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To: Local, Tribal and Regional Health Officials, Infection Control Professionals,  
Physicians and other Health Care Providers, Hospital and Laboratory Staff

From: Diep (Zip) Hoang Johnson, Epidemiologist  
Vectorborne Disease Coordinator  
Wisconsin Division of Public Health

Subject: 2009 Guidelines for Arbovirus surveillance

Attached are the 2009 arbovirus surveillance guidelines, including those for West Nile virus (WNV). As previous years, we will continue to confirm all presumptive positive laboratory results reported by physicians and private laboratories at the WSLH. Case-patients who test positive at the WSLH will be reported to CDC as confirmed. Case-patients for whom specimens are unavailable for confirmatory testing at the WSLH will be reported to CDC as probable. It is important for local health departments to follow-up and report all confirmed and probable human arbovirus infections to the Division of Public Health (DPH) as soon as possible. Division of Public health (DPH) will update its website listing the number of cases and mapping the WNV activity by county once a week. The Dead Bird Reporting Hotline (1-800-433-1610) and dead bird testing for WNV will again be available for callers starting May to November. The equine surveillance will be provided by Wisconsin Veterinary Diagnostic Laboratory.

**Please note, there are a few important changes in 2009:**

- 1) Testing of dead birds will be ended as soon as a county has **one** positive bird; in the past testing stops at two positive birds. We are sorry that Greg Bradley at the USDA is no longer with us but Kristine Bentley will be the new point of contact for all questions regarding dead birds.
- 2) CDC is requesting states to add a supplementary form (asking patient or a medical personnel about medical conditions) in addition to the regular follow-up form (CDES-103) for all confirmed positive WNV cases. I have enclosed the CDC supplementary form with this email. I will be working with Tanya Oemig to program the CDC supplementary form into the WEDSS and to design a protocol for uploading all information to CDC ArboNet electronically. But at this time, please fax me the completed CDES 103 and the CDC supplementary form even if you are one of the counties that are entering information into WEDSS. This will assist me in having the information available to enter into CDC ArboNet.
- 3) DPH is collaborating with the UW-Madison, Department of Entomology to perform mosquito surveillance for *Culex* sp. and *O. japonicus* for three southern regions of Wisconsin.

- 4) The 2009 WI Arbovirus surveillance protocol and the 2008 WI Arbovirus summary will be posted on the DPH WNV website.
- 5) WNV educational materials can be ordered directly from the DHFS Forms Center:
  - a. Use the link to access the order form:  
<http://dhs.wisconsin.gov/forms/PrintFormsOnline.htm>

- b. Follow the instructions and email the form to: Cris Caputo at 608-267-9054  
[dhsfmdphpph@dhs.wi.gov](mailto:dhsfmdphpph@dhs.wi.gov)

*Available WNV materials:*

- 1) Form/Publication #DPH 42107 - "Fight the Bite" - West Nile Virus in Wisconsin
- 2) Form #DPH 42166 - "Use Protection, Avoid Infection" Mosquito-borne Pocket Card
- 3) Form #DPH 9460- West Nile Virus is Something You Can Do Something About with a Few Simple Steps, CDC-998593

In addition, there are limited "Wisconsin Fight the Bite" campaign items available for distribution to citizens at specific public health educational events. Local Health Departments may contact the Vectorborne Coordinator at 608-267-9000 for ordering information.

The Wisconsin DPHWNV information web page surveillance data and other resource material can be found at: <http://dhs.wisconsin.gov/communicable/westNilevirus/>

For further questions on vectorborne diseases please contact Diep (Zip) Hoang Johnson at 608-267-9000 or email at [diep.hoangjohnson@wi.gov](mailto:diep.hoangjohnson@wi.gov).

## SURVEILLANCE FOR ARBOVIRUS INFECTIONS

### Laboratory Testing Capability (Humans)

Available diagnostic tests at the Wisconsin State Laboratory of Hygiene (WSLH) include IgM capture enzyme immunoassays (IgM CEIA) that will identify IgM antibodies in serum and cerebrospinal fluid (CSF) specific to La Crosse (LAC) encephalitis virus, and Eastern Equine encephalitis (EEE) virus. A microsphere immunoassay is used to test serum and CSF for IgM specific to WNV and St. Louis encephalitis (SLE) virus. Clinicians should also consider enterovirus PCR and culture testing of the CSF (WSLH test code 1507 pcr) for patients with apparent aseptic meningitis.

Confirmatory testing: The WSLH will no longer perform the Plaque Reduction Neutralization assay (PRNT) on equivocal results, but will send them to CDC for confirmation. The decision to perform confirmatory testing will require approval of the Division of Public Health (DPH) or the WSLH. Confirmatory testing for other arboviruses (LAC, EEE, SLE) will continue to be performed by the CDC.

Fee-exempt testing: Fee-exempt testing for arbovirus infection will be offered to clinicians whose patients meet one of the following criteria:

- Confirmatory testing of positive test results performed at laboratories other than the WSLH;
- The patient is over 65 years old with signs and symptoms of meningitis (fever, headache and stiff neck) or encephalitis (fever, headache, and altered mental status ranging from confusion to coma) with no other laboratory diagnosis; or
- The patient has a diagnosis of Guillain-Barré syndrome and no other laboratory diagnosis.
- The local health department may request fee-exempt testing be performed if the case-patient lacks insurance coverage or the ability to pay.

Fee-for service: The WSLH will again provide fee-for-service testing for arbovirus infections. Meeting clinical criteria is **not** required to submit serum or CSF specimens to the WSLH for fee-for-service arboviral screening.

Collection and shipping of clinical specimens to the WSLH:

- Specimens submitted to the WSLH for fee-exempt testing must include the WSLH **Attachment A - Enhanced Wisconsin Arbovirus Surveillance Form (4/09)**.
- Specimens submitted for fee-for-service testing must use the **WSLH CDD Requisition Form B**.
- At least 3-7 mls of serum and/or  $\geq 1$ ml of CSF in sterile screw-capped vials should be submitted on cold packs. Please contact the WSLH-Clinical Stock Orders, for ordering of kits and WSLH CDD Requisition Form B at 1-800-862-1088 or 608-265-2966.
- It is **essential** that the lab requisition forms be as complete as possible including **the patient name, city, date of birth, specimen type, submitting agency, collection date and time**.

## Positive Human Arbovirus Reporting and Follow-Up

- The WSLH reports positive human arboviral test results by telephone or fax to DPH and reports all test results to the agency submitting the sample.
- The DPH will promptly report, by phone or email, positive human arboviral test results to the LHD where the patient resides. Vice versa, the LHD should report by phone to DPH any presumptive positive from physicians or commercial labs within 24 hours so that we can quickly obtain specimens from the private labs for confirmation. Most commercial labs will throw out their samples after one week.
- If it is determined that the patient does not reside within the jurisdiction of the LHD, that health department is expected to forward the case to the appropriate LHD for follow up.
- The LHD should contact the physician and the submitting laboratory or hospital infection control staff regarding these test results.
- The LHD should ensure the test results have been relayed to the healthcare provider, patient, and hospital infection control staff before any information will be released to the public.
- LHD staff should use the enclosed **Attachment B - Arboviral Infection Follow-up Form, CDES 103** (see Attachments section) to collect follow-up information requested by the DPH within 72 hours. Once the follow-up has been completed and the paperwork returned to DPH, if the case definition is met then the case will be counted in the state total, the DHFS WNV website will be updated to reflect the case, and the case will be reported to CDC.
- With the exception of the first human **confirmed case** of West Nile virus infection identified in the state for the season, an unusual outbreak of cases, or introduction of a new arbovirus into the state, any of which may prompt a statewide press release, the decision about releasing information on subsequent positive cases will be up to the LHD. The DPH can provide the LHD with a press release template if needed.
- The only information DPH will release regarding positive human cases includes acknowledgement of the positive case, the onset date of the illness, and county of residence of the positive individual. No demographic information (such as sex, age, or hospitalization status of a patient) will be released. Protection of an individual's privacy is of paramount concern when releasing information on human infections. The same criteria will apply should any individuals succumb to the disease.

## Case Definition of Human Arbovirus Infections (EEE, LAC, SLE, WNV )

The DPH will follow current CDC case definitions and classifications of arbovirus infections including West Nile virus encephalitis classified as **neuroinvasive** and West Nile fever classified as **non-neuroinvasive**.

**1. Neuroinvasive** disease requires the presence of fever and at least one of the following:

- acutely altered mental status
- other acute signs of central OR peripheral neurologic dysfunction such as paresis, paralysis, movement disorders, palsies, or sensory deficits
- pleocytosis (increased WBC count) in CSF associated with illness clinically compatible with meningitis (stiff neck, headache)

*Common Clinical Description:*

Meningitis characterized by fever, headache, stiff neck, and pleocytosis or encephalitis characterized by fever, headache, and altered mental status ranging from confusion to coma with or without additional signs of brain dysfunction (e.g., paresis or paralysis, cranial nerve palsies, sensory deficits, abnormal reflexes, generalized convulsions, and abnormal movements).

**2. Non-Neuroinvasive** disease (West Nile Fever) requires, at minimum:

- the presence of fever (as measured by the patient or clinician)
- the absence of neuroinvasive disease (above)
- the absence of a more likely clinical explanation for the illness

*Common Clinical Description:*

A non-specific, self-limited, febrile illness characterized by the acute onset of fever, headache, arthralgias, myalgias, and fatigue.

### Laboratory Criteria for Diagnosis (applies to all arbovirus infections including WNV)

Cases of arboviral disease are also classified as either **confirmed** or **probable**, according to the following laboratory criteria, specified in the CDC case description:

#### Confirmed case:

- Fourfold or greater change in virus-specific serum antibody titer, or
- Isolation of virus or demonstration of specific viral antigen or genomic sequences in tissue, blood, or CSF, or
- Virus specific immunoglobulin M (IgM) antibodies in CSF by antibody-capture enzyme immunoassay (EIA), or
- IgM antibodies in serum by antibody-capture EIA and confirmed by the presence of virus-specific serum immunoglobulin G (IgG) in the same specimen or a later specimen by other serologic assay (such as PRNT).

#### Probable case:

- A single or stable (less than equal to twofold change) but elevated titer of virus-specific antibodies in serum, or
- IgM antibodies in serum detected by antibody-captured EIA but with no confirmatory test results for virus-specific serum IgG antibodies in the same or a later specimen.

A **case** must meet one or more of the above **clinical criteria** **AND** one or more of the above **laboratory criteria**. This determination will be made by DPH.

A complete description of the West Nile virus case definition is available at:

<http://www.cdc.gov/ncidod/dvbid/westnile/clinicians/surveillance.htm#casedef>

## Bird Surveillance (WNV)

### Corvid Surveillance (crows, blue jays, and ravens):

The DPH is requesting the report of **all** sick and dead corvids during May 1 to October 31 for WNV testing. Reporting of other dead/sick species are also encouraged.

- Birds that are suitable for testing outlined in **Attachment C - 2009 West Nile Virus Corvid Collection/Shipment Instructions** will be collected and shipped to the USDA, Wildlife Services in Waupun.
- **Federal Express (account # 2413-9197-3)** will be used to transport dead birds for testing to USDA and WVDL (see attachment C for complete information). The USDA will be responsible for transporting the birds to the University of Wisconsin Veterinary Diagnostic Lab (WVDL) for WNV using IgM antigen capture ELISA (MAC – ELISA) performed on a skin biopsy.
- When one WNV positive bird is detected within a county, corvid specimens from that county will no longer be accepted for testing.
- We are relying on assistance from LHDs as well as other local entities including animal control staff to continue to report dead and sick birds on the Health Alert Network (HAN). This will provide data entry and tracking capabilities for reporting sick and dead birds, printing reports, and accessing summaries of dead bird reporting and testing. Please do not send reports to DPH for entry.
- The system can be accessed via the HAN at [https://www.han.wisc.edu/mod\\_phom/index.jsp](https://www.han.wisc.edu/mod_phom/index.jsp). If you are not a registered HAN user, click the Register tab and follow the directions to become a registered user. This should be done as soon as possible.
- All WNV test results from corvid bird surveillance will be posted to the HAN West Nile Virus Bird Reporting System by the WVDL and will be available to LHDs as the tests are completed.
- DPH will promptly report WNV positive bird(s) by phone or email to the respective LHD. In addition, the Hotline staff will call the LHD with the positive bird to notify them of the bird's specific information (i.e. where and when it was collected). LHDs may also access the HAN WNV Bird Reporting system to find information on all submitted birds.
- We request that the LHD contact the bird submitter (i.e. animal control officer or veterinarian) if the submitter was not LHD staff, to inform them of positive test results.
- With the exception of the first WNV birds identified in the state, which may be statewide news events, the LHD will decide whether to release information to the public on subsequent positive cases. A press release template is available from the DPH.

- Once the LHD is informed of positive test results, information on WNV positive birds will be posted to the DHFS WNV web site with the next update (no sooner than 24 hours after the LHD is notified).
- A copy of the Sick/Dead Bird reporting form, **Attachment D – Wisconsin West Nile Virus Surveillance: Sick/Dead Bird Reporting Form 2009**, is enclosed for your reference.

## **Non-Corvid Surveillance (birds and mammals)**

### **WDNR West Nile Virus Non-Corvid Surveillance Plan for 2009**

Over the last six years, more than 1200 birds and mammals have been tested in Wisconsin's non-corvid WNV surveillance program. In past years of WNV surveillance, DNR Wildlife Health targeted certain non-corvid bird and mammal species for testing in an effort to determine if and how wildlife populations were being affected by this disease. However, as a result of both a reduction in federal funds available to the WNV surveillance program and a lack of evidence suggesting that WNV has significantly affected targeted wildlife populations, WDNR will not be requesting individual birds and mammals of specific species for WNV testing. Instead, **WDNR surveillance efforts will focus on any non-corvid bird or mammal that is showing clinical signs of WNV, or that is involved in a significant mortality event (die-off of >5 individuals), and as part of routine diagnostic testing during necropsies and avian influenza surveillance efforts.**

Reports of sick/dead non-corvid birds should be referred to the local DNR office/Wildlife Biologist or the Dead Bird Hotline (1-800-433-1610). The Dead Bird Hotline will be staffed daily from May 1 through October 31 to respond to citizen reports of sick/dead birds and requests for WNV and Avian Influenza (AI) information. During the off-season, the hotline number will have a messaging service where callers can leave sick/dead bird reports and hotline staff will respond back or refer calls as appropriate. Reports of sick/dead mammals should be referred to the local DNR office/Wildlife Biologist.

## Equine Surveillance (WNV)

- Notification of positive equine arboviral encephalitis cases diagnosed at the Wisconsin Veterinary Diagnostic Laboratory (WVDL) will continue. Results of positive arbovirus tests in horses are reported electronically or by FAX by the WVDL to the DPH.
- The DPH will forward, either by phone or by FAX, basic information on the animal and the test results to the LHD where the animal or animal owner resides. More specific information on individual cases can be requested from the DPH. Please be aware that equine information related to arboviral surveillance held by LHD staff **is not** protected by medical confidentiality. Past requests to LHD for equine information resulted in health departments being legally obligated to provide the information requested.
- Once the LHD, veterinarian, and horse owner are informed of the test results, information on WNV positive horse cases will be posted to the DHFS WNV web site with the next update. Information posted will only identify a positive horse and the county where it resides.

## **Attachments:**

1. **Attachment A:** WSLH Enhanced Wisconsin Arbovirus Surveillance Form (4/09). This form is to be used to order human arbovirus testing, enclosed with the samples, and send to WSLH.
2. **Attachment B:** Arbovirus Infection Follow-up Form, CDES 103  
This form can be found in EpiNet, The State of Wisconsin Disease Surveillance Manual, under Arboviral Diseases.
3. **Attachment C:** West Nile Virus Corvid Collection/Shipment Instructions (rev04/09).
4. **Attachment D:** Wisconsin West Nile Virus Surveillance- Sick/Dead Bird Reporting Form (rev04/09).
5. **Attachment E:** CDC Supplementary Questionnaire (rev04/09)

**Attachment A: Enhanced Wisconsin Arbovirus Surveillance (rev4/09)**

**WISCONSIN STATE LABORATORY OF HYGIENE**

<p><b>Patient Name (Last,First)</b> _____</p> <p><b>Patient Address</b> _____</p> <p><b>Patient City</b> _____</p> <p><b>Patient State if not Wisconsin</b> _____</p> <p><b>Age or Date of Birth:</b> _____</p> <p><b>Patient Sex:</b>     M / F</p>	<p><b>SUBMITTING AGENCY:</b> (Name &amp; Address)</p> <p><b>Physician's Name</b> _____</p> <p><b>Agency Telephone #:</b> _____</p> <p><b>SLH Agency#:</b> _____</p> <p><b>Bill to: 609</b></p> <p><b>Study: Arbo Surv</b></p>
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**Specimen Type:**   \_\_\_ CSF (*must be iced in transit*)       \_\_\_ Acute Serum   \_\_\_ Convalescent Serum  
(Note: Both CSF and serum are recommended in acute cases.)

**Collection Date:** \_\_\_\_\_       **Illness Onset Date:** \_\_\_\_\_

**Hospitalized?**    Yes        No       **Travel History:** \_\_\_\_\_

**Reason for Testing:**

(Note: The request must meet one of the following criteria to qualify for fee-exempt testing)

- Confirmatory testing of positive test results performed at laboratories other than the WSLH
- The patient is over 65 years old with signs and symptoms of meningitis (fever, headache and stiff neck) or encephalitis (fever, headache, and altered mental status ranging from confusion to coma) with no other laboratory diagnosis
- The patient is diagnosed with Guillain-Barre' syndrome with no other laboratory diagnosis
- Approved by local health department

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**WSLH Test Names & Codes**

- Eastern Equine Encephalitis IgM CEIA Ab (2437M)
- La Crosse Encephalitis IgM CEIA Ab (2440M)
- West Nile Virus/ St. Louis Encephalitis IgM (2443)
- Arbovirus IgM Panel (2435)

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\_\_\_ **Specimen Shipping Instructions:** CSF and serum must be shipped with cool-pack; SLH kit #22 or equivalent may be used.

**Specimens should be shipped to: Wisconsin State Laboratory of Hygiene, 465 Henry Mall, Madison, WI 53706**

(Note: Separate specimens and forms should be submitted if other testing is desired.)

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**Attachment C: WEST NILE VIRUS  
CORVID COLLECTION/SHIPMENT INSTRUCTIONS (rev04/09)**

1. Collect freshly dead, non-scavenged crows, blue jays, and ravens. The corvid carcass should be free of maggots and strong odor, and have intact eyes. \*\*\*
2. Live sick birds should be humanely euthanized by injection of barbiturate euthanasia solution or by cervical dislocation.
3. Wear rubber gloves when handling sick or dead birds. If you have no gloves, insert your hand into a clean plastic bag, pick up the bird with the bagged hand, invert the bag over the bird and seal the bag.
4. Freeze birds as soon as possible after collection.
5. Place each bird in an individual plastic bag and seal. If more than one bird is shipped, each bag must be identified. Double bag the individual carcasses as a group.
6. For each bird or group of birds submitted from one location, complete a “Wisconsin West Nile Virus Surveillance: Sick/Dead Bird Reporting Form”. Include a copy of this form with each submitted bird. Information needed for each bird must include:
  - a. species
  - b. date collected
  - c. location (e.g. street address/city/zip code, or township/section/range)
  - d. found dead or euthanized
  - e. additional history as requested on the Sick/Dead Bird Reporting Form\*Cooperators (who have access) may enter the information on the HAN system and then include the printout or reporting form OR the information will be entered on the HAN system for you by the Dead Bird Hotline Staff when the package is received.
7. Birds can be shipped in Styrofoam or plastic coolers placed inside a cardboard box as the final shipping container. Insert newspaper or other fill into the space between the sides of the box and the cooler to prevent breakage or leakage. Line the cooler with a large plastic bag and pack the carcasses in the cooler with ice packs. Place crumpled newspaper or similar absorbent material into the cooler with the bagged carcasses to fill unused space, keep the ice packs in contact with the carcasses, and provide insulation. Tape the cooler or box shut with strapping tape.
8. Place the “Sick/Dead Bird Reporting Form” in a Ziploc bag and place the Ziploc bag in the shipping container with specimen.
9. Contact FedEx to arrange package pickup at 1-800-463-3339 for delivery to the USDA, APHIS, Wildlife Services Program. **DO NOT SHIP PACKAGES ON FRIDAYS!** A shipping label is required for all shipments. Labels can be picked up from many Post

Offices, FedEx Kinkos, or provided by the driver upon pickup. The following information will need to be completed on the shipping label:

Block #

- a. The Date, your name, company/agency, address, and telephone number. You may leave the sender FedEx Account Number section blank.
- b. N/A
- c. Recipient's information:

USDA APHIS Wildlife Services  
1201 Storbeck Drive  
Waupun, WI 53963  
(920) 324-4514

- d. Check the **FedEx Standard Overnight** box (this is the 2<sup>nd</sup> box)
- e. Check the **Other Pkg.** box
- f. Only check the **No** box
- g. Check the **Recipient** box  
FedEx Acct. No. = **2413-9197-3**

10. Contact the Dead Bird Hotline Technician at 1-800-433-1610 to indicate that you have sent a package.
11. Styrofoam boxes, coldpaks, and shipping labels for shipping birds can be sent to you upon request. Please contact the Dead Bird 'Hotline' staff at 1-800-433-1610 to request containers for corvid shipments.

**\*\*\* For other bird species, contact the Dead Bird hotline or local DNR office to find out whether it can be tested for WNV or other diseases by the DNR.**



**Attachment E. CDC Supplementary Questionnaire (rev04/09)**  
**Questions to Assess Underlying Medical Conditions and Medication Use**

1. Before your West Nile virus infection, did a health care provider ever tell you that you had any of the following medical conditions?

- |  |                              |                             |                                  |
|--|------------------------------|-----------------------------|----------------------------------|
| Diabetes                                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| High blood pressure (hypertension)           | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Heart attack (myocardial infarction)         | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Angina or coronary artery disease            | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Congestive heart failure (CHF)               | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Stroke                                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Chronic obstructive pulmonary disease (COPD) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Chronic liver disease                        | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Kidney failure or chronic kidney disease     | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Alcoholism                                   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Bone marrow transplant                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Solid organ transplant                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |

If yes: What organ was transplanted?: \_\_\_\_\_

What year was the transplant?: \_\_\_\_\_

- |        |                              |                             |                                  |
|--------|------------------------------|-----------------------------|----------------------------------|
| Cancer | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
|--------|------------------------------|-----------------------------|----------------------------------|

If yes: What type(s)?: \_\_\_\_\_

What year were you diagnosed?: \_\_\_\_\_

Are you currently being treated for cancer?:  Yes  No  Unknown

2. Before your West Nile infection, did a health care provider ever tell you that you had a medical condition that limited your ability to fight an infection?  Yes  No  Unknown

If yes: What condition(s)?: \_\_\_\_\_

3. At the time you were diagnosed with West Nile virus infection, were you taking any of the following types of prescription medications or treatments?

- |  |                              |                             |                                  |
|--|------------------------------|-----------------------------|----------------------------------|
| Chemotherapy                                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Other treatments for cancer                        | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Hemodialysis                                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Other treatments for kidney disease                | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Oral or injected steroids (not inhaled or topical) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Insulin or other medications to treat diabetes     | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Medications to treat high blood pressure           | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Medications to treat coronary artery disease       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Medications to treat congestive heart failure      | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Medications that suppress the immune system        | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |

4. Which of the following sources provided the information above? (**check all that apply**)

- |          |                              |                             |                      |                              |                             |
|----------|------------------------------|-----------------------------|----------------------|------------------------------|-----------------------------|
| Patient  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Family member/friend | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Provider | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Medical record       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |