

**Quality Assurance Guidelines on HIV Voluntary  
Counselling and Testing Services  
in Community Settings**

**Community Forum on AIDS  
Hong Kong Advisory Council on AIDS**

**July 2009**

**Community Forum on AIDS (CFA) has the following terms of reference :**

- (a) enhance communication between ACA and frontline HIV/AIDS service delivery organizations and workers;
- (b) examine needs and identify gaps in the community;
- (c) recommend measures conducive to promoting acceptance of people living with HIV/AIDS;
- (d) provide a platform for collaboration in combating HIV/AIDS epidemic;
- (e) enhance the quality of HIV/AIDS service through development of best practices and indicators; and
- (f) advocate and facilitate capacity building with other relevant parties.

**Membership (2008-2011)**

**Convener :** Dr FAN Yun-sun, Susan

**Members :** Ms AU Yin-ting, Janet

Mr CHAN Wai-leung, Charlie

Mr CHAU Ting-leung, Marco

Ms CHOI Siu-fong, Esther

Dr CHU Chung-man, Ferrick

Ms CHU Kam-ying, Elsie

Mr CHU Muk-wah, Daniel

Rev CHU Yiu-ming

Ms Elijah FUNG

Ms FONG Man-ying

Dr HO Chi-on, Billy

Ms HO Pik-yuk, Shara

Ms HUI Mei-sheung, Tennessy

Mr KAN Wang-hoi

Mr KO Chun-wa, MH

Prof LAU Tak-fai, Joseph

Dr LEE Chi-kei, Krystal

Mr LEE King-fai

Prof MAK Ping-see, Diana

Mr PUI Wing-tai, Beethoven

Mr TAM Wai-to

Mr TONG Tai-wai, Raphael, MH

Dr WAN Wai-yee

Mr WON Mau-cheong

Mr WONG Tak-hing, Brian

Miss WONG Wai-kwan, Loretta

Miss YAU Ho-chun, Nora, MH, JP

Ms YAU Yuk-lan

Ms YIM Kit-sum, Kendy

Mr YIU Wai-ming, Leo

Ms YU Po-chu, Pansy

Ms YUEN How-sin

**Secretaries :** Dr WONG Wai-ming, Francis

Mr NG Chun-kit, Kenneth

**Correspondence**

Address : 5/F Yaumatei Jockey Club Clinic

145 Battery Street, Yaumatei

Kowloon, Hong Kong

Tel (852) 2304 6100

Fax (852) 2337 0897

E-mail: [aca@dh.gov.hk](mailto:aca@dh.gov.hk)

Website: <http://www.aids.gov.hk>

# **Quality Assurance Guidelines on HIV Voluntary Counselling and Testing Services in Community Settings**

## **FOREWORD**

Since the first case of HIV/AIDS was reported in 1984, we have witnessed tremendous developments in HIV prevention, diagnosis, treatment and research in the last quarter of a century. Greater emphasis is now placed on early detection and treatment so that those persons infected with HIV can benefit from improved quality of life and increased life expectancy.

In the early days, HIV testing was conducted primarily by healthcare professionals in clinical settings. Recently, UNAIDS and US CDC recommended expanding HIV voluntary counselling and testing service in community settings to widen the coverage. Consequently, less technically demanding testing tools were developed to facilitate access for hard-to-reach and at-risk populations such as MSM, sex workers and their clients and injecting drug users.

In Hong Kong, with the support of the AIDS Trust Fund, many non-governmental organizations have initiated HIV voluntary counselling and testing services in recent years. With the availability of easy-to-use rapid HIV test kits, trained community workers provide a friendly and high-quality HIV testing service in outreach settings. The growing popularity of HIV testing service providers in community settings has led to a need for guidelines to benchmark practices and uphold standards.

Using an open and participatory approach, the Community Forum on AIDS set up a working group to develop the first set of local guidelines for HIV voluntary counselling and testing services in the community setting in Hong Kong. I believe that these quality assurance guidelines will serve as an essential reference for community HIV testing service providers. My heartfelt gratitude is extended to the members of the Working Group for their meaningful and selfless contributions to produce these excellent guidelines.

Dr Susan Fan  
Convener  
Community Forum on AIDS

## **Acknowledgements**

These Guidelines were developed by a Working Group formed under the Community Forum on AIDS (CFA). The Working Group comprised staff from the Department of Health's (DH) Red Ribbon Centre (RRC) as well as frontline VCT service providers. The membership of the Working Group is shown at Annex A.

## **Glossary**

ACA	Hong Kong Advisory Council on AIDS
ACTS	AIDS Counselling and Testing Service
CFA	Community Forum on AIDS
CHP	Centre for Health Protection
DH	Department of Health
HIV	Human Immunodeficiency Virus
MMWR	Morbidity and Mortality Weekly Report
MSM	Men who have sex with men
NGO	Non-governmental organizations
QA	Quality Assurance
QC	Quality Control
RRC	Red Ribbon Centre
SCAS	Scientific Committee on AIDS and STI
SPP	Special Preventive Programme
STI	Sexually Transmitted Infections
UNAIDS	Joint United Nations Programme on HIV/AIDS
USCDC	The United States Centers for Disease Control and Prevention
VCT	Voluntary Counselling and Testing

## **Preamble**

In recent years, there is an increasing trend of HIV tests being performed by peer colleagues in community settings. Some members of the target communities prefer to be tested in venues which they frequently visit. HIV rapid tests have become increasingly popular as clients prefer to know their HIV status at the point of testing. In order to benchmark the quality of these VCT services, CFA undertook to develop a set of guidelines by taking reference from the latest available scientific literature and customizing them for the local situation. Community organizations or NGO performing conventional HIV tests in a clinical setting can also refer to these guidelines as well as clinical VCT guidelines of service providers in the public sector.

The Guidelines are divided into the following sections:

- Section 1 - Basic Principles and Requirements for the provision of VCT Service
- Section 2 - Organization of VCT service
- Section 3 - Personnel
- Section 4 - Process Control
- Section 5 - Counselling
- Section 6 - Infection Control
- Section 7 - Documentation and Monitoring
- Section 8 - Troubleshooting
- Section 9 - External Assessment

## References

- Annex A - Membership of the Working Group
- Annex B - Flow chart on the laboratory diagnosis of HIV infection for adults (protocol of Virus Unit, Department of Health) (adopted from HIV Manual 2001)
- Annex C - Basic Principles on Infection Control When Implementing HIV Testing in a Community Setting

## **Section 1 – Basic Principles and Requirements for the provision of VCT Service**

- Client should exercise self-determination throughout the process of VCT.
- Client has the right to confidentiality in terms of protection against disclosure of identity and test result.
- Client has the right to be protected against all forms of discrimination.
- Informed consent should be obtained from the client before VCT is conducted.
- Client should receive accurate and comprehensive information regarding VCT and related issues, be given ample opportunity to ask questions, and have their concerns adequately addressed.
- The service provider organization should set its own policy on age of consent based on their capacity and safeguards. In case of doubt, client could be referred to DH for VCT.
- VCT should be conducted in a suitable testing environment (e.g. a private room with good lighting and hygiene).
- The service provider should keep updated with the latest developments to provide a quality VCT service.

## **Section 2 - Organization of VCT Service**

Organizations providing VCT should:

- Identify the person responsible for managing the VCT service.
- Draw up its own protocol for VCT, preferably with input from its board / medical advisers.
- Provide written testing instructions and site-specific procedures.
- Train and assess the competency of personnel to ensure that they are able to perform the assigned tasks in accordance with instructions (refer to Section 3).
- Secure a suitable venue for providing VCT.
- Verify the testing process (refer to Section 4)
  - Provide adequate pretest information to every test subject (refer to Section 5);
  - Check performance of new test kits and shipments, frequency of routine quality control testing and actions to take if control does not work;
  - Collect specimens, perform the test, interpret and inform client of test results, resolve problems before reporting results.
- Establish referral mechanisms for confirmatory tests.
- Maintain sufficient supplies of unexpired test and control kits and adhere to manufacturer's temperature ranges for storage and testing.
- Ensure compliance with bio-hazardous waste handling and infection control guidelines (refer to Section 6).
- Document records and timelines for review; retain and destroy when outdated (refer to Section 7).

## **Section 3 - Personnel**

Personnel performing VCT should:

- receive appropriate training and supervision;
- be able to demonstrate competency in performing VCT; and
- keep updated by attending VCT training and refresher courses.

Training may be provided by DH on a regular basis and its content agreed in advance after consultation with the service provider organization. Training may also be conducted within the service provider organization by experienced practitioners / supervisors for their colleagues.

### **A. Training Content**

This should cover, but is not limited to:

- ✓ How to integrate testing into the overall HIV prevention program
- ✓ How to provide pre-test counselling
- ✓ How to perform the test
- ✓ Use and importance of blood and body fluid precautions and biohazard safety
- ✓ How to provide post-test counselling
- ✓ How to handle sensitive and emergency issues e.g. legal liability and age of consent, psychological reaction etc.

### **B. Training on How to Perform the Test**

- ✓ Read instructions for performing the test
- ✓ Observe someone performing the test or video of someone performing the test
- ✓ Practise performing the test with positive and negative control results
- ✓ Practise performing the test
- ✓ Review the procedures and forms on how to document testing

### **C. Competency Assessment**

- a. Assess performance of tasks done before testing
  - ✓ Check and record temperatures of the testing and storage areas
  - ✓ Set up testing area, label and test device and prepare control and test



result log sheets

- ✓ Run the external control and record results
- b. Assess performance of tasks during testing
- ✓ Observe whether personnel performs specimen collection and handling according to manufacturer's instructions
  - ✓ Observe how the test is performed on a client or on a volunteer
  - ✓ Assess the practice of universal or standard precautions
  - ✓ Review results obtained from testing a panel of referenced specimens that show a range of results, such as specimens that include non-reactive, weakly reactive and reactive results
  - ✓ Appraise the individual's ability to interpret results
- c. Assess performance of tasks after testing
- ✓ Review test records and quality control papers for documentation
  - ✓ If confirmatory test specimens are collected on site, observe the collection and handling of venous blood for referral
  - ✓ Verify that confidentiality is maintained

## **Section 4 - Process Control**

Process control refers to activities and techniques that are carried out to ensure that the testing procedures are performed accurately in a suitable environment. Furthermore, the test kits should work as expected to produce accurate and reliable results.

### **A. Before Testing**

- ✓ Check storage and room temperatures daily
- ✓ Check inventory and test kit lots, as needed
- ✓ Receive request for testing
- ✓ Provide HIV/AIDS test information to client
- ✓ Set up test area, label test device
- ✓ Perform external quality control according to the manufacturer's and the site's instructions

### **B. During Testing**

- ✓ Follow biohazard safety precautions
- ✓ Take a blood droplet by finger prick
- ✓ Perform the test
- ✓ Interpret test results

### **C. After Testing**

- ✓ Document results
- ✓ Report results to client
- ✓ Collect, process and transport confirmatory test specimens or refer client for follow-up
- ✓ Clean up and dispose of bio-hazardous waste
- ✓ Manage confirmatory test results
- ✓ Take appropriate steps to deal with problematic cases
- ✓ Participate in periodic external quality assessment

## **Section 5 – Counselling**

Counselling is an integral and important part of VCT. It offers a window of opportunity to share important HIV prevention information and provide clients with practical advice to reduce HIV risks.

### **A. Pre-Test Counselling**

- a. Welcome client to the service (ensure privacy of the setting).
- b. Check client's particulars and previous attendance.
- c. Explain about the test procedures and reassure about confidentiality.
- d. Discuss potential implications of a positive and negative test result.
- e. Inform client how to interpret and read results.
- f. Provide health education advice on STI/HIV when necessary.
- g. Explore client's risk behaviour and conduct HIV risk assessment when necessary.
- h. Allow clients adequate time to ask questions and provide them with tailor-made information to address their concerns.
- i. Obtain client's consent.

Throughout the counseling, be aware of client's mental and emotional status. If there are concerns, refer to a more experienced colleague or DH.

### **B. Post-Test Counselling**

Give adequate time for counselling clients.

- Negative rapid test results
  - a. Explain that client is not infected unless blood was taken within the window period (second screening is required after the window period).
  - b. Provide counselling and negotiate plan for risk reduction.
  - c. Answer questions raised by client.
  - d. Remind client to call for advice if necessary.
  - e. Emphasize the need for regular HIV tests if client continues risk-taking behaviour.
- Positive rapid test results
  - a. Explain that this is a preliminary positive test result; further

- confirmatory test by Western Blot method is required.
- b. Assess client's emotional state and level of acceptance.
  - c. Provide referral to DH ACTS (Tel: 2780 2211) and other resource materials for emotional support.
  - d. Discuss about HIV treatment / management if necessary.
  - e. Explain that HIV is now a chronic disease which can be managed by effective antiretroviral treatment.
  - f. Stress the importance of confirmatory test and follow-up for medical treatment if found positive.
  - g. Recommend client to consider partner referral once he/she accepts own newly diagnosed status.
  - h. Discuss ways of preventing HIV transmission to others.
- Invalid rapid test results (neither positive nor negative)
- a. Explain the implication of the situation to client.
  - b. Arrange conventional blood test.
  - c. Refer to DH ACTS (Tel: 2780 2211).

### **C. Crisis Counselling**

After being diagnosed HIV positive, the client may go through a crisis situation with emotional disturbance. The person may feel intensely threatened, shocked and helpless, as if losing control of his/her life. The goal is to help the client define problems quickly and restore a sense of control.

- a. Encourage the expression of his/her feelings.
- b. Be empathetic, show understanding and concern.
- c. Explore with client the precipitating factors of the crisis, and facilitate client's understanding of the situation.
- d. Review client's strengths to cope with the current crisis.
- e. Summarize client's current situation.
- f. Explore immediate concerns.
- g. Select the most important issue to work on initially.
- h. Provide helplines or other sources of support.

## Section 6 – Infection Control

Standard precautions should be adopted by testing personnel and service providers at all times during VCT. These include good hand hygiene practices and use of protective barriers during patient care and blood taking. All blood and body fluids with potential/unknown risk of transmission should be treated as if infectious for blood borne diseases.

The Centre for Health Protection's Scientific Committee on AIDS and Sexually Transmitted Infections issued the following recommendations on HIV transmission in healthcare settings:

- (a) Hands must be washed before and after procedural contact with client. Immediate hand washing is required if in touch with blood, body fluids and after glove removal. Soap and water are used for routine washing. Alcohol-based handrub can be used in place for maintaining hand hygiene. Remember gloves cannot substitute the practice of good hand hygiene.
- (b) Gloves must be worn when there is direct contact or possibility of contact with blood, body fluids, mucous membranes and wounds of clients. Gloves should be changed between care of different clients. Gloves must be changed if they are torn, visibly contaminated with blood and in case of a needle-stick injury. Other personal protective equipment such as surgical mask should be worn when staff or clients have fever or respiratory symptoms.
- (c) Client samples should be taken correctly by following strictly the instructions provided by manufacturers. Measures should be taken to prevent injuries by needles, lancets and other sharp instruments. Used sharp should not be recapped and should be placed in a puncture resistant box, which shall preferably be up to 3/4 full and must not be overfilled. These sharp boxes, after proper sealing, should be disposed as other medical wastes in accordance with procedures laid down by the Environmental Protection Department.
- (d) Disposable equipment and accessories should be discarded as appropriate. Reusable items should be properly cleaned and decontaminated as necessary after use. Chemical disinfectants such as 0.1% sodium hypochlorite (add one part of household bleach into 49 parts of water) and 70% alcohol can be used for disinfection of contaminated articles, after removal of the soils.

- (e) Environment contaminated with blood should be cleaned and disinfected immediately. Gloves should be worn before contact with blood or body fluid. For blood, cleanse the visible matter with disposable absorbent material soaked with 1% (add one part of household bleach into 4 parts of water) hypochlorite solution. After leaving for 10 minutes, rinse with water. For other body fluids, cleanse the visible matter with disposable absorbent material soaked with 0.1% (add one part of household bleach into 49 parts of water) hypochlorite solution. After leaving for 30 minutes, rinse with water. Common housekeeping procedures are adequate for cleaning environmental surface.

### **Accidents and Dangerous Occurrences**

All personnel should be instructed to notify supervisors of accidents and dangerous occurrences especially needle-sticks injuries. All notified accidents should be recorded in a log book specifically kept for this purpose. They should be reviewed and monitored so that corrective and prevention actions can be taken.

### **Post-Exposure Management**

Wound should be thoroughly washed with soap and water before disinfected and dressed. For mucosal contact, e.g. spillage into the eyes, the exposed part should be washed immediately and liberally with running water. The exposed should seek medical advice for risk assessment and proper post-exposure management.

For a comprehensive version of the infection control practice in community setting, please refer to the guidelines produced by the Centre for Health Protection's Special Preventive Programme publication at Annex C

## Section 7 - Documentation and Monitoring

The hallmark of good quality control is comprehensive documentation. In addition to specific record retention policies as may be required by individual organizations, the following records should be kept and periodically reviewed:

- a. Personnel training program with documentation and record
- b. Temperature logs (Appendix I)
  - Daily record of the refrigerator and/or room temperature where test kits and external controls are stored and the temperature of the testing area
- c. External control result logs (Appendix II)
  - External control records should include date and time of control testing, lot number and expiration date of test kit, lot number and expiration date of controls, control results, and corrective action taken if control results are unacceptable.
- d. Test results logs
  - Test result records should include date and time of testing, identifier for the person being tested, test kit lot number and expiration date, test result, action taken if the result was invalid, identification of the person who performed the test, whether confirmatory testing was requested, including the type of specimen sent for confirmation and the confirmatory test results when available.
  - If more than one person is conducting testing, there should be a mechanism to chronologically link the test record log sheets to detect problems, such as invalid test results occurring repeatedly with the same test kit lot number.

## **Quality Control (QC)**

The QC test kits are specifically formulated and manufactured to ensure good performance of the test. They are also useful in providing a reference standard for verification of the tester's ability to perform the test and interpret the results in a proper manner.

### **QC should be run:**

- When opening a new test kit lot.
- Whenever a new shipment of test kits is received.
- By each new tester prior to performing testing on patient specimens.
- If the temperature of the test kit storage area falls outside 2-27 degree Celsius.
- If the temperature of the testing area falls outside 15-27 degree Celsius.
- At monthly intervals.

### **Key QC indicators may include:**

- Number of tests or QC materials that expired before use, or occurrences of expired tests used for diagnostic or QC purposes.
- Number of tests or QC materials that were stored or used outside of temperature specifications.
- Frequency of QC testing compared to test site procedure.
- Ratio of tests used for diagnostic purposes to tests used for QC purposes.
- Frequency of invalid or incorrect results for diagnostic and QC testing.
- Proportion of negative and preliminary positive diagnostic test results.
- Proportion of rapid test results confirmed positive of all reactive rapid test results.

Significant problems, especially those concerning the accuracy of rapid HIV test in use, should be immediately reported to the appropriate supervisory personnel. The manufacturer should be notified where necessary.



## Section 8 – Troubleshooting

Troubleshooting procedures should be made known to all testing personnel and include the following areas:

- a. When to discontinue testing, e.g. when the QC results are unacceptable as described in the package insert
- b. How to take corrective action, or take action in response to a problem, e.g. contacting the manufacturer when the QC results are unacceptable and following the advice provided
- c. How to document problems and actions taken, e.g. a logbook of problems and corrective actions taken to address the problem
- d. How to verify the corrective actions taken addressed the problem
- e. Expired tests or QC materials:
  - Evaluate inventory management and storage procedures to ensure materials have a reasonable shelf life
  - Usage of test and QC materials
  - If needed, adjust ordering procedures, revise protocols and retrain staff
- f. Tests or QC materials stored or used when temperatures are outside the manufacturer's temperature specifications:
  - Determine the cause for out-of-range temperatures, if procedures were followed, and if testing personnel were aware of temperature conditions
  - Confirm whether tests were used in out-of-range temperatures, if testing procedures were followed, and if testing personnel were aware of temperature conditions
  - Determine whether QC tests were performed to verify the test could be performed and correctly interpreted
  - If needed, modify procedures and retrain staff on temperature control
- g. Incorrect or invalid QC test results:
  - Evaluate procedures for testing external controls and review record of control results
  - Perform troubleshooting procedures in accordance with the manufacturer's

control kit instructions to determine the sources of the incorrect or invalid result

- If test devices used with valid external control materials provide invalid or incorrect results, discontinue testing and contact the manufacturer
- Resume testing only after tests on external control materials provide correct results and document corrective actions
- If needed, modify quality control protocol and retrain staff on appropriate testing.

h. Invalid client test results:

- If possible, observe specimen collection, testing and results interpretation to confirm testing procedures are performed correctly
- Confirm the test device used had not expired
- Review documentation of testing to ensure procedures are followed
- Determine external controls were tested after the second invalid test results and if troubleshooting procedures were followed. If not, perform external QC testing using test devices from the same kit or lot to determine proper functioning of test device
- Perform troubleshooting procedures according to the manufacturer's instructions
- If test results using valid external control materials provide invalid results, testing should be discontinued
- If the test kit/ lot is determined to be faulty, notify the manufacturer
- Resume testing only after tests on external control protocols provide correct results and document corrective actions
- If needed, retrain staff on appropriate testing procedures

i. Excessive false positive client test results:

- Evaluate expiration dates of test kits and temperature of storage and testing areas of test kit lots that produced, and did not produce false positive results
- Review records of external control testing for test devices of the same lot and subjected to the same temperature conditions
- Perform additional troubleshooting procedures in accordance with the manufacturer's instructions
- Evaluate facility testing procedures and if appropriate modify protocol and retrain staff on appropriate testing procedures
- If necessary, inform the manufacturer. If appropriate, consider discontinuation of testing or changing to another test vendor.

## **Section 9 - External Assessment**

It is recommended for service providers to be visited by an external body to assess the quality of the program on a regular basis. For DH ACTS, ISO accreditation was attained for the operation of AIDS Hotline service in 2001. Subsequently the voluntary counselling service attained ISO accreditation in 2005. DH ACTS receives annual inspection by ISO accreditation agency. Even if ISO accreditation is not feasible due to manpower and resource constraints, it is generally recommended for service providers to consider inviting an external party to inspect the VCT program and provide recommendations for improvement on a regular basis.

## References

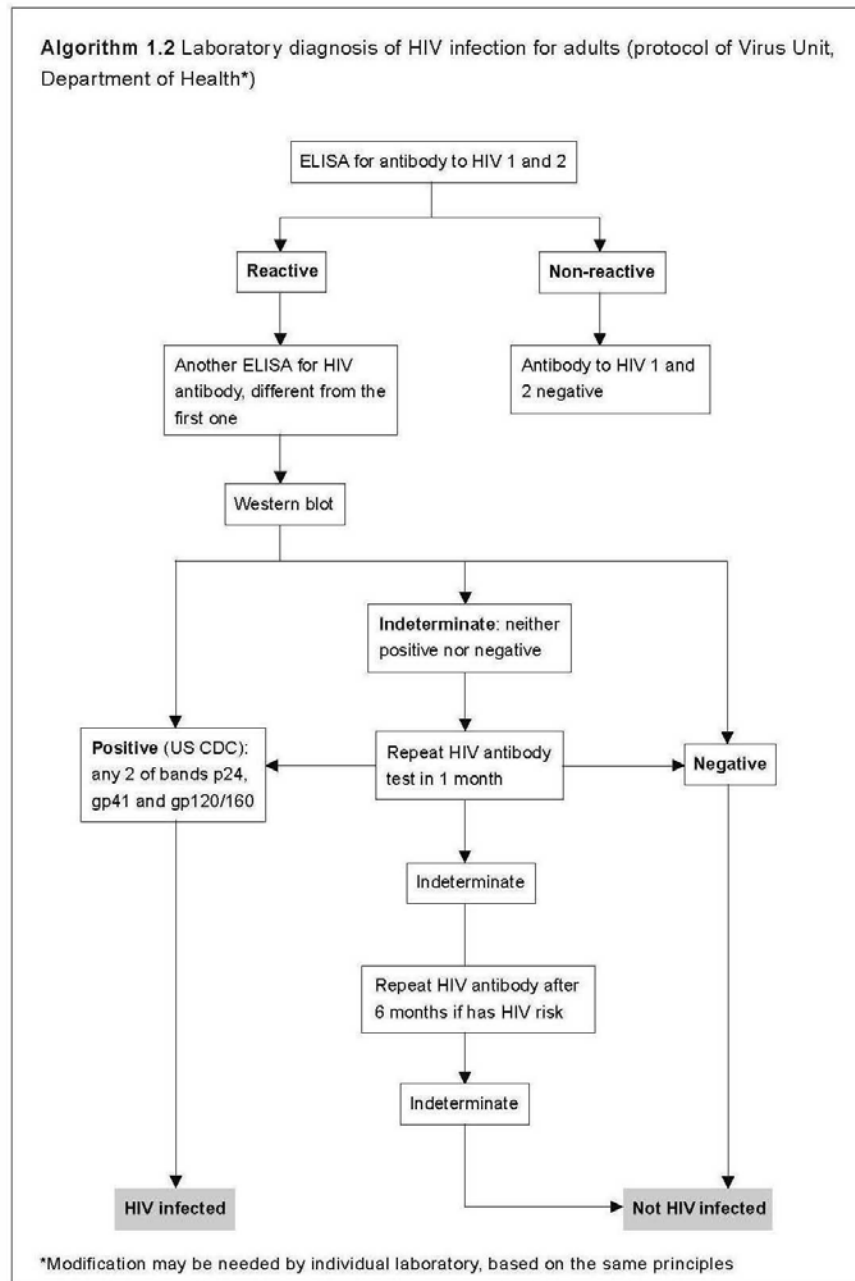
1. Quality Assurance Guidelines for Testing Using Rapid HIV Antibody Tests Waived Under the Clinical Laboratory Improvement Amendments of 1988 USCDC 2007
2. Rapid HIV Testing in Outreach and Other Community Settings – United States 2004-2006; MMWR Weekly November 30, 2007 / 56(47); 1233-1237
3. Scaling Up HIV Testing and Counseling in the Asia and the Pacific – Report of a Technical Consultation Phnom Penh Cambodia 4-6 June 2007; World Health Organization
4. Tools for evaluating HIV Voluntary Counseling and Testing March 2000; UNAIDS
5. Liverpool VCT and Care Kenya, Quality Assurance Resource Pack for Voluntary Counseling and Testing Service Providers 2003, Nairobi
6. Principles and Issues of Diagnostic HIV Testing in Hong Kong; Centre for Health Protection Scientific Committee on AIDS and STI; SCAS Paper 18/2007-2010
7. Basic Principles on Infection Control when Implementing HIV testing in a community setting March 2009; DH SPP ACTS
8. Quality Control Protocol for Testing Using the OraQuick Rapid HIV1/2 Antibody Test Kit January 2007; DH SPP ACTS
9. Implementation of Rapid Test Pilot Programme in AIDS Counselling and Testing Service July 2005; DH SPP ACTS
10. Manual on HIV/AIDS for Social Welfare Personnel 1995; AIDS Services Development Committee; ACA
11. Manual for Nurses June 1997; AIDS Unit DH
12. HIV Manual 2007 Special Preventive Programme Department of Health
13. Quality Management System; ISO 9000-9004
14. HIV Manual 2001, Special Preventive Programme, Department of Health, Hong Kong; p.16

**Membership of the Working Group:**

Mr. Beethoven PUI	A-Backup
Ms Kendy YIM	Action For REACH OUT
Ms Margaret PANG	AIDS Concern
Mr. Joe CHAN	AIDS Concern
Mr. CHAU Chun-yam	BGCA – HK
Ms Shara HO	CHOICE
Mr. Brian WONG	HK AIDS Foundation
Mr Johnny LI	HK AIDS Foundation
Mr. LI Chun Wai	Midnight Blue
Ms YUEN How-sin	SRACP
Mr. Jason LAU	SRACP
Ms NG	Zi Teng
Dr Raymond HO	SPP, DH
Ms Victoria KWONG	SPP, DH
Dr Francis WONG	SPP, DH
Ms Bonnie NG	SPP, DH
Ms Lina WONG	SPP, DH
Mr. Richard PANG	SPP, DH

1.2 Pathogenesis and diagnosis of HIV infection

**Algorithm 1.2** Laboratory diagnosis of HIV infection for adults (protocol of Virus Unit, Department of Health\*)



**Basic Principles on Infection Control When Implementing HIV Testing in a Community Setting**

**Background**

1. International authorities increasingly recommend using HIV testing as a strategy to enhance prevention, care and control of HIV/AIDS, through identifying undiagnosed infected people and implementing appropriate follow up actions.<sup>1,2,3</sup> In the last few years, several public health screening programmes had been launched in various clinical settings in Hong Kong. To improve access and coverage of the vulnerable hard-to-reach populations, HIV testing has also been expanded in different community settings, in line with the latest recommended Strategies by the Advisory Council on AIDS.<sup>4</sup>
2. This document aims to provide some recommendations on infection control principles to prevent transmission of HIV and other blood borne viruses (BBV) when conducting HIV testing programmes in non-clinical settings. It is important that the information contained herein be read in conjunction with other guidelines/recommendations on infection control and specific protocols be developed as appropriate, taking into consideration of the unique needs of individual services.

**Principles and specificities of standard precaution**

3. Standard precaution (SP), defined as a set of precautionary measures including good hand hygiene practices and use of protective barriers during patient care by health care workers, is the core concept for preventing HIV and other BBV in health care settings. All blood and body fluids with potential/unknown risk of transmission should be treated as if infectious for BBV. It is reckoned that SP can

---

<sup>1</sup> CDC. Advancing HIV prevention: new strategies for a changing epidemic-United States. 2003. MMWR 2003;52:329-32.

<sup>2</sup> CDC. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. MMWR 2006;55(No.RR-14)

<sup>3</sup> British HIV Association, British Association for Sexual Health and HIV and British Infection Society. UK National guidelines for HIV testing 2008. 2008.

<sup>4</sup> Hong Kong Advisory Council on AIDS. Recommended HIV/AIDS Strategies for Hong Kong, 2007-2011. 2007.

be applied to community settings for prevention of BBV. Training and education of workers on infection control practice is important for effective service delivery and safeguarding occupational health. Besides SP, other dimensions notably immunisation against vaccine-preventable BBV and post exposure management of exposed workers need to be attended to. Guidance and supervision by health care personnel is deemed necessary for implementation of infection control practices alongside the testing services in community settings.

4. The following specificities took reference of the local recommendations on HIV transmission in health care settings developed by Scientific Committee on AIDS in 2005<sup>5</sup>.
5. Hands must be washed before and after procedural contact with client. Immediate hand washing is required if in touch with blood, body fluids and after glove removal. Soap and water are used for routine washing. Alcohol-based handrub can be used in place for maintaining hand hygiene. Remember, gloves cannot substitute hand hygiene.
6. Gloves must be worn when there is a direct contact or possibility of contact with blood, body fluids, mucous membrane and wound of clients. Gloves should be changed between care of different clients. Gloves must be changed if they are torn and in case a needlestick injury occurs and when they are visibly contaminated with blood. Other personal protective equipments such as surgical mask should be worn when staff or clients have fever or respiratory symptoms.
7. Client samples should be taken correctly by following strictly to the instructions provided by manufacturer. In cases where specimen are collected for HIV testing, the specimen should be packed properly and maintained in an upright position as far as possible to prevent leakage and contamination of the outer surface. Remember to perform hand hygiene after handling the specimen.
8. Precaution should be taken to prevent injuries caused by needles, lancets and other sharp instruments. Used sharps should not be recapped and should be placed in puncture-resistant box, which shall preferably be up to 3/4 full and must not be overfilled. These sharp box, after proper sealing, should be disposed same as other medical wastes per the recommendations by the Environmental

---

<sup>5</sup> Scientific Committee on AIDS. Recommendations on infection control practice for HIV transmission in health care settings. 2005.



Protection Department<sup>6</sup>.

9. Disposable equipment and accessories should be discarded as appropriate. Reusable items should be properly cleaned and decontaminated as necessary after use. Chemical disinfectants such as 0.1 % sodium hypochlorite (one part of household bleach in 49 parts of water) and 70 % alcohol can be used for disinfection of contaminated article, after removal of the soils.
10. Environment spilled with blood and body fluids should be cleaned immediately. Gloves should be worn before contact with blood or body fluid. For blood, cleanse the visible matter with disposable absorbent material soaked with 1% (one part of household bleach in 4 parts of water) hypochlorite solution held in gloves should be used, leave for 10 minutes, and then rinse with water. For other body fluid, cleanse the visible matter with disposable absorbent material wetted with 0.1 % (one part of household bleach in 49 parts of water) hypochlorite solution, leave for 30 minutes<sup>7</sup> and then rinse with water. Common housekeeping procedures are adequate for cleaning environmental surface.

### **Occupational health and post exposure management**

11. Immunisation against preventable infection is useful to reduce risk of work-related transmissions. Hepatitis B vaccination is recommended for susceptible persons whose work involves handling of blood, prior to start of work. Response is expected for some 95% of vaccinated subjects but serologic testing achieves clarification on individual basis. Currently vaccine is not available for hepatitis C and HIV. Generally, work restriction is not required for HIV infected health care workers not performing exposure-prone procedures. In case of doubt, advice should be sought from the Expert Panel on HIV infection and health care workers through the attending doctor of the infected.
12. Adherence to standard infection control practice reduces but not eliminates accidental exposure to BBV. First aid treatment is important after exposure to blood or body fluids. In case of sharps injury, wound should then be thoroughly washed with soap and water before disinfection and dressing. Risk assessment, counseling and post exposure prophylaxis (PEP) form the mainstay of post

---

<sup>6</sup> <http://www.epd.gov.hk/epd/clinicalwaste/nonflash/english/best/producers.html#Engaging>

<sup>7</sup> Department of Health, Guidelines on Infection Control Practice in the Clinic Setting. 2006 (revised)

exposure management.<sup>8</sup> PEP exists for HIV and HBV but not HCV. Locally, Accident and Emergency Departments provide proper wound care and first-line post exposure management. Cases are then referred to specialised clinic, e.g. Therapeutic Prevention Clinic of Centre for Health Protection, for subsequent management as appropriate.

SPP, CHP

March 2009

---

<sup>8</sup> Scientific Committee on AIDS and STI (SCAS), and Infection Control Branch, Centre for Health Protection, Department of Health. Recommendations on the Post exposure Management and Prophylaxis of Needlestick Injury or Mucosal Contact to HBV, HCV and HIV. 2007.

**Appendix I**

**Temperature record of test kit and control kit storage**

Date		Locations			Store (Rm 514)	Remark
	Refrigerator	Blood taking Rm	Clinic cupboard			
<b>Recommended</b>	<b>2 - 8 °c</b>	<b>15 - 27 °c</b>	<b>2 - 27 °c</b>	<b>2 - 27 °c</b>		
	<b>Temp. by</b>					
	<b>USCDC</b>					
1/1/2009						
2/1/2009						
3/1/2009						
4/1/2009						
5/1/2009						
6/1/2009						
7/1/2009						
8/1/2009						
9/1/2009						
10/1/2009						
11/1/2009						
12/1/2009						
13/1/2009						
14/1/2009						
15/1/2009						
16/1/2009						
17/1/2009						
18/1/2009						
19/1/2009						
20/1/2009						
21/1/2009						
22/1/2009						
23/1/2009						
24/1/2009						
25/1/2009						
26/1/2009						
27/1/2009						
28/1/2009						
29/1/2009						
30/1/2009						
31/1/2009						

**Appendix II**

Date	Test Kit			Quality Control (QC) Kit			Quality Control (QC) Test							Performed by	Reviewed by	Remarks
	Lot No	QTY Rec'd	Expire	Lot No	QTY Rec'd	Expire	Temp	Test Kit Lot No	Q C Kit Lot No	Negative Control	HIV 1	HIV-2	Purpose			

Abbreviation: M: Monthly routine    NS: New Shipment    NL: New Lot No.    D: Demonstration    T: Out of temperature range    R: Reactive  
 NR: Non-Reactive

