

# Training course in sampling methods and analysis for surveys among populations at increased risk of HIV

20 – 24 November 2011, Tehran, Iran



## Introduction

Populations at increased risk of HIV are often hidden and hard-to-reach groups. In most countries they include sex-workers (SWs), men who have sex with men (MSM) and injecting drug users (IDUs). These groups have been considered at increased risk in nearly all countries of the Eastern Mediterranean Region of WHO.

Experts, who have been involved in biological and behavioral HIV surveillance among these groups, know how difficult it is to select a representative sample using classic sampling methods. Several alternative sampling methods have been designed to overcome this problem as much as possible. Time Location Sampling (TLS) and Respondent- Driven Sampling (RDS) have increasingly been used in the Region. .

In this short course, we will introduce and review the most common sampling methods for surveys among populations at increased risk of HIV and also the main steps of the analysis of the data collected. Our aim is to enable participants to choose and apply the most appropriate sampling and analysis methods for future surveys among these populations in their countries.

## Learning objectives

Participants will have acquired the following knowledge and skills

- Knowledge of pros and cons of classic sampling methods in HIV surveillance among populations at increased risk of HIV and other Sexually Transmitted Infections (STIs)
- Knowledge of new sampling techniques, TLS and RDS as methods for selection of more representative samples from these populations
- Ability to choose the most appropriate sampling method according to the respective country context and population to be studied
- Skills in data analysis of RDS by using RDSAT software
- Ability to critically appraise every sampling method which has been applied for populations at increased risk of HIV
- Skills in interpreting the findings of a survey

## Key topics

- Populations at increased risk of HIV, hidden and hard-to-reach populations,
- Formative assessment – understanding the context better
- Representativeness/Generalisability
- Probability sampling
- Non-probability sampling
- Time Location Sampling
- Respondent Driven Sampling
- Sample size calculation
- Survey Analysis Concepts
- Statistical modules: Coupon Manger (RDSCM) , RDSAT software

## Key references

- Magnani R, Sabin K, Saidel T, Heckathorn D, (2005). Review of sampling hard-to reach populations for HIV surveillance. AIDS. 19 Suppl 2, S67-S72.
- H. Fisher Raymond, Theresa Ick, Michael Grasso, Jason Vaudrey, Willi McFarland, (2007). Resource Guide: Time Location Sampling (TLS), San Francisco Department of Public Health, HIV Epidemiology Section, Behavioral Surveillance Unit
- Matthew J. Salganik, Variance Estimation, Design Effects, and Sample Size Calculations for Respondent-Driven Sampling, Journal of Urban Health: Bulletin of the New York Academy of Medicine 83(7), i98-i112
- <http://www.respondentdrivensampling.org>

- <http://www.theagencyfordesign.com/clients/cdc/index.htm>

### **Teaching Methods**

Short lectures on the main concepts of different sampling methods, small group discussion on each sampling method, intensive supervision of the group activities and presentations, conduct the analysis by RDSAT using a real database

### **Target Audience**

Epidemiologists, public health professionals, social scientists involved in HIV/AIDS surveillance. The course is designed to provide participants with practical skills and knowledge in development of facility based HIV surveillance in their countries.

Priority goes to candidates with the following knowledge and experiences:

1. English skills: acceptable skills in read, speaking and listening to be able to communicate with others (equal IELTS 5.5-6 –academic version).
2. Social science, health and medical knowledge: general background about public health, its related topics and/or social science (medical doctor or social scientist or MS in public health / related topics)
3. HIV/AIDS knowledge: excellent knowledge of the epidemiology and surveillance of HIV/AIDS
4. Field experience: experience in conducting surveys in the field of public health (e.g. reproductive health, etc.) or is working in an NGO with most-at-risk populations (IDUs, SWs & MSM).
5. Statistics and research methodology: adequate knowledge in basic statistics, sampling and sample size calculation in order to grasp the content of the workshops (general concepts about descriptive statistics, confidence interval, conventional sampling methods, logic of sample size calculation and type I and type II statistical errors)

### **Duration:**

The course takes place in five working days.

### **Organizer:**

- Regional Knowledge Hub for HIV/AIDS surveillance, Kerman University of Medical Sciences, Kerman, Iran

### **Partners:**

- WHO Collaborating Centre for Capacity Building in HIV Surveillance, Zagreb, Croatia
- WHO Regional Office for Eastern Mediterranean
- UNAIDS Regional Office for Eastern Mediterranean
- HIV/AIDS Office, CDC, Ministry of Health, Tehran, Iran

### **Required documents for the course application**

- Completed online application form
- A short English CV
- A motivation letter expressing why you are interested in the course topic

### **Contact Person**

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Day 1		Topic
8:30	9:00	Welcome and Introduction
9:00	10:00	HIV Epidemic levels Who are the most at risk populations (MARPs) for HIV?
10:00	10:15	Break
10:15	11:00	Principles of Sampling; Representativeness/ Generalizability
11:15	12:15	Probability Sampling Methods: Simple, Systematic, Cluster, Stratified, Multi stage
12:15	13:00	<b>Exercise 1:</b> Choose the best sampling method in the different scenarios
13:00	14:00	Lunch
14:00	15:15	Non-probability Methods: Convenience (Haphazard, Ad Hoc Quotas, snowball), Purposive (Judgmental, deviant), consecutive
15:15	15:30	Break
15:30	16:30	Formative Assessment; a tool to know the context better
Day 2		Topic
8:30	9:15	Simplified Method for Cluster-Sample Surveys
9:15	10:00	<b>Countries Experiences 1:</b> Bio-Behavioral Survey in MARPs focusing on the sampling and implementation
10:00	10:15	Break
10:15	11:00	Analysis of Survey data: Basic Concepts
11:00	13:00	<b>Exercise 2:</b> Data interpretation (Survey analysis)
13:00	14:00	Lunch
14:00	15:45	<b>Exercise 3:</b> Continued
15:45	16:00	Break
16:00	16:30	Challenges of sampling in surveys on MARPs
18:00	21:00	Opening ceremony- Dinner

Day 3		Topic
8:30	9:30	Time-Location Sampling (TLS) 1; Basic Concepts
9:30	10:30	<b>Exercise 4:</b> Reaching MARPs by TLS in your country
10:30	10:45	Break
10:45	11:45	Mapping in pre-surveillance and for development of the sampling frame
11:45	13:00	Time-Location Sampling (TLS) 2: Implementation
13:00	14:00	Lunch
14:00	15:15	<b>Exercise 5:</b> Making the weights necessary for TLS data analysis
15:15	15:30	Break
15:30	16:30	<b>Countries Experiences 2:</b> Bio-Behavioral Survey in IDUs Using TLS in Iran
Day 4		Topic
8:30	10:30	Respondent Driven Sampling (RDS)1; Basic Concepts
10:30	10:45	Break
10:45	11:45	Respondent Driven Sampling (RDS)2; Implementation
11:45	13:00	<b>Statistical module 2:</b> Respondent Driven Sampling Coupon Manager (RDSCM)
13:00	14:00	Lunch
		<b>Group Picture</b>
14:00	15:15	<b>Statistical module 3:</b> RDSAT
15:15	15:30	Break
15:30	16:30	<b>Countries Experiences 3:</b> Bio-Behavioral Survey in FSWs by Using RDS in Iran
		<b>Social Event</b>
Day 5		Topic
8:30	9:30	<b>Statistical module 4:</b> RDSAT
9:30	10:15	<b>Exercise 6:</b> Data interpretation (RDS Analysis)
10:15	11:15	<b>Presentation 2:</b> Interpreting the results
11:15	11:30	Break
11:30	12:00	<b>Summary;</b> RDS vs. TLS
12:00	13:00	Evaluation and goodbye party
13:00	14:00	Lunch