

**TITLE: DRIED BLOOD SPOT TESTING IN COMMUNITY SETTINGS**

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**APPLICABILITY:** All sites and employees performing and following-up on dried blood spot testing

**RELATED POLICIES\*:** 1-12-2-010: Laboratory Tests and Collections Not Performed Within Northern Health  
 1-22-7-1-020: Adoption of BCCDC Communicable Disease Control Guidelines  
 2-1-1-010: Health Care Consent Essentials  
 2-4-0-010: Documentation in a Paper Chart  
 \*For community partners, related policies are available upon request to PoliciesStandards@northernhealth.ca

**DEFINITIONS:** **Dried Blood Spot Testing (DBST):** Dried Blood Spot (DBS) Testing is a method of blood collection that can be used for diagnostic hepatitis C and Human Immunodeficiency Virus (HIV) testing as well as screening for syphilis. Samples are collected from a finger prick, dropped on to a filter paper, and then dried for transportation to a laboratory.  
 Additional [Definitions](#)

**COMPETENCY REQUIREMENTS:** Prior to providing Dried Blood Spot Testing in a community setting, all Nurses, Non-Regulated Care Providers (e.g., Community Outreach Workers, Community Health Workers, Peers, Care Aides) must have successfully completed the required Learning Hub course: [NHA - CL - Dried Blood Spot Testing](#) (LH# 30914)

**DOCUMENT QUICK LINKS**

**Learning Hub Modules**

- [NHA - CL - Dried Blood Spot Testing](#) (LH# 30914)

**Community Sites**

- [Testing Site Application: Point of Care Testing \(HIV\) and/or Dried Blood Spot Testing \(HIV/HCV/Syphilis\)](#)
- [Dried Blood Spot Testing Guide](#)
- [Dried Blood Spot Testing Patient Handout](#)

- [BCCDC Serology Requisition](#)
- [Northern Health Communicable Disease Control – HIV and Hepatitis C](#)
- To be provided to site by the NH HIV POCT and DBST Committee:
  - Dried Blood Spot Packing Checklist
  - Dried Blood Spot Testing Client Consent Form and Sample Collection Notes
    - Sites can also email the NH Regional CD Lead (regionalcd.hubteam@northernhealth.ca) to obtain these resources

### **Northern Health Sites**

- NH Testing Site Application: HIV Point of Care Testing (HIV) and/or Dried Blood Spot Testing (HIV/HCV/Syphilis)
- Dried Blood Spot Testing Guide\_(10-120-6069)
- Dried Blood Spot Testing Patient Handout (10-120-6070)
- Dried Blood Spot Packing Checklist\_(10-120-7003)
- Dried Blood Spot Testing Client Consent Form and Sample Collection Notes (10-20-7004)
- [BCCDC Serology Requisition](#)
- [Northern Health Communicable Disease Control – HIV and Hepatitis C](#)

### **BCCDC & Other Resources**

- [BCCDC Communicable Disease Control Manual](#)
- [British Columbia Communicable Disease Control Manual, Chapter 5 – Sexually Transmitted infections, Guidelines for Testing, Follow up, and Prevention of HIV](#)
- [British Columbia Communicable Disease Control Manual, Chapter 1 – Communicable Disease Control, Hepatitis C Guideline](#)
- [Non-Certified Practice Decision Support Tool for Syphilis](#)
- [CATIE – Canada’s Source for HIV and Hepatitis C Information](#)

### **KEY POINTS**

- Dried Blood Spot Testing (DBST) is a type of blood test that can be used to test for Human Immunodeficiency Virus (HIV), hepatitis C (HCV) and syphilis. The test uses a finger prick to collect drops of blood on a piece of filter paper.
- Blood specimens for DBST can be collected by non-healthcare professionals who have completed the required training, making testing more accessible.

- HIV and HCV per DBST are considered confirmatory tests when HIV NAT (HIV RNA) and HCV NAT (HCV RNA) are detectable.
- Syphilis per DBST is only considered a screening test and requires further testing to confirm diagnosis.
- Follow-up for DBST results is managed by the Ordering Provider with assistance from the Regional Communicable Disease (CD) Team under certain conditions.

## **POLICY STATEMENT (ALL STAFF MUST COMPLY)**

- All sites must receive approval to offer DBST from the [NH HIV Point of Care \(POC\) and DBST Committee](#) prior to offering DBST. Sites must submit a [NH HIV POC and DBST Application Form](#) to the committee for approval.
- All individuals collecting a blood sample for DBST must have successfully completed the learning hub course: [NHA - CL - Dried Blood Spot Testing](#) (LH# 30914).
- All DBST must have an Ordering Provider attached. The Ordering Provider must be a Physician or Nurse Practitioner. It is **not** within Registered Nurse (RN ) or Registered Nurse Certified (RN(C)) scope to act as Ordering Provider for DBST.
- The Ordering Provider must follow-up with the client on all positive results including results requiring confirmatory testing.
- If the Ordering Provider requests assistance or is unable to provide follow-up, the CD Coordinator may collaborate and create a plan with the Provider to ensure all required public health follow-up is completed.
- A testing site must make every reasonable attempt to find an Ordering Provider. If after this, they still do not have an Ordering Provider they can contact the Regional Communicable Disease team for support from the Medical Health Officer (MHO) ([regionalcd.hubteam@northernhealth.ca](mailto:regionalcd.hubteam@northernhealth.ca))
  - When the CD MHO is the Ordering Provider, the testing site must complete each requirement outlined in the CD MHO as Ordering Provider checklist for every testing event ([Appendix A](#))

## **CLINICAL PRACTICE STANDARD (ALWAYS USE PROFESSIONAL JUDGMENT AND DOCUMENT ANY DEVIATION FROM THE STANDARD)**

### 1. Gain Approval:

- All sites wishing to offer DBSTs require approval from the Regional CD Hub.
- Sites must complete an application form as outlined in the policy statement and submit it to the NH HIV Point of Care Testing (POCT) and DBST Committee/NH Regional CD Hub for review and approval.

2. Complete education:

- All individuals collecting a blood sample for DBST must have successfully completed the learning hub course: [NHA - CL - Dried Blood Spot Testing](#) (LH# 30914)

3. Acquire equipment supplied by testing sites:

- Forms and Print Materials (See [Document Quick Links](#)):
  - NH Dried Blood Spot Testing Guide
  - DBST Patient Handout
  - DBST Client Consent Form and Sample Collection Note
  - DBST Packing Checklist
- [BCCDC Serology Requisition](#)
- Pens
- Gauze
- Gloves, non-latex
- Alcohol prep pads
- Band-Aids
- Hand sanitizer
- Table protection that is absorbent, with a liquid-proof barrier (i.e., the pads that are blue plastic on one side and white gauze-like material on the other)
- Sharps container(s)
- Carrying container for DBST cards (optional, only required to transport cards that are drying)

4. Acquire equipment supplied by the National Microbiology Lab and acquired by sites through contacting the [NH Regional Chronic Diseases Program](#):

- DBS cards (903TM Whatman Protein Saver Cards)
- Coin envelopes
- Humidity indicators, 10-60%
- Desiccants, 1g or 10g
- Gas impermeable Bitran bags
- 1.5mm x 2.0 mm contact-activated safety lancets
- Drying rack (optional)

## 5. Identify Ordering Providers:

### A. Community provider as the Ordering Provider

- All tests must have an Ordering Provider attached. It is the responsibility of the Ordering Provider to follow-up on all positive results, including results requiring confirmatory testing.
- The Regional CD Hub will receive copies of any positive reportable results and will coordinate with the Ordering Provider to ensure all follow-up and reporting is complete as per usual reportable communicable disease process.

### B. CD MHO as the Ordering Provider

- Email ([regionalcd.hubteam@northernhealth.ca](mailto:regionalcd.hubteam@northernhealth.ca)) to apply to the HIV POC and DBST Committee for approval.
- Following approval, the testing site completes each requirement outlined in the CD MHO as Ordering Provider Checklist for every testing event ([Appendix A](#)).

## 6. Specimen collection and logistics:

- Ensure Client Consent Form is completed by all clients who access testing
- See Dried Blood Spot Testing Guide for:
  - Testing Preparation
  - Collection of DBST sample collection process
  - Paperwork/Requisitions
  - Storage and packaging
  - Specimen logistics
- Review client handout with the client and provide them with a copy.

## 7. Receive and interpret the results:

- Results are available through traditional reporting channels.
- Interpret results according to [Table 1](#).

<b>Table 1. Test results and interpretations</b>		
<b>Test</b>	<b>Negative Result</b>	<b>Positive Result</b>
aHIV 1 (Antibody)	AVIOQ HIV 1: Nonreactive HIV 1 Antibody: Negative	AVIOQ HIV 1: Reactive HIV 1 Antibody: Positive
HIV 1 Quant <sup>1</sup> (RNA)	Aptima HIV Quant Dx: Target Not Detected HIV 1 RNA: Negative	Aptima HIV Quant Dx: (quantitative value) copies/mL HIV 1 RNA: Positive
aHCV (Antibody)	Ortho anti HCV: Nonreactive HCV Antibody: Negative	Ortho anti HCV: Reactive HCV Antibody: Positive
HCV RNA <sup>2</sup>	Aptima HCV Quant Dx Assay: Target Not Detected HCV RNA: Negative	Aptima HCV Quant Dx Assay: (quantitative value) IU/mL HCV RNA: Positive
Syphilis	Bio Rad Syphilis Total Ab: Nonreactive Syphilis Antibody: Negative	Bio Rad Syphilis Total Ab: Reactive Syphilis Antibody: Positive
<p>Notes:</p> <p><sup>1</sup>HIV 1 RNA is only performed if AVIOQ HIV 1 is reactive</p> <p><sup>2</sup>HCV RNA is only performed if Ortho anti HCV is reactive</p> <ul style="list-style-type: none"> <li>• Only detectable HIV NAT (HIV RNA) and detectable HCV NAT (HCV RNA) test results on DBS are considered to be confirmed positive results.</li> <li>• Syphilis confirmatory testing is not available on DBST at this time, therefore reactive TPE screen is not considered a confirmed positive. A serum sample will have to be collected for confirmatory syphilis testing.</li> </ul>		

8. Results management – client follow-up and reporting (Refer to [Appendices B – D](#)):

- For results management of:
  - HIV per DBST see [Appendix B](#)
  - HCV per DBST see [Appendix C](#)
  - Syphilis per DBST see [Appendix D](#)
- The Ordering Provider is responsible for follow-up of test results with the client (as outlined in the NH Client Consent and Contact form and as outlined in appendices) and for reportable communicable diseases (confirmatory HIV and HCV per DBST) follows-up as per [BCCDC Communicable Disease Control Manual](#).
- Follow-up includes seeking confirmatory testing for non-confirmatory results and inconclusive results.

- For example: If an HIV or HCV RNA test was unable to be performed on the DBST sample or if syphilis is reactive per DBST it is the responsibility of the Ordering Provider to follow-up with client to complete confirmatory testing.
- The NH Regional CD Hub will receive positive results via CMOIS and the CD Team will ensure patient follow-up is in process with the Ordering Provider as per [BCCDC Communicable Disease Guidelines](#).
- The NH Regional CD Hub will report all reportable communicable diseases to the BCCDC, as per BCCDC guidelines.

## DOCUMENTATION

### Community setting or private clinic

- Document in client health records per local policy and process; and/or
- Complete Sample Collection Notes on Client Form.

### Northern Health setting

- CMOIS, MOIS using CMOIS CD Documentation Standard and CMOIS STI Documentation Standard.

**NOTE:** If CD MHO is the Ordering Provider, then the Sample Collection Notes on Client Consent Form must be used and sent to the Regional CD Hub, as per the Checklist for CD MHO as Ordering Provider ([see Appendix A](#)).

## KEY CONTACTS

- **NH HIV POCT and DBST Committee/NH Regional Communicable Disease Hub**  
Toll-Free phone: 1-855-565-2990  
Confidential fax: 1-250-645-7995  
Email: [RegionalCD.HubTeam@northernhealth.ca](mailto:RegionalCD.HubTeam@northernhealth.ca)
- **Regional Chronic Diseases Strategic Initiatives Lead**  
Email: [RCD.Communications@northernhealth.ca](mailto:RCD.Communications@northernhealth.ca)  
Cell: 250-613-6572



## REFERENCES

- British Columbia Centre for Disease Control (2023). Communicable Disease Control Manual. Retrieved August 16, 2023 from <http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/communicable-disease-control>
- British Columbia Centre for Disease Control. (2016, October). Communicable Disease Control Manual Chapter 5 – Guidelines for Testing, Follow up, and Prevention of HIV. Retrieved August 16, 2023 from [http://www.bccdc.ca/resource-gallery/Documents/Communicable-Disease-Manual/Chapter%205%20-%20STI/HIV\\_Guidelines\\_Testing\\_FollowUp\\_Prevention.pdf](http://www.bccdc.ca/resource-gallery/Documents/Communicable-Disease-Manual/Chapter%205%20-%20STI/HIV_Guidelines_Testing_FollowUp_Prevention.pdf)
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- Canada's source for HIV and hepatitis C information. (n.d.). CATIE. Retrieved on July 11, 2022 from <http://www.catie.ca/en/home>
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## KEYWORDS

HIV, HCV, Syphilis, DBS, DBST, low threshold testing

## DEFINITIONS

**Nurses:** includes all registered nurses (RNs), registered psychiatric nurses (RPNs) and licensed practical nurses (LPNs).

**Hepatitis C (HCV):** HCV is a liver infection caused by the hepatitis C virus. HCV is spread through contact with blood from an infected person. HCV can be managed and cured with treatment.

**Human Immunodeficiency Virus (HIV):** HIV is a virus that targets the body's immune system. It is passed through blood and body fluids such as semen, pre-ejaculate, vaginal fluids, anal fluids, and breast/chest milk. HIV can be managed with antiviral medications.

**Syphilis:** Syphilis is a sexually transmitted infection (STI) caused by the bacteria *Treponema pallidum*. Syphilis infection occurs in stages: primary, secondary, early latent, and late latent. Each stage has different symptoms associated with it. Syphilis can be treated with antibiotics.



## APPENDIX A: CHECKLIST FOR MEDICAL HEALTH OFFICER AS ORDERING PROVIDER FOR DBST

- Review Dried Blood Spot Testing (DBST) guidelines, processes, and policies.
- Ensure application and approval for DBST site and use of MHO MSP# is established from Regional Communicable Disease Team/NH POCT and DBST Committee.
- Obtain consent from Communicable Disease Team as Ordering Provider for every testing event (see below).
- Complete all required education as outlined in policy statement and obtain supplies.

### Before EVERY Event:

- Email [regionalcd.hubteam@northernhealth.ca](mailto:regionalcd.hubteam@northernhealth.ca) to notify Regional CD Lead of testing event (Date, location, collection team members).
  - CD Lead will respond with approval decision, MSP#, name of Ordering Provider, and address of report delivery.
- Print client consent and sample collection note forms and patient information handout.
- Ensure you have a blank copy of the DBST Event Tracking Spreadsheet (Provided by Regional CD Lead).

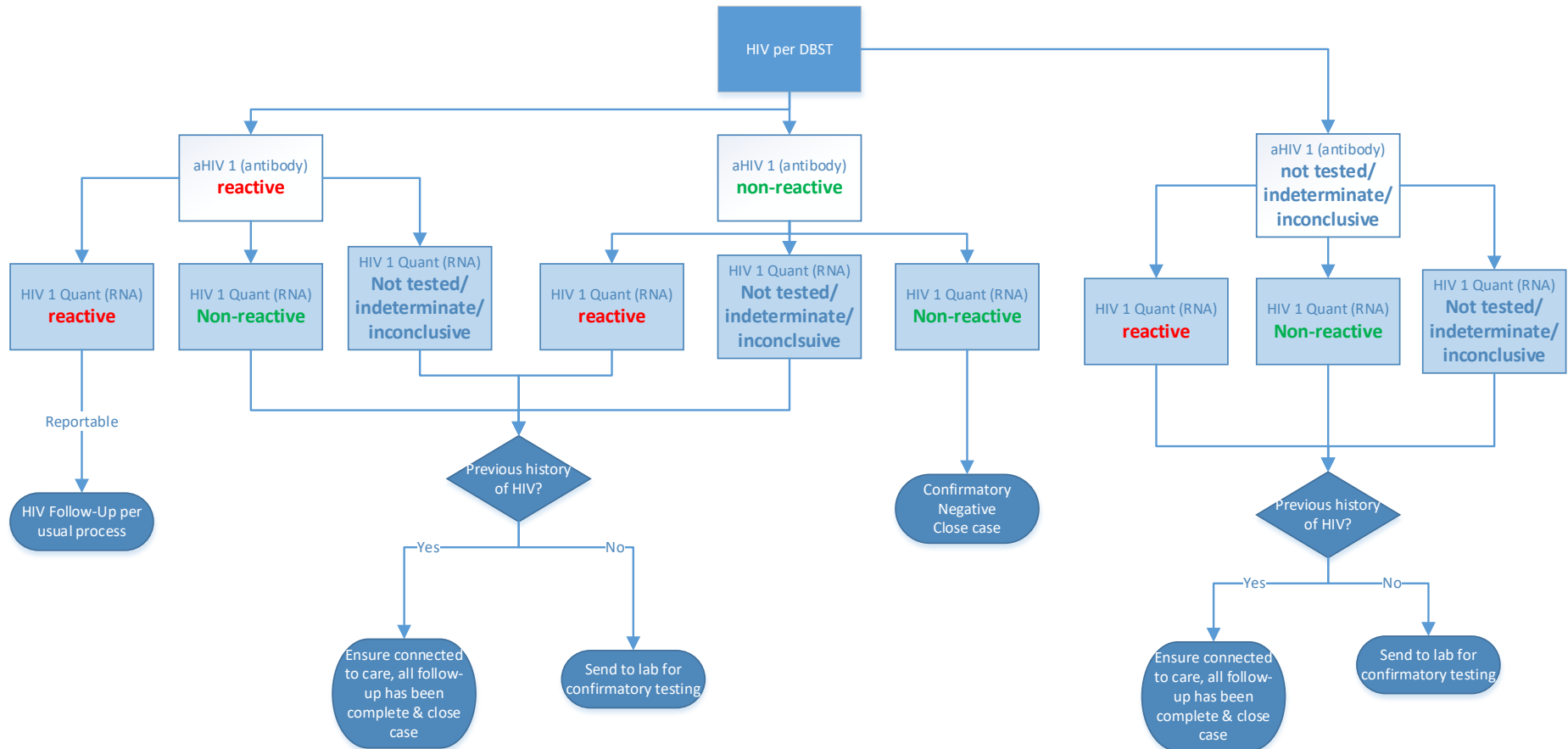
### During Event:

- Ensure client consent form is completed for **every** client before sample collection. Ensure writing is legible and all client identifiers and client contact information is provided.
- Review Patient Information handout with client and give them a copy.
- Complete sample collection team note for each client seen for sample collection (at bottom of client form). Complete both consent and chart note even if not able to obtain adequate sample for testing.

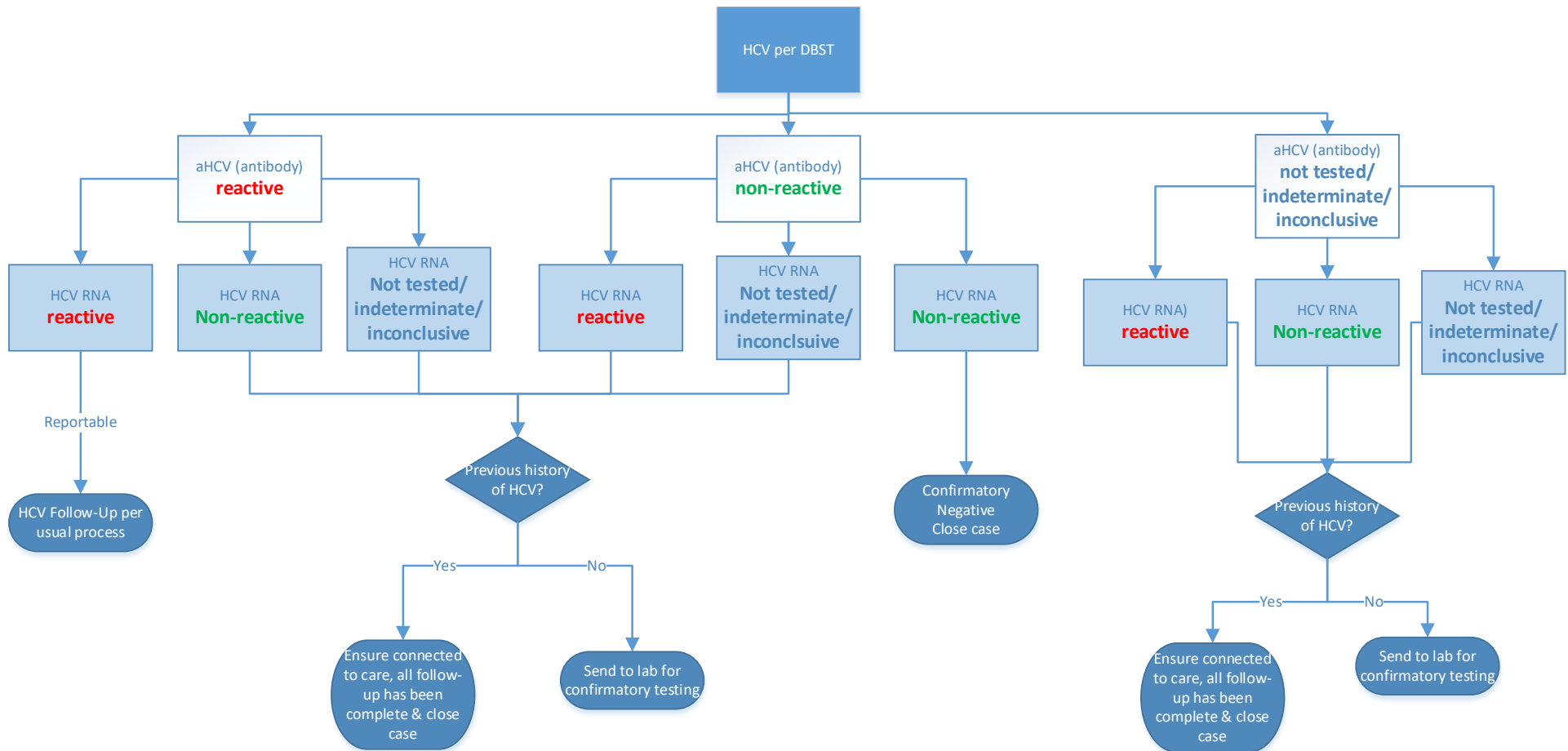
### After Event:

- Email (per local policy) client forms and DBST Event Tracking Spreadsheet to the Regional CD Team ([regionalcd.hubteam@northernhealth.ca](mailto:regionalcd.hubteam@northernhealth.ca)) or Fax to Regional CD Hub (250-645-7995) within 5 business days.

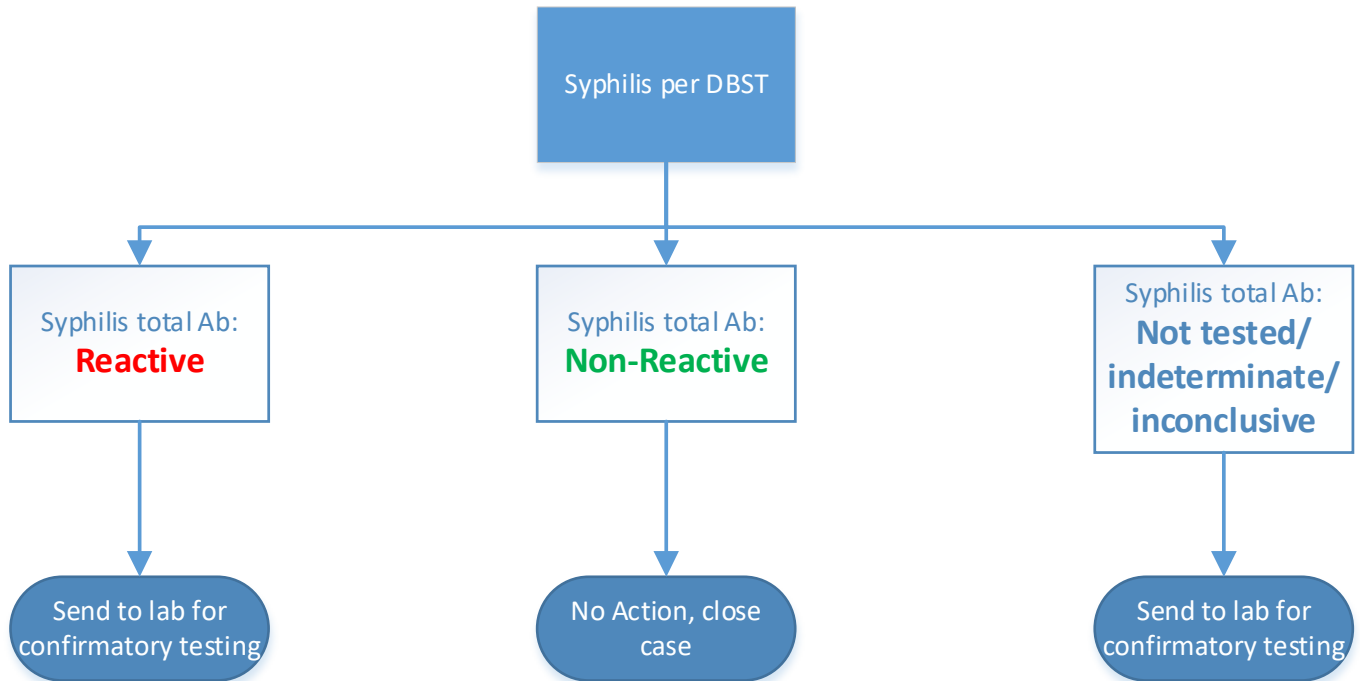
## APPENDIX B: DBST RESULT MANAGEMENT FOR HIV



## APPENDIX C: DBST RESULT MANAGEMENT FOR HEPATITIS C



## APPENDIX D: DBST RESULT MANAGEMENT FOR SYPHILIS



<b>REVISION HISTORY</b>			
Initial Effective Date:	June 7, 2024		
Approved By:	VP Population and Public Health, Chief Medical Health Officer		
Author Title:	Regional Nursing Lead, Communicable Disease		
Revision History:	Effective Date:	Description of Changes:	Reviewed or Revised by:
	June 7, 2024	Policy Issued	VP Population and Public Health; Chief Medical Health Officer Regional Nursing Lead, Communicable Disease; Medical Health Officer, Regional Nursing Leads Communicable Disease; Program Lead Communicable Disease; Regional Manager Communicable Disease; Strategic Lead, Chronic Disease HIV, Hep C, and Chronic Pain
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