

How to complete the Vaccine Preventable Diseases (VPD) Surveillance Form

Guidance document
September 2015

Public Health Ontario

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Purpose

The purpose of guidance document and the the [Vaccine Preventable Disease \(VPD\) Surveillance Form](#) is to assist Public Health Units (PHUs) to obtain the required information when investigating a case of a VPD in order to fulfill provincial surveillance reporting requirements utilizing the integrated Public Health Information System (iPHIS).

This document was developed for the following VPDs: *Haemophilus influenzae* b disease, invasive (Hib), meningococcal disease, invasive (IMD), mumps, pertussis (whooping cough), pneumococcal disease, invasive (IPD), and varicella (chickenpox). This document contains information and links to the Appendix A and B chapters for the above VPDs, Public Health Ontario Laboratory (PHOL) test directory information with links and pertinent information from iPHIS bulletins.

Documentation of the elimination of measles and rubella is underway and enhanced surveillance of these diseases is required. The [How to complete the Measles and Rubella \(MR\) Enhanced Surveillance Form](#) guidance document and [Measles and Rubella \(MR\) Enhanced Surveillance Form](#) provide additional details on the enhanced surveillance data reporting requirements.

Reporting Process

Ontario legislation mandates that a specified reportable VPD suspected by the PHU should be reported to Public Health Ontario (PHO) using iPHIS, or any other method specified by the ministry, within a certain number of day(s) following the receipt of initial notification of the case.¹ Cases must also be entered using iPHIS following receipt of initial notification:

VPD	Report within:
Hib; IMD; Mumps; Pertussis	One business day
IPD; Varicella	Five business days

If you have any questions about VPD case or contact management, or completion of the accompanying form, please contact the Immunization & VPD team at Public Health Ontario at ivpd@oahpp.ca.

Vaccine Preventable Diseases Surveillance Form Details

The VPD Surveillance Form can be used in PDF fillable format or printed out and completed as a hard copy. The drop down values are listed in this Guidance Document to facilitate completion of the Form. For your reference, navigation details for the corresponding iPHIS data entry fields are provided.

Section 1: Client Information

This client information section is used to collect basic demographic client information.

From the iPHIS Demographics Module go to Client Demographics

Enter the client's information. The minimum mandatory data elements required include the client's last name, first name, date of birth, gender and PHU.¹

Section 2: Case Details

This case details section explains aspects of the case details when entering surveillance information in to iPHIS.

From the iPHIS Outbreak Module go to Cases >Case> Case Details

REPORTED DATE

Receipt date of the initial notification of a confirmed, probable or person under investigation (PUI) VPD case. If the case was transferred from a different PHU, the reported date does not change. This reported date should remain as the date the initial PHU first received notification.^{2,3}

ONSET DATE

Enter the date the clinically compatible signs and symptom(s) / clinical evidence started. These are described under the clinical evidence section in Appendix B – Case Definition and this date is used to

establish the period of communicability. Please refer to the Symptoms section below for a list of the clinically compatible signs and symptoms found in Appendix B for each specific VPD.

INITIAL CLASSIFICATION AND DATE

Indicate the classification (PUI, confirmed, probable or does not meet) and corresponding date. Most initial classifications will be "PUI" pending lab results and/or confirmation of an epidemiological link.

FINAL CLASSIFICATION AND DATE

Indicate the classification (confirmed, probable or does not meet) and corresponding date once the lab results and/or epidemiological link has been established. A final case classification of epi-linked confirmed **is not a valid classification** and **should not be used**.

Please refer to the following links for provincial surveillance case definitions:

VPD	Links for provincial surveillance case definitions
Hib	Appendix B - Hib
IMD	Appendix B - IMD
Mumps	Appendix B - Mumps
Pertussis	Appendix B - Pertussis
IPD	Appendix B - IPD (confirmed cases only)
Varicella	Appendix B - Chickenpox Note: only the following <u>individual</u> confirmed case classification of chickenpox should be reported: <ul style="list-style-type: none">• Confirmed cases (clinical evidence of illness <u>and</u> laboratory confirmation)• Hospitalized cases• Cases with complications, including death All cases of chickenpox (including those that have been entered as individual cases) should be reported within the aggregate report. Please note herpes zoster (shingles) is not reportable. ⁴

AGE AT ONSET

Age of the case at the time of onset of disease as established above (indicate if years or months).

Section 3: Clinical Information / Symptoms

Presenting symptoms and clinical information is needed to complete the surveillance reporting requirements.

From the iPHIS Outbreak Module go to Cases > Case > Symptoms

Select all symptoms that are present from the list provided. Only symptoms required to meet the criteria for clinical evidence (as described in the Appendix B – Case Definition) are included. These are required to establish confirmed and probable case classifications for provincial reporting purposes. Additional symptoms not in the drop down menu may be recorded under ‘Other symptoms’. For fever, provide the highest measured temperature if available. Other significant clinical details may be recorded in [Section 11: Notes](#).

Note: The Clinical Evidence outlined in Appendix B for the respective VPD may not match the selection of symptoms provided in iPHIS. Please choose the most appropriate symptom(s):

VPD	Clinical Evidence per Appendix B	
Hib	<ul style="list-style-type: none"> • Meningitis • Epiglottitis • Bacteremia 	<ul style="list-style-type: none"> • Buccal cellulitis • Pneumonia • Septic arthritis ⁵
IMD	<ul style="list-style-type: none"> • Meningitis • Meningococemia • Pneumonia with bacteremia • Septic arthritis 	<ul style="list-style-type: none"> • Pericarditis • Purpura fulminans • Petechiae ⁶
Mumps	<ul style="list-style-type: none"> • Unilateral or bilateral tenderness and swelling of parotid or other salivary gland lasting more than two days • Respiratory tract symptoms • Orchitis • Oophoritis 	<ul style="list-style-type: none"> • Aseptic meningitis • Encephalitis • Pancreatitis • Hearing Loss • Mastitis • Asymptomatic ⁷
Pertussis	<ul style="list-style-type: none"> • Paroxysmal cough of any duration • Cough ending in vomiting, gagging, or associated with apnea 	<ul style="list-style-type: none"> • Cough with inspiratory "whoop" • Cough lasting 2 weeks or longer along with one of the above ⁸
IPD	<ul style="list-style-type: none"> • Pneumonia with bacteremia • Meningitis ⁹ 	<ul style="list-style-type: none"> • Bacteremia without a known site of infection
Varicella	<ul style="list-style-type: none"> • Pruritic rash (macules to papules, vesicles and crusts); all stages may be simultaneously present; lesions may appear in crops ¹⁰ 	

In iPHIS, ensure the “Use as onset” box next to the onset date is checked off when the VPD-defining symptom is present.² The onset date of the symptom will be used to assist in the determination of the period of communicability and transmission exposure period.

Section 4: Risks

Risk factors are entered in this RISK section of iPHIS. The next section explains how and where to enter information in the iPHIS RISK tab.

MEDICAL RISK FACTORS

From the iPHIS Outbreak Module go to Cases > Case > Risks > Medical Risk Factors

Select “Yes” if the client has no immunization. Select “No” if the client is partially or completely immunized and enter immunization details as per Section 7 (Immunization History).

BEHAVIOURAL SOCIAL FACTORS

From the iPHIS Outbreak Module go to Cases > Case > Risks > Behavioural Social Factors

Select “Yes” if the client has had recent travel or visitors from other countries, then enter travel details as per Section 8 (Acquisition Exposure).

PREGNANT

From the iPHIS Outbreak Module go to Cases > Case > Risks > Medical Risk Factors

Select “Yes” if the client is pregnant and provide the gestation (weeks) at the time of illness onset.

Section 5: Interventions/Treatments

Sections 5, 6, and 7 are used to enter specific case information including hospitalization information, laboratory testing and results and immunization information.

From the iPHIS Outbreak Module go to Cases > Case > Intervent/Treatments

HOSPITALIZATION

Indicate if the case is hospitalized and include the hospital (facility) name where the case is being investigated/treated, admission and discharge dates, and purpose of the visit (e.g. treatment, lab work, etc.). Do not enter an emergency room visit (i.e. without admission) as a hospitalization.²

Hospitalization that is less than 24 hours should be verified to ensure that was an inpatient admission versus an ER visit which is an outpatient setting.

Section 6: Laboratory Information

Sections 5, 6, and 7 are used to enter specific case information including hospitalization information, laboratory testing and results and immunization information.

From the iPHIS Outbreak Module go to Cases > Case > Lab

LABORATORY TESTING

Indicate “Yes” if laboratory testing was done and provide the testing details including disease, specimen type, test, result, (specimen) collection date and date of result.

The health care provider should be supported in obtaining the appropriate clinical specimens and ordering one or more laboratory tests to confirm the disease which is a requirement for a confirmed case classification when no epidemiological link to a laboratory confirmed case is present. Select the specimen type, test, and a corresponding result for each test. If the specimen or result is different from the drop down menu options, choose “Other (specify)” and indicate the specimen / result in the “Specify / Lab Comments” field. Each laboratory specimen should be entered into iPHIS including date of collection, result and date of result.

Specimen Type	Test	Result
Blood CSF	Culture	Detected
		Not Detected
		Indeterminate
		Pending
		Other (specify)
Blood	IgM IgG acute IgG convalescent	Reactive
		Non-reactive
		Indeterminate
		Pending
		Other (specify)
Normally sterile site (e.g. CSF, joint, pleural or pericardial fluid)	RT-PCR	Detected
Swab (e.g. nasopharyngeal (NP), buccal, throat)		Not Detected
Urine		Indeterminate
		Pending
		Other (specify)

Refer to the links provided for additional guidance on laboratory information. Select the link **Appendix B - Section 4.0 Laboratory Evidence** under each respective VPD for information on laboratory confirmation, approved/validated tests, and indications and limitations. Public Health Ontario Laboratory (PHOL) test directory information is also included. Select the link **PHOL Test Directory – [Name of Test]** for information on specimen requirements, test information, and testing turnaround time.

VPD	Links for Laboratory Information
Hib	Appendix B - Section 4.0 Laboratory Evidence PHOL Testing Directory - Haemophilus influenzae - Confirmation and serotyping
IMD	Appendix B - Section 4.0 Laboratory Evidence PHOL Testing Directory - Neisseria meningitidis - Blood - RT-PCR / Neisseria meningitidis - CSF - RT-PCR / Neisseria meningitidis – ID - confirmation and serotyping
Mumps	Appendix B - Section 4.0 Laboratory Evidence PHOL Testing Directory - Mumps - Diagnostic - PCR / Mumps - Diagnostic Serology
Pertussis	Appendix B - Section 4.0 Laboratory Evidence PHOL Testing Directory - Bordetella - Respiratory

VPD	Links for Laboratory Information
	Appendix B - Section 4.0 Laboratory Evidence
IPD	PHOL Testing Directory - Streptococcus pneumoniae – CSF – RT-PCR / Streptococcus pneumoniae – Lung Tissue – RT-PCR / Streptococcus pneumoniae - Serotyping
Varicella	Appendix B - Section 4.0 Laboratory Evidence
	PHOL Testing Directory - Varicella – Diagnostic Serology / Varicella Zoster Virus – Culture

FURTHER DIFFERENTIATION

From the iPHIS Outbreak Module go to Cases > Case > Case Details

For certain VPDs where further differentiation is applicable, please indicate the corresponding type, serogroup or serotype once available:

VPD	Further Differentiation	Options
Hib	Type	type b; other (not reportable) – specify at PHU discretion
IMD	Serogroup	A; B; C; Y; W-135
IPD	Serotype	free text

Section 7: Immunization History

Sections 5, 6, and 7 are used to enter specific case information including hospitalization information, laboratory testing and results and immunization information.

CLIENT IS UNIMMUNIZED

From the iPHIS Outbreak Module go to Cases > Case > Risks > Medical Risk Factors

The immunization history section reflects the immunization status of the case **before** disease onset. It is critical to collect information on the vaccine which protects against the suspected VPD and document

the accurate administration date of each dose of vaccine. This is used to evaluate if the VPD resulted from a failure to vaccinate versus a vaccine failure.

From the iPHIS Outbreak Module go to Cases > Case > Intervent/Treatments > (+)Immunizations / Chemoprophylaxis

Select “No” if the client has received one or more dose(s) of the VPD-specific vaccine and provide the exact administration date, agent, lot #, site, dose #, and source of information (e.g. client, consent form, health unit / IRIS or Panorama, immunization record, parent report, provider report). If the exact administration date is unknown, enter the month / year if known under the “Estimated Date” field (e.g. Td 1999; Tdap June 1984). Please note vaccines no longer or not in use in Ontario are preceded by ‘(I)’.² Refer to [Ontario’s Publicly Funded Immunization Schedules](#) for details.¹¹

From the iPHIS Outbreak Module go to Cases > Case > Risks > Medical Risk Factors

Select “Yes” if the client has not received any doses of the VPD-specific vaccine. Select the reason the client is unimmunized from the adjacent drop-down list (e.g. religious/ conscientious objection, medical contraindication, laboratory evidence of previous disease, underage for vaccination). If the reason is not available in the drop-down list, select “Other” and specify the reason in the [Section 11: Notes](#) as indicated. Section 8: Acquisition Exposure.

Obtaining missing immunization information is critical to adequately evaluate the effectiveness of our vaccine programs. Immunization records may be obtained from the local PHU where the case attended elementary school, from the primary care provider who administered the vaccine or from his/her home country for persons born outside of Canada.

Section 8: Acquisition Exposure

Aquisition and Transmission exposures (numbered 8 and 9) are used to examine the possible sites where a case might have acquired the disease and possible sites where a case might have exposed others during the communicable period of the disease.

From the iPHIS Outbreak Module go to Cases > Case > Exposures

The incubation period varies by disease. Examine potential sources the case had for acquiring the disease using the period indicated below before the onset of symptoms. Pertinent travel history should be provided when indicated. Indicate if the case is epidemiologically linked to a laboratory-confirmed

case under investigation. For all diseases with the exception of IPD, person to person is the mode of disease transmission.

VPD	Incubation Period per Appendix A
Hib	Unknown; probably short, 2-4 days ¹²
IMD	2-10 days, commonly 3-4 days ¹³
Mumps	12-25 days, commonly 16-18 days ¹⁴
Pertussis	Usually 7-10 days, can range from 5-21 days ¹⁵
IPD	As short as 1-3 days ¹⁶
Varicella	10-21 days, commonly 14-16 days; may be shortened in the immunodeficient and prolonged as long as 28 days after passive immunization against varicella ⁴

CLIENT TRAVEL OUTSIDE ONTARIO WITHIN PAST MONTH

Either “No” or “Yes” must be selected for the behavioural risk factor **“TRAVEL OUTSIDE ONTARIO WITHIN THE PAST MONTH”**

If the client traveled (i.e. “Yes” selected), further details concerning travel (e.g., location and dates of travel) should be entered in *section 4.0 Exposures*.

The time frame for assessing travel outside Ontario is approximately one month from symptom onset.

The following information is captured in the name of the acquisition exposure:

“TRAVEL TO {COUNTRY/PROVINCE}” or “MIGRATED FROM {COUNTRY/PROVINCE}” or “VISITOR FROM {COUNTRY/PROVINCE}”.

If the client traveled (i.e. “Yes” selected), indicate:

- **Travel start date** – date client arrived at their destination (note: if the case migrated or is a visitor from a different country, enter the date of birth)
- **Travel end date** – date client departed from their destination to return to Ontario
- **Travel details** – enter the region / country / province where the client traveled or indicate if the client had out-of-province visitors suspected of transmitting the VPD. If the client traveled to more than one country / province, specify the dates client was in each area (e.g. Europe – Germany July 4-7, 2014; Austria July 7-10, 2014; Netherlands July 10-14, 2014).

Note: for the purpose of capturing all travel-related exposures under this travel section, both acquisition and transmission exposure details should be provided in this section. If the client traveled during

his/her infectious period, additional information may be required such as flight details and/or attractions visited.

EPI-LINKED TO LAB-CONFIRMED CASE

If “Yes” is selected, provide the iPHIS case ID of the lab confirmed case.

OTHER ACQUISITION

Indicate if the client acquired disease from a source other than travel or epi-link to a lab confirmed case (e.g. attended the same location where the source case visited during the infectious period). If “Yes”, provide the facility name / type / address (e.g. Tiny Tim Toffee Shop – 123 Candy Street, Toronto) and the start/end dates of the exposure.

Section 9: Transmission Exposure

Aquisition and Transmission exposures (numbered 8 and 9) are used to examine the possible sites where a case might have acquired the disease and possible sites where a case might have exposed others during the communicable period of the disease.

From the iPHIS Outbreak Module go to Cases > Case > Exposures

PERIOD OF COMMUNICABILITY

Timely identification is essential to mitigate the risk of disease transmission to susceptible contacts. To assist with contact identification, the period of communicability and mode of transmission for each VPD is provided. See [Section 12](#) for contact follow-up details.

VPD	Period of Communicability per Appendix A	Mode of Transmission per Appendix A
Hib	As long as Hib bacteria are present, which may be for a prolonged period of time even without nasal discharge; communicability ends within 24 to 48 hours after starting effective antibiotic therapy ¹²	Most commonly by inhalation of respiratory droplets or by direct contact with nasal or throat secretions ¹²
IMD	Usually 7 days prior to onset of symptoms to 24 hours after the initiation of appropriate antibiotic therapy ¹³	Direct contact with the nose and throat secretions or by respiratory droplets; close and prolonged contact, such as kissing, sneezing, and sharing eating and drinking utensils ¹³

VPD	Period of Communicability per Appendix A	Mode of Transmission per Appendix A
Mumps	7 days before and up to 5 days after onset of parotitis; mumps virus may be isolated from saliva and respiratory secretions for up to 9 days after onset of parotitis, however risk of transmission is reduced by 5 days after symptom onset ¹⁴	Droplet spread during face-to-face contact and direct contact with saliva or respiratory droplets; Spread through coughing, sneezing, sharing drinks, kissing, or from contact with any surface that has been contaminated with droplets ¹⁴
Pertussis	Highly communicable in the first 2 weeks; negligible in about 3 weeks; no longer communicable after 5 days of effective treatment ¹⁵	Direct contact with discharges from respiratory secretions via droplets ¹⁵
IPD	No special management of contacts required unless the contact is in the setting of an institutional outbreak ¹⁶	
Varicella	Usually 1-2 days before onset of rash and continues until all lesions are crusted, as long as 5 days; may be prolonged in individuals with altered immunity ⁴	Direct, droplet or airborne spread of vesicle fluid or secretions of the respiratory tract or indirectly by freshly contaminated fomites; to the fetus during pregnancy ⁴

TRANSMISSION DETAILS

Obtain a list of locations during the disease specific period of communicability that the case attended, including specific details of dates and length of time in each location (when applicable to the specific VPD). This may require a separate log sheet depending on the specifics of case (see [Section 11: Notes](#)).

Section 10: Complications & Outcome

Sections 10, 11, and 12 are used to explain possible complications and outcomes and provides directions where to write notes if your health unit uses them.

COMPLICATIONS

From the iPHIS Outbreak Module go to Cases > Case > Complications

Select “Yes” if the client had complications and specify.

OUTCOME AND OUTCOME DATE

From the iPHIS Outbreak Module go to Cases > Case > Outcome

Indicate the case outcome (recovered, residual effect(s), fatal) and provide details in [Section 11: Notes](#). If the outcome is fatal, the cause and date of death must be provided.

Section 11: Notes

Sections 10, 11, and 12 are used to explain possible complications and outcomes and provides directions where to write notes if your health unit uses them.

From the iPHIS Outbreak Module go to Cases > Case > Notes

Include all significant clinical details and/or information which might be of assistance in ensuring a complete investigation is accomplished.

Section 12: Contact Follow-up Sheet (Optional)

Sections 10, 11, and 12 are used to explain possible complications and outcomes and provides directions where to write notes if your health unit uses them. This sheet may be used at the health unit's discretion. As privacy best practice, do not include any identifying contact information.

Individuals who were in contact with a person during the period of communicability require assessment to determine their risk of acquiring the disease. This assessment will assist in determining the risk of the contacts with respect to disease acquisition as a result of this exposure (i.e. not susceptible or susceptible) and whether additional recommended public health interventions such as chemoprophylaxis or immunoprophylaxis is indicated.

VPD Links to Contact and Post-exposure Management Information

[Appendix A - Section 6.4 Management of Contacts](#)

Hib Defined as a person living with or who has spent four or more hours per day with the case, for at least five of the seven days preceding the day of hospital admission

- Chemoprophylaxis for where there is at least one contact in the household who is a child < 4 years who has not received the recommended doses of Hib containing vaccines or where there is an immunocompromised child regardless of immunization status¹²

[Appendix A - Section 6.4 Management of Contacts](#)

IMD Household and close contacts (defined in Appendix A) who were exposed seven days before onset of symptoms to 24 hours after initiation of effective treatment, regardless of immunization status⁸

- Chemoprophylaxis [highest risk with household contacts] and immunoprophylaxis if serogroup is vaccine preventable¹³

[Appendix A - Section 6.4 Management of Contacts](#)

Mumps Refer to criteria of those in contact seven days before to five days after symptom onset

- No chemoprophylaxis or immunoprophylaxis recommended for prevention of disease transmission but immunization with a mumps-containing vaccine as appropriate for age is recommended for susceptible contacts¹⁴

[Appendix A - Section: Management of Contacts](#)

Pertussis Due to waning immunity from prior disease or immunization, all household contacts are potentially susceptible. In addition, high risk persons as defined below (with face-to-face exposure and/or shared confined air for > 1 hour) are considered contacts. These high risk persons (either household or other exposure risk) are recommended for chemoprophylaxis.

- Chemoprophylaxis for infants < 1 year regardless of immunization status and pregnant women in their third trimester and their household members. No immunoprophylaxis is recommended for prevention of disease transmission, however this is an opportunity to recommend immunization to all those who are not up to date in their pertussis immunization¹⁵

[N/A for contacts of a case \(Appendix A – Section: Management of Contacts\)](#)

IPD

- No chemoprophylaxis or immunoprophylaxis recommended¹⁵

[Appendix A - Section 6.4 Management of Contacts](#)

Varicella Susceptible persons with significant exposure (defined in Appendix A)

- Immunoprophylaxis {vaccine or Varicella Zoster immune globulin} may be indicated⁴

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Public Health Ontario

480 University Avenue, Suite 300,
Toronto, Ontario
M5G 1V2

647.260.7100

communications@oahpp.ca

www.publichealthontario.ca

