**Ontario Brucellosis** **Investigation Tool**

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| **Legend** | **for interview with case ♦ System-Mandatory ❖ Required Personal Health information** |

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| **Cover Sheet***Note that this page can be autogenerated in iPHIS* | | |
| Date Printed: YYYY-MM-DD  Bring Forward Date: YYYY-MM-DD  iPHIS Client ID #:  Enter number  **♦** Investigator:  **Enter name \_ \_**  **♦** Branch Office:  Enter office  **♦** Reported Date: YYYY-MM-DD  **❖**Diagnosing Health Unit:  Enter health unit  **♦** Disease: **BRUCELLOSIS**  **♦** Is this an outbreak-associated case?  Yes, *OB #* ####-####-###  No, *link to* ***OB # 0000-2005-005*** *in iPHIS*  Is the client in a high-risk occupation/environment?  Yes, specify: Specify  No | **♦** Client Name:  **Enter name \_ \_**  Alias:  **Enter alias \_ \_** | |
| **♦** Gender: **Select an option** | **♦** Age: **Age** |
| **♦** DOB:YYYY-MM-DD  Address:  **Enter address \_**  **Enter address \_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_**  Tel. 1:  **###-###-####**  Type:  Home  Mobile  Work  **Other, specify**  Tel. 2:  **###-###-####**  Type:  Home  Mobile  Work  **Other, specify**  Email 1: **Enter email address \_ \_**  Email 2:  **Enter email address \_ \_** | |
| Is the client homeless?  Yes  No  New Address:  **Enter address \_**  **♦** Language:  **Specify \_ \_**  Translation required*?*  Yes  No  **Proxy respondent**  Name:  **Enter name \_ \_**  Parent/Guardian  Spouse/Partner  Other  **Specify \_ \_** | **♦** Physician’s Name: **Enter name \_ \_**  **♦** Role**:**  Attending Physician  Family Physician  Specialist  Walk-In Physician  Other  Unknown  **OPTIONAL**  Additional Physician’s Name: **Enter name \_**  Address:  **Enter address \_**  Tel:  **###-###-####**  Fax:  **###-###-####**  Role:  **Enter role \_ \_** | |

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| **Verification of Client’s Identity & Notice of Collection** | | | | | | |
| Client’s identity verified?  Yes, *specify*:  DOB  Postal Code  Physician  No | | | | | | |
| **Notice of Collection**  *Please consult with local privacy and legal counsel about PHU-specific Notice of Collection requirements under*  *PHIPA s. 16*. *Insert Notice of Collection, as necessary.* | | | | | | |
| **Record of File** | | | | | | |
| **♦ Responsible Health Unit** | | **Date** | **♦ Investigator’s Name** | **Investigator’s Signature** | **Investigator’s Initials** | **Designation** |
| Specify | | **❖**Investigation Start Date  YYYY-MM-DD | Specify | Specify | Specify | PHI  PHN  Other \_\_\_\_\_\_\_ |
| Specify | | Assignment Date  YYYY-MM-DD | Specify | Specify | Specify | PHI  PHN  Other \_\_\_\_\_\_\_ |

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| **Call Log Details** | | | | | | | |
|  | **Date** | **Start Time** | **Type of Call** | **Call To/From** | | **Outcome**  **(contact made, v/m, text, email, no answer, etc.)** | **Investigator’s initials** |
| Call 1 | YYYY-MM-DD |  | Outgoing  Incoming |  |  |  |  |
| Call 2 | YYYY-MM-DD |  | Outgoing  Incoming |  |  |  |  |
| Call 3 | YYYY-MM-DD |  | Outgoing  Incoming |  |  |  |  |
| Call 4 | YYYY-MM-DD |  | Outgoing  Incoming |  |  |  |  |
| Call 5 | YYYY-MM-DD |  | Outgoing  Incoming |  |  |  |  |
| Date letter sent: YYYY-MM-DD | | | | | | | |

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| **Case Details** | | | | | | |
| **♦ Aetiologic Agent** | Select the Aetiologic Agent | | | | | |
| **♦ Classification** | Confirmed  Probable  Does Not Meet Definition | | | | **♦ Classification Date** | YYYY-MM-DD |
| **♦ Outbreak Case Classification** | Confirmed  Probable  Does Not Meet Definition | | | | **♦ Outbreak Classification Date** | YYYY-MM-DD |
| **♦ Disposition** | Complete  Closed- Duplicate-Do Not Use  Entered In Error  Lost to Follow Up  Does Not Meet Definition  Untraceable | | | | **♦ Disposition Date** | YYYY-MM-DD |
| **♦ Status** | Closed | | Initial here | | **♦ Status Date** | YYYY-MM-DD |
| Open (re-opened) | | Initial here | | **♦ Status Date** | YYYY-MM-DD |
| Closed | | Initial here | | **♦ Status Date** | YYYY-MM-DD |
| **♦ Priority** | ☐ High | ☐ Medium ☐ Low | | *(At health unit’s discretion)* | | |

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| **Symptoms** | | | | | | | | | |
| ***Incubation period*** *is variable and can range from 5 days to 5 months, commonly 1-2 months.*  ***Communicability****: person to person transmission is rare. Sexual transmission and in-utero transmission have been reported. Breastfeeding women may transmit infections to their infants.* | | | | | | | | | |
| ***Specimen collection date:*** YYYY-MM-DD | | | | | | | | | |
| **♦ Symptom**  *Ensure that symptoms in* ***bold font*** *are asked* | **♦ Response** | | | | | **❖ Use as Onset**  *(choose one)* | **❖ Onset Date**  YYYY-MM-DD | **Onset Time**  24-HR Clock  HH:MM  *(discretionary)* | **❖ Recovery Date**  YYYY-MM-DD  *(one date is sufficient)* |
| **Yes** | **No** | **Unknown** | **Not Asked** | **Refused** |
| Asymptomatic |  |  | *Enter zero (0) for the duration days. DO NOT enter an Onset Date and DO NOT check the ‘Use as Onset’ box* | | | | | | |
| Abdominal pain |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD |
| **Anorexia [appetite loss]** |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD |
| Back pain |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD |
| Body, generalized aches |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Chills |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Depression |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Diarrhea |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Epididymitis |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| **Fatigue** |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| **Fever** |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| **Headache** |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Joint inflammation [arthritis] |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| **Joint pain [arthralgia]** |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Liver enlarged [hepatomegaly] |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| **Loss of weight** |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Lymph nodes swelling/pain  [lymphadenopathy] |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Malaise  [general unwell feeling] |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Muscle weakness |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Myalgia [muscle pain] |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Spleen enlarged [splenomegaly] |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| **Sweating, profuse [diaphoresis]** |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| Other, *specify* |  |  |  |  |  |  | YYYY-MM-DD | HH:MM | YYYY-MM-DD | |
| ***Note: This list is not comprehensive. There are additional symptoms listed in iPHIS.*** | | | | | | | | | | |

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| ♦ **Complications** |
| Arthritis  None  Other (e.g., meningitis, endocarditis, osteomyelitis; specify)  Unknown |

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| **Hospitalization & Treatment** *Mandatory in iPHIS only if admitted to hospital* | | |
| Did you go to an emergency room? | Yes  No | If yes, name of hospital: Enter name  Date(s): YYYY-MM-DD |
| **♦** Were you admitted to hospital as a result of your illness (not including stay in the emergency room)? | Yes  No  Don’t recall | If yes, name of hospital: Enter name  ♦ Date of admission: YYYY-MM-DD  ❖ Date of discharge: YYYY-MM-DD  Unknown discharge date |
| *→ For iPHIS data entry – if the case is hospitalized enter information under Interventions.* | | |
| Were you prescribed antibiotics or medication for your illness? | Yes  No  Don’t recall | If yes, Medication: Enter name  Start date: YYYY-MM-DDEnd date: YYYY-MM-DD  Route of administration: Enter route Dosage: Enter dosage |
| Did you take over-the-counter medication? | Yes  No  Don’t recall | If yes, specify |
| *Treatment information can be entered in iPHIS under* ***Cases > Case > Rx/Treatments>Treatment*** *as per current iPHIS User Guide* | | |

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| **Outcome** *(complete for cases only)**Mandatory in iPHIS only if Outcome is Fatal* | | | | |
| **Outcome** | Unknown  ♦ Fatal  Ill  Pending  Residual effects  Recovered | | ♦ **Cause(s) of** **Death?**  *If fatal, complete disposition type and facility name in iPHIS* | Specify |
| *If fatal, complete section below under Outcome* | | | | |
| ♦ **Type of Death** | Reportable disease contributed to but was not the underlying cause of death  Reportable disease was the underlying cause of death  Reportable disease was unrelated to the cause of death  Unknown | | | |
| **Outcome Date** | YYYY-MM-DD | **Date Accurate** | Yes Specify source (e.g. death certificate)  No | |

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| **Medical Risk Factors** | **❖ Response** | | | | **Details**  *iPHIS character limit: 50.* |
| **Yes** | **No** | **Unknown** | **Not asked** |
| **❖** Immunocompromised  (e.g., by medication/disease) |  |  |  |  | If yes, specify |
| **❖** Previous history of Brucellosis infection |  |  |  |  | If yes, specify |
| **❖** Currently pregnant  (i.e., risk to infant) |  |  |  |  | If yes, specify |
| **❖** Currently breastfeeding  (i.e., risk to infant) |  |  |  |  |  |
| **❖** Maternal infection  (e.g., vertical transmission) |  |  |  |  | If yes, specify |
| **❖** Other (specify) |  |  |  |  | If yes, specify |
| **❖** Unknown |  |  | *→ For iPHIS data entry – check Yes for Unknown if all other Medical Risk Factors are No or Unknown.* | | |

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| **Date of Onset, Age and Gender**  *Complete this section if submission of pages 7-9 to Public Health Ontario is required* | | | | | |
| Date of Onset: | YYYY-MM-DD | Age: | **Age** | Gender: | **Select an option** |

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| **Incubation Period** |
| *Enter onset date and time, using this as day 0, then count back to determine the incubation period.* |
| - 60 days - 5 days onset  Select a date Select a date Select a date & time |

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| **Behavioural Social Risk Factors in the 60 days prior to onset of illness** | **❖ Response** | | | | **Details**  (e.g., Brand name, purchase/consumption location, product details, date of exposure)  *iPHIS character limit: 50.* |
| **Yes** | **No** | **Unknown** | **Not asked** |
| **❖** Consumption of raw/unpasteurized milk or milk products (e.g., raw milk cheese)  *(specify location of purchase)* |  |  |  |  | Specify |
| **❖** Consumption of raw/undercooked beef |  |  |  |  | Specify |
| **❖** Consumption of raw/undercooked pork or pork products |  |  |  |  | Specify |
| **❖** Consumption of raw/undercooked game meat (e.g., bison, caribou, elk) |  |  |  |  | Specify |
| **❖** Consumption of raw/undercooked meat from small ruminants (e.g., goat, sheep or lamb) |  |  |  |  | Specify |
| **❖** Contact with animals, e.g. pets, farm animals or petting zoo  *(ask about animal reservoirs associated with identified Brucella species)* |  |  |  |  | Specify |
| **❖** Hunting or skinning an animal (e.g., elk, moose, deer, sheep, goats) |  |  |  |  | Specify |
| *Brucella* species and reservoirs: *B. suis* (pigs, caribou, reindeer), *B. abortus* (cattle, bison, caribou, elk, deer), *B. melitensis* (goats, sheep), *B. canis* (dogs, coyotes), *B. ceti* (dolphins, porpoises, whales), *B. pinnipedialis* (sea lions, seals, walruses), *B. inopinata* (reservoir unknown), *B. neotomae* (desert woodrats), *B. ovis* (sheep), *B. microti* (Microtus voles)  Note: contact CFIA if disease traced to imported or domestic animals or sources | | | | | |
| **❖** Contact with aborted animal fetuses or birth products, e.g. placenta  (specify animal species and type of exposure) |  |  |  |  | Specify |
| **❖** Deliberate use (e.g. bioterrorism) |  |  |  |  | Specify |
| **❖** Occupational – farm worker |  |  |  |  | Specify |
| **❖** Occupational – hunter or trapper |  |  |  |  | Specify |
| **❖** Occupational – laboratory worker |  |  |  |  | Specify |
| **❖** Occupational – slaughterhouse (abattoir) worker (including custom cutting/processing of hunted game) |  |  |  |  | Specify |
| **❖** Occupational - veterinarian |  |  |  |  | Specify |
| **❖** Other (specify) |  |  |  |  | Specify |
| **❖** Travel outside province in the last 60 days (specify province or country) |  |  |  |  | Specify |
| **❖** Unknown |  |  | *→ For iPHIS data entry – check Yes for Unknown if all other Behavioural Risk Factors are No or Unknown.* | | |
| **♦** CreateExposures *Identify Exposures to be entered in iPHIS.*  *→ For iPHIS data entry – record details of exposure(s) in* [*iPHIS Case Exposure Form*](https://www.publichealthontario.ca/-/media/Documents/I/2015/investigation-tool-iphis-case-exposure-form.docx?la=en&rev=d8fb16a37da3475fb46fba02e9505f0f&sc_lang=en&hash=47E3148895EB5991B7766C95B3CC96C5) *as required.* | | | | | |

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| **Premises Referral** | | |
| Has an food premises been identified as a possible source? | Yes  No | If exposure is linked to a food premises, refer premises to the Food Safety Program and create an exposure as appropriate.  Refer to [Appendix 1](https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/brucellosis_chapter.pdf) for guidance re: reporting of occupational exposures in various settings. |

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| **Contact Management** | | | |
| *\*\*NOTE: investigate contacts, such a coworkers and family members, to identify people who may have been exposed to the same source as the case and who could also be infected.*  Manage symptomatic and exposed contacts as cases and complete a separate OIT for each individual.  Advise **asymptomatic** contacts to monitor for signs and symptoms of Brucellosis and to seek immediate medical assessment if these develop. Advise asymptomatic contacts to notify public health if symptoms develop within 60 days of exposure and to inform healthcare provider of exposure to Brucellosis. | | | |
| **Contact 1** | | | |
| Name |  | Status | Symptomatic  Asymptomatic |
| If symptomatic: CaseID: |  | **♦ Classification** | Confirmed  Probable  DNM |
| Symptom onset date | Select a date | Occupation |  |
| If asymptomatic: advised to monitor for signs and symptoms | | Yes  No  N/A | |
| Contact information  (phone, address, email) | Enter contact information | | |
| Notes (specify nature and duration of exposure) | Enter notes | | |
| **Contact 2** | | | |
| Name |  | Status | Symptomatic  Asymptomatic |
| If symptomatic: Case ID: |  | **♦ Classification** | Confirmed  Probable  DNM |
| Symptom onset date | Select a date | Occupation |  |
| If asymptomatic: advised to monitor for signs and symptoms | | Yes  No  N/A | |
| Contact information  (phone, address, email) | Enter contact information | | |
| Notes (specify nature and duration of exposure) | Enter notes | | |

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| **Education/Counselling** *Discuss the relevant sections with case* | | |
| **Hand Hygiene** |  | Wash hands with soap and water after using the bathroom, after changing diapers, handling animals or pet food, and before preparing meals or eating meals. |
|  | Wash hands after handling raw eggs and meat, including any of these items that are packaged or frozen. |
| **Recovery** |  | If you continue to feel unwell, new symptoms appear, or symptoms change – seek medical attention.  Use of antibiotics should be reviewed with your physician. Antibiotics are usually prescribed for six weeks to prevent recurring infection. |
| **Food Safety** |  | Use a probe thermometer to verify cooking temperatures, as color is not a very reliable indicator of how thoroughly meat has been cooked. Cook meats to a safe internal temperature.   | **Food** | **Temperature** | | --- | --- | | **Pork** (pieces and whole cuts) | 71°C (160°F) | | **Poultry** (pieces) – chicken, turkey, duck | 74°C (165°F) | | **Poultry** (whole) – chicken, turkey, duck | 82°C (180°F) | | **Game meat** (bear, deer, bison, elk, rabbit, etc.) | 74°C (165°F) | | **Ground meat and meat mixtures** (burgers, sausages, meatballs, meatloaf, casseroles) - beef, veal, lamb and pork | 71°C (160°F) | | **Ground meat and meat mixtures** - poultry | 74°C (165°F) | | **Fish** | 70°C (158°F) | | **Others** (stuffing and leftovers) | 74°C (165°F) | |
|  |  | Avoid consumption of raw (unpasteurized) milk |
|  |  | Avoid consumption of raw (unpasteurized) dairy products (e.g., milk, cheese, ice cream) and undercooked meat products when travelling to foreign countries |
| **Animals** |  | Clean your hands with soap and water or an alcohol-based hand rub after handling animals, their living environment (e.g., cages, coops, pens), feces or food. Do not touch your face before cleaning your hands.  Avoid direct contact with body fluids and/or birth products from infected animals.  Use protective clothing and gloves when handling feral (wild) swine.  Wear protective clothing and gloves while butchering an animal/hunted game.  Do not touch/eat any parts of the carcass that look diseased, wash hands with soap and water after butchering is completed, boil knife after butchering is completed. Bury any remains. |

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| **Thank you** |
| Thank you for your time. This information will be used to help prevent future cases of Brucellosis. Please note that another investigator may contact you again to ask additional questions if it is identified that there is a possibility that you are included in an outbreak. |

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| **❖ Intervention Type** | **Intervention implemented (check all that apply)** | **Investigator’s initials** | ♦ **Start Date**  **YYYY-MM-DD** | **❖ End Date**  **YYYY-MM-DD** |
| Counselling |  |  | **YYYY-MM-DD** | **YYYY-MM-DD** |
| Education  (e.g., disease fact sheet, general food safety chart/cooking temperature chart, hand washing information) |  |  | YYYY-MM-DD | YYYY-MM-DD |
| ER visit |  |  | YYYY-MM-DD | YYYY-MM-DD |
| Food Recall |  |  | YYYY-MM-DD | YYYY-MM-DD |
| Hospitalization |  |  | YYYY-MM-DD | YYYY-MM-DD |
| Letter - Client |  |  | YYYY-MM-DD | YYYY-MM-DD |
| Letter - Physician |  |  | YYYY-MM-DD | YYYY-MM-DD |
| Other (i.e., contacts assessed, PHI/PHN contact information) |  |  | YYYY-MM-DD | YYYY-MM-DD |
| *→**For iPHIS data entry – enter information under* ***Cases > Case > Interventions.*** | | | | |

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| **Progress Notes** |
| **Enter notes** |

If you have any comments or feedback regarding this Investigation Tool, please email us at [ezvbd@oahpp.ca](mailto:ezvbd@oahpp.ca).