National HIV/AIDS Surveillance Plan

Tbilisi, 2010

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CONTENTS

INTRODUCTION

National HIV/AIDS Surveillance plan was developed in the frame of the project financed by The Global Fund – „Establishment of Evidence-base for Implementation of National HIV/AIDS Programs by Strengthening the HIV/AIDS Surveillance System in the Country".

Present document is a revised version of the National HIV/AIDS Surveillance Plan developed by the working group in 2008.

Working on the National Surveillance Plan was preceded by the comprehensive assessment of the HIV/AIDS Surveillance System used before 2007, discussion of the evaluation results and results-based conclusions and recommendations with stakeholders, development of new design of HIV/AIDS Surveillance System, piloting of modernized system in two regions of Georgia, Tbilisi and Adjara regions, pilot assessment and introduction of the newly designed system throughout Georgia.

The aim of the National Plan is to assist policy makers to understand: a) the necessity of improving the HIV/AIDS surveillance system; b) the optimal models of functional and organizational arrangements; c) Efforts (including financial resources) and action plan needed for effective operation of the updated HIV/AIDS surveillance system.

The present document consists of four chapters and annexes.

Chapter I Current Situation is devoted to the findings of the assessment of the HIV/AIDS surveillance system used before 2007 (described in detail in the separate report Assessment of the HIV/AIDS Surveillance).

The next Chapter II HIV/AIDS Surveillance System considers the updated model of the surveillance system from different perspectives and thus consists of the following sub-chapters:

- ***Sub-chapter 1 Conceptual Framework*** of the System is devoted to considering the purpose of the system and determining key concepts, principles and approaches.
- ***Sub-chapter 2 Functional Description*** of the System describes major functions relevant to the purpose of the system: considers HIV/AIDS surveillance target groups, basic methods and tools of surveillance, data sets and deliverables (reports).
- ***The last sub-chapter 3 Organizational Arrangement*** of the System deals with the assignment of the functions described in previous sub-chapter to different participating and responsible parties and characterizing functional or administrative relationships among them.

Chapter III Implementation and Recourses is lists and describes the activities needed for ensuring the stable and effective operation of the updated HIV/AIDS surveillance system. The same chapter also considers major assumptions and risks that may affect the implementation of the national plan of HIV/AIDS surveillance, as well as the financial resources for implementation of the national plan, which will base the relevant state healthcare program.

This document is a result of the reconciliation of international and local experience and the rethink of the future, the desire to find the best solution and the product of unwearyingly work of the country's leading specialists in the process of long discussions.

INTERNATIONAL REQUIREMENTS FOR HIV/AIDS SURVEILLANCE

- The main international requirements for HIV/AIDS surveillance system are standardized and tailored to the status of the HIV/AIDS epidemic:
    - Major indicators (biological, behavioral and socio-demographic) of HIV/AIDS surveillance are defined.
    - Desegregation variables are defined: age, gender, geographic area, sub-population groups and risk-factors.
- Regardless of the specificity of HIV/AIDS surveillance system, countries have the obligation to send information in a standard format regularly to the respective international organizations/bodies to keep the relevant international organizations /structures up-to-date.

INSTITUTIONAL DESCRIPTION

PRIORITIES OF THE NATIONAL POLICY

Public policy documents reflect the vision of the state in developing HIV/AIDS surveillance. HIV/AIDS surveillance is recognized as one out of the four strategies to halt and begin the reverse of the spread of HIV/AIDS by 2015.

REGULATORY ENVIRONMENT

- Responsibilities and powers for implementing the surveillance of HIV/AIDS cases are not defined in the normative environment.
- The normative environment doesn't provide for regulating the relationship between two or more parties in the field of HIV/AIDS surveillance, save the unilateral obligation of medical facilities to report medical statistics.

ORGANIZATIONAL AND FUNCTIONAL DESIGN

Involved Party	Responsibilities by Individual Function				
	HIV Testing	Behavioral Surveys	Disease Register	Data Analysis	Information Usage
Central Level					
Country Coordination Mechanism					X
Ministry of Labor, Health and Social Affairs of Georgia					X
Infectious Diseases, AIDS and Clinical Immunology Research	X		X	X	X

Involved Party	Responsibilities by Individual Function				
	HIV Testing	Behavioral Surveys	Disease Register	Data Analysis	Information Usage
NCDCPH (Statistics Service, the HIV/AIDS Surveillance				X	?
Central Blood Bank	X				
Lung and Tuberculosis Research Institute	X			X	
Narcology Research Institute (Central)	X				
STD Institute (Central)	X				
Medical Service of the Penitentiary System (Aldagi-	X				
Nongovernmental Organizations	X	X		X	X
Local Level					
Regional / District Public Health Services					
Regional Laboratories (Subdivisions of AIDS Center	X				
Regional Blood Transfusion Stations	X				
STD Clinics (Regional)	X				
Private Laboratories	X				
Antenatal Services	X				
Hospitals	X				

1. The majority of HIV/AIDS surveillance functions are not procedurally formalized and based on standard technical manuals/guidelines (and tools).
2. The function (and the methodology) of determining the number/size of high-risk groups is not defined and is left "orphaned".
3. Risk Behavior Subpopulation (the second generation) Surveys (BSS) are not institutionalized and are carried out by the non-governmental organizations, which use a standard methodology and have experienced professionals at their disposal.
4. A standard format and a framework for data analysis have not been put in practice.

INFORMATION FLOWS

1. At the primary level the data collection is not standardized.
2. Data is transferred in an aggregate form (from the bottom to the top)
3. In the majority cases information/test results are not communicated back to the referring facility.
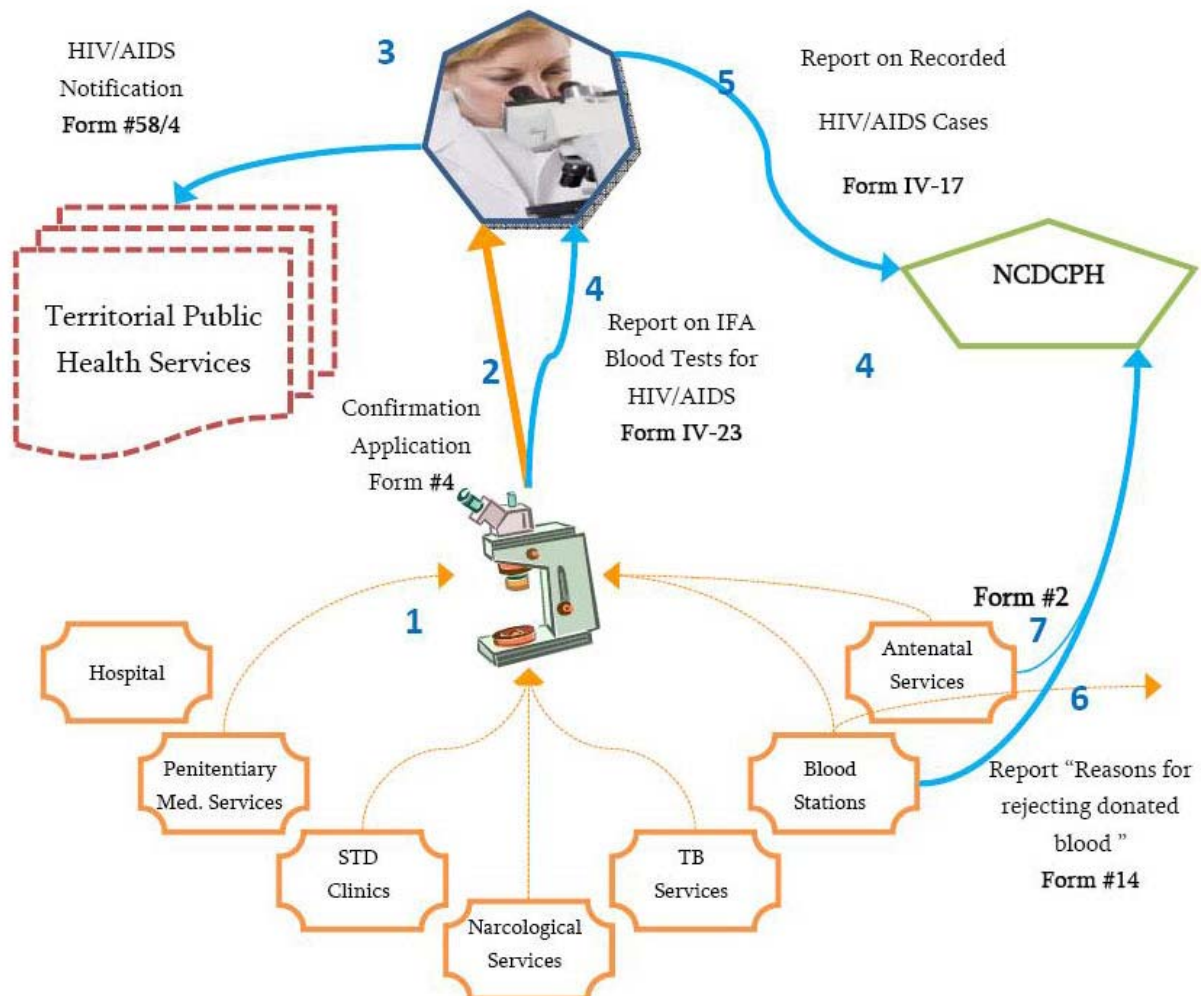
STAKEHOLDERS

The stakeholders of the HIV/AIDS surveillance system, their roles, demands, expectations and incentives are described in the table below:

Stakeholder	Role	Demands	Expectations	Incentives
Medical facilities	Detecting, recording, and reporting AIDS cases	Simplicity, clear directions	Accessible standard forms, guidelines	Predominantly professional
Laboratories	HIV Testing	Biological Safety	Quality assurance system	Predominantly professional
Public health centers	Reporting, data analysis	Integrated system	High quality data	Professional and financial
The Ministry, ministerial structures	Policy and strategy development	Compliance with international standards	Information for Decision-Making	Predominantly Professional
Nongovernmental organizations	Studies exploring risk behaviors	Regularity, geographic coverage	State funding	Professional and financial
GFTAM funded project	Financial support of national response to HIV epidemic in accordance with a country request	Ensuring the possibility of assessing intermediate and final results of influencing the epidemic and its causing factors	Regular reports reliably describing the epidemiological situation	Proper reporting (showing results) to the donor organization
Donors	Supporting the functions of surveillance, which hasn't yet been provided by the state itself	Providing for and implementing international practice (experience) and standards	Institutionalizing the functions endorsed by them	Fulfilling international commitments (at the global level)

MATERIAL AND TECHNICAL CAPACITIES

1. The material and technical base of the local level facilities is rather poor. Specifically, curative-preventive facilities, laboratories, and blood stations virtually lack computer equipment, intranet and Internet.
2. From this perspective the situation is much better in the central level institutions. The NCDCPH possesses enough material and technical facilities to perform analysis, but those means are not sufficient to implement a state-of-the-art management information system.

HUMAN RESOURCES

1. The heads of the facilities participating in the surveillance system consider the basic computer knowledge and skills of the human resources employed there as being satisfactory.
2. As for the knowledge and skills for computer data processing/analysis, the assessment is unsatisfactory here, which is more apparent at the local level facilities.
3. Key technical staff turnover is not a serious issue at the central as well as the local level institutions participating in surveillance.
4. The key technical staff employed at these institutions is motivated to perform the work envisaged by the HIV/AIDS surveillance; however their professional motivation is more than financial. They recognize the specific benefits associated with the implementation of a cutting-edge information system and are not afraid of introducing innovations.

INSTITUTIONAL ASSESSMENTS

The results of analyzing the needs and the factors can be grouped in four categories using SWOT analysis methodology.

	Positive	Negative
	Strengths	**Weaknesses**
Internal	The function of analyzing and reporting on HIV epidemic has been entrusted to the specialized public entity having adequate expertise and material technical resources. The experience and the technical resources are available in the country to conduct Biological and Behavioral Surveillance Surveys. The turnover of the key technical staff is low. The involved parties are interested and motivated in the system updating.	There's no conceptual integrated framework for HIV surveillance. The system of vertical subordination or accountability between the central and local government bodies (services) participating in the HIV surveillance is virtually absent. Information flows, all the way from initial recording to analysis, are not standardized. The rules and forms currently used to collect and report information are technically defective and virtually useless to perform full-blown analysis. Primary healthcare facilities are short of adequate resources and incentives to collect and submit quality data needed for surveillance The element of informing is not used appropriately for advising and implementing other activities of surveillance in the future.

	Opportunities	Threats
External	International commitments of the country as a prerequisite of actually reflecting HIV surveillance in the national policy priorities. Bringing NCDCPH regional structures into operation makes it possible to concentrate on the key functions of HIV surveillance at the sub national level. The integration of HIV surveillance into the system of the surveillance of other communicable diseases (the creation of the integrated surveillance system). Support from international partners and the utilization of accumulated international experience in standardizing the current surveillance methodology, tailoring it to the country and implementing it there.	Health care deregulation and limited capacities for implementing standardized case registration and reporting in the health market (the scarcity of "tools" at the government's disposal). Endless changes in the health care management system (organizational and functional rearrangements). Improper legislative practices featuring the absence, collision or inappropriateness of essential legal norms. The lack of evidence-based decision-making practices in public policy and, consequently low demand for arguments/information. There is a possibility for increasing HIV testing and expanding information flows/sources in case of decentralizing the confirmation – all of these are to be implemented without using up-to-date information and communication systems.

CONCLUSIONS

HIV surveillance system meets the internal demands of the country and partially the requirements resulting from international commitments, but it by no means implies that the system doesn't need updating/improving:

- The parties involved in the system's operation are not satisfied with the existing situation and want to improve it.
- The demand for HIV surveillance is expected to rise in the near future (for internal consumption).
- The international commitments are not fully met.

Qualitative updating in the HIV/AIDS surveillance system is mainly needed for:

- The management and analysis of information flows.
- The mechanisms of epidemiological investigation and consultancy.

All of these major or less important qualitative updates should serve the following purposes (all main requirements for a revised surveillance system):

- Actual observance of the confidentiality principle.
- Generation of reliable and technically sound information (evidence) for decision-making.

The highest priority interventions include:

- The development of a conceptual framework for the country's HIV/AIDS surveillance system with participation of all stakeholders – all the key questions left open should be answered and the basis should be created, which will define the major characteristics of the system itself and the plan for its implementation and operation.
- The function and organizational arrangement of the HIV/AIDS surveillance system on the basis of conceptual considerations, reflecting the system in the legal environment.
- The standardization of all surveillance functions/activities through developing a methodology tailored to the capacities of the country, training technical staff, and exercising continuous control over the observance of the standards.

Only after implementing these two interventions it is possible to introduce a modern informational-analytical system, which will help all the involved parties and the major user – NCDCPH to better perform the functions envisaged by HIV surveillance.

RECOMMENDATIONS

Recom.1: Notwithstanding the fact that Georgia belongs to the set of countries with a low prevalence of HIV, it is desirable that the HIV surveillance system to be developed considering the requirements set for the countries with a "concentrated epidemic" status, implying:

1. monitoring changes in behavioral factors and the HIV prevalence rate among high–risk population groups
2. drawing connections between behavioral risk-factors detected in high-risk subpopulation groups and the general population

Recom.2: Before defining technical and methodological characteristics of the HIV/AIDS surveillance system, it is necessary that the system be conceptually understood by all stakeholders taking into consideration the gained experience and the drawbacks revealed by the study. The conceptual framework should:

1. Answer several questions concerning the quality control of laboratory testing, the organization of voluntary counseling, and the management of information flows when a large number of entities are participating in the liberal healthcare market and deregulation with decentralization is taking place.
2. Explain the appropriateness and the possibility (feasibility) of an actual integration of the HIV/AIDS surveillance system with the surveillance system of other communicable diseases or separation of the former from the latter one.
3. Set clearly the guiding principles and approaches, according to which choices will be made among the various options of organizational and functional arrangement of the system.
4. Define the rules (norms) based on which the legislation will be revised.

Recom.3: It is necessary to consider the appropriateness and the feasibility of uniting the functions of informing, counseling, and implementing l surveillance "under one ceiling", especially at the peripheral level. After "accommodating" the mentioned functions "under one ceiling" it's desirable to examine the issue of decentralizing the case confirmation and make decisions:

1. In any case the updated surveillance system should fit with the multiplicity of participating actors (including the facilities providing confirmation services) in the unregulated healthcare market.
2. It is desirable that informing on confirmation results, providing post-test counseling, and conducting epidemiological investigation be performed by the same medical entity; it will facilitate maintaining the confidentiality and establishing trust between the HIV infected person and the surveillance system.

Recom.4: While revising normative acts after conceptual consideration, it is necessary that:

1. The issues of HIV/AIDS surveillance be clearly pointed out in every place, where the combination / integration of these issues with the surveillance of other diseases is not appropriate (pursuant to the conceptual framework)
2. In each place where the obligation of one party (entity) is defined, the administration mechanism be clearly defined (i.e. what the entity ought to expect if it doesn't fulfill the obligation, in what form the reporting or fulfillment of the obligation is assessed, what the reciprocal obligation of the other party is and so on.)

Recom.5: While planning the technical characteristics and the management of information flows, it is desirable that:

1. The format and the content (the matrix of quantitative characteristics for internal and external usage with the disaggregation variables) of the analytical product be clearly defined in the first place and only then the guidelines and the tools for primary recording and transmitting data be developed
2. Pursuant to the manual for the development of major indicators (UNAIDS, 2007), the reporting of the data from the lower level to the upper one be performed in the same non-aggregate form as data is collected at the lower level.

Recom.6: While planning information flows, it is preferable that the workload be minimized at the primary levels since there are no means of motivating them, controlling the quality of performed work, or mechanisms for administrative management there. In technical terms, it implies:

1. Performing data collection in the most simplified format (minimizing the variables to be recorded and then reported by these facilities) using a paper medium.
2. Centralizing the interface of entering the data into the electronic database (i.e. the information available on paper medium should be gathered at one place) initially and carrying out decentralization of this function only after considering arguments of cost-effectiveness and quality.
3. Calculating the detection rate only for certain subpopulations at the initial stage (e.g. pregnant women, TB patients, inmates in the penitentiary institutions), inasmuch as it is unrealistic to obtain complete data on each initial testing in a non-aggregate form from other medical facilities; in the future it will always be possible to add the data on each testing performed in other subpopulations to the main stream of information flow.

HIV/AIDS SURVEILLANCE SYSTEM

CONCEPTUAL FRAMEWORK OF THE SYSTEM

THE AIM AND THE PLACE OF THE SYSTEM

The purpose of the HIV/AIDS surveillance system is:

- Provide stakeholders or decision-makers with the evidence on the status of the epidemic.
- Facilitate in abating the spread of the epidemic within its limits.

A content or subject matter of decisions to be based on the evidence provided by the surveillance system includes:

- The anti-epidemic strategy which is adequate to a size and trends of the expected spread of the HIV epidemic in the country including planning of anti-epidemic measures and the optimal configuration of health service.
- The assessment of the effectiveness of the implemented measures to influence behavioral factors in the high-risk subpopulations.

According to its purpose the HIV/AIDS surveillance system undertakes three major interconnected functions:

- Voluntary counseling and testing of an individual
- Epidemiological investigation of an HIV/AIDS case
- Generation and management of reliable information flows about the state of the epidemic and assessment, analysis and identification of trends of the state of the epidemic based on this information

The epidemiological investigation of HIV/AIDS cases is based on detecting an isolated case of HIV/AIDS and serves for:

- Identifying additional HIV cases among contacts (risky in terms of HIV transmission) of an HIV infected individual (e.g. sex partners in case of unprotected sex).
- Avoiding further spread of HIV infection from an identified HIV infected person employing preventive measures.
- HIV/AIDS surveillance as the autonomous system with its specific outcomes (deliverables) and functions constitutes the integral part of the whole surveillance system of other communicable diseases. As its part is one of the subsystems of the country's healthcare system.

MAIN NOTIONS

THE STATE OF THE EPIDEMIC

The notion "the state of the epidemic" implies a pattern and dynamics of the spread of HIV/AIDS as well as factors (the same as "determinants") influencing it.

DETERMINANTS

The notion "determinants" implies all factors, despite their nature exerting influence in one way or another on the spread of HIV/AIDS. The following can serve as determinants: ethnic or cultural peculiarities (values and norms), risky behaviors for spreading HIV/AIDS (e.g. unprotected sex or use of intravenous drugs), social-economic situation (e.g. a rate of labor market entry for youth), prevalence of intravenous drug use, existence of major transport corridors, migration processes and so on.

Determinants are divided into two groups depending on whether it is obligatory for a HIV/AIDS surveillance system to monitor and report them or not:

Obligatory determinants:

Risky behaviors:

- Usage of non-sterile injection devices
- Unsafe sex

Non-obligatory determinants:

- Migration processes
- Narco-trafficking

SURVEILLANCE INTERVENTIONS (THE SAME AS "ACTIVITIES" OR "SERVICES")

Implies voluntary counseling and testing and an epidemiological investigation

BIOLOGICAL SURVEILLANCE

Biological surveillance means gathering data (through HIV testing) on the spread of HIV infection in a population (or particular sub-population). It is fulfilled in three ways:

- At medical facilities:
    - Regular screening (the same as routine surveillance)
    - Sentinel surveillance in defined sub-population groups.
- Performance of biomarker studies in the high-risk groups along with behavioral surveys is regarded as the second generation surveillance.

BEHAVIORAL SURVEILLANCE

Periodical studies of the existing HIV risk behavior (or changes in them) among defined sub-population (high-risk) groups by means of sociological surveys.

ROUTINE SURVEILLANCE OF HIV/AIDS CASES

A regular HIV testing (screening) of patients at medical facilities (through voluntary counseling or without it). Routine surveillance is performed for each individual from target groups who seeks medical assistance at medical facilities of certain types (so-called specialized facilities) such as antenatal, TB or drug addiction clinics.

SENTINEL SURVEILLANCE

An HIV testing of patient admitted to several selected facilities of a certain type (so called "main base"). Sentinel surveillance is used for sub-populations not covered by routine surveillance (for example STI patents).

HIGH-RISK POPULATIONS (GROUPS)

High risk populations include:

- Injection Drugs Users (IDUs);
- Commercial Sex Workers (CSWs);
- Men having homosexual relationships; MSMs ("men having sex with men")

SUSPECTED CASE OF HIV INFECTION

Any person with a risk-factor/clinical manifestation and/or one who gets medical advice on HIV/AIDS or undergoes HIV/AIDS counseling and testing (or the testing only) for whatever reason

PROBABLE CASE OF HIV INFECTION

Any person with a positive result of a reliable lab HIV testing (e.g. IFA or rapid/simple HIV tests)

CONFIRMED CASE OF HIV INFECTION

Any person with a positive result of a laboratory confirmatory HIV testing (e.g. Western Blot)

HIV CASE RECORDED IN THE HIV SURVEILLANCE SYSTEM

The HIV case is recorded in the HIV surveillance system only in case it coincides with the standard notion[1] and there are epidemiological data present (especially the report on HIV infection survey form #1). The confirmed HIV infection lab test without the relevant epidemiological data is not recorded in the surveillance system.

MAIN APPROACHES AND PRINCIPLES

PRINCIPLES

VOLUNTAIRNESS

Voluntariness-implies that surveillance interventions are carried out after an informed consent of an individual: at first the information on HIV (explanation, advice) is provided to an individual and after receiving the consent, a testing, and consultation takes place.

According to the principle of the voluntariness a person can:

- Undergo pre-test counseling and then refuse HIV testing and, respectively, post-test counseling.
- Refuse pre-test counseling and proceed directly with HIV testing and receive post-test counseling.
- Undergo pre-test counseling and HIV testing and not return for test results (and, respectively not undergo post-test counseling).
- Undergo pre-test counseling, HIV testing, return for test results and refuse post-test counseling.

INFORMED CONSENT

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[1] In accordance with methodological recommendations for HIV/AIDS routine surveillance

Pursuant to the Law of Georgia on "Patients' Rights" the notion of "informed consent" implies consent of a patient or his or her relative or legal representative if the patient is incapacitated to receive one or another service of medical surveillance after providing him or her with the information about:

a. The essence and the necessity of a medical service.
b. Expected results of a medical service
c. The risk for a patient's health and life posed by the service
d. The alternatives to the intended medical service and risk and possible effectiveness associated with them
e. The expected results of refusing to receive a health service.
f. Financial and social aspects associated with issues enumerated in paragraphs a-e.

CONFIDENTIALITY

The principle of confidentiality (the same as "keeping a personal system") implies keeping personal information (in this case about HIV infection) in secret and exposing it to the third party only by approval of the individual.

The principle of confidentiality requires that personal data within the HIV/AIDS surveillance system be available only by excluding the possibility of identifying a person.

For HIV/AIDS surveillance maintaining confidentiality means not only that specialists involved in the HIV surveillance system don't give information about an individual's HIV status to the third person, that personal information (records) about the HIV status is protected and that unauthorized access to it is ruled out, but also that such environment is created at the site of service provision, where the third person cannot actually become aware of the HIV status of an individual without the will of the latter.

ANONYMITY

The principle of anonymity implies that a person is allowed not to disclose his or her identity and get services offered by the surveillance system (counseling, testing or epidemiological investigation) at any level of surveillance.

According to the level of anonymity, there are the following types of testing:

Types of testing	anonymity	Maintaining confidentiality	Description / explanation
Testing linked with a facility	low	Is necessary and hard to achieve	The information accompanying a blood/serum sample to be sent for testing to a laboratory contains the name of a facility and the sample ID number which is linked to the ID number of a consultancy by which the name and the surname of an individual can be identified.

Types of testing	anonymity	Maintaining confidentiality	Description / explanation
Anonymous testing linked with a facility	high	Is necessary and relatively easy to achieve	The information accompanying a blood/serum sample to be sent for testing to a laboratory contains the name of a facility and the sample ID number which is not linked to the ID number of a consultancy. A person who returns for test results is identified and gets the result based on his or her anonymous ID number.
Anonymous testing unlinked with a facility	complete	Is maintained on its own	The information accompanying a blood sample doesn't contain any identifiable data. Such testing isn't used by Voluntary Counseling and Testing centers. It is used for biomarker and behavioral studies.

FREEDOM OF CHOICE

Freedom of choice-implies that a user can make a free choice as far as possible at any stage of surveillance. It refers not only to the rights defined by the law (e.g. the right to agree or refuse to undergo HIV testing) but also to choosing respective health provider for HIV testing, getting information, post-test counseling and receiving medical follow-up or treatment of necessary.

APPROACHES

ONE STOP SERVICE

One stop service-implies providing all of the three services of surveillance with a minimum number of personal visits to a medical facility and a maximum level of convenience (geographic accessibility, maintaining confidentiality, minimum risk of stigmatization). It can be achieved by providing pre-test counseling, information and post-test counseling jointly at the same facility and by the same specialist if possible.

INFORMATION VERIFICATION AND UPDATE

A new epidemiological pattern (contacts, ways of transmission, risky behaviors) may emerge at any stage of an epidemiological investigation requiring entering/completing or changing personal information in the database; for such cases a surveillance information system should provide for updating personal information using a special procedure (to prevent the data from being altered/damaged inadvertently).

STAGE BY STAGE DEVELOPMENT

Georgia pertains to the group of countries with low prevalence of HIV epidemic; "stage by stage development" means that the functional and organizational arrangement of an HIV/AIDS surveillance system should:

- Meet all recommendations for a country with a status of low prevalence of the epidemic;
- Provide for relatively high requirements for countries with a status of concentrated epidemic and have capacities to meet these requirements with minimum investment and rearrangement of the system if necessary.

"Stage by stage development" approach saves national resources needed for building and running surveillance system by matching them with the existing and predictable (potential) requirements.

FUNCTIONAL DESCRIPTION OF THE SYSTEM

A system of epidemiological surveillance is described functionally around the above-mentioned three major functions.

With respect to the first function ("Generation and management of reliable information flows about the state of the epidemic and assessment, analysis and identification of trends of the status of the epidemic based on this information") the system is described in detail in sub-chapter 2.3. "Data sets". In the part of generating and managing information flows obtained by routine and sentinel surveillance the function completely depends on successful realization and implementation of the other two functions, mostly voluntary counseling and testing.

TARGET GROUPS

A starting point for a functional realization of HIV surveillance is defining target groups for surveillance and methods for each of them depending on the main purpose of the surveillance (gathering information about the epidemic state and preventing the spread of it).

Choosing target groups for surveillance is based on international experience and recommendations as well as on peculiarities and necessities of the country.

Methods used for collecting surveillance data differ from each other by their purpose, scope, requirements and capabilities and can be grouped as follows:

Data collection methods	Requires highly organized health care services	Requires full (high level of) coverage of a target population with medical care services	Allows prevention in a target population	Anonymity
Biological surveillance				
Routine	Yes	Yes	Yes	No
Sentinel	Yes	No	No	Possible
Studies:				
Biomarker	No	No	No	Complete

				Complete
Behavioral	No	No	No	Complete

The following sub-populations are of interest for the HIV surveillance based on a state of the epidemic in the country and the specifics of the country:

Target population	Probability of HIV infection[2]	Size (number) is measurable	Possibility to cover with medical services	Relevance (significance) for surveillance	
				Case detection and prevention	Estimation of the epidemic spread
1. TB affected population seeking medical assistance in TB clinics	average	yes	high	yes	yes
2. pregnant women receiving antenatal care	low	yes	high	yes	Yes
3. Injection drugs users seeking assistance in drug abuse clinics	high	yes[3]	low	yes	yes
4. inmates in the penitentiary system	high	yes	high	yes	yes
5. blood donors	low	yes	high	yes	Yes
6. population seeking care at medical facilities for STIs	average	no	low	no	yes
7. population seeking medical care ar medical facilities for Hepatitis B and Hepatitis C	Average	no	low	yes	yes

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[2] The probability scale for the prevalence status of the epidemic is conventional.

[3] It's difficult to define the size of the IDUs, but it's possible to define the number of that part which addresses medical facilities.

Target population	Probability of HIV infection2	Size (number) is measurable	Possibility to cover with medical services	Relevance (significance) for surveillance	
				Case detection and prevention	Estimation of the epidemic spread
8. any individual with clinical signs suggestive for AIDS	high	No	low	yes	no
High risk groups which:					
9. do not seek assistance in healthcare facilities	high	no	Impossible	no	yes
10. seek medical assistance in healthcare facilities	high	no	high	yes	no

Considering the surveillance interests towards the target population as well as specific characteristics of the target population and the capabilities of data collection methods and activities at the surveillance disposal (combining two matrices given above) two functions of surveillance (collecting information about the state of the epidemic and preventing the spread of the epidemic) are divided the following way:

Target population	Routine	Sentinel surveillance	Biomarker and behavioral studies
1. TB affected population seeking medical assistance in TB clinics			
2. Pregnant women			
3. Population seeking medical assistance in drug abuse clinics			
4. Inmates in the penitentiary system			

Target population	Routine	Sentinel surveillance	Biomarker and behavioral studies
5. Blood donors	▨		
6. Population seeking care at medical facilities for STIs		▨	
7. Population seeking care at medical facilities for Hepatitis B and Hepatitis C		▨	
8. Any individual with clinical signs suggestive for AIDS	Recommended		
High-risk groups which:			
9. Do not seek medical assistance in healthcare facilities			▨
10. Seek medical assistance in healthcare facilities4	Recommended		

TB AFFECTED INDIVIDUALS SEEKING MEDICAL CARE IN TB CLINICS

TB cases are closely associated with HIV infection. About one third of HIV infected individuals around the world are infected with HIV and TB mycobacterium at the same time. HIV infection is one of the important factors influencing the incidence of TB and the course of the disease.

Detection of active tuberculosis is often associated with primary TB infection inquired by HIV affected patients.

Early diagnostics of HIV infection in TB patients makes it possible to initiate anti-TB therapy and ARV treatment in a timely manner leading to a much more beneficial outcome of the disease. Therefore, it is very important to ensure that HIV counseling and testing centers are fully (for 100%) accessible to TB patients.

World Health Organization recommends operating Voluntary Counseling and Testing offices at every medical facility with high concentration of TB patients (TB outpatient clinic, TB hospital and so on).

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[4] Implies any medical facility where high-risk-group individuals may seek medical assistance for any health problem despite its nature (profile) except TB and drug addiction clinics and blood transfusion stations.

Hence, the HIV/AIDS surveillance system with regular biological surveillance studies (screening) ensures the full coverage of the target population in Georgia. It follows from the fact that specialized medical facilities and patient flows are recorded and "managed" under a program-based state funding. If TB outpatient services are fully integrated in the primary healthcare in the future, then the scheme of implementing this function will be revised accordingly.

PREGNANT WOMEN RECEIVING ANTENATAL CARE

Determining the prevalence of HIV infection among pregnant women is recommended as an indirect indicator of HIV prevalence in the general population (proxy indicator of prevalence). In countries with concentrated epidemic and especially in those with generalized epidemic the HIV testing of pregnant women first of all serves a preventive purpose for avoiding HIV in newborns.

According to the WHO recommendation5 a routine serological testing of pregnant women is a key activity of HIV surveillance in the countries with concentrated and generalized epidemic and is considered as a complementary measure for countries with low prevalence of the epidemic.

In the framework of the state funded program, the routine surveillance (screening) for pregnant women on HIV infection is implemented at antenatal clinics throughout Georgia since 2006. Considering that it's impossible to implement the complete voluntary testing at the antenatal clinics at this stage, the screening is conducted through so called "opt-out approach". The preference of the latter is determined by the fact that is evidenced recently, the indicators of the testing conducted via "opt-out" approach is higher than of those conducted through "opt-in" approach, which means complete pre-test counseling and written consent of the pregnant.

IDUS SEEKING MEDICAL CARE IN DRUG ADDICTION CLINICS

Only a small fraction of IDUs seek medical assistance in specialized drug addiction clinics (presumably, 1000 individuals annually). It is also difficult to determine a size of this sub-population as well as measure HIV prevalence in this group (a biomarker sociological survey is recommended for its measurement). However, since this sub-population is under the highest risk of HIV transmission it is justifiable to establish a case-based routine surveillance for the patients of drug addiction clinics.

Drug addiction clinics are relatively small in numbers and amenable to monitoring; they have good potential for implementing a full-blown voluntary counseling and testing.

INMATES IN THE PENITENTIARY SYSTEM

These persons serve as major reservoir of mycobacterium and high-risk group individuals are quite common among them (compared to the whole population). It is justifiable to select them as a target population for the reason of preventing the spread of HIV/AIDS.

BLOOD DONORS

HIV testing of blood donors is compulsory in this group to prevent transmission of HIV infection. Considering the specifics of Georgia where the majority of donors belongs to a certain group of individuals (unofficial "professionals") HIV testing in this group cannot be used as a measure of HIV prevalence in the general population. Unlike the rest of the target population blood donors undergo HIV testing in a compulsory manner without voluntary pre-test counseling.

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[5] WHO, UNAIDS Guidelines for Conducting HIV Sentinel Serosurveys among Pregnant Women and Other Groups, UNAIDS/03.49E 2003

The probability of detecting HIV infection in this sub-population is higher than in the general population; however it is not practical to establish a case-based surveillance for preventive purposes in countries with a low prevalence of the epidemic. The surveillance is justifiable only for estimating the spread of the epidemic. Considering the specifics of Georgia where individuals tend to seek medical care for STIs in different facilities and, in fact, it is impossible to record such medical services (patient flows) it is practical to establish a sentinel surveillance only at a small number of selected specialized clinics.

At the same time clinical protocols (if they are implemented) recommend providing voluntary HIV counseling and testing to each patient who seeks care in any medical facility for STI diagnosis and treatment.

INDIVIDUALS SEEKING MEDICAL CARE FOR HEPATITIS B AND HEPATITIS C

In terms of HIV epidemiology this sub-group is extremely important because the ways of transmission are similar to those of HIV infection. Like with STIs, flows of these patients are also unorganized and it is impossible for the system of surveillance to ensure full coverage of healthcare providers and implement a routine surveillance. For this reason sentinel surveillance will be implemented in several specialized clinics for this population group to estimate the spread of the epidemic. Along with surveillance activities clinical protocols for diagnosis and treatment of Hepatitis B and Hepatitis C recommend introducing voluntary HIV counseling and testing if such protocols are implemented6)

ANY PERSON WITH CLINICAL SIGNS SUSPECTED ON HIV/AIDS

Despite the state of a low prevalence of the epidemic detecting a suspected case of HV/AIDS by clinical signs is very important in terms of preventing the epidemic as well as providing qualified and timely treatment and care to a patient. It is quite logical that a person with suspected signs of AIDS be subject t a routine HIV surveillance testing. Only because of the impossibility to pursue such a policy in the near future due to the fact that there are almost no regulations of the clinical practice (quality assurance/control) the only way is to employ a relatively "mild" approach for surveillance – to introduce clinical signs of a suspected case of AIDS in the curricula of the respective clinical residency programs and to make appropriate changes to the medical guidelines/protocols.

HIGH-RISK GROUPS NOT SEEKING MEDICAL CARE

Surveillance of this sub-population is important for determining the prevalence of HIV infection among the high risk groups (biomarker studies) and measuring behavioral factors / risks (behavioral studies).

HIGH-RISK GROUPS SEEKING MEDICAL CARE IN NON-SPECIALIZED MEDICAL FACILITIES

Any individual representing a high risk group may seek medical assistance in a medical facility for a health problem (complaint) that is not related with a risky behavior. It is desirable to implement a complete voluntary counseling and testing in this group for detecting and preventing the spread of HIV.

Since at this stage it is not possible to introduce a proper VCT at each medical facility and to include them into the system of routine surveillance the facilities providing medical services to this population group are advised to offer a voluntary counseling and testing to patients with a history of a risky behavior like it is done for persons with symptoms of suspected AIDS.

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[6] Implementation means not only the development/availability of the protocols or the training of medical personnel by also the introduction of workable mechanism for controlling this application practice.

A self-referral of a person to a specialized (AIDS) medical facility whether or not this individual belongs to a target group of routine surveillance or to a high-risk group.

- In such a case, a specialized medical institution is regarded as a "primary institution", where:
- a self-referred person gets a pre-test counseling;
- a case reporting form is filled in a post-test counseling is performed irrespective of the result of an initial or a confirmatory testing;
- If the diagnosis is confirmed and an HIV affected individual agrees to get clinical examination and proceeds to a stage of clinical follow-up.

METHODS AND INSTRUMENTS

VOLUNTARY COUNSELING AND TESTING

HIV Voluntary Counseling and Testing (VCT) represents medical service provided to the visitor in a confidential environment in case of informed consent and includes pre-test counseling, testing and post-test counseling.

VCT can be initiated by an individual (so-called client-initiated) or a healthcare provider (so-called provider-initiated), when a patient visiting a medical facility for a certain condition (e.g. TB, STI or viral hepatitis) is offered a pre-test counseling and testing on clinical (if presented with suspected symptoms / clinical signs of HIV/AIDS) or epidemiological indications. In any case an HIV counseling and testing is voluntary.

In Georgia as in the country with the low prevalence of the epidemic, surveillance is based on a provider- initiated voluntary counseling and testing. At this stage it is not reasonable to introduce a client-initiated voluntary counseling in any medical facility, at least at the regional level. A comparative analysis of integrating VCT centers with the existing medical facilities (see. Annex #2, p. 43) shows that it is very difficult to make a choice in favor of a certain type of facility. Most important, it is not yet clear what picture will appear in the result of the privatization and optimization of medical facilities (hospitals, outpatient clinics) in the country. Therefore, it's desirable to return to analyzing and discussing the issue after an year, when there will be more clarity in the market of healthcare providers and by which time the organizational forms of providers of HIV services as well as AIDS curative services will be defined.

Respectively, a voluntary counseling and testing consists of the following activities (components):

HIV PRE-TEST COUNSELING

A VCT specialist provides information on HIV/AIDS to a person seeking medical advice (a suspected case), asks him about the risk behaviors associated with HIV infection, explains the possible results of an HIV testing (presumptive positive, positive, negative) to him, evaluates the risk for this person to be infected and tries to get an informed consent for an HIV testing.

BLOOD SAMPLING

Blood or blood serum is used for testing. 3 ml of blood is drawn from a vein for analysis, placed in a special tube and sent with precautions to a laboratory for testing with any reliable diagnostic method (e.g. rapid/simple or IFA method).

HIV TESTING

At present, HIV testing can be performed by IFA or rapid test method. If a positive test result is obtained, a recipient is considered a suspected HIV case and a blood/serum sample is sent to an appropriate facility for a confirmatory testing. If HIV testing is performed in a regional or a district center where a confirming laboratory is not available, the (in a special vial with necessary precautions and an accompanying ciphered code), sample is sent to the confirming laboratory7.

POST-TEST COUNSELING

A confirmatory laboratory sends confirmation test results (both positive and negative) of all submitted probable cases to the primary facility, besides information on positive confirmation test is sent to the NCDCPH, where it is recorded in the database (the ciphered code, date and the result of a confirmatory testing).

To get a test result an individual applies to a primary medical facility (where he or she underwent a pre-test counseling or blood sampling for testing). Irrespective of the test result a VCT specialist offers him/her a post-test counseling:

- post-test counseling for HIV negative individuals - a VCT specialist communicates the test result to the person and provides information about the ways of HIV transmission, risk factors and preventive measures.
- post-test counseling for HIV positive individuals - a VCT specialist communicates the final test result to the person, familiarizes him or her with the epidemiological regime, tries to identify existing contacts in order to carry out a further epidemiological investigation; offers the patient to go to an appropriate medical facility for clinical examination ad monitoring.

ROUTINE SCREENING, WITHOUT VCT

A routine screening without VCT (opt-out approach) is an appealing and justified approach when:

- The size of a target population is big though it is desirable or necessary to achieve a full coverage for preventive reasons (e.g. prevention of mother to child transmission, use of blood preparations and so on).
- Resources (financial, technical, and professional) are scarce.

This method of a routine screening is used for the HIV surveillance of the pregnant women in the antenatal clinics and blood donors.

The vital difference between routine screening with a full-fledged VCT and the one without it is as follows:

Surveillance activities and methods	Routine surveillance with VCT	Routine surveillance without VCT
Pre-test counseling	Is performed by a VCT specialist in a primary health care facility	Not performed; at the primary health care facility person is informed about the HIV testing and person gives his or her consent to get tested on HIV
Post-test counseling	Is performed by a VCT specialist in a primary health care facility	not performed in a primary health care facility carried out by the NCDCPH (central or region level) epidemiologist
Reporting on every case of testing	VCT specialist fills in the form at the pre-counseling stage	Laboratory technician/nurse fills in the form when taking a blood sample; form is

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7 The methodology of sending laboratory sample is defined by the National Center for Disease Control and Public Health and is endorsed by the MOLSHA with respective regulatory enactment.

	after receiving test results the form is sent to the NCDCPH information flow includes all variables	sent to the NCDCPH before receiving the test results. Information flow includes only several variables: age, gender; contact info of a person (name, surname, address, telephones)
Anonymity	A person is allowed to stay anonymous; he/she is assigned a unique identification code.	No anonymity – identity of the person is disclosed (while taking a blood sample on HIV)
Securing confidentiality	Considerably high – only the VCT specialist is informed about the status of the HIV infection of the person.	Considerably high if: HIV test result is not sent back to the primary facility; only NCDCPH epidemiologist is informed about the HIV status of the person. Very low in case the test result is sent back to the primary facility.

The main weakest side of the surveillance without VCT is that it is difficult to maintain confidentiality. It can be ensured only when a person doesn't get information and a post-test counseling in the primary facility, where a blood sample was taken for HIV testing and a personal form (report) was filled-in including his or her contact information.

In technical terms, a much simpler code - a compound variable composed of two parts (e.g. the code of a primary facility and the number of record in the log-book of blood sampling for HIV testing) - is used instead of the ID code. Such a variable is unique on its own and allows that a person be easily found in the NCDCPH database.

EPIDEMIOLOGICAL INVESTIGATION

Epidemiological investigation is conducted:

- When HIV positive status is determined jointly with a post-test counseling (so called "initial epidemiological investigation") and then at the stage of clinical follow-up and treatment.

The initial epidemiological investigation of high-risk groups, TB patients and prison inmates is carried out by VCT specialists in the primary facilities where individuals got pre-test counseling and testing (clinics, TB clinics and medical departments of penitentiary institutions).

 The epidemiological investigation of a confirmed case provides for:

- Obtaining information of the following type:
    - information about the marital status (if it is unknown previously)
    - information about partners (syringe, sex partners)
    - information about medical procedures in the past (e.g. donation / transfusion, surgical intervention)
- Finding possible contacts mentioned above, carrying out their counseling and HIV testing. Continuous follow-up of HIV infected individuals on the issues of the progress of the disease, taking medicines regularly, undergoing medical examinations periodically and so on.

At the next stage, if an HIV infected person visits a medical facility for a clinical examination and supervision, the local epidemiologist carries out the epidemiological investigation if the person agrees to it.

BIOMARKER AND BEHAVIORAL STUDIES SURVEY

The methodology of carrying out biomarker and behavioral surveillance studies among IDUs, CSWs and MSMs is described in detail in the respective guidelines for surveying these risk groups.

ASSESSING THE PRACTICE SAFETY AT MEDICAL FACILITIES

Assessments of medical facilities are carried out by the NCDCPH either using its own resources or services provided by another organization.

The methodology of assessing safe practice at medical facilities and format of analyzing/reporting the results are defined in the manual Safe Practice Assessment at Medical Facilities.

DATA SETS

BIOLOGICAL SURVEILLANCE

ROUTINE SURVEILLANCE OF HIV/AIDS CASES

WITH VCT

The initial data recording is carried out at the level of primary medical facilities by a VCT specialist during a pre-test counseling.

A VCT specialist fills-in the HIV test report form #1 (see Annex 6; Figure 1: HIV test report form #1), containing obligatory variables and a person's unique ID - a ciphered code constructed according to the methodology described in the Annex 7.

Filled-in forms are submitted to the NCDCPH in accordance with the defined rule (the rule of submitting the forms is described in detail in the guidelines for a routine surveillance of HIV cases).

A data operator at the NCDCPH enters submitted forms into the information system. The reports are then sent to the archive.

In case some new circumstances are found in the result of epidemiological surveillance at the stage of clinical follow-up the same form with revised variables is filled-in and sent to the NCDCPH to update the respective record in the database.

WITHOUT VCT

The initial data recording is carried out at the level of primary medical facilities by a laboratory technician / nurse during a blood sampling.

After taking a blood sample a nurse / laboratory technician fills in the report form #3 without VCT (see Annex 6;Figure 2), where the contact information, sex, age and the unique ID number (simple code - a facility code and a record number in the log-book) are indicated and sends it to NCDCPH in accordance with the defined rule (the rule of submitting the forms is described in detail in the guidelines for a routine surveillance of HIV cases).

A data operator at the NCDCPH enters a submitted form #3 (see. Annex #6, Figure 2) into the information system (all variables except the contact information). The form #3 is then sent to the archive.

A confirmatory laboratory submits the confirmation blood test result notification form #4.2 (see Annex 6;Figure 3) containing the result of a confirmation test to the NCDCPH. A data operator at the NCDCPH enters the information received from a confirming laboratory in the respective record (a result and a date of confirmation).

After receiving the confirmation result from confirmatory laboratory, NCDCPH epidemiologist finds the personal information by test number via report form #3 provided by the primary facility without VCT and contacts the pregnant immediately to conduct post-test counseling and surveillance. After epidemiological investigation is completed the NCDCPH epidemiologist fills-in the HIV investigation report form #1 (see Annex 6;Figure 1) and submits it to a data operator of the center who enters it into the database.

SENTINEL SURVEILLANCE OF HIV INFECTION

When blood sample is taken and tested for HIV at a sentinel site a physician / laboratory technician fills in the sentinel HIV testing report form #4 (see Annex 6 Figure 4).

Sentinel HIV testing report form #4 is sent to the NCDCPH according to the established rule (the rule of submitting the notification is described in the guidelines for sentinel surveillance). A data operator enters the form into the information system.

BEHAVIORAL SURVEILLANCE

The results of behavioral surveillance studies in the standard form are submitted to the NCDCPH. The study report contains all variables and indicators according to their specified passports.

DELIVERABLES (REPORTS)

A National Report on HIV / AIDS surveillance presents the results of work carried out during the reportable period.

The national report consists of two required sections:

- Descriptive part
- Detailed tables

The third section devoted to assessing the effectiveness of national response measures against the epidemic may be added to the national report in the future (so-called "analytic part").

DESCRIPTIVE PART

The descriptive part is devoted to describing the HIV situation by its key characteristics, in particular:

- Describing the HIV/AIDS situation in the country by a certain time (the end of a calendar year)
- Showing trends of the HIV/AIDS epidemic in the country.

In this section some charts (based on the data given in the next section of "tables") will be used for illustrative purposes.

The descriptive section consists of the following chapters:

REGISTERING REPORTED CASES OF HIV/AIDS

This chapter is based on the reported cases of HIV/AIDS and includes the following sub-chapters:

- New HIV incidences (laboratory-confirmed HIV cases irrespective of the clinical stage)
- New AIDS incidence (clinical stage)
- Mortality

The trends are given for 5-year period according to the following characteristics: Recently revealed HIV /AIDS cases, HIV/AIDS incidences by sex, age and region, shares of different modes of HIV transmission by years.

In addition to the above-mentioned disaggregation variables – sex, age and region, mortality rate is disaggregated in accordance with causes of death: a disease/condition associated with AIDS or a cause not associated with AIDS

ANTIRETROVIRAL (ARV) TREATMENT

The subchapter describes: (1) ARV coverage rate; (2) survival rate of patients on ARV treatment (survival).

SENTINEL SURVEILLANCE

The subchapter will be devoted to describing HIV and AIDS prevalence in the following sentinel populations[8]:

- Individuals infected with STIs
- Individuals with Hepatitis B and Hepatitis C[9]

CONDUCTED RESEARCHES ON HIV INFECTION

The sub-chapter is devoted to description of HIV infection researches. Only the subpopulations with defined volume will be included: pregnant women, inmates of penitentiary system and TB patients.

- In addition, the number of screening conducted among blood donors and confirmed cases of HIV infection will be included.

BIO-BEHAVIORAL SURVEILLANCE

The subchapter summarizes key findings of the bio-behavioral surveillance surveys carried out among high-risk populations:

- HIV prevalence;
- Knowledge about preventing HIV transmission;
- Risk behaviors

SECTION OF TABLES

Due to the fact that the information generated by the system of surveillance will be available to all interested parties in the electronic form, the number of required tables in the national report has been decreased to the minimum.

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8. Target groups of sentinel surveillance are given provisionally and can be changed in the process of developing the HIV surveillance system in the country.

9 After integration of HIV and Hepatitis surveillance system

The format of 16 tables with its main indicators and disaggregation variables is described in the Annex 2

ORGANIZATIONAL ARRANGEMENT OF THE SYSTEM

Given the example of the routine surveillance the relation and the distribution of above-mentioned functions among the implementing agents can be shown graphically the following way

Pretest counseling, HIV testing (at least a blood sampling) and post test counseling take place at the same medical facility. Pursuant to the scheme, whenever a positive HIV result is suspected, the first entity that performed HIV testing sends the blood sample to a confirming laboratory as prescribed by the rule (The rules of transporting blood samples are described in detail in the methodological recommendations for routine surveillance of HIV/AIDS cases). If a confirmatory test gives a negative result on HIV an individual gets only a post-test counseling in the primary medical facility while if a positive result is obtained then an epidemiological investigation is carried out by the same VCT specialist. HIV positive person is advised to visit a specialized medical facility where a clinical examination should be performed and a regime of a clinical follow-up should be determined.

After an HIV positive individual visits a specialized provider of AIDS medical services, surveillance is continued by a physician/epidemiologist working at this facility. Generally, it implies a passive surveillance when a patient is advised on avoiding a further spread of HIV infection and on the necessity to get the contacted persons tested for HIV. The Additional / new information obtained in the result of the epidemiological investigation is added/updated to the personal record in the surveillance database.

PARTICIPANTS AND RESPONSIBLE AGENTS

ROUTINE SURVEILLANCE WITH VCT

The agents involved in the routine surveillance can be shown schematically in the following way:

Arrow #1:

When a patient applies to medical institution (primary medical facility) medical personnel send him to a VCT specialist working at this facility, who performs a pre-test counseling.

Arrow 2:

If a patient gives consent, his (her) blood sample is taken in the VCT room and sent to a laboratory. It doesn't matter whether a laboratory is located at the same facility or it is a contracted laboratory.

Arrow #2.1:

Test result obtained by a rapid / IFA method is sent by a laboratory to a primary medical facility.

Arrow (a):

Immediately upon receiving a test result from a laboratory a primary facility completes recording individual information about an HIV tested individual and submits disaggregated data (with a coded personal code) to the NCDCPH as established by the rule (The rule of submitting the data is described in the methodological recommendations for a routine surveillance of HIV cases).

Arrow 2.2:

In the case of a probable HIV a laboratory sends a blood sample (with ciphered personal code) to a confirmatory laboratory.

Arrow 3:

A confirmatory laboratory sends a confirmatory result to a primary facility according to the established rule (The rule of submitting the data is described in the methodological recommendations for a routine surveillance of HIV cases).

Arrow (b):

In case of positive confirmatory test result, confirming laboratory submits a test result to the NCDCPH according to the established rule. (The rule of notifying is described in the guidelines for a routine surveillance of HIV cases).
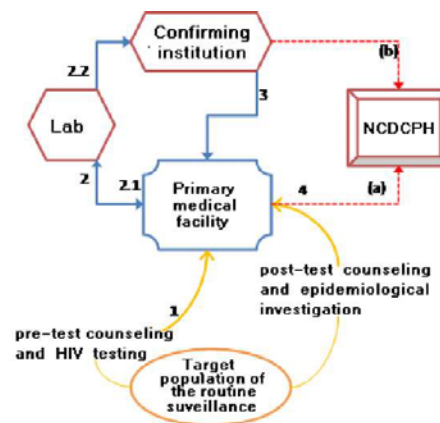
ROUTINE SURVEILLANCE WITHOUT VCT

The agents involved in the system of a routine surveillance at the primary medical facilities without VCT services and functional links among them are as follows:

Arrow #1:

A person applies to a medical facility where he gets informed on HIV testing.

Arrow #2:

If a patient agrees, a laboratory technician takes a blood sample makes an entry in a log-book for HIV testing, indicates a simple code/test number on a vial for HIV testing and sends it for testing.

Arrow #3:

In the case of a probable HIV a laboratory sends a vial with a blood sample to a confirmatory laboratory.

Arrow (a):

A primary medical facility fills-in a special form where contact info is indicated and submits it to the NCDCPH according to the established rule (The rule of submitting the form is described in the methodological recommendations for a routine surveillance of HIV cases).

Arrow (b):

A confirming laboratory receives a blood sample labeled with a code, performs a confirmatory testing and submits a positive test result to the NCDCPH using a special notification form.

Arrow #4:

The NCDCPH enters the received variables (except the contact information) into the information system and stores the received forms in a special archive.

If an HIV positive case is confirmed, the NCDCPH looks for contact information in the archive of the forms submitted by primary medical facilities, contacts with an HIV tested individual by phone and arranges a meeting in a place convenient to the person where the person gets information and a post-test counseling.
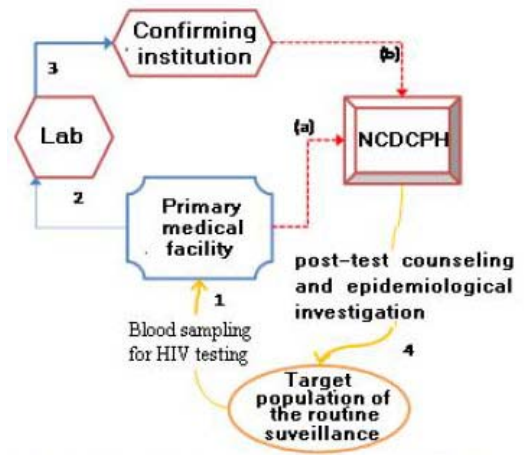
ARRANGEMENT BY ADMINISTRATIVE LEVELS

DISTRICT LEVEL

Primary medical facilities where pre-test counseling and testing are performed are located at the district (primary) level. Testing/ laboratory investigation itself is carried out in a laboratory of a primary medical facility or in a contracted laboratory.
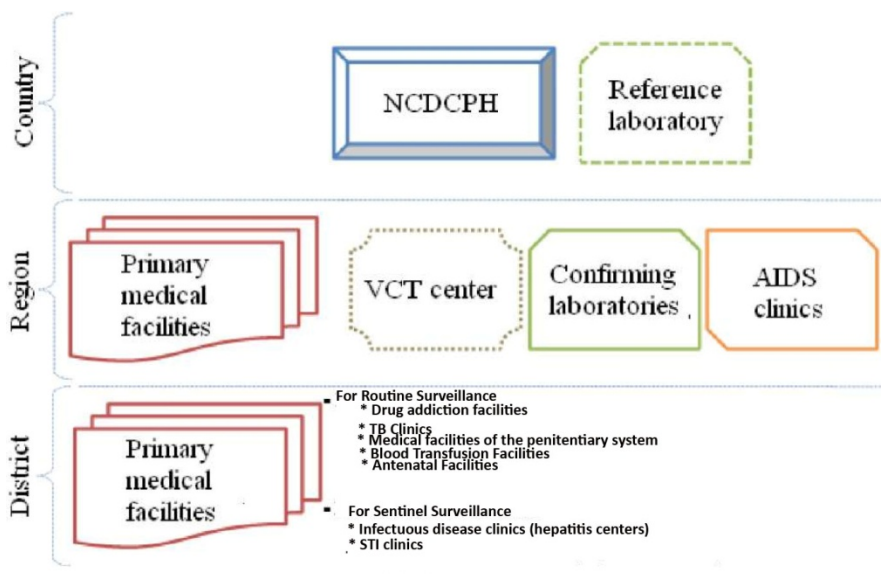
REGIONAL LEVEL[10]

Primary medical facilities where a target group can receive medical services may exist at the regional level as well. Any medical facility where an initial diagnosis of a suspected HIV/AIDS is made on the basis of clinical manifestations or medical services are provided to high-risk group individuals is considered to be a primary medical facility as well.

There exists a confirming laboratory at the same level (for the time being the only confirming laboratory is located in Tbilisi; however it is expected that they will appear in the other regional centers as well).

There are so-called "AIDS clinics" - special medical services for a clinical follow-up of HIV positive individuals and a treatment of AIDS patients - at the regional level.

VCT centers organized by NGOs with support of donors are also operating separately at the regional level. These centers provide services mainly to high-risk group individuals.

Such a division of the surveillance agents by administrative levels implies that a person (e.g. living in a province) doesn't need to apply to the regional level until he or she requires clinical investigation and follow-up (and treatment in the future).

NATIONAL LEVEL[11]

The NCDCPH is located at this level.

NEEDED HUMAN RESOURCES AND THEIR ALLOCATION

VCT SPECIALISTS

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[10] In this framework Tbilisi is considered as a region (along with its administrative districts) rather than the capital or a national/central level.

[11] National level by no means implies that these agents are necessarily located in the capital

A position of a VCT specialist is provided for in a regular staff of primary medical facilities (for a routine surveillance) to provide these services instead of other relevant specialists working at these clinics (e.g. narcologists at drug abuse clinics or TB specialists at TB clinics) (see Annex 4 Organizational arrangement in primary healthcare facilities)

DATA ENTRY AND MANAGEMENT

Data entry is performed by a data operator of the NCDCPH.

In addition to the data entry a data operator is responsible for archiving forms / questionnaires.

The number of data operators is determined by the size of a population targeted by a routine surveillance.

The information system provides automatic calculation of indicators and generation of tables in printed or electronic form.

TECHNICAL RESOURCES

Technical capacities, namely computer equipment (a server, workstations, a network infrastructure), needed for a proper operation of the HIV/AIDS surveillance information system at NCDCPH was updated in December 2009 and a software package for data entry, processing and reporting was developed.

To ensure a proper functioning of a surveillance system the technical facilities for taking, storing, transportation and disposal of blood samples are needed. Their technical specifications will be defined in the relevant guidelines.

IMPLEMENTATION AND DEVELOPMENT

Activities for introduction of new surveillance system, considered under National Plan for HIV/AIDS surveillance (2009 edition), including special activities based on selection of optimum model are fully implementing and will be completed up to end of 2010.

So, this chapter covers issues, regarding:

- realization of this plan, i.e. management of planned routine activities, including avoidance or overcoming of possible risks
- estimation of needs of resources, required for adequate realization of plan

MANAGEMENT OF PLAN IMPLEMENTATION

According to the plan, on behalf of State the National Center for Disease Control and Public Health shall be responsible for management of HIV/AIDS surveillance system.

The prerogative of the Ministry of Health, Labor and Social Affairs of Georgia is that whether the activities of functioning of surveillance system, considered under the plan:

- shall be distributed within several State programs of health care (and therefore public finances shall be spent) or
- shall be accumulated in one independent HIV/AIDS surveillance (sub)program and complete management of financial flows and plan implementation shall be carried out from one entity (National Center for Disease Control and Public Health)

In any case, all activities, required for efficient operation of system shall be covered by healthcare State program(s).

Function of management of HIV/AIDS surveillance system (and implementation of this plan) requires from National Center for Disease Control and Public Health, carrying out of following activities:

Regarding the process management:

Supervision over fulfillment of obligations by all system-participant parties (implied timeliness and quality) and corresponding respond in case of non-fulfillment (methods of which –administrative or contractual/financial shall be specified under corresponding healthcare State program)

Examination of causes of problems arose during work process or improvement means and when applicable, making changes to implementation of national plan, or preparation of recommendations regarding revision of national plan or state program (if it is required by necessary changes)

Regarding processing and analysis of received information:

- taking care of efficient operation of information system, that in its turn includes:
  - supervision over server infrastructure and software part (administration of data bases, as well as continuous running of IT infrastructure)
  - quality control of information flows and digitalization (entering of data from paper medium into electronic base)
- generation of reports by processing of data and regular evaluation and analysis of epidemiological situation

- determination of need in specification, revision after analysis or any type of response and assuming necessary measures within the terms of reference

Regarding observance and improvement of methods (approaches):

- modification of forms of data collection (registration on paper medium), as well as specification of needs in changes of information flows, their evaluation and preparation recommendations on changes in national plan (or only in methodical guidance)
- determination of need in revision of variables, rates or definitions for epidemiological analysis and preparation recommendations on changes in methodical guidance
- in case of updating of methodical guidance, preparation of performance specification for information system updating and purchasing of service

It should be highlighted that delegation of management function to National Center for Disease Control and Public Health shall not release the ministry from supervision over successful implementation of national plan and requires from this later provision of effective execution of delegated management function by using administrative or contractual mechanisms.

ASSUMPTIONS AND RISKS

This national plan for HIV/AIDS surveillance is designed on the main assumption that the state of the epidemics in the country doesn't evolve to the generalized one and may change to the concentrated epidemic at the worst within the next 5 years. If this assumption doesn't hold a revision of the national plan will be needed to make at least the following corrections in it:

- revising the surveillance measures intended for the target populations in the modeling instrument (to be reflected in the budget accordingly)
- creating stand-alone VCT services in regional centers and in the majority of district centers

The second important assumption the plan is based on is concerned with fulfilling domestic or international obligations and promises made by the Government of Georgia with regard to preventing the spread of the HIV epidemic. If this assumption is fallacious and HIV/AIDS issues in general and the surveillance in particular are not health policy priorities of the government then it will be necessary to drop several activities out of the basic model and to reconcile the resource needing for surveillance with the capacities of the country.

The most serious risk the implementation of this plan and the operation of surveillance system may confront with is related to the effectiveness of the mechanisms for recording and reporting isolated cases of HIV. This risk is not unique for the HIV/AIDS case surveillance only and applies to a proper functioning of the health information system in general. The risk exists since at the current level of a health market regulation there is a high likelihood that medical facilities do not record or report HIV cases appropriately (fully, timely and with good quality). This risk is accounted for in the functional arrangement of surveillance as much as possible. Information flows have been linked to the contract management mechanisms under the state programs - a proper fulfillment of HIV surveillance activities will be made a precondition for getting a reimbursement for the main services provided. However, such an approach is not enough for preventing the risk:

- A design of state health programs and, respectively, terms and conditions of contracts for health services may not account for the "interests" of the HIV/AIDS case surveillance system in full; the same may occur during the administration of these contracts and state programs.
- By no means it is guaranteed that the state health programs being "central" to the system of epidemiological surveillance remain unchanged (even abolished) leading to the disappearance of the only mechanism to exert influence on the facilities providing health services covered by the routine screening

In the first case it is relatively easy to manage the risk. It needs the effort and advocacy of the NCDCPH and other stakeholders to adequately provide for the interests of surveillance at every stage of the state health programs management.

As for the second risk, the only solution is to introduce changes in the regulatory environment: define effective norms that will charge health care providers with the responsibility of case recording and reporting and will establish clear mechanisms of implementation.

NEEDED RESOURCES

Needed resources have been estimated in parallel with the appraisal of national antiepidemic strategy and it provides for the activities (and their financing) that are directly concerned with surveillance system.

If represent HIV/AIDS case surveillance system without context, than needed resources will be as follows:

Illustration 1:   Need of total resources for surveillance and components connected with it (in GEL)

	Years						
	2011	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Prevention	1,970,994	1,982,448	1,993,902	2,009,174	2,024,446	2,041,627	**12,022,591**
Surveillance	137,370	137,460	137,550	137,670	137,790	137,925	825,765
Total routine	**2,108,364**	**2,119,908**	**2,131,452**	**2,146,844**	**2,162,236**	**2,179,552**	**12,848,356**
	107,160	107,160	107,160	107,160	107,160	107,160	642,960
BSS	380,000	105,000	380,000	75,000	410,000	30,000	1,380,000
Examination of med. inst.	30,000	0	0	0	0	0	30,000
Total operational	**2,625,524**	**2,332,068**	**2,618,612**	**2,329,004**	**2,679,396**	**2,316,712**	**14,901,316**
Investment	9,800	9,800	9,800	9,800	9,800	9,800	58,800
In total	2,635,324	2,341,868	2,628,412	2,338,804	2,689,196	2,326,512	14,960,116

The average annular resources need vary between 2.3 and 2.7 ml. GEL From this, about 900 thousand is needed annually for routine surveillance, which is divided into two sub-categories – "prevention" and "surveillance".

As certain activities of routine surveillance are considered as "preventive activities" in the national strategy, the net need of resources, required for implementation of surveillance plan are as follows:

Illustration 2   Resources needed only for functioning of surveillance system (in GEL)

Only surveillance System components	2011	2012	2013	2014	2015	2016	???
Routine	137,370	137,460	137,550	137,670	137,790	137,925	**825,765**
Sentinel	107,160	107,160	107,160	107,160	107,160	107,160	**642,960**
BSS	380,000	105,000	380,000	75,000	410,000	30,000	**1,380,000**
Examination of med. inst.	30,000	0	0	0	0	0	**30,000**
Investment	9,800	9,800	9,800	9,800	9,800	9,800	**58,800**
	664,330	**359,420**	**634,510**	**329,630**	**664,750**	**284,885**	**2,937,525**

The average annual need is specified from 300 up to 650 thousand and the basic reason is BSS investigations.

Conditionally, the resources required for system development and functioning are divided into two groups:

- Operational costs (i.e. current costs) – that are needed for covering of daily functioning of system
- Investment costs (i.e. one-time costs) - that are needed for one-time improvement of system capacities or repeated improvement during relatively long period of time

The Investment costs annually imply investments in the form of trainings (9.8 thousand GEL per year) in personnel (in professional personnel). Calculation of operational expenses was made for four component of surveillance independently:

Illustration 3:   Budget of annual operational expenses (year of 2011, in GEL)

Budget of costs							
Operational expenses							
Routine screening	Total	Prevention	Surveillance	Total	Prevention	Surveillance	
Consultation	360,030	348,030	12,000	17%	18%	9%	
Testing rapid/simple	1,499,190	1,424,850	74,340	71%	72%	54%	
Transportation	133,978	121,662	12,240	6%	6%	9%	
Confirmation	90,988	76,452	11,040	4%	4%	8%	
Supportive supervision	2,100	0	2,100				
Data entering	25,650	0	25,650	1%	0%	19%	
Total routine screening	**2,111,936**	**1,970,994**	**137,370**	**100%**	**100%**	**98%**	**80%**
Sentinel							
Consultation or registration	18,000			17%			
Testing quick/simple	49,560			46%			
Transportation	2,800			3%			
Confirmation	36,800			34%			
Data entering	0			0%			
Total sentinel	**107,160**			**100%**			**4%**
BSS	**380,000**						**14%**
Examination of medical facilities	**30,000**						**1%**
Total operating expenses					**2,629,096**		**100%**

The resources for routine and sentinel surveillance are divided in subcategories again by functional components. As for biomarker and behavioral surveys (BBS) and the assessment of medical facilities the need in resources is given in aggregate.

As for biomarker and behavioral surveys (BBS) and the assessment of medical facilities the need in resources is given in aggregate.

Operation of a surveillance system is based on the following target contingent and surveillance activities / approaches:

Illustration 4:   Target groups and surveillance activities / approaches – year of 2011

	Target groups	Size (to be covered)	Surv. Type	Link	VCT	Number of VCT offices	Number of assoc.	of VCT	Number of sent.	Suspici ous	
1	**Intravenous drug users**	**6.000**	Routine	**Yes**	**Yes**	**16**	**0**			**5.00%**	300
2	**Pregnant women**	**55.000**	Routine	**Yes**	**No**	**0**	**203**			**0.04%**	22
3	**TB patients**	**6.000**	Routine	**Yes**	**Yes**	**0**	**16**			**2.00%**	120
4	**Prisoners (HRG)**	**10.000**	Routine	**Yes**	**Yes**	**16**	**0**			**5.00%**	500
5	**Blood donors**	**44.000**	Routine	**Yes**	**No**	**0**	**14**			**0.02%**	9
6	**STI patients**	**0**	Sentinel	**No**	**No**	**2**	**0**	**2**		**3.00%**	0
7	**Patients with Hepatitis**	**0**	Sentinel	**No**	**No**	**2**	**0**	**2**		**3.00%**	0
8	**With clinical signs**	**0**	Recomm			**3.000**	**0**			**0.00%**	0
9	**HRG not seeking health**	**0**	BSS				**0**			**5.00%**	0
10	**HRG seeking health**	**750**	Routine	**Yes**			**0**			**5.00%**	38

A comprehensive routine screening with VCT is performed in:

- approximately 6000 IDUs in 16 medical facilities
- up to 6 000 TB patients in about 16 specialized medical facilities, where specialists of clinic take on function of VCT service
- up to 10 000 prisoners from high-risk groups in 16 penitentiary institutions, where VCT rooms will operate

An incomplete routine screening without VCT is performed for

- up to 55.000 pregnant women in 203 facility (where blood drawing and reporting activities, considered under surveillance methodology are performed by main medical personnel)
- Presumably in 44 000 blood donors in about 14 blood transfusion stations or offices.

Sentinel surveillance is performed in patients with STIs and with Hepatitis B and C by two sentinel stations respectively

COSTS OF ROUTINE SURVEILLANCE

According to preliminary estimations, the case based report forms will be completed for 22,000 individuals and shorter forms (with several variables) - for 99,000 individuals. 38.000 GEL per year is provided for submitting these forms and entering them into the system

Illustration 5:   **Basis of calculation of costs for routine surveillance (quantitative parameters) – year of 2011**

	Total	Prevention	Surveillance
Forms for routine screening	**22,000**	16,000	6,000
Forms without routine screening	**99,000**	99,000	0
Number of comb. facilities without VCT	**217**	217	0
Number of VCT offices	**32**	32	0
Number of doctors who take on VCT functions	**16**	0	16
Tests, requiring transportation	**66,000**	60,000	6,000
Suspicious cases- routine	**989**	831	120

In total it will be necessary to establish and operate 32 VCT rooms; 217 specialists (e.g. TB specialists) will take on functions of VCT. 360 000 GEL is required to operate such capacities provided that salaries of specialists working at VCT offices will be covered fully while 217, where other specialists (Tb specialist) will take on the functions of VCT the costs will amount to supplementary payments (for VCT services) above a regular pay.

Based on target contingent:

- Simple / Rapid testing will be performed for 121000 individuals and it will cost approximately 1.5 million GEL from which the greatest part (1.42 million) is the prevention costs and 74 000 GEL is considered as net cost of surveillance
- The estimated number of HIV cases is 989; it determines the cost of sample transportation for confirmatory testing in the amount of 134.000 GEL and 91.000 GEL respectively. From this only 23.000 GEL is the costs of direct surveillance and other costs shall be covered from the budget of preventive activities

COSTS OF A SENTINEL SURVEILLANCE

The basic scenario provides for 4 sentinel stations. 1000 individuals will get testing in each of these stations. The estimated number of suspected cases equals to 400 and it determines the amount of expenditures on transportation and confirmatory laboratory testing. The basic scenario doesn't provide for VCT offices the surveillance base.

According to these calculations, the structure of costs for sentinel surveillance is follow:

Illustration 6:   **Operational budget of sentinel surveillance – year of 2011 (in GEL)**

Sentinel		
Consultation or registration	18,000	17%
Testing rapid/simple	49,560	46%
Transportation	2,800	3%
Confirmation	36,800	34%
Data entering	0	0%
Total sentinel	**107,160**	**100%**

The greatest part of costs is for laboratory examinations – in total 77%. Costs for data entering are so insignificant (considering the minor volume of cases and number of variables) that they are not indicated in budget as separate costs.

INVESTMENT AND OTHER COSTS

While calculating resources needed for introducing the HIV/AIDS case surveillance system only the investment in human (professional) resources has been taken into consideration, since:

- The assessment of the system showed that there are enough technical and communication facilities for managing the data at the central level.
- The design of the system doesn't require decentralized data entry even if the decision is made to carry out data entry / processing at the regional level. The NCDCPH regional branches have necessary technical capacities in this regard

- The most part of the methodology needed for the system operation will be developed by financial support of Global Fund

As during introducing of system the specialists were prepared in voluntary counseling and testing, for future it is envisaged only for limited contingent (4 trainings for 53 participants in total).

Target contingent	102
Target contingent with reserve	113
Number of trainings	8

Other costs, required for plan implementation management- namely for supervision over plan implementation, the analytical work and information system keeping (administration of data base) will be covered NCDCPH administrative budget.

Annex 1: Comparative analysis of placing of voluntary counseling and testing centers in exiting facilities

Illustration 7: **Options of placing of regional VCT centers**

Facility	Function	Availability	Customer	Integration into the system	Investment
Blood bank/blood transfusion station	-	-	+	0	0/+
Public health center	+/0	+	+/0	+	0/+
AIDS centers / diagnostic laboratories	+	+	+	0	0/+
Private laboratory	-	+	+	-	0
Hospitals	0	+	+	-	0
Drug abuse clinics or other specialized medical facilities	0	0	-	-	0
Non -governmental organizations	0	0	+	0	+/0
Independent VCT centers	+	-/0	+	-	-

BLOOD BANK/ BLOOD TRANSFUSION STATION

The function of VCT is extraneous for blood banks / blood transfusion stations - their main purpose is to provide hospitals with safe (uninfected) blood and blood products. Hence, voluntary counseling and testing is not their natural function and is perceived as an additional burden (less connected with their main activity).

Blood banks have less important role in ensuring geographic accessibility since the majority of them are concentrated in Tbilisi (5 blood banks) and some regions of Western Georgia (Adjara, Imereti, Samegrelo, Kvemo Kartli). Furthermore, some discussions are underway in the country to consolidate several blood banks and create one large blood bank in Western and Eastern Georgia. It will, in turn, give rise to a problem of geographic accessibility for the population.

As for customers, blood banks are regarded as one of the entities where patients will never experience barriers (e.g. the risk of stigmatization) in getting HIV counseling and testing.

The integration of blood banks into the national surveillance system has been assessed as neutral: although blood banks are relatively well-organized autonomous entities, there are some mechanisms of "soft" regulation and blood banks can be incorporated into the surveillance on a contractual basis. On the other hand, routine HIV screening of blood donors is mainly (conceptually) considered to be one of the technological stages in producing blood preparations rather than surveillance activity on its own account.

As for the advisability of investing blood banks deserve higher ranking: although blood banks are equipped with medical appliances needed for HIV testing, the system lacks specialists who might be able to perform voluntary counseling and follow-up of HIV infected patients.

In functional terms, a public health center is the most closely related entity to incorporate voluntary HIV counseling and testing. Their functions include surveillance of various communicable diseases and therefore, HIV/AIDS surveillance can be added naturally to their main activities. Despite the functional proximity, HIV/AIDS counseling will be an additional function requiring extra staff to be trained or existing personnel to be retrained.

In terms of accessibility since public health centers are located in every region they deserve a positive score.

In terms of users the public health center deserves a positive score if disregard the fact that it is relatively difficult to attract HRG individuals to these facilities compared to the general population as it is the case for all public entities.

There is a high potential for integrating public health centers into the surveillance system.

As for the infrastructure, some public health centers have got needed equipment for performing lab diagnostics and have employed epidemiologists who can carry out epidemiological investigations. However, this staff needs to be trained in pre-test and post-test counseling

AIDS DIAGNOSTIC CENTERS /LABORATORIES

These institutions combine two types of facilities: a) AIDS centers which are integrated with infectious disease hospitals and are operational now in Tbilisi, Batumi, Zugdidi and Kutaisi, and b) AIDS diagnostic laboratories which are mainly based at various medical facilities (commonly, in hospitals).

The functions of AIDS diagnostic centers include voluntary HIV/AIDS counseling and testing, surveillance of HIV infected patients, search for contacts, prevention and treatment of opportunistic infections as well as ARV treatment of HIV infected patients. Therefore, in functional terms, AIDS centers are the most closely related with and are in line with the functions of VCT centers.

As for AIDS diagnostic laboratories, their responsibilities include only performing HIV/AIDS lab testing and communicating test results back to a referring facility or a tested individual. Hence, considering main activities of AIDS laboratories, VCT is not quite as natural of a function for them as it is the case with AIDS centers.

Accessibility is relatively poor for AIDS centers since for the time being they are located only in the capital and three regions of Western Georgia (Samegrelo, Imereti, Adjara). There are some plans for the future to open such centers in Eastern Georgia as well.

As for AIDS diagnostic laboratories, they are easily accessible since they exist in every region of Georgia (almost in every district in a passive form). The weakness of these facilities is that they are mainly hospital-based structural units. Consequently, if a profile of a hospital is to be changed an AIDS diagnostic laboratory may stop to operate or HIV testing may no longer be performed there.

AIDS centers as well as AIDS laboratories do not pose any inconvenience to general population or HRG individuals since these centers / laboratories are integrated with medical facilities of such a profile that both patients from general population and HRG individuals are visiting them freely. Therefore, it will not make anyone to feel embarrassed (in terms of stigmatization) about visiting such a facility and getting tested there.

The level of integration into the system is medium, although these facilities have rather well- developed infrastructure at their disposal. Not only they are equipped with needed technical appliances but also their physician-laboratories are trained

in voluntary counseling and testing. However, in this case, the latter will still need to be retrained and undergo additional training in the issues of the epidemiological investigation.

PRIVATE LABORATORIES

Private laboratories do not comply with VCT centers in functional terms. VCT is extraneous function for them.

These facilities deserve high ranking in terms of geographic accessibility as well as from a customer's perspective since they do not make customers feel uncomfortable as far as stigmatization is concerned.

The potential of integrating private laboratories into the surveillance system is rather low making investment in their infrastructure inadvisable as well.

HOSPITALS

The strengths and the weaknesses of hospitals are almost the same as with AIDS diagnostic laboratories except the difference that a chance of integrating hospitals into the surveillance system is rather low (especially in the light of the ongoing privatization).

DRUG ABUSE CLINICS OR OTHER SPECIALIZED FACILITIES

Drug abuse clinics, skin and STI clinics or other similar specialized medical facilities fall into this category. In functional terms, these facilities are partially in line with functions of VCT centers since they provide services to HRG individuals including drug addiction and STI counseling and/or testing. These activities comprise a part of HIV/AIDS counseling and therefore VCT functions are inherent to these facilities.

As far as accessibility is concerned, these clinics are also located in all regions and almost in every district of the country. At the district level these dispensaries are mainly integrated with primary health care or hospital facilities.

From a customer's viewpoint, such medical facilities are practical for individuals with HIV associated high risk behaviors (drug addicts, STI patients), however, they are not convenient for general population and other individuals.

The level of integration of these facilities into the surveillance system is almost the same as with hospitals and is regarded as unsatisfactory.

The advisability of capital investments have been assessed as neutral: staff is available there and if retrained they can serve as consultants. However, in this case it will be necessary to combine functions of epidemiology additionally. On the other hand, organizational arrangement of these facilities questions advisability of investing in them in the context of ongoing privatization (at this stage).

NON-GOVERNMENTAL ORGANIZATIONS

In functional terms, activities of some NGOs (such as "Bemoni", "Tanadgoma", HIV/AIDS and Mental Health Expert Center and other similar organizations) comply with functions of voluntary HIV counseling and testing. Voluntary counseling and testing is actually included in the functions of these NGOs. The other non-governmental organizations mainly serve the purpose of preventing HIV transmission among HRG individuals and in the general population.

As for the accessibility issue, those NGOs that are engaged in voluntary counseling and testing are located mainly in Tbilisi and Western Georgia as it is the case for AIDS centers.

At the customer level, NGOs have received a positive assessment from the perspective of both HRG individuals and general population.

The level of integration into the system is low, while advisability of investing in their infrastructure is relatively high.

STAND-ALONE VCT CENTERS

In functional terms, VCT centers are directly connected with the function of HIV counseling and testing of both HRG individuals and general population.

Although functions of these facilities include provision of voluntary HIV/AIDS counseling and testing, they at the same time lack ability to perform epidemiological investigations.

From the accessibility viewpoint, the number of stand-alone VCT centers is low and it is necessary to establish them in every region of the country.

From a customer's perspective, voluntary HIV counseling and testing centers are fairly attractive facilities if they provide services for preventing not only HIV infection but also other blood- transmitted diseases along with STIs.

The integration of these facilities into the surveillance system as well as their infrastructure has received a negative assessment for the moment. It is necessary to increase their capacities (material- technical base as well as human resources).

Table 1: Newly identified HIV-infection cases per 100,000 population and cumulative number of cases according to regions | ind # 1

	2005		2006		2007		2008		2009		Cumulative
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	
Tbilisi											
Autonomous Republic of Abkhazia											
Autonomous Republic of Adjara											
Guria											
Imereti											
Kakheti											
Mtskheta-Mtianeti											
Racha-Lechkumi and Kvemo- Svaneti											
Samegrelo-Zemo Svaneti											
Samtske-Javakheti											
Kvemo Kartli											
Shida Kartli											
Total Georgia											

Table 1: Newly identified HIV-infection cases per 100,000 population and cumulative number of cases according to sex and age groups | ind # 1

	2005		2006		2007		2008		2009		Cumulative
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	
Male											
0-14											
15-24											
25+											
Total male											
Female											
0-14											
15-24											
25+											
Total female											
Total											

Table 2: Newly identified HIV-infection cases, percentage distribution and cumulative number according to HIV transmission modes | ind # 2

	2005		2006		2007		2008		2009		Cumulative
	n	%	N	%	n	%	n	%	n	%	
Intravenous drug use											

Homosexual contact		
Heterosexual contact		
Blood transfusion		
Mother-to child transmission		
Unknown		

Total	**100**	**100**	**100**	**100**	**100**

	2005		2006		2007		2008		2009		Cumulative	
	n	%	n	%	n	%	n	%	n	%	n	%
Male (Age 15+)												
Intravenous drug use												
Homosexual contact												
Heterosexual contact												
Blood recipient												
Unknown												
Total male		**100**		**100**		**100**				**100**		**100**
Female (Age 15+)												
Intravenous drug use												
Heterosexual contact												
Blood recipient												
Unknown												
Total female		**100**		**100**		**100**				**100**		**100**
Children (Age <15)												
Mother-to-child												
Blood recipient												
Other / unknown												
Total children		**100**		**100**		**100**				**100**		**100**

	2005		2006		2007		2008		2009		Cumulative
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	
Tbilisi											
Autonomous Republic of Abkhazia											
Autonomous Republic of Adjara											
Guria											
Imereti											
Kakheti											

Mtskheta-Mtianeti										
Racha-Lechkumi and Kvemo- Svaneti										
Samegrelo-Zemo Svaneti										
Samtske-Javakheti										
Kvemo Kartli										
Shida Kartli										
Total Georgia										

Table 5:   AIDS cases according to sex and age groups

	2005		2006		2007		2008		2009		Cumulative
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	
Male											
0-14											
15-24											
25+											
Total male											
Female											
0-14											
15-24											
25+											
Total female											
Total											

Table 6:   Rate of late identification of case according to age, sex and transmission ways | ind # 6

	2005		2006		2007		2008		2009	
	n	%	N	%	n	%	n	%	n	%
Age										
0-14										
15-24										
25+										
Sex										
Male										
Female										
Transmission way										
Intravenous drug use										
Homosexual contact										
Heterosexual contact										
Blood recipient										

	Mother-to child transmission																	
	Unknown																	
Total																		

Table 7: Death cases and death-rate (%) in HIV-infected persons according to sex and age| ind # 4

	2005			2006			2007			2008			2009			Cumulative		
	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%
Female																		
0-14																		
15-24																		
25+																		
Total female																		
Male																		
0-14																		
15-24																		
25+																		
Total male																		
Total																		

Table 8: Death cases and death-rate (%) in AIDS-affected persons according to sex and transmission ways and percentage distribution of death cases of AIDS-affected persons according to cause of death | ind # 5

	2005			2006			2007			2008			2009			Cumulative		
	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%
Sex																		
Female																		
0–14																		
15–24																		
25+																		
Male																		
0–14																		
15–24																		
25+																		
Transmission way																		
Intravenous drug use																		
Homosexual contact																		
Heterosexual contact																		
Blood recipient																		
Mother-to child transmission																		
Unknown																		

Cause of death																
Related with AIDS																
Not related with AIDS																
Unknown																
Total																

Table 9: HIV-prevalence in target contingent of routine screening without VCT according to sex and age group| ind # 11, Error! Reference source not found.

	2005			2006			2007			2008			2009		
	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%
Target contingent															
Male															
0-14															
15-24															
25+															
Total male															
Female															
0-14															
15-24															
25+															
Total female															
Total target contingent															

Table 10: Rate of coverage of pregnant women with HIV-testing according to regions| ind # 13

	2005		2006		2007		2008		2009	
	n	%	N	%	n	%	n	%	n	%
Tbilisi										
Autonomous Republic of Abkhazia										
Autonomous Republic of Adjara										
Guria										
Imereti										
Kakheti										
Mtskheta-Mtianeti										
Racha-Lechkumi and Kvemo- Svaneti										
Samegrelo-Zemo Svaneti										
Samtske-Javakheti										
Kvemo Kartli										
Shida Kartli										
Total Georgia										

Table 11:   HIV prevalence in sentinel population according to sex and age groups | ind # 7

	2005			2006			2007			2008			2009		
	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%
Target contingent															
Male															
0-14															
15-24															
25+															
Total male															
Female															
0-14															
15-24															
25+															
Total female															
Total target contingent															

Table 12:   Rate of coverage with ARV treatment according to sex and age groups | ind # 14

	2005		2006		2007		2008		2009	
	n	%	N	%	n	%	n	%	n	%
Sex										
Male										
Female										
Age										
<15										
15+										
Total										

Table 13:   Rate of survival of patients being under ARV-treatment during 12, 24, 36 months | ind # 15

	12 months		24 months		36 months	
	N	%	n	%	n	%
Sex						
Male						
Female						
Age						
<15						
15+						
Transmission way						
Intravenous drug use						

Homosexual contact															
Heterosexual contact															
Blood recipient															
Mother-to child transmission															
Unknown															
Total															

Table 14: HIV-infection prevalence in risk-groups according to age groups and sex (Routine surveillance) | ind # 8

	2005			2006			2007			2008			2009		
	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%
Risk-group															
Male															
0-14															
15-24															
25+															
Total male															
Female															
0-14															
15-24															
25+															
Total female															
Total risk-groups															

Table 15: HIV-infection prevalence according to age groups and sex - routine surveillance | ind # 9 and ind # 10

	Y1			Y2			Y3			Y4			Y5		
	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%
Target contingent															
Male															
0-14															
15-24															
25+															
Total male															
Female															
0-14															
15-24															
25+															
Total female															
Total target contingent															

Table 16: Surveillance variables and their connections with indicators

Variable name	Variable description	Indicator	Data source	Note
1) Unique ID	Case identifier		Surveillance base	
2) Date of birth	Date of birth of person		Surveillance base	
3) Sex	Gender of individual		Surveillance base	
4) District of residence of tested person	City or district of residence of tested person		Surveillance base	
5) Admission date	Blood drawing date		Surveillance base	
6) VCT specialist	Filled-in only during a routine screening with VTC and is used for internal quality-control		Surveillance base	
7) Referring facility	Coded name of a facility		Surveillance base	
8) Risk groups	List of risk-groups		Surveillance base	
9) Country of birth	Country where an infected person was born		Surveillance base	TESSy requirement
10) Citizenship	Country whose citizen is tested person		Surveillance base	TESSy requirement
11) Year of previous positive confirmative testing	Date of previous confirmative positive test		Surveillance base	TESSy requirement
12) Mode of transmission	The most suspected way of HIV-transmission		Surveillance base	
13) Hetero sub-category	Sub-categories of HIV-transmission by heterosexual mode		Surveillance base	TESSy requirement
14) Mother-to-child subcategory	Sub-categories of HIV-transmission from mother to child		Surveillance base	TESSy requirement
15) ARV treatment	Any ARV treatment administered before the manifestation of AIDS			TESSy requirement
16) AIDS indicative disease	Indicative diseases indicated in standard definition of AIDS			TESSy requirement
17) Cause of death	Cause related or not related with AIDS		Surveillance base	
18) HIV-Type	Type of the virus causing HIV infection			

Variable name	Variable description	Indicator	Data source	Note
Logical variables [12]				
19) Date when HIV was diagnosed	*Date of the first HIV positive testing*		Surveillance base	**Error! Reference source not found.** Error! Reference source not found. + *Error! Reference source not found.* Error! Reference source not found.
20) Date when AIDS was diagnosed	*Date of making clinical and or laboratory diagnosis*		Surveillance base	**Error! Reference source not found.** Error! Reference source not found. + *Error! Reference source not found.* Error! Reference source not found.
21) Stage of disease	*HIV/AIDS stage at the moment of registration of infected person*			*If variable #20 is NULL, then "HIV infection ", if not - "AIDS"*
22) Outcome	*Information about the survival status of an infected individual*		Surveillance base	*TESSy requirement if varible #17 is NULL, then outcome is "Survived", if not "Death"*
23) Death reporting date	*Date, when death was reported to the national surveillance system*		Surveillance base	*TESSy requirement **Error! Reference source not found.** Error! Reference source not found. + **Error! Reference source not found.** Error! Reference source not found.*
Calculated and grouped variables for indicators				
24) Population	*Georgian population according to the State Department of Statistics*		Department of Statistics of ministry of Economic Development	

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[12] created by program (does not require manual fixing)

Variable name	Variable description	Indicator	Data source	Note
25) **Number of pregnant women**	Number of pregnant women (according to regions and age groups) registered in the country during the year according to data of National Center for Disease Control and Public Health		NCDCPH	
26) **Number of survived HIV-infected persons**	Cumulative death cases at the beginning of year deducted from number of cumulative HIV-cases at the end of the same year	4	Surveillance base	
27) **Number of survived AIDS-affected persons**	Cumulative death cases at the beginning of year deducted from number of cumulative AIDS-cases at the end of the same year	5	Surveillance base	
28) **Age group**	*Age groups: <15, 15-19, 20-24, 25-29, 30-39, 40-49, 50+*			
29) **HIV-tested in sentinel**	*Number of persons tested for HIV-infection by sentinel*	7	Surveillance base	
30) **Number of HIV-tested persons (without routine VCT)**	*Number of persons in **target contingent** examined by screening without **routine** VCT*	11, **Error! Reference source not found.**	Surveillance base	
31) **Number of HIV-positive cases (without routine VCT)**	*HIV-positive cases in **target contingent** identified by screening without **routine** VCT*	11, **Error! Reference source not found.**	Surveillance base	
32) **Number of HIV-tested persons (wit routine VCT)**	*Number of persons in **target contingent** examined by screening with **routine** VCT*	9, 10	Surveillance base	
33) **Number of HIV-positive cases in target contingent (with routine VCT)**	*Number of HIV-positive cases in **target contingent** identified by screening with **routine** VCT*	9, 10	Surveillance base	
34) **HIV-infected persons-sentinel**	*HIV-positive cases identified by sentinel surveillance*	7	Surveillance base	
35) **Number of HIV-tested persons in risk-groups**	*Number of persons tested by **routine** VCT according to risk-groups*	8	Surveillance base	
36) **Number of HIV-positive cases in risk groups**	*Number of HIV-positive cases in risk groups, identified by **routine** VCT*	8	Surveillance base	
37) **Number of HIV-infected persons being under ARV treatment at the end of year**		14	Clinical base	

Variable name	Variable description	Indicator	Data source	Note
38) Number infected persons requiring ARV treatment	*Patients, requiring treatment according to national guideline due to clinical state:* *– current criteria number of CD4 cells< 200 or patient is affected by AIDS indicative disease* *– future criteria: number of CD4 cells ≤ 350 or patient is affected by AIDS indicative disease*	14	Clinical base	
39) Number of patients under treatment, survived after 12,24,36 months from starting of treatment	*The patient considered under treatment if according to doctor's order he/she at least once received medicine, prescribed for HIV/AIDS treatment rather than for further prevention of transmission from mother to child or exposure. The patients, started treatment at least 12 (24, 36) months before ending of reporting period are survived and continuing treatment after 12 (24, 36) months from its starting*	15	Clinical base	
40) Number of patients who started ARV treatment 12, 24, 36 later	*Total number of patients starting treatment at least 12 (24, 36) months before ending of reporting period, including those who stopped treatment and dead*	15	Clinical base	
41) Donor type		11		
42) Date of taking of infected person under surveillance	*Date of opening of case report of patient*		Clinical base	

Table 17: Indicators and variables

	Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
1.	rate of newly detected HIV cases	Number of HIV cases detected during one year per 100,000 population	Numerator - number of new HIV positive cases detected within one year	Variable (**Error! Reference source not found.**	" Table 1: Newly identified HIV-infection cases per 100,000 population and cumulative number of cases according to regions | ind # 1"	Age groups (**Error! Reference source not found.**,	
			Denominator - the average number of population in the same year	Variable (**Error! Reference source not found.**	Table 1 „: Newly identified HIV-infection cases per 100,000 population and cumulative number of cases according to sex and age groups | ind # 1"	Sex (**Error! Reference source not found.**, Region (**Error! Reference source not found.**	
2.	Distribution of newly detected HIV infection cases according to the transmission mode	Distribution of HIV cases detected within one year, according to the transmission mode	Numerator - number of HIV cases detected within one year by specific transmission mode	Variable (**Error! Reference source not found.**, (**Error! Reference source not found.**	Table 2 „ Newly identified HIV-infection cases, percentage distribution and cumulative number according to HIV transmission modes | ind # 2" Table 3 „Newly identified HIV-infection cases, percentage distribution	Age groups (**Error! Reference source not found.**, Sex (**Error! Reference source not found.**,	

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Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
		Denominator – the total number of HIV cases detected within one year	Variable (**Error! Reference source not found.**	and cumulative number according to sex, age groups and HIV transmission modes | ind # 2		
3. AIDS incidence per 100,000 population	Number of AIDS cases newly diagnosed within one year per 100,000 population	Numerator - Number of AIDS cases newly diagnosed within one year	Variable (**Error! Reference source not found.**	Table 4 „AIDS cases, incidence per 100,000 population and cumulative number of cases according to regions | ind # 3	Age groups(**Error! Reference source not found.**, Sex(**Error! Reference source not found.**, Region (**Error! Reference source not found.**	
		Denominator - the average number of population during the same year	Variable (**Error! Reference source not found.**			
4. Death rate in HIV positive individuals	Percentage of registered death cases in HIV positive individuals per year	Numerator – Absolute number of registered death cases in HIV positive individuals per year	Variable (**Error! Reference source not found.**	Table 7 " Death cases and death-rate (%) in HIV-infected persons according to sex and age| ind # 4"	Age groups (**Error! Reference source not found.**, Sex(**Error! Reference source not found.**	The more the number of people on ARV treatment will increase, the more the number of HIV related deaths has to decrease. In addition, if HIV related deaths decrease the number of people living with HIV infection will increase (i.e. HIV prevalence will increase). It's important that such a rise in HIV prevalence not be erroneously attributed to an increase in the scale of the epidemic.
		Denominator – survived HIV positive individuals in the same year	Variable (26)			

	Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
5.	Death-rate in persons affected by AIDS	Percentage of AIDS related death cases registered within one year in persons affected by AIDS	Numerator – Absolute number of death cases registered during one year	Variable (**Error! Reference source not found.**	Table 8 "Death cases and death-rate (%) in AIDS-affected persons according to sex and transmission ways and percentage distribution of death cases of AIDS-affected persons according to cause of death | ind # 5"	Age groups (**Error! Reference source not found.**, Sex(**Error! Reference source not found.**, transmission modes (**Error! Reference source not found.**	
			Denominator - Survived persons affected by AIDS in the same year	Variables (27)			
6.	Late detection rate	Percentage of HIV cases detected at late stage from HIV positive cases recorded under routine surveillance in the same year	Numerator – number of HIV cases, registered within one year, whose CD4 at the moment of clinical surveillance was ≤350 cell/mm^3 or were diagnosed with AIDS	Variable (**Error! Reference source not found.**		Age groups (**Error! Reference source not found.**, Sex(**Error! Reference source not found.**, Transmission modes (**Error! Reference source not found.**	A reduction in the late detection of cases may result from the improved access of services and/or increased awareness of the population.
			Denominator – HIV cases registered under clinical surveillance in the same year	Variable (**Error! Reference source not found.**			

	Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
7.	HIV prevalence in sentinel population	Percentage of HIV cases revealed in certain sentinel sub-population within definite period, from total number of tested in the same sub-population	Numerator – number of HIV cases, revealed in certain sub-population within definite period	Variable (34)	Table 11 "HIV prevalence in sentinel population according to sex and age groups | ind # 7"	Age group (**Error! Reference source not found.** Sex(**Error! Reference source not found.**, Target contingent	
			Denominator – Total number of tested in the same sub-population within the same period	Variable (29)			
8.	HIV prevalence in high-risk groups (routine surveillance VCT)	Percentage of HIV cases within one year in high-risk groups under routine surveillance, from total number of tested in the same group	Numerator – number of HIV cases, revealed within one year under routine surveillance in high-risk groups	Variable (36)	Table 14 "HIV-infection prevalence in risk-groups according to age groups and sex (Routine surveillance) | ind # 8	Age groups(**Error! Reference source not found.**, Sex(**Error! Reference source not found.**	
			Numerator – number of HIV –tested persons under routine surveillance in the same risk-group during the same year	Variable (35)			
9.	HIV prevalence in TB patients (routine with VCT)	Percentage of HIV cases during one year in HIV tested TB patients (with	Numerator – HIV cases detected during one year in TB patients	Variable (33)	Table 15 "HIV-infection prevalence according to age groups and sex -	Age groups(**Error! Reference**	

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
	routine VCT)	Denominator – number of TB patients examined on HIV during one year	Variable (32)	routine surveillance | ind # 9 and ind # 10"	**source not found.**, Sex(**Error! Reference source not found.**	
10. HIV prevalence in prisoners (routine with VCT)	Percentage of HIV cases in HIV-tested prisoners during one year	Numerator –Number of HIV cases detected during one year in prisoners	Variable (33)	Table 9 "HIV-prevalence in target contingent of routine screening without VCT according to sex and age group| ind # 11, Error**! Reference source not found.**"	Age groups(**Error! Reference source not found.**, Sex(**Error! Reference source not found.**	
		Denominator – number of prisoners examined during the same year	Variable (32)			
11. HIV prevalence in donors (routine without VCT)	Percentage of HIV cases detected during one year in HIV-tested donors	Numerator – Number of HIV cases detected during one year in donors	Variable (31)	Table 9 "HIV-prevalence in target contingent of routine screening without	Sex(**Error! Reference source not found.**,	

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
		Denominator – Number of HIV examined donors during the same year	Variable (30)	VCT according to sex and age group| ind # 11, Error! Reference **source not found.**"	Age groups(**Error! Reference source not found.**, Donor type (**Error! Reference source not found.**	
12. HIV prevalence in pregnant women (routine without VCT)	Percentage of HIV cases detected during one year in HIV-tested pregnant women	Numerator – Number of HIV cases detected during one year in pregnant women	Variable (31)	Table 9 "HIV-prevalence in target contingent of routine screening without VCT according to sex and age group| ind # 11, Error! Reference **source not found.**"	Age groups(**Error! Reference source not found.**	
		Denominator – Number of HIV examined pregnant women during the same year	Variable (30)			
13. HIV-test coverage rate in registered pregnant women	Percentage pregnant women registered during one year from those HIV-tested	Numerator – Number of pregnant women HIV-tested during one year	Variable (30)	Table 10 "Rate of coverage of pregnant women with HIV-testing according to regions| ind # 13"	Region (**Error! Reference source not found.**	
		Number of pregnant women, newly registered during one year	Variable (25)			

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
14. ARV treatment coverage rate	Percentage of HIV-infected persons being under treatment from those requiring ARV treatment according to national guidelines	Numerator – Number of HIV-infected persons, being under ARV-treatment at the end of the year	Variable (37)	Table 12 "Rate of coverage with ARV treatment according to sex and age groups │ ind # 14"	Sex(**Error! Reference source not found.**, Age groups(**Error! Reference source not found.**	
		Denominator – Number of HIV-infected persons during the same year, requiring ARV treatment according to national guidelines	Variable (38)			
15. Survival rate of patients receiving ARV-therapy during 12, 24, 36 months	Percentage of survived patients receiving ARV-treatment after 12, 24 and 36 months from starting of treatment	Numerator –Number of patients receiving treatment, survived after 12, 24 and 36 months from starting of treatment	Variable (39)	Table 13 "Rate of survival of patients being under ARV-treatment during 12, 24, 36 months │ ind # 15"		
		Denominator –Total number of patients, started ARV therapy 12, 24 and 36 months before	Variable (40)			
16. HIV-testing rate of IDUs	Percentage of persons from IDUs, who were tested on HIV during last 12 months and are aware	**Numerator:** Number of IDUs who were tested on HIV during last 12 months and are aware of a test result			▪ Sex ▪ Age: ≤24 / ≥ 25	Awareness on HIV status is critical for avoidance of further distribution of HIV-infection. Indicator evaluates availability of

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
	of a test result	**Denominator:** Total number of IDU respondents, indicating on injection during last month				VCT services in target group
17. Coverage of IDUs with preventive programs	Percentage of persons from IDUs, who knows to where the confidential HIV-testing is available and who received condoms and sterile injection means (needle/syringe/butterfly) during last 12 months from preventive programs	**Numerator:** Number of IDUs, affirmatively answering on all three questions **Denominator :** Total number of respondents, indicating on injection during last month			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates last 12 months period. If data for last 3, 6 months period are available as well, attach it to the report
18. Minimum coverage of IDUs by preventive programs	Percentage of persons in IDUs who knows to where the confidential HIV-testing is available and who received condoms or sterile injection means or information materials, or educational information	**Numerator:** Number of IDUs who knows to where the confidential HIV-testing is available and who affirmatively answered on at least one question from other ones **Denominator :**Total number of IDU respondents, indication on injection during last month			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates minimum coverage with preventive programs

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
19. Integrated coverage of IDUs by preventive programs	Percentage of persons in IDUs who knows to where the confidential HIV-testing is available and who received all below mentioned items from preventive programs during last 12 months: sterile injection means, condom, information materials, educational information	**Numerator:** Number of IDUs who knows to where the confidential HIV-testing is available and who affirmatively answered on other four questions **Denominator:** Total number of IDU respondents, indicating on injection during last month			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates integrated coverage with preventive programs
20. Supply of IDUs with sterile injection means	Percentage of persons in IDUs who received sterile injection means during last 12 months from preventive programs	**Numerator:** Number of IDUs, affirmatively answering on question **Denominator:** Total number of IDU respondents, indicating on injection during last month			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates minimum coverage with preventive programs
21. Supply of IDUs with condoms	Percentage of persons in IDUs who received condom during last 12 months from preventive programs	**Numerator:** Number of IDUs, affirmatively answering on question **Denominator** Total number of IDU respondents, indicating on injection during last month			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates minimum coverage with preventive programs

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
22. Supply of IDUs with informational materials	Percentage of persons in IDUs who received information materials during last 12 months from preventive programs	**Numerator:** Number of IDUs, affirmatively answering on question			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates minimum coverage with preventive programs
		Denominator Total number of IDU respondents, indicating on injection during last month				
23. Supply of IDUs with educational information	Percentage of persons in IDUs who received educational information during last 12 months from preventive programs	**Numerator:** Number of IDUs, affirmatively answering on question			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates minimum coverage with preventive programs
		Denominator Total number of IDU respondents, indicating on injection during last month				
24. Usage of sterile injection means by IDUs during last drug injection	Percentage of persons in IDUs who used sterile injection means during last drug injection	**Numerator:** Number of IDUs, indicating on usage of sterile injection means during last drug injection			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator evaluates risk behavior related to intravenous use of drugs
		Denominator: Total number of IDU respondents, indicating on injection during last month				

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
25. Safe injection among IDUs, during last drug injection	Percentage of persons in IDUs, who during last drug injection did not use: needle/syringe previously used by other person; needle/syringe left on public area; syringe, previously filled by other person; syringe, filled from syringe used by other person; possibly contaminated shared injection attributes (vessel/ cotton wool/filter/water); drug solution from shared container, which was prepared without his/her attendance;	**Numerator:** Number of IDUs, negatively answered on all seven questions **Denominator:** Total number of IDU respondents, indicating on drug injection during last month			▪ Sex ▪ Age: ≤24 / ≥ 25	Distribution of HIV infection, related to intravenous drug usage is specified by several factors, such as: (i) Spread of HIV epidemic; (ii) Spreading of intravenous drug usage; (iii) Spreading of contaminated injection means by IDUs; (iv) Sexual intercourses and usage of condom among IDUs and between IDUs and representatives of general population. Indicator gives information on 3rd factors.
26. Usage of condom by IDUs during last sexual intercourse	Percentage of persons in IDUs, who had sexual intercourse during last 12 months and used condom during last sexual intercourse	**Numerator:** Number of IDUs, confirming use of condom during last sexual intercourse **Denominator:** Total number of IDU respondents, indicating on drug injection during last month and on sexual intercourse during last 12 months			▪ Sex ▪ Age: ≤24 / ≥ 25	

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
27. Usage of condom by IDUs during last sexual intercourse with regular sexual partner	Percentage of persons in IDUs, who had sexual intercourse during last 12 months and who used condom during last sexual intercourse with regular sexual partner	**Numerator:** Number of IDUs, confirming use of condom during last sexual intercourse with regular sexual partner			▪ Sex ▪ Age: ≤24 / ≥ 25	
		Denominator: Total number of IDU respondents, indicating on drug injection during last month and on sexual intercourse during last 12 months with regular sexual partner				
28. Usage of condom by IDUs during last sexual intercourse with random sex partner	Percentage of persons in IDUs, who had sexual intercourse during last 12 months and who used condom during last sexual intercourse with random sex- partner	**Numerator:** Number of IDUs, confirming use of condom during last sexual intercourse with regular random partner			▪ Sex ▪ Age: ≤24 / ≥ 25	
		Denominator: Total number of IDU respondents, indicating on drug injection during last month and on sexual intercourse during last 12 months with random sex- partner				

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
29. Usage of condom by IDUs during last sexual intercourse with commercial sex- partner	Percentage of persons in IDUs, who had sexual intercourse during last 12 months and who used condom during last sexual intercourse with commercial sex- partner	**Numerator:** Number of IDUs, confirming use of condom during last sexual intercourse with regular commercial partner **Denominator:** Total number of IDU respondents, indicating on drug injection during last month and on sexual intercourse during last 12 months with commercial sex- partner			▪ Sex ▪ Age: ≤24 / ≥ 25	
30. Awareness of IDUs of ways of prevention of HIV infection spreading by sexual contact and refutation of diffused erroneous considerations on HIV transmission ways	Percentage of persons in IDUs, who knows that: protection against HIV infection is possible in case of regular and reliable sex- partner; the risk of transmission of HIV infection is reduced by correct usage of condom; seemingly healthy person may be HIV-affected; HIV infection can not be transmitted by a mosquito bite; HIV infection can not be transmitted by shearing meals with HIV infected person	**Numerator:** Number of IDUs, correctly answering on all five questions **Denominator:** Total number of IDU respondents answering on all five questions, including "I do not know". Respondents, who are not aware of HIV/AIDS will be considered in denominator			▪ Sex ▪ Age: ≤24 / ≥ 25	Erroneous consideration that seemingly healthy person can not be HIV infected promotes unsafe sexual contact. Refutation of erroneous considerations is also significant as awareness of transmission ways

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
31. Awareness of IDUs on transmission of HIV infection by sexual contacts and injection	Percentage of persons in IDUs, who knows that: protection against HIV infection is possible in case of regular and reliable sex-partner; the risk of transmission of HIV infection is reduced by correct usage of condom; seemingly healthy person may be HIV-affected; the person may be HIV-infected if he/her uses injection means, used by other person; possibly contaminated shared injection attributes (vessel/ cotton wool/filter/water); and drug solution from shared container, which was prepared without his/her attendance; drug user may be protected against HIV infection by turning to non-injection drugs	**Numerator:** Number of IDUs, correctly answering on all seven questions **Denominator:** Total number of IDU respondents answering on all six questions, including "I do not know". Respondents, who are not aware of HIV/AIDS will be considered in denominator			▪ Sex ▪ Age: ≤24 / ≥ 25	Indicator gives information on awareness of HIV transmission ways, highlighting behaviors, related to drug usage
32. HIV prevalence in IDUs	Percentage of HIV infected	**Numerator:** Number of HIV-infected IDUs			▪ Sex ▪ Age:	

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
	persons in IDUs	**Denominator:** Total number of HIV-tested IDU respondents indicating on drug injection during last month			≤24 / ≥ 25	
33. HIV prevalence in commercial sex-workers	Percentage of HIV-positive persons among commercial sex-workers	**Numerator:** Number of HIV-positive commercial sex-workers			Age: ≤24 / ≥ 25	Indicator evaluates spreading of HIV infection in target group UNGASS indicator
		Denominator: Total number of HIV-tested respondent commercial sex-workers				
34. Rate of HIV testing among commercial sex-workers	Percentage of persons among commercial sex-workers, who were tested on HIV during last 12 months and are aware of a test result	**Numerator:** Number of commercial sex-workers who were tested on HIV during last 12 months and are aware of a test result			Age: ▪ ≤24 / ≥ 25	Indicator evaluates availability of VCT services in target group, as well as appealability to these services UNGASS indicator
		Denominator: Total number of respondent commercial sex-workers				
35. Covering of commercial sex-workers by preventive programs	Percentage of persons among commercial sex-workers, who knows to where the confidential	**Numerator:** Number of commercial sex-workers affirmatively answering on both questions			Age: ≤24 / ≥ 25	Indicator evaluates covering of target group by minimum package of preventive programs

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
	HIV-testing is available and who received condoms during last 12 months from preventive program	**Denominator:** Total number of respondent commercial sex-workers				UNGASS indicator
36. Awareness of commercial sex-workers of ways of prevention of HIV infection spreading by sexual contact and refutation of diffused erroneous considerations on HIV transmission ways	Percentage of commercial sex-workers who knows that: protection against HIV infection is possible in case of regular and reliable sex- partner; the risk of transmission of HIV infection is reduced by correct usage of condom; seemingly healthy person may be HIV-affected; HIV infection can not be transmitted by a mosquito bite; HIV infection can not be transmitted by shearing meals with HIV infected person	**Numerator:** Number of commercial sex-workers affirmatively answering all five questions **Denominator:** Total number of respondent commercial sex-workers			Age: ≤24 / ≥ 25	Erroneous consideration that seemingly healthy person can not be HIV infected promotes unsafe sexual contacts. Refutation of erroneous considerations is also significant as awareness of transmission ways UNGASS indicator
37. Awareness of commercial sex-workers of ways of prevention of HIV infection	Percentage of commercial sex-workers who knows that: person may be HIV-infected as a result of	**Numerator:** Number of commercial sex-workers affirmatively answering all six questions			Age: ≤24 / ≥ 25	Indicator gives additional information on country-specific prejudices as well („Persons with I blood group can not be

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
spreading by sexual contact and refutation of diffused erroneous considerations on HIV transmission ways	usage of needle/syringe, used by other person; protection against HIV infection is possible in case of regular and reliable sex-partner; the risk of transmission of HIV infection is reduced by correct usage of condom; seemingly healthy person may be HIV-affected; HIV infection can not be transmitted by a mosquito bite; HIV infection can not be transmitted by shearing meals with HIV infected person	**Denominator:** Total number of respondent commercial sex-workers				affected by HIV and STI "). Awareness shall be evaluated including this prejudices . (National indicator)
38. Usage of condom by commercial sex-workers during sexual intercourse with last client	Percentage of commercial sex-workers, who used condom during sexual intercourse with last client	**Numerator:** Number of commercial sex-workers, who used condom during sexual intercourse with last client			Age: ≤24 / ≥ 25	Indicator gives overestimated data on systematic usage of condom, but question –how frequently the condom was used with clients

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
		Denominator: Total number of respondent commercial sex-workers				(always/often/newer) within certain time-period –is an alternative method and this method will result in deviation regarding to remember. Generally, it is expected that tendency of usage of condom during last sexual intercourse will reflect the tendency of systematic usage of condom UNGASS indicator
39. Intravenous drug usage among commercial sex-workers	Percentage of commercial sex-workers who used intravenous drugs during last 12 months	**Numerator:** Number of commercial sex-workers who used intravenous drugs during last 12 months period			Age: ≤24 / ≥ 25	Indicator evaluates coverability of commercial sex and intravenous drug usage. In some countries this pattern is widespread. Control of this indicator is very important as, in case of rooting of such tendency in Georgia ,planning of preventive programs will be fundamentally changed. National indicator
		Denominator: Total number of respondent commercial sex-workers				
40. Systematic usage of condom by commercial sex-workers with clients during last one month	Percentage of commercial sex-workers reporting the systematic usage of condom with clients during last one month	**Numerator:** Number of commercial sex-workers indicating on systematic usage of condom with clients during last one month			Age: ≤24 / ≥ 25	Indicator gives additional information on risk behavior with clients. National indicator

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
		Denominator: Total number of respondent commercial sex-workers				
41. Usage of condom by commercial sex-workers during last sexual intercourse with regular sex-partner	Percentage of commercial sex-workers indicating on usage of condom during last sexual intercourse with regular sex- partner	**Numerator:** Number of commercial sex-workers indicating on usage of condom during last sexual intercourse with regular sex- partner			Age: ≤24 / ≥ 25	Rate of risk sexual behavior with regular partner due to relation of sex-workers to this partner is high. It is expected that tendency of usage of condom during last sexual intercourse will reflect the tendency of systematic usage of condom
		Denominator: Number of respondent commercial sex-workers indicating on regular partner				National indicator
42. Usage of condom during last sexual intercourse with regular partner	Percentage of commercial sex-workers indicating on usage of condom during last sexual intercourse with regular partner	**Numerator:** Number of commercial sex-workers indicating on usage of condom during last sexual intercourse with regular partner			Age ≤24 / ≥ 25	Rate of risk sexual behavior with regular partner due to relation of sex-workers to this partner is high. It is expected that tendency of usage of condom during last sexual intercourse will reflect the tendency of systematic usage of condom
		Denominator: Number of respondent commercial sex-workers indicating on regular partner				National indicator

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
43. Systematic usage of condom by commercial sex-workers with regular partner during last 12 months	Percentage of commercial sex-workers indicating systematic usage of condom with regular partner during last 12 months	**Numerator:** Number of commercial sex-workers indicating systematic usage of condom with regular partner during last 12 months			Age: ≤24 / ≥ 25	Indicator gives additional information on risk behavior with regular partner. National indicator
		Denominator: Number of respondent commercial sex-workers indicating on regular partner				
44. HIV prevalence in homosexual men	Percentage of HIV-infected persons among homosexual men	**Numerator:** Number of HIV-infected MSMs			Age: ≤24 / ≥ 25	Indicator evaluates spreading of HIV-infection within target group UNGASS indicator
		Denominator: Total number of HIV-tested respondent MSMs				
45. Rate of HIV-testing among homosexual men	Percentage of persons among homosexual men, undergone HIV testing during last 12 moths and aware of test results	**Numerator:** Number of MSM undergone HIV testing during last 12 moths and aware of test results			Age: ≤24 / ≥ 25	Indicator evaluates availability of VCT services in target group, as well as appealability to these services UNGASS indicator
		Denominator: Total number of respondent MSMs				

	Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
46.	Rate of coverage of homosexual men by preventive programs	Percentage of persons among homosexual men, who knows to where the confidential HIV-testing is available and who received condom during last 12 months from preventive programs	**Numerator:** Number of MSMs affirmatively answering on both questions			Age: ≤24 / ≥ 25	Indicator evaluates covering of target group by minimum package of preventive programs UNGASS indicator
			Denominator: Total number of respondent MSMs				
47.	Awareness of homosexual men of HIV prevention ways	Percentage of homosexual men who knows that: protection against HIV infection is possible in case of regular and reliable sex- partner; the risk of transmission of HIV infection is reduced by correct usage of condom; seemingly healthy person may be HIV-affected; HIV infection can not be transmitted by a mosquito bite; HIV infection can not be transmitted by shearing meals with HIV infected person	**Numerator:** Number of MSMs, correctly answering on all five question			Age: ≤24 / ≥ 25	Erroneous consideration that seemingly healthy person can not be HIV infected promotes unsafe sexual contacts. Refutation of erroneous considerations is also significant as awareness of transmission ways UNGASS indicator
			Denominator: Total number of respondent MSMs				
48.	Awareness of sex-workers of ways of HIV prevention	Percentage of homosexual men who knows that: protection	**Numerator:** Number of MSMs, correctly answering on all five question			Age: ≤24 / ≥ 25	Indicator gives additional information on country-specific prejudices as well („Persons

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
	against HIV infection is possible in case of regular and reliable sex- partner; the risk of transmission of HIV infection is reduced by correct usage of condom; seemingly healthy person may be HIV-affected; HIV infection can not be transmitted by a mosquito bite; HIV infection can not be transmitted by shearing meals with HIV infected person; person with I blood group may be HIV-infected.	**Denominator:** Total number of respondent MSMs				with I blood group can not be affected by HIV and STI "). Awareness shall be evaluated including this prejudices. National indicator
49. Usage of condom during last anal sexual contact with male sex- partner	Percentage of MSMs who had anal sexual contact during last 6 months and who used condom during last anal sexual contact with male sex- partner	**Numerator:** Number of MSMs, used condom during last anal sexual contact **Denominator:** Total number of respondent MSMs, reporting anal sexual contact with male sex-partner during last 6 months			Age: ≤24 / ≥ 25	It is expected that tendency of usage of condom during last sexual intercourse will reflect the tendency of systematic usage of condom This indicator evaluates progress in terms of safe behavior, registering anal sexual contacts that are safe and excepts HIV transmission UNGASS indicator

	Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
50.	Usage of condom during last anal sexual contact with random male sex-partner	Percentage of MSMs who had anal sexual contact with random male sex-partner during last 6 months and who used condom during last sexual intercourse with such partner	**Numerator:** Number of MSMs, used condom during last anal sexual contact with random male sex-partner			Age: ≤24 / ≥ 25	It is expected that tendency of usage of condom during last sexual intercourse will reflect the tendency of systematic usage of condom.
			Denominator: Total number of respondent MSMs, reporting the anal sexual contact with random male partner during last 6 months				This indicator evaluates progress in terms of safe behavior, registering anal sexual contacts with random partners that are safe and excepts HIV transmission
51.	Usage of condom during last anal sexual contact with regular male sex-partner	Percentage of MSMs who had anal sexual contact with regular male sex-partner during last 6 months and who used condom during last sexual intercourse with such partner	**Numerator:** Number of MSMs, used condom during last anal sexual contact with regular male sex-partner			Age: ≤24 / ≥ 25	It is expected that tendency of usage of condom during last sexual intercourse will reflect the tendency of systematic usage of condom.
			Denominator: Total number of respondent MSMs, reporting the anal sexual contact with regular male partner during last 6 months				This indicator evaluates progress in terms of safe behavior, registering anal sexual contacts with regular partner that are safe and excepts HIV transmission .
							National indicator

	Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
52.	Usage of condom during last anal sexual contact with commercial male sex- worker	Percentage of MSMs reporting the usage of condom during last anal sexual contact with commercial male sex-worker	**Numerator:** Number of MSMs, reporting the usage of condom during last anal sexual contact with commercial male sex-worker			Age: ≤24 / ≥ 25	This indicator evaluates progress in terms of safe behavior, registering anal sexual contacts that are safe and excepts HIV transmission but are specific to compensable sexual intercourse.
			Denominator: Number of MSMs, reporting the usage of condom during last anal sexual contact with commercial male sex-worker during last 6 months				National indicator
53.	Number of male sex-partners	Median of male sex-partners during last 6 months	Median of male sex-partners during last 6 months			Age: ≤24 / ≥ 25	Indicator gives essential information on risk-factor of investigated group, such as multiple partners. National indicator
54.	Usage of intravenous drugs among male homosexuals	Percentage of MSMs, used intravenous drugs during last 12 months	**Numerator:** Number of MSMs, used intravenous drugs during last 12 months			Age: ≤24 / ≥ 25	Indicator evaluates rate, how much the usage of intravenous drugs is spread within target group. Control of this indicator is

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
		Denominator: Total number of respondent MSMs				very important as, in case of rooting of such tendency in Georgia, planning of preventive programs will be fundamentally changed. National indicator
55. Systematic usage of condom during anal sexual contact with male sex-partner	Percentage of MSMs who had anal sexual contact during last 6 months and reporting the systematic usage of condom during anal sexual contact with male sex-partners	**Numerator:** Number of MSMs, reporting the systematic usage of condom during anal sexual contact with male sex-partners			Age: ≤24 / ≥ 25	
		Denominator: Total number of respondent MSMs, reporting the anal sexual contact with male sex-partner during anal sexual contact with male sex-partner within last 6 months			Age: ≤24 / ≥ 25	Indicator gives additional information on risk behavior with male sex-partners in general. For calculation of unsafe anal sexual contact, the number of MSMs do not reporting systematic usage of condoms during anal sexual contacts shall be used. National indicator

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
56. Systematic usage of condom during anal sexual contact with random male sex-partners	Percentage of MSMs who had anal sexual contact with random male partner during last 3 months and reporting systematic usage of condom during anal sexual contacts with such partners	**Numerator:** Number of MSMs, reporting the systematic usage of condom during anal sexual contacts with random male sex-partners during last six months **Denominator:** Total number of respondent MSMs, indicated that they had anal sexual contact with random male sex-partner during last 6 months			Age: ≤24 / ≥ 25	Indicator gives additional information on risk behavior with random male sex-partners. For calculation of unsafe anal sexual contact, the number of MSMs do not reporting systematic usage of condoms during anal sexual contacts shall be used. National indicator
57. Systematic usage of condom during anal sexual contact with regular male sex-partners	Percentage of MSMs who had anal sexual contact with regular male partner during last 6 months and reporting systematic usage of condom during anal	**Numerator:** Number of MSMs, reporting the systematic usage of condom during anal sexual contacts with regular male sex-partners during last six months			Age: ≤24 / ≥ 25	Indicator gives additional information on risk behavior with regular male sex-partners. For calculation of unsafe anal sexual contact, the number of MSMs do not reporting systematic usage of condoms

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
	sexual contacts with such partners	**Denominator:** Total number of respondent MSMs, indicated that they had anal sexual contact with regular male sex-partner during last 6 months				during anal sexual contacts shall be used. National indicator
58. Systematic usage of condom during anal sexual contacts with commercial male sex-partners	Percentage of MSMs, who had paid male sex-partner during last 6 months and who reporting systematic usage of condom with commercial male sex-partner	**Numerator:** Number of MSMs, reporting the systematic usage of condom with commercial male sex-partners during last six months **Denominator:** Total number of respondent MSMs, indicated that they had anal sexual contact with commercial male sex-partner during last 6 months			Age: ≤24 / ≥ 25	Indicator gives additional information on risk behavior with commercial male sex-partners. For calculation of unsafe anal sexual contact, the number of MSMs do not reporting systematic usage of condoms during anal sexual contacts shall be used National indicator
59. Usage of condom during last sexual intercourse with female sex-partner	Percentage of MSMs who had sexual intercourse with female sex-partner during last 12 months and reporting usage of	**Numerator:** Number of MSMs, reporting the usage of condom during last sexual intercourse with female sex-partner			Age: ≤24 / ≥ 25	Indicator gives additional information on risk behavior with female sex-partners. National indicator

Indicator	Definition	Numerator / Denominator	Used variables	Table	Disaggregation	Interpretation
	condom during last sexual intercourse with female sex-partner	**Denominator:** Number of respondent MSMs reporting the contact with female sex-partner during last 12 months				
60. Diagnosed STI during last 12 months	Percentage of MSMs, diagnosed during last 12 months with infection transmitted by sexual way	**Numerator:** Number of MSMs, diagnosed with STI during last 12 months			Age: ≤24 / ≥ 25	Indicator gives information on raised risk of HIV transmission in case of STI. moreover, indicator gives epidemiological information as well. National indicator

Dedicated VCT specialist	Specialists trained in VCT
Strengths:	**Strengths:**
○ Training (and refresher training) of staff is cheap and fast = low capital costs	○ Lower current expenses
○ Guaranteed and quality VCT services	○ Organizational simplicity and stability
○ High level of confidentiality	○ Broad patient choice
○ Good organization and quality of data recording and transmission	
Weaknesses:	**Weaknesses:**
○ Instability of the system due to stuff turnover	○ Low level of confidentiality
○ Higher current expenses	○ Low organization and quality of data recording
○ Patient choice is limited	○ High capital costs
○ Organizational problem:	○ Lower quality of services
○ Facility staff (paid by the program)? or	
○ Surveillance staff (NCDCPH) (paid out of administrative expenses)?	

Voluntary counseling and testing

Labour remuneration		Numb.	Monthly salary	Payroll Taxes	Total annual
Specialist		1	300	100	4800
Nurse (laboratorian)		1	50	16,57	800
Other		0	100	33,33	0
Total Labour Remuneration					
Premises and other expenses	Unit	Amount	Cost		Total annual
Rent	sq/m per month	10	2		240
Utility costs	sq/m per month	10	2		240
Stationery	Spec. per month	1	5		60
Misc.					0
Total premises and other expenses					540
Total Voluntary counseling and testing					6140
Wage supplement for VCT		1	50	16,67	800

Testing

Initial laboratory testing		Numb.	Cost		Total annual
Immunoenzyme / rapid simple		1	11		10
Vial		1	0,17		0,17
Total initial laboratory testing					10,17
Transportation		1	2		10
Immunoblotting method		1	85		95

Data collection / transmission / processing					
Data entry - routine screening					
Number of fields (variables)	35				
Time for entering one variable (sec)	5				
Time for entering one form (sec)	175				
Number of working days	260				
Length of work-day	8				
Number of variables (form without VCT)	5				
Time for entering one form (without VCT (sec)	25				
Expenditures		Numb.	Monthly salary	Payroll Taxes	Total annual
Operator		1	500	166,67	8000
Printing of forms / questionnaires		1	0,05		0,05
Sending of forms		1	0,1		0,1
Total annual expenses					8000

Tests			
BSSIDU			50000
BSSCSW			45000
BSSMSM			50000
Total BSS			145000
Assessment of facilities on safe practices			1000

Investment in human resources

Trainings

Number of participants per training	15				
Reserve	100%				
Duration of one training course (days)	5				
Number of trainings per year	1				

Cost of training

		Daily fee	Numb. of days	Taxes payable	Total
Remuneration					
Trainer		100	5	33	667
Assistant		0	3	0	0
Total remuneration					667
Logistics					
Daily		100	6	33	800
Office rental		200	5		1000
Study materials/stationery		5	15		75
Total logistics					1875
Total training costs					2542

Figure 1: HIV test report form #1

1. Code: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

2. Date of birth:	__ __ / __ __ / __	3. Sex:	1 Male 2 Female	4. Region	|__|__|__|__|__|__|__|__|__|__|__|

5. Admission date	6. VCT specialist	7. Referring facility	8. Risk group *(check as many as necessary)*
__ __ / __ __ / __ __	|__|__|__|__|	|__|__|__|__|	**1.** IDU **2.** Sex worker **3.** Homo/bisexual **4.** None

9. Country of birth	10. Citizenship	11. Previous positive confirmation test result
|__|__|__|__|__|__|__|__|__|_	|__|__|__|__|__|__|__|__|__|_	|__|__|__|__|__|

12. Transmission way *(Check only one)*	13. Hetero sub-category *(Check only one)*	14. Mother to child transmission *(Check only one)*
1. Intravenous drug use **2.** Heterosexual contact **3.** Homosexual contact **4.** Transfusion of blood product **5.** Mother to child transmission **6.** Unknown **7.** Contact with a person has lost	**1.** Is from a country with generalized epidemic **2.** Contact with homo/bisexual man **3.** Contact with drug addict **4.** Contact with a Haemophiliac **5.** Partner from a country wich a generalized epidemic **6.** Contact with HIV infected pedson not belonging ti the above categories **7.** Status of partner is unknown	**1.** Mother is IDU **2.** Is from the country with a generalized epidemic **3.** Infected through a heterosexual contact and does not belong to the above categories **4.** Is not a blood recipient **5.** Other **6.** Unknown

15. ARV treatment	16. AIDS indicative disease
☐ Yes ☐ No ☐ Unknown	|__|__| / |__|__| / |__|__| / |__|__|

17. Cause of death
1. Associated with HIV   2. Not associated with HIV   3. Unknown

Routine screening "base" without VCT : |___|___|___|___|___|

Test #	Admission date	Age	Sex	Name	Surname	Town/Region	Phone number and street/address
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_| |_|_|_|_|_|_|_|_|_|_|_|_|
	__ __ / __ __ / __ __	_|_	☐Male ☐Female	_|_|_|_|_|_|_|_|_|_	|_|_|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|	|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Figure 3: Confirmatory test result notification form #4.2

The code of the confirmatory facility : |__|__|__|__|__|

Test #	Date of testing	HIV type
|__|__|__|__|__| / |__|__|__|__|__|	__ __ / __ __ / __ __	☐ HIV1 ☐ HIV2 ☐ HIV 1/2
|__|__|__|__|__| / |__|__|__|__|__|	__ __ / __ __ / __ __	☐ HIV1 ☐ HIV2 ☐ HIV 1/2
|__|__|__|__|__| / |__|__|__|__|__|	__ __ / __ __ / __ __	☐ HIV1 ☐ HIV2 ☐ HIV 1/2

Sending date: __ __ / __ __ / __ __

Signature of the person in charge: _____

Figure 4: Sentinel HIV test report form #4

Sentinel base: |__|__|__|__|__| Month and year: |__|__| / |__|__|

Test #	Age	Sex
		☐ male ☐ female
		☐ male ☐ female
		☐ male ☐ female
		☐ male ☐ female

90

1. Code:

- Sex: "1" male, "2" female
- The fust letter of the place of birth
- Date of birth: day, month, year „*011268*"
- The first two letters in fathers name
- The first two letters in mother's name
- Number of letters in surname, e.g. „*08*", „*12*"
- The first letter of the name
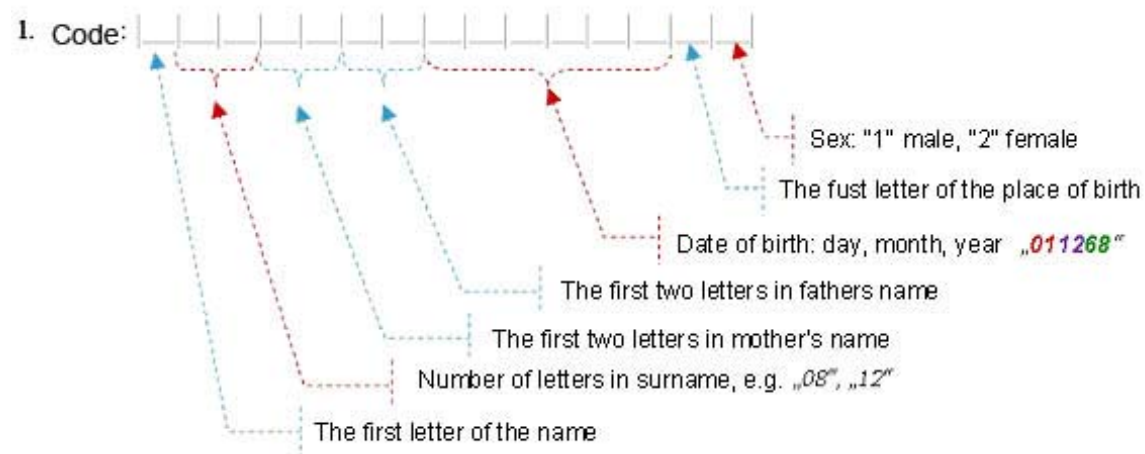
Example:

Name	Surname	Mother's name	Father's name	Date of birth	Place of birth	Sex	Code
Bondo	Jikia	Maya	Petre	05/07/1980	Borjomi	Male	B05MAPE050780B1
Maya	Petriashvili	Nino	Giorgi	14/12/2001	Tbilisi	Female	M11NIGI141201T2

Directions:

1. Ask **only the first letter of his or her name** and write it down in the first cell (do not ask the name!)

2. Ask about the length of his or her surname (the number of letters in it) and write it down in the 2nd and the 3rd cells; if number of letters <10, write a leading „0", e.g. „05" or „08"

3. Ask only **the first and the second letters of mother's name** and write it down in the 4th and 5th cells (do not ask mother's name!)

4. Ask only **the first and the second letters of father's name** and write it down in the 6th and 7th cells (do not ask father's name!)

5. Ask about the **date of birth** and write it down in cells from 8 to 13: e.g. if the date of birth is December 1, 1968 then you fill in **011268** in the six cells.

6. Ask only the first letter of the place of birth and write it down in the 14th (last but one) cell (do not ask the place of birth)

Determine sex and write down **"1"** if male and **"2"** if female in the last cell.