PH, National Schools of PH, EPISOUTH, EPINORTH, TEPHINET, NGO's

5. Framework

This document proposes to adapt the principles from the **Declaration of Paris (2005)**⁸ for guiding the development of the training strategy among EPISOUTH countries.

Table 2: Principles of the training strategy for the EPISOUTH region

PRINCIPLES FOR TRAINING STRATEGY ⁹ FOR THE EPISOUTH REGION
<u>Ownership</u> - EPISOUTH countries set their own training priorities for enhancing their PH institutions
<u>Alignment</u> – Donors align with these objectives promote the use and enhancement of local and regional resources.
<u>Harmonisation</u> - Donors discuss with EPISOUTH Network and national institutions coordinate action plans and funding strategies in order to avoid duplication in training activities in the region.
<u>Results</u> – Training objectives and activities are results driven. Measurable indicators are identified for evaluation.
<u>Mutual Accountability</u> – EPISOUTH partners are accountable for achieving expected results. Donors should assume follow up of the activities and together with partners evaluate the accomplishment of objectives.

The same year in the World Health Assembly, 194 countries unanimously adopted the **International Health Regulation (IHR 2005)**, the most relevant and comprehensive agreement involving the entire EPISOUTH region. Other lateral or multilateral agreements are currently in effect among the Mediterranean and Balkan countries for improving communication and response for any public health event of international concern.

Focus on training, despite important heterogeneity in the access to and quality of training among the 26 countries participating in EPISOUTH, sub-regional training initiatives in public health medicine and epidemiology are available and different training related “networks”, institutions, agencies and/or associations operate in the region at different levels.

⁸ General commitment endorsed in the High-Level Forum on Aid Effectiveness, following the Declaration adopted at the High-Level Forum on Harmonisation in Rome (February 2003) and the core principles put forward at the Marrakech Roundtable on Managing for Development Results (February 2004).

⁹ Adapted from Paris Declaration 2005

Academic links between universities are usually reflected in common projects and exchange of professional. Public health schools (usually between academic and applied training) are associated in the European region in ASPHER (Association of Schools of Public Health in the European Region), TEPHINET (Training in Epidemiology and Public Health Intervention Network) associates over 40 FETPs all around the world. Other agencies such as WHO promote and deliver short training courses at national and WHO-regional level for helping countries to fulfil international commitments and for developing national action plans.

However, there is no initiative for promoting training activities of common interest for the Mediterranean and the Balkans. Collaboration within the region is usually fragmented and driven by administrative borders and political rather than public health interests.

This strategic document is not meant to replace but to complement actions for improving training capacities and access to training in the EPISOUTH region. EPISOUTH could play an important role in promoting regional training activities, discussion fora, multi-institutional agreements, training opportunities and could help improving the link between surveillance and epidemiological investigations and public health action. However, there are many other actors including international organizations, multilateral institutions, Ministries of Public Health, Universities, Public Health institutes, Schools of PH, Public Health Networks, reference laboratories, certain NGO's, etc playing an important role in training in the region that could be involved in developing this strategy or participate in specific activities.

The table below shows the general framework and training actions proposed for the development of training strategy for strengthening surveillance and response systems in the Mediterranean and the Balkans.

Table 3. Strategic lines, actions, target groups and players for improving core training capacity in the EPISOUTH region

EPISOUTH TRAINING STRATEGIC LINES AND ACTIONS						
Strategic lines	Training and capacity building strategic actions	Targets				Potential Players
		New PH workforce	PH staff	Seniors PH staff and Decision Making	PH related professionals	
1.Strengthening existing resources	Mapping existing training resources in the region and promote links between existing training facilities	X	X	X	X	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, NGO's, etc
	Promoting academic certification of current training activities	X	X	X	X	ECDC, TEPHINET, Universities in and out Episouth region, EpiNorth Others
	Disseminate and increase awareness about training activities available in the region.		X	X		EPISOUTH, WHO, ECDC, EC, TEPHINET
	Cascade training strategies at local & peripheral level		X	X	X	MoH and PH Institutes, WHO, Nat. Schools of PH
2.Innovative training and capacity building	Face to face training + E- learning complementary formula		X	X	X	Universities, WHO, Nat. Schools of PH
	Creating E- advisory network for technical consultations		X	X	X	EPISOUTH, Universities, MoH and PH Institutes, WHO, Nat. Schools of PH , NGO's, Others
3.Promote interdisciplinary approach in Public Health surveillance	Identify, define, agree and disseminate areas of interest for interdisciplinary approach to surveillance and response			X	X	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, NGO's, among others

	Promote discussions for adapting inter-disciplinary approach within curricula			X	X	WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, NGO,s, etc
4.Establishing collaborative initiatives	To promote implementation of “strategic regional FETP” in specific geographical areas of interest for instance North Africa and The Balkans	X	X			EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, etc
	External short periods of “on job” training/or visits in EPISOUTH associated institutions		X	X	X	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, NGO’s, etc
5.Monitoring and evaluation	Identification of training impact indicators		X	X	X	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, Ngo´s, etc
	Develop methodological guides of “good practices” and benchmarking for adult training in applied PH and Field Epidemiology		X	X	X	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, Ngo´s, etc

6. Monitoring and evaluation

Evaluating training activities should address both efficiency and effectiveness. While efficiency is usually evaluated in most training programmes indicators for evaluating effectiveness in this domain are not developed.

EPISOUTH may allow for the necessary space for proposing, discussing and agreeing on the set of indicators for evaluating the mid and long term impact of training activities in the region. An institutional approach should be adopted in this process. The following table provides some examples of potential indicators for monitoring effectiveness.

Table 4. Example of indicators for monitoring and effectiveness measure and the potential players

MONITORING AND EVALUTATION				
Strategic lines	Training and capacity building strategic actions	Indicators		Potential Players
		Monitoring	Effectiveness	
1. Strengthening existing resources	Mapping existing training resources in the region and promote links between existing training facilities	- Defined number of training resources mapped (for the different target groups New PH, PH Staff, seniors and decision makers, PH related professionals)	- Percentages of increased use of the mapped resources	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH's, TEPHINET, EpiNorth, NGO's, etc
	Academic certification of current training activities	- Increase percentage of mapped training with academic certification - Increasing percentage of PH staff within Episouth PH institutions with obtained academic certifications	- The proportion of professionals with certification being increased during X consecutive years at central, peripheral and local level - Certification request included in the profile for employability in Surveillance institutions within EPISOUTH region	ECDC, TEPHINET, Universities in and out Episouth region, EpiNorth Others
	Disseminate and increase awareness about training activities available in the region.	- Increasing percentage of PH professionals (new, seniors and decision makers) within Episouth whom applied to mapped courses - Number of users of the EPISOUTH directory courses	- Decreasing time periods from the last course attendance among seniors and decision makers working in the institutions of Episouth	EPISOUTH, WHO, ECDC, EC, TEPHINET
	Cascade training strategies at local & peripheral level	- Increasing percentage of PH staff within Episouth PH institutions participating in internal cascade training at local and peripheral levels.	- Cascade training strategies included in the regular schedule of the institutions within the region - Tools and new procedures from learnt in training applied in routine of institution	MoH and PH Institutes, WHO, Nat. Schools of PH
2. Innovating training and capacity building	Face to face training + E- learning complementary formula	- Increasing percentage of PH staff within Episouth PH institutions participating in face to face + E-learning at central, local and peripheral levels.	- Face to face + E-learning strategies included in the regular schedule of the institutions within the region - Tools and new procedures from training implemented in the general procedures	EPISOUTH, Universities, WHO, Nat. Schools of PH

	Creating E-advisor network for technical consultations	<ul style="list-style-type: none"> - Directory of experts for technical supervision and consultation - Number of consults received by each advisor - Discussion for a created 	<ul style="list-style-type: none"> - Linkages created from specific consults made through E- advisors 	EPISOUTH, Universities, MoH and PH Institutes, WHO, Nat. Schools of PH , NGO's, etc
3. Promote interdisciplinary approach in Public Health surveillance	Identify, define, agree and disseminate areas of interest for interdisciplinary approach to surveillance and response	<ul style="list-style-type: none"> - Number of non PH or Epidemiology related areas identified 	<ul style="list-style-type: none"> - Linkages created from non -EPI fields made through - Percentage of multidisciplinary ad hoc teams established as consequence of the actions within the region 	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, NGO's, etc
	Promote discussions for adapting interdisciplinary approach within curricula	<ul style="list-style-type: none"> -Number of multidisciplinary discussion fora of PH concern created 	<ul style="list-style-type: none"> - Number of modification made in the curricula - Reports and scientific papers on the issue submitted 	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, NGO,s, etc
4. Establishing collaborative initiatives	To promote implementation of "strategic regional FETP" in specific geographical areas of interest for instance North Africa and Balkans	<ul style="list-style-type: none"> - Number of preparatory meetings for establishment of a regional FETP - Number of e-mails with new FETP 	<ul style="list-style-type: none"> - Preparatory documents for FETP establishment - Letters of agreements from institutions involved for FETP establishment 	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, etc
	External short periods of "on job" training in EPISOUTH associated institutions	<ul style="list-style-type: none"> - Number of candidates for "on-job trainings" - Proportion of PH staff demanding "on-job training" - Number of stays during a specific period 	<ul style="list-style-type: none"> - Implementation of tools/procedures learnt through "on job training" periods in the institutions within the region 	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, NGO's, etc
5. Monitoring and evaluation	Identification of training impact indicators	<ul style="list-style-type: none"> - Set of indicators created - Number of sets applied to specific actions 	<ul style="list-style-type: none"> - Number of specific mentions to the implementation of training indicators within the countries 	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, Ngo's, etc
	Develop methodological guides of "good practices" and benchmarking for adult training in applied PH and Field Epidemiology	<ul style="list-style-type: none"> - Number of documents written - Number of uses of the guides 	<ul style="list-style-type: none"> - Changes procedures performed in routines within the institutions within the region 	EPISOUTH, WHO, EC, ECDC, PH Institutes, National Schools of PH, MoH, TEPHINET, EpiNorth, Ngo's, etc

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APPENDIX

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