

**Action Plan for West Nile Virus and  
the Blood Supply**

**2009**

**BC Ministry of Health Services**

## **Glossary of Acronyms**

BCCDC	British Columbia Centre for Disease Control
BCMA	British Columbia Medical Association
CBS	Canadian Blood Services
MHO	Medical Health Officer
MPT	Mini Pool Testing
MoHS	Ministry of Health Services
NAT	Nucleic Acid Test
PBCO	Provincial Blood Coordinating Office
PHO	Provincial Health Officer
P/T	Provincial / Territorial
SUT	Single Unit Testing
TMAG	Transfusion Medicine Advisory Group
TraQ	Transfusion Quality Management Program
TT-WNV	Transfusion Transmissible West Nile Virus or Transfusion-Transmitted West Nile Virus
WNV	West Nile Virus

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## **I. Background**

### **1.1 WNV Experience in 2008 and Forecast for BC in 2009**

West Nile Virus (WNV) has rapidly spread across North America to the BC border since first being recognized in 1999 in New York City. One travel-related infection was diagnosed in BC in 2008. Although no indigenously acquired WNV was detected in animals, birds, mosquitoes or humans in BC in 2008, public health officials anticipate its eventual emergence in BC, possibly during 2009.

In 2008, WNV activity occurred in central and western Canada including Ontario, Manitoba and Saskatchewan, and in states bordering British Columbia (Montana, Idaho and Washington State). Viral activity in Canada was significantly lower in 2008 compared to the previous year, with 36 reported probable and confirmed symptomatic human cases of WNV compared to 2,353 probable and confirmed human cases in 2007.

In the U.S. during 2008, based on human cases reported to the U.S. Center for Disease Control, the level of WNV activity decreased approximately 63 percent from 2007, with around 1,300 cases reported for 2008 ([www.cdc.gov](http://www.cdc.gov)).

### **1.2 Preventing Transfusion-Transmitted WNV**

WNV is transfusion-transmissible although the minimum infective dose of transfusion transmitted WNV (TT-WNV) is unknown. Two cases of asymptomatic WNV were identified through blood donor screening in Canada in 2008 – one in Manitoba and one in Quebec. There have been no reported cases in Canada of probable or confirmed TT-WNV since 2002. The risk of TT-WNV has significantly decreased since implementing universal donor WNV testing in the U.S. and Canada in July 2003. A small residual risk remains: in the U.S. six probable or confirmed TT-WNV cases were detected in 2003, one was reported in 2004, and two were reported in 2006. These cases involved patients who received blood that had undergone either mini-pool and/or single-unit WNV testing.

Canadian Blood Services (CBS) has been testing every unit of blood for WNV using a nucleic acid test (NAT), introduced in July 2003, using mini-pools of blood from six donors. Health Canada licensed the Roche blood donor WNV screening assay, and CBS implemented this assay in its WNV donor test laboratories in June 2008. This test detects WNV and other genetically similar *Flaviviruses*, none of which except St. Louis encephalitis virus is endemic (as episodic summer outbreaks or sporadic cases) to Canada or the United States. In Canada, a positive test result most likely reflects WNV infection.

Both WNV and TT-WNV are reportable infections to public health in BC. The routine follow-up process for reported WNV cases, from all sources, includes questions related to possible transfusion transmission risk (either as a recent donor or blood recipient). Comprehensive two-way communications procedures are in place between public health and CBS - BC & Yukon Centre.

### 1.3 CBS Plans for Donor WNV Testing for 2009

CBS' plans for WNV donor testing for the 2009 WNV season in Canada are expected to follow the same strategy as the previous year:

- i) CBS routinely performs WNV-NAT in mini-pools of six specimens. Single-unit WNV-NAT is selectively used during WNV season since Single Unit Testing (SUT) is more sensitive than Mini Pool Testing (MPT) in detecting early, seronegative, viremic infections that pose the highest risk of TT-WNV.
- ii) CBS plans allow for flexible deployment of SUT by:
  - recognizing that the system's total capacity for SUT is limited. Therefore—depending on the level and geographic extent of 2009 WNV activity—CBS may not have the capacity to perform SUT on collections from all health regions where the triggers listed below (see “iii”) are reached; and
  - balancing considerations of blood safety and blood availability. Cancellation or relocation of donor clinics to lower risk areas may be considered if blood inventory permits;
- iii) SUT of donations made in a health region<sup>1</sup> when the following predetermined triggers are reached in either the local donor or the local community population:
  - one mini-pool-positive donation made in a health region, or
  - incidence of reported human cases of WNV in the population of a health region over the preceding two weeks exceeds 1/1,000 population in rural areas or 1/2,500 population in urban areas (based on weekly CBS review of current, available human WNV surveillance data), or
  - (if the system's capacity permits and this is deemed to be medically appropriate) in a health region adjacent to where SUT is being done, or
  - (if the system's capacity permits and this is deemed to be medically appropriate) incidence of human cases of WNV in the population of an adjacent health region over the preceding two weeks that exceeds 1/1,000 population in rural areas or 1/2,500 population in urban areas; and
- iv) cease SUT of donations made in a health region when:
  - no new positive donors are reported in that health region over a **one week** period following the last WNV-positive donor in that region **AND**
  - the incidence of new confirmed human cases likely acquired locally in the population of that health region over the preceding **two weeks** is below 1/1,000 population in rural areas or 1/2,500 population in urban areas.

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<sup>1</sup> CBS Health Regions coincide with defined boundaries of the Health Service Delivery Areas, which are components of each Health Authority in British Columbia.

The current CBS approach for conversion from MPT to SUT is more comprehensive than recent Food and Drug Administration Guidance for US blood suppliers, which recommends implementing SUT after one WNV reactive donation in a region. The effectiveness of this approach for regional WNV risk assessment is limited by the frequency of collections from a region. Therefore, by including SUT triggers based on threshold rates of public health reported WNV incidence, CBS criteria reflect a broader scope of surveillance intelligence for assessing WNV risk and the need for SUT in a region. **CBS closely monitors and analyzes public health-reported WNV disease activity across Canada and the US throughout the summer to guide timely decision-making for assigning SUT.**

#### **1.4 Routine, Ongoing Donor Screening and Post-donation Information**

Donors must be feeling healthy and well on collection day. Donors who develop fever or other symptoms of possible WNV are instructed to contact CBS and are also temporarily deferred and any in-date components from that donation are retrieved. Current CBS regulations require a 56-day donor deferral following a positive WNV test. CBS will routinely update the BC Centre for Disease Control (BCCDC) on an ongoing basis throughout WNV season of aggregate (non-nominal) donor WNV test results (both positive and negative results), stratified according to health service delivery area (of donor clinic locations).

#### **1.5 CBS Procedures after a Donor's Positive WNV Screening Test**

Turn-around time for results from donor screening tests is 48-72 hours after blood collection. After receipt of a donor's positive WNV test result, CBS will:

- contact the donor as soon as possible by phone (with follow-up letter)
- with the donor's consent, also contact the family physician by phone and by follow-up fax/letter
- contact the Medical Health Officer (MHO) in the donor's region by phone and by follow-up letter.
- contact the BCCDC by phone, who in turn will notify the Office of the Provincial Health Officer, immediately after the first positive WNV blood test from a donor.

Physicians may be contacted by public health to co-ordinate follow-up, which may include further testing if clinically appropriate or collecting added epidemiologic information. This added information will enable public health to better characterize the ongoing risk of WNV in a particular region, and to determine if additional WNV prevention or control measures may be warranted.

#### **1.6 Patient Informed Consent for Blood Transfusion**

Physicians are being reminded to discuss WNV risk from blood transfusion with patients prior to surgical procedures where use of blood is reasonably anticipated. In 2008, the Provincial Blood Coordinating Office/CBS provided regular updates about WNV risk to the BC transfusion medicine community to assist physicians in discussing WNV-related risks and benefits of transfusion, with their patients. Hospital Blood Transfusion Services and physicians who utilize blood and blood products are also encouraged to regularly consult the Transfusion Quality Management (TraQ) Program

website (see “1.8 Communications” below) to obtain the most current information about WNV risk from blood transfusion.

### **1.7 WNV Reporting by Physicians**

Physicians should ask patients who are being tested for suspected WNV infection if they donated blood or a blood product in the previous eight weeks. If so, physicians are to report this to the CBS - BC & Yukon Centre at 604-876-7219 (24 hour access line) or by fax: 604-879-6669. This reporting will enable CBS to remove in-date inventory or assist in investigating a possible transfusion-transmitted infection. Physicians should also advise CBS of any case of suspected WNV in a patient who has received blood in the previous eight weeks. A positive WNV test in a person who has recently donated or received blood is also a reportable infection to public health in BC and physicians should notify their local Medical Health Officer.

As an added precaution, the BCCDC and CBS - BC & Yukon Centre have established a procedure, approved by the Provincial Health Officer and if required, authorized by an annually renewed provincial Order-in-Council, that enables BCCDC to inform CBS of suspect WNV cases, regardless of self-reported donation or blood receipt history. Through a daily data linkage, CBS is able to identify and apply temporary deferrals to all donors who are suspect WNV cases, and to rapidly quarantine potentially infectious blood components or quickly investigate suspected cases of TT-WNV.

### **1.8 Communications**

CBS will provide updates to hospital Blood Transfusion Services through Customer Letters as required. These are emailed and faxed to all hospital Blood Bank Directors and supervisors, who in turn distribute to blood users in their facilities; as well this information will be provided to the BCCDC and the Provincial Health Officer (PHO). Customer Letters are also available at:

[http://www.bloodservices.ca/centreapps/internet/uw\\_v502\\_mainengine.nsf/web/1182AC2170F6A4D485256DDA0055350F?OpenDocument](http://www.bloodservices.ca/centreapps/internet/uw_v502_mainengine.nsf/web/1182AC2170F6A4D485256DDA0055350F?OpenDocument)

Regular surveillance updates on TT-WNV and WNV epidemiology are also provided by CBS during the WNV season. These are distributed by email to the Transfusion Medicine Advisory Group (TMAG)<sup>2</sup>, and to the wider transfusion medicine community throughout BC and are also available at the TraQ Program website maintained by the Provincial Blood Coordinating Office at: <http://www.traqprogram.ca/WNV.asp>

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<sup>2</sup> TMAG is a standing committee of the Ministry of Health Services that provides expert medical, clinical, and technical advice and guidance on blood transfusion therapy and blood and blood products utilization. TMAG membership includes transfusion medical experts from each health authority in BC

## **II. Activities in BC to Support Planning and Implementation**

### **2.1 Action Plan**

The BC Ministry of Health Services (MoHS) and Canadian Blood Services annually review the Action Plan for WNV and the Blood Supply.

#### **2.1.1 BC Communications Plan**

BCCDC will handle general communications with the public and media on laboratory testing, epidemiology and surveillance of WNV. The Public Affairs Branch, MoHS, will handle all communications on WNV from a MoHS perspective.

Communications from a medical perspective to physicians will be developed and distributed through the TMAG via their email distribution list. Updates for the transfusion medical technologists and physicians will also be provided on the TraQ webpage of the Provincial Blood Coordinating Office website.

<http://www.traqprogram.ca/WNV.asp>

#### **2.1.2 Communication Process with CBS**

To facilitate the exchange of information, regular conference calls are scheduled between CBS and a variety of stakeholders (e.g., public health, Public Health Agency of Canada, Provincial / Territorial Blood Liaison Committee members) during WNV season.

#### **2.1.3 WNV Blood Supply and Utilization Contingency Plan for British Columbia**

In addition to the actions taken by CBS to ensure the safety and security of the blood system, each province and territory takes responsibility for developing contingency plans to address possible scenarios and their unique circumstances. In 2003, BC and Canadian Blood Services developed this action plan and the Utilization Contingency Plan (see Appendix C) in consultation with the TMAG. The Utilization Contingency Plan, which is reviewed annually, includes policy recommendations from best case scenario to four levels of worsening case scenarios that complement the plans developed by CBS, BC MoHS and Health Authorities in BC.

#### **2.1.4 Risk Management**

In addition to the expected arrival of the virus within the province, there is the added complication of BC being a net importer of blood. Approximately 10-15 percent of BC's blood supply comes from other provinces, so the presence of WNV infection in those provinces is incorporated into the contingency planning framework.

## **2.2 Impact on Health Authority Operations – Potential Decrease in Blood Supply**

In unforeseen circumstances, a shortage in the national blood supply may occur that could impact the capacity to undertake health care treatments or procedures that involve the use of blood or blood products. Physicians may need to postpone elective surgeries or reconsider available alternative blood conservation strategies. It is essential that health authorities and care providers are frequently updated on WNV risk to the blood supply. This will occur through various sources: MoHS staff, the PHO, MHOs and Blood Bank Directors.

## **2.3 Case Reporting between Public Health and CBS**

Probable and confirmed cases of human WNV, along with suspected TT-WNV are reportable infections under the Health Act Communicable Disease Regulation of the *Public Health Act*. If required, a provincial Order-in-Council authorizes the BCCDC (where all public health WNV testing is performed in BC) to provide CBS nominal data on suspect WNV cases (when a specimen is received by BCCDC for WNV testing). This reporting is accomplished through a daily secure data linkage from BCCDC to CBS. As appropriate, a number of actions would occur following newly identified WNV cases, including lookback, traceback, retrieval of in-date products and temporary donor deferral.

BCCDC is the lead agency providing general WNV information in BC.

## **Appendix A - Roles and Responsibilities of Stakeholders**

This document outlines the roles of the following parties as they relate to blood and blood products only. The document does not detail the broader responsibilities from a public health perspective.

### **1. Ministry of Health Services (MoHS)**

- Receive updates from Canadian Blood Services (CBS) and discuss Provincial/Territorial (P/T) implications and required actions – through P/T Blood Liaison Committee members.
- Liaise with other departments, agencies and health care providers (Office of the Provincial Health Officer (PHO), British Columbia Centre for Disease Control (BCCDC), Provincial Blood Coordinating Office (PBCO), Public Affairs Bureau (PAB), etc.) to address West Nile virus (WNV) issues and implement required activities.
- Work alongside other provinces and territories to ensure consistent messaging and keep each other updated.
- Communication responsibility:
  - Ensure communication occurs, through the appropriate channels [such as the Transfusion Medicine Advisory Group (TMAG)], on the status and effect of WNV on the blood supply to Health Authorities, Hospitals, Medical Health Officers (MHOs), and Physicians.
  - Create communications to inform the media (Public) and stakeholders on the risks and the quality of the blood system - messaging to align with BCCDC, CBS, and the Public Health Agency of Canada communications' documents.

### **2. PHO and BCCDC**

- Work together with MHOs on surveillance, health protection and disease control.
- Supply information on suspected WNV cases to CBS in a timely manner.
- Communication responsibility:
  - PHO and BCCDC to publicly speak about the communicable disease aspect of this health issue.
  - Advise Minister and the MoHS staff on WNV and health protection and potential impact on BC residents.
  - Communicate with CBS regarding cases and testing results.
  - BCCDC to contact the office of the PHO regarding first probable case of WNV in a blood donor.
  - Work with CBS and Health Canada in determining potential risk.

### **3. Health Authorities**

- Liaise with MoHS and BCCDC on WNV strategies and activities.
- Implement necessary actions related to WNV.
- Assist with lookback/traceback efforts.
- Communication responsibility:
  - Inform MHO, practitioners and staff on WNV issues.
  - Address public issues and concerns.
  - Assist in informing the public on WNV issues – ensure consistent messaging is applied.

### **4. CBS Head Office**

- Update CBS plans for protecting the blood supply during the WNV season. Convey information regarding these plans and WNV risk to the blood system, to their stakeholders and customers (P/Ts, physicians, etc.).
- Receive information on WNV cases and work with blood banks in lookback/traceback efforts.
- Ensure implementation of activities required across CBS.
- Communication responsibility:
  - Communicate contingency plan to provinces and territories.
  - Communicate to hospitals and practitioners, the risks and quality of the blood system.
  - Communicate to the donor population of the continued need for blood donation and preventative measures.
  - Ensure frequent WNV updates on status of testing, WNV issues and contingencies to provinces and territories.
  - Respond to inquiries from the media on the safety of the blood supply.

### **5. CBS – BC & Yukon Centre**

- Process and follow-up on suspect, probable or confirmed cases of WNV reported by BCCDC, in a timely fashion.
- Participate in provincial WNV surveillance activities where appropriate.
- Obtain updates from CBS Head Office and implement contingencies as required.
- Participate in contingency operations with blood banks and practitioners.
- Communication responsibility:
  - Contact the BCCDC regarding first probable human case of WNV in a blood donor and receive confirmation that BCCDC will contact the office of the PHO;
  - Communicate WNV updates with the blood banks and practitioners;
  - Provide CBS Head Office with updates on field operations;
  - Provide MoHS with regular and *ad hoc* updates on the status of the blood supply in BC;
  - Inform MoHS of WNV related activities as appropriate; and,
  - Collaborate with BC Public Health.
- Participate in press conferences as needed and respond to media inquiries related to WNV and blood supply safety.

## **6. Blood Banks and Practitioners**

- Liaise with TMAG and CBS – BC & Yukon Centre.
- Practitioners to apply effective utilization management of blood supply during WNV risk period as defined by CBS and the Public Health Agency of Canada.
- Assist with lookback/traceback where required.
- Receive and provide updates to CBS – BC & Yukon Centre, the PBCO and MoHS on blood availability and WNV.
- Communication responsibility:
  - Blood Banks to continually update CBS – BC & Yukon Centre on blood inventory and requirements.
  - Blood Banks to inform practitioners of WNV risk and status of the blood supply.
  - Practitioners to inform patients of potential risks to blood and alternative options.

## **7. Public Health Agency of Canada**

- Provide policy and regulation framework and guidance.
- Work with CBS and Provincial/Territorial PHOs on WNV planning and surveillance.
- Communication responsibility:
  - Inform the public on WNV surveillance, education and protection from a national perspective.

## **Appendix B - West Nile Virus Blood Supply and Utilization Contingency Plan for British Columbia**

### **A. Preamble**

1. The purpose of this document is to outline the steps to be taken by the BC Ministry of Health Services (MoHS), Canadian Blood Services (CBS) and hospital transfusion services to manage the potential threat of West Nile virus (WNV) infection in the blood system during the WNV season.

### **B. Background**

1. WNV infection may become endemic in BC, with initial reports of human cases likely to occur in late summer or early fall. Medical evidence suggests that the threat of WNV infection through transfusion is likely to occur only after the appearance of human cases of WNV infection within a community. Other evidence identifying a viral endemic state, such as the appearance of WNV-infected mosquito and bird populations, typically precedes the appearance of human infection by several weeks.
2. CBS does year-round donor WNV testing using mini-pools of six donor specimens. CBS' plans for WNV include:
  - i) following a flexible plan for single unit testing (SUT) that:
    - recognizes that the system's total capacity for SUT is limited and therefore—depending on the level and geographic extent of WNV activity—CBS may not have the capacity to perform SUT on collections from all health regions when the triggers (see section 1.3, iii, page 2) are reached;
    - balances considerations of blood safety and blood availability (cancellation or relocation of donor clinics to lower risk areas may be considered if blood inventory permits);
    - implements and stops SUT according to specified criteria (including reporting of a single case in a health region  $\pm$  exceeding a threshold population-based incidence) as outlined in section 1.3iii (see page 2);
    - encourages Canadians to donate throughout summer and not self-defer because of mosquito bites; and
    - collaborates closely with physicians, public health and hospital blood banks on reporting and follow-up of WNV in donors and recipients of blood.
3. BC imports 10-15 percent of its blood supply from other provinces, so the presence of WNV infection in those provinces is factored into the contingency planning framework.

**C. Policy Recommendations for the Best-Case Scenario (Default Policy)**

Table 1: outlines the policy to be followed when the following conditions apply:

- 1) No human case of WNV infection is reported in BC; and
- 2) No human case of WNV infection is reported in a province from which BC imports blood products; and
- 3) No other supporting evidence suggests a WNV endemic state in BC, or in a province from which BC imports blood products.

This will be considered the default policy (Best Case Scenario) for managing the blood system.

**Table 1: Policy Recommendations for Best-Case Scenario**

<p><b>A. Risk Communication</b></p>	<p><b>a) To Hospital Blood Transfusion Services</b></p> <ol style="list-style-type: none"> <li>1. BC Action Plan for WNV and the Blood Supply provided to hospitals through the Transfusion Medicine Advisory Group (TMAG)/CBS</li> <li>2. Other communications from TMAG/CBS (e.g. advice re: TT-WNV &amp; Informed Consent)</li> </ol> <p><b>b) To Physicians</b></p> <ol style="list-style-type: none"> <li>1. General WNV risk info and updated WNV risk info on Internet: <ul style="list-style-type: none"> <li>➤ BCCDC (<a href="http://www.bccdc.org">www.bccdc.org</a>)</li> <li>➤ CBS (<a href="http://www.blood.ca">www.blood.ca</a>)</li> <li>➤ BC Health Authorities (<a href="http://www.healthservices.gov.bc.ca/socsec/contacts.html">www.healthservices.gov.bc.ca/socsec/contacts.html</a>)</li> <li>➤ PBCO and TraQ (<a href="http://www.traqprogram.ca/WNV.asp">http://www.traqprogram.ca/WNV.asp</a>)</li> <li>➤ Public Health Agency of Canada (<a href="http://www.phac-aspc.gc.ca/new_e.html">http://www.phac-aspc.gc.ca/new_e.html</a>)</li> </ul> </li> </ol> <p><b>c) To Public</b></p> <ol style="list-style-type: none"> <li>1. General WNV risk info and updated WNV risk info on Internet: <ul style="list-style-type: none"> <li>➤ MoHS (<a href="http://www.gov.bc.ca/health">www.gov.bc.ca/health</a>)</li> <li>➤ BCCDC</li> <li>➤ CBS</li> <li>➤ Health Authorities</li> <li>➤ Health Canada</li> <li>➤ HealthLink BC <ul style="list-style-type: none"> <li>• phone 8-1-1</li> <li>• Deaf and hearing-impaired toll-free throughout BC 7-1-1</li> </ul> </li> </ul> </li> </ol>
<p><b>B. Inventory Planning</b></p> <ol style="list-style-type: none"> <li>1) Red Blood Cells</li> <li>2) Platelets</li> <li>3) Plasma</li> </ol>	<ol style="list-style-type: none"> <li>1. Blood inventory and distribution planning according to CBS instructions</li> </ol>
<p><b>C. Public Health and CBS Activities</b></p>	<ol style="list-style-type: none"> <li>1. Enhanced (suspect) WNV reporting to CBS according to approved BCCDC-CBS procedure</li> <li>2. Ongoing public health surveillance of bird, mosquito, and human WNV cases in BC and in provinces from which BC imports blood products.</li> </ol>

#### **D. Policy Recommendations for Worsening Case Scenario**

The following contingency plans will be implemented to manage the blood system in BC when supportive evidence from the public health surveillance system indicates an increasing risk of WNV transmission through the blood system, starting from the best-case scenario baseline.

#### **Thresholds for Increasing Risk of Transfusion Transmissible WNV (TT-WNV)**

Thresholds of increasing risk are represented by the following scenarios:

1. Non human epidemiological evidence-based primarily on avian WNV surveillance and, secondarily, on regional WNV surveillance of trapped mosquitoes and dead corvids, or reported equine cases, which suggests a WNV endemic state in a province from which BC imports blood products.
2. Human case(s) of WNV infection (public health-reported or in a blood donor) reported in a province from which BC imports blood products.
3. Reports of WNV in birds or mosquitoes in BC.
4. Human case(s) of WNV infection (public health-reported or in a blood donor) reported in BC.
5. Outbreak of WNV activity in humans in BC.

**Worsening Case Scenario 1:**

Epidemiological evidence to suggest an epizootic WNV endemic state in a province from which BC imports blood products

**Table 2: Policy Recommendations for Worsening Case Scenario 1**

<b>A. Risk Communication</b>	Updated situation report and risk update from TMAG/CBS <b>a) To Hospital Blood Transfusion Services and physicians using blood products</b> <ul style="list-style-type: none"><li>➤ Update risk of TT-WNV infection and be vigilant for human WNV cases through close liaison with public health authorities.</li></ul> <b>b) To physicians</b> <ul style="list-style-type: none"><li>➤ Provide general and updated WNV risk information (through agencies noted in Table 1).</li></ul> <b>c) To public</b> <ul style="list-style-type: none"><li>➤ Provide general and updated WNV risk information (through agencies noted in Table 1).</li></ul>
<b>B. Inventory Planning</b> <b>1) Red Blood Cells</b> <b>2) Platelets</b> <b>3) Plasma</b>	1. Reinforce need for informed consent prior to blood transfusion.
<b>C. Public Health and CBS Activities</b>	1. As per Best Case Scenario.

**Worsening Case Scenario 2:**

Human case(s) of WNV infection reported in a province from which BC imports blood products

**Table 3: Policy Recommendations for Worsening Case Scenario 2**

<b>A. Risk Communication</b>	Updated situation report and risk assessment from Worsening Case Scenario 1, issued by <b>TMAG/CBS</b> <b>a) To Hospital Blood Transfusion Services and Physicians using Blood Products</b> ➤ Provide advice and reinforce need for informed consent prior to blood transfusion.
<b>B. Inventory Planning</b> 1) Red Blood Cells 2) Platelets 3) Plasma	1. CBS - BC & Yukon Centre attempts to import blood components from provinces not reporting WNV human cases. 2. If provincial blood inventory enables, consider preferential use of blood components collected in BC.
<b>C. Public Health and CBS Activities</b>	1. As per Best Case Scenario, plus 2. CBS implements single unit WNV donor testing strategy as outlined in section 1.3. 3. Blood product inventory retrieval and recipient notification policy according to CBS policies and procedures. 4. WNV lookback and traceback policy according to CBS policy and in consultation with hospital Blood Transfusion Services Directors. 5. Coordinate communication strategies and messages with public health authorities (BCCDC) for blood-related issues.

**Worsening Case Scenario 3:**

Epidemiological evidence to suggest an epizootic WNV endemic state in BC

**Table 4: Policy Recommendations for Worsening Case Scenario 3**

<p><b>A. Risk Communication</b></p>	<p>Updated situation report and risk assessment from Worsening Case Scenario 2, issued by <b>TMAG/CBS</b></p> <p><b>a) To Hospital Blood Transfusion Services and Physicians using Blood Products</b></p> <ul style="list-style-type: none"> <li>➤ Provide advice and reinforce need for informed consent prior to blood transfusion.</li> </ul> <p><b>b) To physicians</b></p> <ul style="list-style-type: none"> <li>➤ Provide updated TT-WNV risk information and reinforce need for informed consent prior blood transfusion through a targeted physician letter mail-out from TMAG.</li> <li>➤ Provide general and updated WNV risk info (through agencies noted in Table 1).</li> </ul> <p><b>c) To public</b></p> <ul style="list-style-type: none"> <li>➤ Provide general and updated WNV risk info (through agencies noted in Table 1).</li> </ul>
<p><b>B. Blood Inventory Planning</b></p> <p>1) Red Blood Cells</p> <p>2) Platelets</p> <p>3) Plasma</p>	<p>1. Inventory planning according to CBS instructions.</p>
<p><b>C. Public Health and CBS Activities</b></p>	<p>1. As per Best Case Scenario, plus</p> <p>2. CBS implements single unit WNV donor testing strategy as outlined in section 1.3.</p> <p>3. Blood product inventory retrieval and recipient notification policy according to CBS policies and procedures.</p> <p>4. WNV lookback and traceback policy according to CBS policy and in consultation with hospital Blood Transfusion Services' Directors.</p> <p>5. Coordinate communication strategies and messages with public health authorities (BCCDC) for blood-related issues.</p>

**Worsening Case Scenario 4:**

Human case(s) of WNV infection reported in BC

or

Regional sporadic human cases of WNV

**Table 5: Policy Recommendations for Worsening Case Scenario 4**

<b>A. Risk Communication</b>	<p>Updated situation report and risk assessment from Worsening Case Scenario 3, issued by <b>TMAG/CBS</b></p> <p><b>a) To Hospital Blood Transfusion Services and Physicians using Blood Products</b></p> <ul style="list-style-type: none"><li>➤ Provide advice and reinforce need for informed consent prior to blood transfusion.</li><li>➤ Maximize use of non-blood alternatives.</li></ul> <p><b>b) To physicians</b></p> <ul style="list-style-type: none"><li>➤ Provide updated risk information on TT-WNV and reinforce need for informed consent prior blood transfusion through a targeted physician letter mail-out from TMAG.</li><li>➤ Provide general and updated WNV risk info (through agencies noted in Table 1).</li></ul> <p><b>c) To public</b></p> <ul style="list-style-type: none"><li>➤ Provide general and updated WNV risk info (through agencies noted in Table 1).</li></ul>
<b>B. Inventory Planning</b>	1. Blood inventory planning according to CBS instructions.
1) Red Blood Cells	
2) Platelets	
3) Plasma	
<b>C. Public Health and CBS Activities</b>	<ol style="list-style-type: none"><li>1. As per Best Case Scenario, plus</li><li>2. CBS implements single-unit WNV donor testing strategy as outlined in section 1.3.</li><li>3. Blood product inventory retrieval and recipient notification policy according to CBS policies and procedures.</li><li>4. WNV lookback and traceback policy according to CBS policy and in consultation with hospital Blood Transfusion Services' Directors.</li><li>5. Coordinate communication strategies and messages with public health authorities (BCCDC) for blood-related issues.</li></ol>

**Worst Case Scenario:**

Epidemic human WNV activity in BC

**Table 6: Policy Recommendations for Worst Case Scenario**

<b>A. Risk Communication</b>	Updated situation report and risk assessment from Worsening Case Scenario 4, issued by <b>TMAG/CBS</b> <b>a) To Hospital Blood Transfusion Services and Physicians using Blood Products</b> <ul style="list-style-type: none"><li>➤ Maximize use of non-blood alternatives.</li><li>➤ Reinforce need for informed consent prior to blood transfusion.</li><li>➤ Reinforce vigilance (and reporting) for TT-WNV.</li></ul> <b>b) To physicians</b> <ul style="list-style-type: none"><li>➤ Provide updated risk information on TT-WNV.</li><li>➤ Reinforce informed need for consent policy prior to blood transfusion.</li></ul> <b>c) To public</b> <ul style="list-style-type: none"><li>➤ Provide general and updated WNV risk info (through agencies noted in Table 1).</li></ul>
<b>B. Inventory Planning</b>	1. Blood inventory planning according to CBS instructions (may involve increased imports from provinces with low WNV activity in humans).
<b>1) Red Blood Cells</b>	
<b>2) Platelets</b>	
<b>3) Plasma</b>	
<b>C. Public Health and CBS Activities</b>	1. As per Best Case Scenario, plus 2. CBS implements single unit WNV donor testing strategy as outlined in section 1.3. 3. Blood product inventory retrieval and recipient notification policy according to CBS policies and procedures. 4. WNV lookback and traceback policy according to CBS policy and in consultation with hospital Blood Transfusion Services' Directors. 5. Coordinate communication strategies and messages with public health authorities (BCCDC) for blood-related issues.