

NEWSLETTER WHO Collaborating Centre for Capacity Building in HIV/AIDS Surveillance

Andrija Štampar School of Public
Health, Medical School,
University of Zagreb, Croatia
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UPCOMING COURSES OF THE WHO COLLABORATING CENTER FOR CAPACITY BUILDING IN HIV/AIDS SURVEILLANCE:

29 June – 3 July 2008, Dubrovnik,
Cavtat

Training course in Surveillance and
Control of Sexually Transmitted
Infections, in collaboration with
University of California, San Francisco,
San Francisco Department for Public
Health and WHO EURO

14 – 17 July 2008, Zagreb, Croatia

Training course in Analysis of Data
from Respondent-Driven Sampling, in
collaboration with the Centres for
Disease Control and Prevention, USA

October 2008, Zagreb, Croatia

Training course in Surveillance of
Resistance to ART, in collaboration
with WHO HQ

15 – 19 September, Zagreb, Croatia

Training course in Strengthening
Capacities for Conducting National
AIDS Spending Assessments and
Resource Needs Estimates, in
collaboration with UNAIDS

10 – 14 November 2008, Zagreb,
Croatia

Training course on Design and
Implementation of HIV Surveys using
Respondent-Driven Sampling



Countries where participants of the training courses came from

The WHO Collaborating Centre for Capacity Building in HIV/AIDS Surveillance is located at the Andrija Štampar School of Public Health, which is a part of the School of Medicine, University of Zagreb, and is co-managed by the UNDP Office in Croatia. The Centre was established in 2003 as a Knowledge Hub within the Project “Capability Strengthening for Improved Utilization of Financial Resources to fight HIV/AIDS” and funded by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and WHO EURO.

The Knowledge Hub received the designation of the WHO Collaborating Centre for Capacity Building in HIV/AIDS Surveillance in March 2008. The mission of the Centre is to contribute to increasing capacities in the implementation of effective, sustainable and context-specific surveillance systems for HIV/AIDS which enable evidence-based development of HIV prevention, care and treatment. The Centre aims to respond to national and regional needs in HIV surveillance by providing innovative teaching programmes and technical assistance, as well as developing partnerships and collaborative networks that bring together a wide range of expertise in the field. Other activities of the Centre include adapting guidelines and tools and conducting surveillance-related research.

Sharing knowledge is the key component of Centre’s work. Twenty-seven training courses organised by the Centre during September 2003 - April 2008 were attended by more than 600 participants from 53 countries in Europe, North and Central Africa and the Middle East. Eighteen courses were organised in Croatia and nine outside Croatia. Some courses, such as the courses on respondent-driven sampling and monitoring and evaluation of HIV programmes were held several times in Zagreb, Croatia, and elsewhere.

1. HIV/AIDS Surveillance Courses: Expanding the quality and depth of surveillance expertise



2nd International
Advisory Meeting, and
the designation of the
Andrija Štampar School of
Public Health as the WHO
Collaborating Centre

Our course topics cover a wide range of areas - from policy focused issues such as monitoring and evaluation of national HIV/AIDS programmes to acquiring hands-on skills and knowledge to create methodologically sound and context-specific surveillance surveys among most-at-risk populations. Courses also enable participants from diverse countries and different professional backgrounds to develop contacts and exchange experiences that will allow them to develop their HIV prevention efforts through obtaining information on the distribution and trends in HIV infection. Each course lasts five days, and in addition to being provided in Croatia, the Centre's staff also conducts courses upon request in different countries. We have been fortunate to have, since 2004, participants from 53 countries, and we are looking forward to continue to attract a diverse set of participants. In the last year we have been able to implement a scholarship programme that allows participants from resource-constrained countries to participate in our training courses. The primary requirement for scholarship applicants is to work on HIV surveillance in their countries. Scholarships were provided since 2006 to 42 participants from Eastern Europe, Africa and the Middle East.

Following courses are currently offered by the WHO Collaborating Centre:



Course
on time-location
sampling

1. Introduction to HIV/AIDS surveillance
2. Behavioural surveillance
3. Surveillance of sexually transmitted infections (STIs)
4. HIV/AIDS biological surveillance: new concepts and methods in estimating burden of disease and response to treatment
5. Surveillance in hard-to-reach populations
6. HIV surveillance for programme managers
7. Monitoring and evaluation of national HIV/AIDS programmes
8. Surveillance of HIV/AIDS among tuberculosis patients
9. Surveillance in low and concentrated epidemics
10. Respondent-driven sampling (RDS)
11. Data triangulation
12. Training course in designing protocols for population-based and clinic-based HIV surveillance surveys
13. Time-location sampling
14. Analysis and interpretation of data from respondent-driven sampling using RDSAT
15. Strengthening capacities for conducting national AIDS spending assessments and resource needs estimates
16. Surveillance of HIV drug resistance

BRIEF OUTLINE OF THE COURSES

1. Introduction to HIV/AIDS surveillance



Mission in Yemen, during implementation of the HIV survey

The aim of this course is to give an overview of HIV/AIDS epidemics globally and regionally, as well as to introduce definitions and main concepts of public health surveillance, including the principles and concepts of HIV/AIDS surveillance. The course describes the steps and components needed to design and establish an HIV/AIDS surveillance system, as well as principles of data collection, analysis and dissemination.

Participants will be introduced to the basic concepts on how to assess the effectiveness, including sensitivity and completeness of a surveillance system and given an overview of national and international HIV surveillance systems and structures in Europe. The course also aims to increase an understanding of ethical issues in HIV/AIDS surveillance.

2. Behavioral surveillance

The aim of this course is to introduce participants to behavioural surveillance in the broader frame of HIV/AIDS surveillance. It will provide an overview of tools used for conducting studies of sexual and other risk behaviours. The special emphasis will be given to explaining probability and non-probability sample designs, as well as qualitative methods used to conduct formative research. Basic principles of analysis used in behavioural surveillance will be explained, such as univariate, bivariate and multivariate analysis, and trend data analysis. The course will also provide an overview of the importance of behavioural surveillance in mathematical and statistical modeling that attempts to monitor the status of an epidemic, forecast its future magnitude, and identify trends. The participants will learn how to design and improve HIV prevention programmes using behavioural data.

3. Surveillance of sexually transmitted infections (STIs)

The course aims to provide an understanding of the structure and functioning of surveillance of sexually transmitted infections (STIs) and strategies for planning and implementing STI surveillance programmes in diverse settings. The course starts with an overview of the aims and objectives of STI surveillance and describes the structure and functioning of STI surveillance systems in use today. Other lectures will address trends and determinants of STIs and the influence of STI treatment and care structures on STI surveillance. Participants will be given an opportunity to share their own country-specific experiences by describing key characteristics and outcomes of STI surveillance activities in their countries. Participants will learn about the methods and considerations for identifying, collecting and managing STI surveillance data, as well as different approaches used in STI surveillance data analysis.

4. HIV/AIDS biological surveillance: new concepts and methods in estimating burden of disease and response to treatment

The aim of this course is to introduce the principles and components of HIV biological surveillance systems, demonstrating the necessary steps in setting up such systems and defining strategies best adapted to country specific situations. Participants will learn of different biological tests that have been evaluated for use and explain their validity and utilization in different types of settings and epidemics, as well as the principles of handling serological specimens. Basic principles of data collection, analysis, interpretation and dissemination will be explained. Participants will be given an overview of use and procedures of unlinked anonymous testing and presented with ethical issues and challenges in HIV biological surveillance.

5. Surveillance in hard-to-reach populations



Group work during the training workshop

The aim of this course is to provide overall skills in designing and implementing surveillance studies in hard to reach populations, with an emphasis on men who have sex with men, injecting drug users, and commercial sex workers. Focus of the course is on gaining practical skills, which is achieved through interactive sessions on the protocol development exercise. Participants will be presented with the main methodological tasks and challenges related to sampling and surveying hard to reach populations, ranging from issues on how to select an adequate sampling method to interpreting and disseminating data.

6. HIV surveillance for programme managers

This module is intended for those who wish to obtain the broader knowledge in principles of HIV/AIDS surveillance. The module provides an overview of the key aspects of HIV/AIDS surveillance: HIV biological surveillance, STI surveillance and behavioural surveillance. The course emphasises the importance of evaluation of surveillance systems, and the use of surveillance data to assess the effectiveness and gaps in prevention and control policies. The course is relevant for HIV programme managers who work on planning of various components of HIV programmes, including surveillance. The course addresses all key elements of HIV surveillance and the links of surveillance and monitoring and evaluation, which has become increasingly important in HIV programme management. The group work will enable participants to acquire skills in planning, organisation and budgeting national or regional HIV surveillance systems and to learn how to use data for programme planning and evaluation.

7. Monitoring and evaluation of national HIV/AIDS response

The aim of this course is to provide participants with practical guidance on how to develop a national system of monitoring and evaluation of HIV programmes. The module is structured around five key themes – introduction to monitoring and evaluation (M&E), measuring impact, measuring coverage, using M&E data and setting up a national M&E system. It addresses the use of strategic information for programme planning, monitoring, and evaluation. Input indicators measure what goes into a programme (money, staff, commodities, etc.), while output indicators measure what comes out of it (number of HIV tests conducted, persons contacted by outreach workers, etc.). Outcome indicators measure the short to medium term results expected at the population level and include indicators that measure changes in HIV-related risk behaviours. Impact indicators are measures of the longer term results expected to occur in the target population.

Participants of the training course in pre-surveillance assessment, Aden, Yemen



8. Surveillance of HIV/AIDS among tuberculosis patients

Innovative processes of teaching — Extensive training materials with case studies and practical exercises are used during the courses. Training is based on interactive methods and 30-50% of time is spent on practical exercises, in particular on the group exercise on development of a protocol for a surveillance survey. Participants are encouraged to reflect upon and apply their knowledge to their own country settings.

Scholarship programme — A unique feature of the training programme since 2006 has been the provision of scholarships. Enrolment on the scholarship programme is based on applicants' CV, the completed application form and a letter of interest. The primary requirement is the work on HIV surveillance and an outline of future plans for work on HIV surveillance

Evaluation — Each of the training courses is extensively evaluated and the results are analysed and used to improve course content and organisation. Evaluation of individual courses has demonstrated that participants are very satisfied with the quality of lectures, and that the surveillance protocol development exercises have in particular proven to be useful. It has been encouraging that participants reported that it would be possible to introduce the knowledge learned during the training into their work practice.

Follow-up — We offer follow-up support related to participants' surveillance activities. Participants are encouraged to contact course lecturers and facilitators in case of any questions concerning surveillance and technical assistance related to the development and implementation of surveillance systems in their countries.

Participants receive a diploma that is accredited by the European Credit Transfer System (ECTS) with 3 points.

Tuberculosis (TB) is the leading cause of morbidity and mortality in HIV-infected patients, and prevention and treatment of TB in HIV-infected patients is considered a global priority by WHO and other international health organizations. Obtaining accurate estimates of HIV prevalence in TB patients is important as it guides the clinical management of HIV infection among patients with TB. This training course aims to develop the necessary skills to plan, implement and evaluate HIV surveillance among TB patients through surveys and routine data collection from clinical settings.

9. Respondent-driven sampling (RDS)

Respondent-driven sampling (RDS) is a recently developed method used to sample hidden and hard to reach populations such as injecting drug users, commercial sex workers, and men who have sex with men. As a variant of chain-referral sampling, it does not require the development of a sampling frame. Rather, RDS uses a coupon referral system whereby target group members recruit each other through their social networks. Once data is obtained, it is analysed with RDS Analysis Tool, specially designed software that accounts for the snowball-like initial selection of respondents and uses a weighing system in order for RDS-obtained sample to be considered probabilistic and representative of the social network the sample was recruited from. Since its development in the late 1990s, RDS has been widely used for surveillance purposes, and it has proved to be successful in recruiting hard to reach populations. This course aims to provide participants with practical skills and theoretical knowledge. Participants will become familiar with the method, and should be able to create a design of an RDS bio-behavioural survey

10. Data triangulation

Triangulation can be effective when there are multiple data sources, including quantitative and qualitative data from various sources that can be analyzed to inform policy or programme decision-making. Data triangulation can be used to answer different question, ranging from explaining the trends and the levels of the HIV epidemic to assessing the population impact of HIV prevention and treatment programmes. It is done mainly by using quantitative analysis and interpretation of data coming both from HIV surveillance and programme-based sources and vital statistics registries. The aim of the course is to introduce participants to the concepts, principles and methods of triangulation analysis. Case studies will be used to demonstrate how triangulation is done and provide participants with the practical skills needed to perform triangulation analysis to answer specific questions relevant for the planning of HIV programmes and policies in their own countries.

11. Training course in designing protocols for population-based and clinic-based HIV surveillance surveys

A protocol is an essential starting point for high quality HIV surveillance and all HIV surveillance surveys must be protocol-based. A protocol gives written evidence for the necessity and feasibility of a study and provides a detailed study plan. Writing the protocol forces the investigator to organize, clarify, and refine all the elements of the study, and this enhances the scientific rigor and the efficiency of the project. In addition to being an invaluable tool for finding research funding, the protocol provides structure and organization to the study, detailing the numerous procedures required to meet a given study's objectives and goals, and the resources needed to conduct the study. The course provides an intensive training in writing-up surveillance protocols and therefore aims to increase theo-



Visit to the RDS survey site in Zagreb, Croatia

retical and practical knowledge in designing and planning surveillance activities. It is structured to address concrete steps and ten key parts of any protocol, starting from aims, objectives and methods, to data analysis and dissemination of survey results

12. Time location sampling (TLS)

Time-location sampling is a type of a cluster-based sampling, which is used to sample groups at higher risk of HIV that gather at certain sites at certain time-intervals. It has been used to sample different high risk groups and results have been described in the literature. Groups that can be sampled using the time-location method may include street-based sex workers and men who have sex with men who gather in bars or parks, truck drivers at stations and injecting drug users in shooting galleries. This course aims to provide participants with practical skills and knowledge to implement a community-based bio-behavioural HIV survey using TLS. Participants will learn the requirements, principles and design of a survey which uses TLS in a variety of field contexts. Furthermore, this course provides field examples of the advantages and challenges associated with implementing TLS and provides contingency plans for dealing with difficult and unforeseen problems in the field.

13. Surveillance in low and concentrated epidemics

This module will introduce participants to the broad field of the theory and practice of HIV/AIDS surveillance, including behavioural, HIV and STI surveillance, and provide an understanding of the aims and special features of HIV surveillance. The main topics covered by the course are: Key concepts of HIV/AIDS surveillance; Pre-surveillance assessment; Clinical and institution based surveillance; Principles and components of biological HIV/AIDS surveillance; Sampling in surveillance in the context of low-level and concentrated epidemics; Behavioural questionnaires; Sample size calculations; Data analysis and report writing; Data dissemination.

14. Analysis and interpretation of data from respondent-driven sampling using RDSAT

Since the first RDS study was conducted in 1994 in the United States, this methodology has been used in more than 60 studies in more than 10 European countries to sample injecting drug users, sex workers and men who have sex with men. However, many of these countries have been unable to analyze their data due to their inability to use the specialized RDS analysis tool (RDSAT) and difficulties in understanding the complexities of social network theory and statistical adjustments inherent in using this program. The course provides participants with

Diploma awarding ceremony, at the end of the course in time-location Sampling WHO Collaborating Centre for Capacity Building in HIV/AIDS Surveillance





Training module on RDS

knowledge and understanding of RDS data analysis, and theoretical concepts it is based upon. The course addresses all steps in RDS data management and analysis, including bivariate and multivariate analysis. The training course will address the significant improvements in RDSAT (from winter 2008), which includes the ability to export individualized weights to conduct regression analyses. Importantly, the course addresses interpretation of RDS data, particularly the external validity.

15. Surveillance of HIV drug resistance

The aim of this course is to increase understanding of the determinants of HIV drug resistance and the identification of ways to minimize its spread. HIV drug resistance surveillance is a critical adjunct to all country-level ARV programmes, as it helps detect the circulation of resistance strains in the early stages of the implementation of the programme. The specific objectives of the course are to describe how to: (1) develop and maintain a surveillance system that measures HIV drug resistance among untreated patients; (2) develop and maintain a surveillance system that measures HIV drug resistance among patients with prior treatment history; (3) develop standardized protocols for sampling, data collection, laboratory handling, data management and analysis, quality control and ethical issues; (4) build surveillance capacity at country and sub-regional levels; (5) promote technology transfer of drug resistance test methodologies to developing countries; (6) provide information to international and country-level policy-makers through a rapid and easily accessible dissemination system.

16. Strengthening capacities for conducting national AIDS spending assessments and resource needs estimates

In most of eastern European countries, the AIDS response has moved significantly forward. This requires monitoring and evaluation activities, which are more enhanced and adapted to local conditions in order to ensure an evidence-based response. The National AIDS Spending Assessment (NASA) approach to resource tracking is a comprehensive and systematic methodology used to determine the flow of resources used in the national response to HIV/ AIDS. It describes the allocation of funds, from their origin down to the end point of service delivery, among the different institutions who are involved in the national response. The participants will learn how to use the NASA approach in order to determine the resources necessary for an efficient HIV/AIDS programme. The key topics of the course are: (1) The National AIDS Spending Assessment (NASA); (2) NASA opportunities and challenges; (3) NASA implementation, procedures and planning; (4) Financing and consumption flows - transactions and resource tracking; (4) Expenditure estimates in the absence of data - using costing techniques; (5) NASA matrixes; (6) Resource needs estimates.

Meeting on the adaptation of surveillance training modules for WHO EMRO, Luxor, 2008



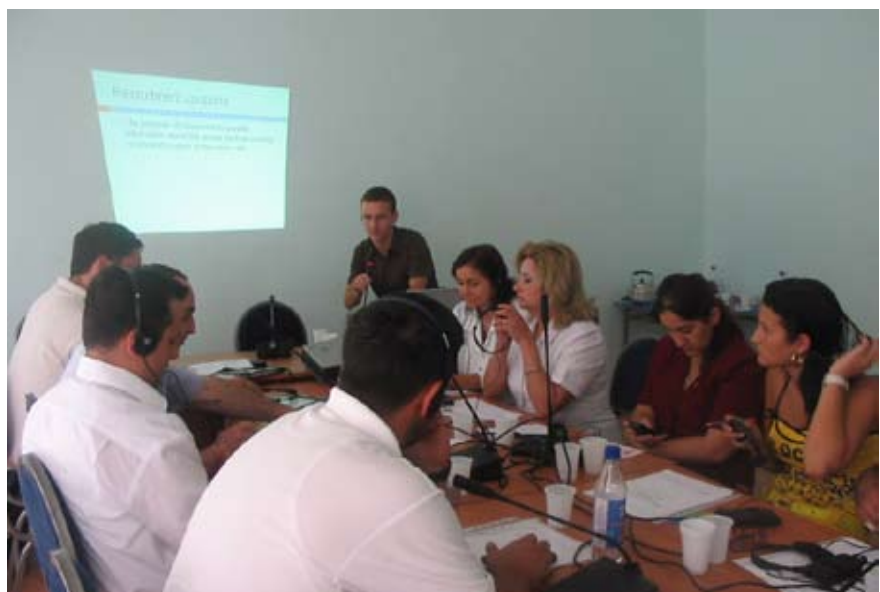
2. Technical assistance

Technical assistance included different aspects of work on HIV surveillance, such as implementation of bio-behavioural HIV surveys, systems of monitoring and evaluation and writing-up proposals for the GFATM. Technical assistance has been provided in 10 countries: Azerbaijan, Bosnia and Herzegovina, FYR Macedonia, Iran, Lithuania, Montenegro, Pakistan, Serbia, Sudan and Yemen. We implemented bio-behavioural HIV surveys using respondent-driven sampling among men who have sex with men in Croatia, among injecting drug users in three cities in Bosnia and Herzegovina, and among sex workers in Yemen. We work continuously as advisors to WHO EURO, WHO EMRO, UNDP and UNICEF on carrying out various surveillance projects and consultancy missions, and development of HIV surveillance tools and guidelines. The Centre conducted the adaptation of the CDC training module on respondent-driven sampling for the WHO EMRO Region, and participated at the workshop on the adaptation of the HIV surveillance training manuals for WHO EMRO in Luxor in February 2008.

3. Research

We carried out a bio-behavioural survey using respondent driven sampling among in Zagreb, in collaboration with the University Hospital for Infectious Diseases "Dr. Fran Mihaljević", UNDP and the Croatian Ministry of Health and Social Affairs and the NGO Iskorak. The aims of the study were to assess the prevalence of HIV, HCV, HBV, HAV, syphilis, chlamydia and gonorrhoea (PCR on urine and rectal samples) as well as the magnitude of risk behaviors among MSM in Zagreb. This is the first study conducted among MSM using a probabilistic sampling method in Croatia, and one of the first such surveys in Eastern Europe which we hope will contribute towards sharing experiences on the process of survey implementation and results. In Croatia, we participated in the first general population sexual health survey among young people carried out in 2004. We are currently finalising the assessment of the HIV epidemics and the policy responses among men who have sex with men in 27 countries in eastern Europe for WHO EURO.

Mission in Azerbaijan
on design HIV bio-
behavioural survey



In front of the Andrija Štampar School of Public Health, at the training course in Protocol Development in Clinic and Population-Based HIV surveillance



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