
Notification Timeline:

From Lab/Practitioner to Public Health: Within 48 hours.

From Public Health to Ministry of Health: Within 2 weeks.

Public Health Follow-up Timeline: Initiate within 72 hrs.

Public Health Purpose for Notification of Mumps (Adapted from Massachusetts, 2017)

- To prevent mortality and serious morbidity from mumps through rapid contact tracing;
- To prevent transmission of mumps from imported cases;
- To track epidemiology trends of mumps in Saskatchewan including risk factors and distribution;
- To monitor the effectiveness of prevention and control measures including the immunization program;
- To inform decisions about future immunization programs
- To make timely and evidence informed actions on outbreaks; and
- To inform the public and medical community about mumps.

Information

Surveillance Case Definition¹ (Public Health Agency of Canada, 2008)

Confirmed Case	Clinical illness ^a and laboratory confirmation of infection in the absence of recent immunization ^b with mumps-containing vaccine: <ul style="list-style-type: none">• isolation of mumps virus from an appropriate clinical specimen OR <ul style="list-style-type: none">• detection of mumps virus ribonucleic acid (RNA) OR <ul style="list-style-type: none">• seroconversion or a significant rise (e.g., fourfold or greater) in mumps immunoglobulin G (IgG) titre by any standard serologic assay between acute and convalescent sera
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¹ Surveillance case definitions ensure uniform reporting to allow comparability of surveillance data. The definition is not intended to be used for clinical or laboratory diagnosis or management of cases.

	<p>OR</p> <ul style="list-style-type: none"> • positive serologic test for mumps immunoglobulin M (IgM) antibody ^c in a person who is either epidemiologically linked to a laboratory-confirmed case or has recently travelled to an area of known mumps activity. <p>OR</p> <p>Clinical illness in a person with an epidemiologic link to a laboratory-confirmed case.</p>
<p>Probable Case</p>	<p>Clinical illness ^a</p> <ul style="list-style-type: none"> • in the absence of appropriate laboratory tests <p>OR</p> <ul style="list-style-type: none"> • in the absence of an epidemiologic link to a laboratory-confirmed case.
<p>^a Clinical illness is characterized by acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting > 2 days, and without other apparent cause.</p> <p>^b The most frequent reaction to measles-mumps-rubella (MMR) immunization is malaise and fever (with or without rash) occurring 7-12 days after immunization. Parotitis has occasionally occurred after immunization. However, this should be determined for each case, as these reactions and the time frame can vary (<i>Canadian Immunization Guide</i>, 7th edition).</p> <p>A laboratory-confirmed case may not exhibit clinical illness, as up to 30% of cases are asymptomatic.</p> <p>^c IgM serology has the potential for false-positive findings. *If the clinical presentation is inconsistent with a diagnosis of mumps or in the absence of recent travel/exposure history, IgM results must be confirmed by the other listed confirmatory methods.</p> <p>Further strain characterization is indicated for epidemiologic, public health and control purposes.</p>	

Although the case definition indicates that a positive serologic test for mumps IgM is a confirmed case, the challenge with relying on the IgM serology alone is that other etiologic agents (e.g., infection with parainfluenza virus, Epstein-Barr virus (EBV), or *Mycoplasma pneumoniae*) cross react and result in a false positive IgM for mumps. The positive predictive value of mumps IgM is low when the incidence of mumps is low in the community and most results will be false positives. If you have any questions regarding the interpretation of lab results, please call the to Roy Romanow Provincial Laboratory (RRPL) or the local Medical Health Officer (MHO).

To confirm diagnosis of mumps, the following must be taken into consideration:

- lab information;
- clinical presentation;
- case history.

Epidemiology and Occurrence

Canada

With the introduction of vaccine in 1969 in Canada, the number of reported mumps cases nationally decreased by more than 99% from an average of 34,000 cases per year in the early 1950s to fewer than 400 cases in the early 1990 and an annual average of 79 cases in the period 2000–2006. From 1996 to 2006, only five outbreaks primarily involving pre-school or school-aged children, adolescents, and young adults were reported.

Over time, the age distribution of mumps cases has changed. In Canada, the proportion of reported cases aged 20 years and older increased from 14% in 1988–1990 to 64% in 2003–2005 while the proportion of cases aged 1–9 decreased from 49% to 17% during the same period (Public Health Agency of Canada, 2009).

In Saskatchewan, between 2000-2016, a total of 32 cases of mumps were reported with zero cases reported in 6 of these years.

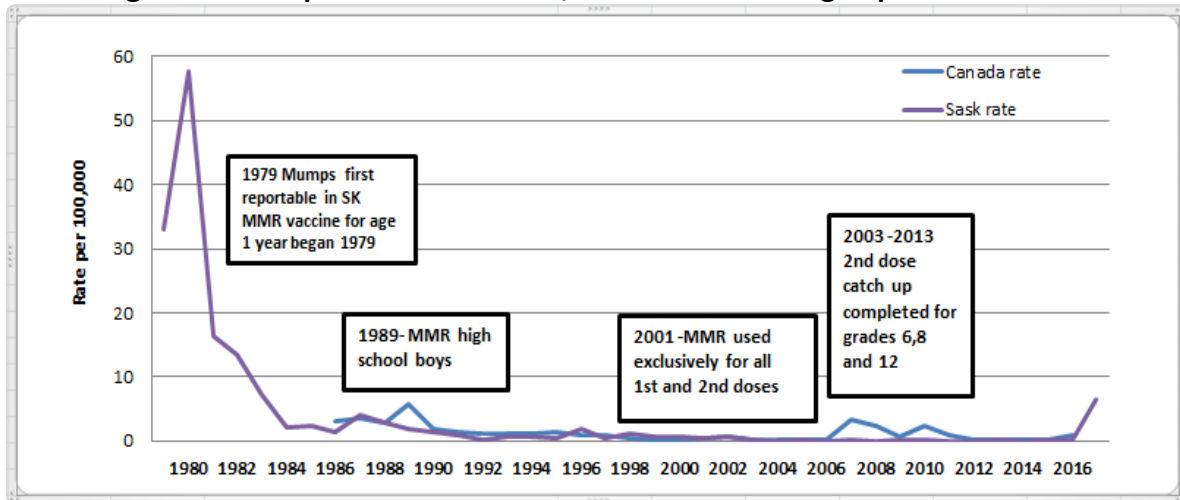
In 2017, 77 cases were largely related to three outbreaks: one involved a mine worksite; another involved a sports team which likely contracted the virus during interprovincial sports events. Mumps was introduced into a remote community from a neighbouring province.

Table 1. Evolution of the Mumps Immunization Program in Saskatchewan

1979	MMR vaccine for age 1 year
Fall 1991 to 1992	Mass MMR immunization for teen-aged boys in high schools and post-secondary institutions
2001	MMR used exclusively for all 1st and 2nd doses; MR discontinued by Berna
2003 - 2004	2 dose mumps catch-up in Grade 6
2007 - 2013	2-dose mumps catch-up for eligible Grade 12 students
2008 - 2013	2-dose mumps catch-up for eligible Grade 8 students
2011 - 2013	2nd dose provided to eligible Grade 6 students
May 2013	Adult born since Jan. 1, 1970 eligible for 2 MMR doses

Saskatchewan Immunization Manual (2018)

Figure 1. Mumps in Saskatchewan, 1979-2017 showing impact of vaccine



Additional Background Information

Causative Agent

Mumps virus, a member of the family *Paramyxoviridae*, genus *Rubulavirus*.

Symptoms

Prodromal symptoms are non-specific and include myalgia, headache, malaise and low-grade fever.

This acute viral illness is characterized by fever, swelling and tenderness of one or more salivary glands, usually the parotid and sometimes the sublingual or submaxillary glands. Children often experience respiratory symptoms. Up to 30% of infected cases can be asymptomatic.

- Orchitis can occur in as many as 20-30% of postpubertal males.
- Aseptic meningitis occurs in up to 10% of cases and rarely, encephalitis may occur as a complication (Heymann, 2015).
- Other rare complications may include arthritis, mastitis, glomerulonephritis, myocarditis, endocardial fibroelastosis, thrombocytopenia, cerebellar ataxia, transverse myelitis, ascending polyradiculitis, pancreatitis, oophoritis, hearing impairment etc. (American Academy of Pediatrics, 2018).
- During the first trimester of pregnancy, mumps is associated with an increased rate of spontaneous abortion (Heymann, 2015).

Reservoir/Source

Humans are the only known natural hosts.

Incubation Period

Range from 12-25 days (usually 16-18 days) (American Academy of Pediatrics, 2018).

Period of Communicability

Can be isolated for up to 7 days before the onset of symptoms and for as long as 9 days after the onset of the illness. The period of maximum infectiousness is between 2 days before to 5 days after the onset of illness (Heymann, 2015)

Mode of Transmission

Droplet spread or direct contact with the respiratory secretions of an infected person; airborne transmission also occurs.

Specimen Collection and Transport

For the diagnosis of mumps the recommended specimens to be collected are:

- serum sample
- AND**
- a swab from around opening of Stenson's duct
- OR**
- a urine sample.

The buccal swab and urine sample will be tested by polymerase chain reaction (PCR). The respiratory pathogens currently in circulation can interfere with the serologic diagnosis (cross-reactions leading to false positive IgM).

- It is recommended that a buccal swab be obtained at the same time as the serological sample.
- Samples should be collected when the patient first presents with symptoms; these have the best chance of having a positive result by PCR if mumps infection is present. Among symptomatic persons who have received a dose of MMR, the virus may be cleared rapidly.

Public Health Investigation

I. Case

Control measures must be implemented immediately for all confirmed, probable or clinical cases. Awaiting lab confirmation must not delay the initiation of control measures. Refer to [Attachment – Mumps Data Collection Worksheet](#) to assist.

History

- Determine mumps immunization history including number of doses, date(s) administered, and type of vaccine.
- If the case has been fully immunized against mumps, further details of immunizations are required (lot numbers, where the vaccines were received, etc.).
- Determine if there is an opportunity for acquisition through:
 - contact with a confirmed or probable case of mumps.
 - history of travel (seven to 21 days before onset of rash), or contact (seven to 21 days before onset of rash) with a person who had recent travel.
- Health conditions that may render the individual more susceptible to infection or alter the period of communicability (e.g. immunocompromised).
- Identify contacts (refer to contact definition) by inquiring about opportunities for transmission events during the infectious period, which includes seven days prior to and five days after the parotitis appears:
 - household;
 - daycare/school;
 - workplaces;
 - health care facilities² (including physicians' offices and waiting rooms).

Public Health Interventions

Assessment

- Assess for contacts paying particular attention to susceptible contacts as per [Table 3](#).

Communication

- Letters can be sent to classrooms and other group settings where individual contact tracing is not required (i.e. involving school age and adults where there are no vulnerable contacts) to inform them of the exposure, symptom monitoring and when to seek medical attention (see Sample letter).

² In acute care settings, Infection Control and Occupational/ Employee Health should also be involved.

Education

- All cases should be provided disease information as well as information on prevention and control measures including period of communicability and avoiding contact with susceptible individuals.

Exclusion and Isolation

Exclusion and isolation of cases should be implemented as outlined in Table 2.

Table 2. Exclusion Requirements for Cases

Who	Exclusion Requirements	Timeframe
Cases (including confirmed, clinical and suspect). ³	Exclude from childcare, school, post-secondary institutions, and workplaces. Avoid contact with susceptible people.	For at least 5 days from parotitis onset. This should be extended to 9 days if the case remains symptomatic.
Health Care Workers (HCWs) who are cases (including confirmed, clinical and suspect). ³ Note – Advise case to immediately notify Occupational Health and/or Infection Control for the facility in which they work.	Cases should be excluded from work. Cases who work with vulnerable patients (i.e., immunocompromised).	For at least 5 days from parotitis onset. This should be extended to 9 days if the case remains symptomatic. For 9 days from parotitis onset.
Cases in the hospital or other health care facility.	The case should be on droplet precautions.	For at least 5 days from parotitis onset. This should be extended to 9 days if the case remains symptomatic.

Immunization

Ensure the client's entire immunization status is up-to-date once they have recovered.⁴

Treatment

- Supportive therapy as there is no specific treatment for mumps.
- Individuals with severe central nervous system involvement may require hospitalization.

³ The exclusion of epidemiologically-linked contacts with symptoms can be discontinued before five days if laboratory results rule out a diagnosis of mumps.

⁴ Life-long immunity is expected following natural infection with mumps.

II. Contacts/Contact Investigation

Table 3. Contact Definition (Public Health Agency of Canada, 2009)

Definition of Close Contact
<p>Contacts of confirmed cases are defined as any of the following during the infectious period (approximately 7 days before to 5 days after symptom onset):</p> <ul style="list-style-type: none"> • household contacts of a case; • persons who sleep in the same room as the case; • direct contact with the oral/nasal secretions of a case (e.g., face-to-face contact where droplet contact may occur, sharing cigarettes/drinking glasses/food/cosmetics (lip gloss), kissing on the mouth, children and staff in child care and nursery school facilities, etc.); • children and staff in child care and school facilities; • HCWs who have unprotected face-to-face interaction (within 1 metre) to an infectious mumps case in the facility.
Definition of Susceptible Contacts
<ul style="list-style-type: none"> • Those born in 1970 or later who have not received two doses of mumps-containing vaccine (at least four weeks apart) after their first birthday AND <ul style="list-style-type: none"> ○ who have not had laboratory confirmed mumps OR ○ who do not have documented immunity due to mumps illness. <p>Serological screening to identify susceptible contacts is impractical and unnecessary, since there are no additional risks of immunizing those already immune.</p>

In Canada, it is assumed that people who were born before 1970 are generally considered immune due to natural immunity.

Public Health Interventions

Assessment

Assess for signs and symptoms and immunization history.

Communication

- Identifiable contacts should, at a minimum, be provided with a letter that includes all details as outlined in education.

Education

- All contacts of confirmed cases should be educated about mumps including the signs and symptoms, period of communicability and measures to prevent transmission of respiratory viruses – handwashing, not sharing water bottles, etc.
- The risk of exposure should also be communicated to all students and parents and other contacts.

- Individuals should be advised to visit one's health-care provider should any symptoms develop.

Exclusion and Immunization

- Exclusion of susceptible contacts that meet the criteria in [Table 3](#) is outlined in [Table 4](#).
- If the contact develops symptoms compatible with mumps, exclusion criteria for cases should be applied.

Table 4. Exclusion and Immunization Requirements for Contacts

Non-HCW Contacts who are:	Required Immunizations	Exclusion Requirements	Timeframe
Immune.	None.	None.	None.
Susceptible (in school, childcare or workplace setting).	As per Saskatchewan Immunization Manual. ⁵	None.	None.

The following additional requirements apply to **Health Care Workers who are Contacts**

- Advise the health-care worker to contact Occupational Health and/or Infection Control for the facility in which they work.
- Public Health will notify Occupational Health and/or Infection Control that contacts to mumps have been identified in their facility. Personal details of the contacts will not be disclosed.
- Provide information on mumps disease and its symptoms.
- Assess immunization status.

Table 5. Exclusion and Immunization Requirements for Contacts who are Health Care Workers

History of Immunization	Required Immunizations	Exclusion Requirements
Documented 2 doses of mumps-containing vaccine.	None.	None.
Documented 1 dose of mumps-containing vaccine.	Provide second dose of mumps-containing vaccine.	Return to work immediately.
Undocumented	1. Draw blood for	While waiting for serology results,

⁵ <http://www.ehealthsask.ca/services/manuals/Pages/SIM.aspx>.

History of Immunization	Required Immunizations	Exclusion Requirements
immunization history.	mumps IgG serology. 2. Provide a dose of mumps-containing vaccine (after serology taken).	exclude case from work for period of communicability, which starts on day 10 after exposure where exposure is day 1: a. If IgG positive, then consider immune and can return to work; consider a second dose of MMR for adequate measles and rubella protection. b. If IgG negative, then consider susceptible, provide a second dose of mumps-containing vaccine 28 days after the first and exclude from work on day 10 after first exposure until day 26 after last exposure.

Testing

Attempt to confirm diagnosis in any contacts that develop symptoms consistent with mumps.⁶

Prophylaxis/Immunization

Although immunization with live virus mumps-containing vaccine has not been demonstrated to be effective in preventing infection after exposure, the following still applies:

- Immunization of [susceptible contacts](#) with mumps-containing vaccine, recognizing that immunization after exposure may not prevent disease if the individual is already infected. See [Table 4. Exclusion and Immunization Requirements for Contacts](#). Serological screening to identify susceptible contacts is impractical and unnecessary, since there is no risk to those already immune.

⁶ This recommendation is applicable when sporadic cases are occurring. Recommendations for testing during an outbreak should be discussed with the MHO.

III. Environment

Child Care Centre/Schools Control Measures

Strict enforcement of infection control measures. Refer to the Saskatchewan Ministry of Health Infection Control Manual for Child Care Facilities.⁷

Health Facilities Control Measures

Strict enforcement of infection control measures. Refer to your Regional Infection Control Manual.

Cases should be on isolation and in a private room for at least 5 days from parotitis onset. This should be extended to 9 days if the case remains symptomatic. Refer to [Table 2](#) (Exclusion Requirements for Cases) and [Table 5](#) (Exclusion and Immunization Requirements for Contacts who are Health Care Workers).

IV. Epidemic Measures

The resources required for contact tracing and the management of contacts may put significant demands on public health and laboratory capacity.

- Logistics for providing immunization to susceptible contacts, including prioritization of vaccine supply, should be carefully considered.
- Serological screening to identify susceptible individuals is impractical and unnecessary, since there is no risk to those already immune.

When determining means to control outbreaks, exclusion of susceptible students from affected schools, thought to be at risk of transmission, should be considered. Excluded students can be readmitted following immunization. Immunization is not known to prevent mumps in those already exposed, but will protect against future exposures if the individual has had time to mount an immune response. Those who continue to be unimmunized due to medical, religious, or other reasons should be excluded until at least 26 days after the onset of parotitis in the last person with mumps in the affected school.

In the event of an outbreak, promote awareness in the community affected by the outbreak and among healthcare personnel:

- share information about the settings within which transmission is occurring;
- transmission patterns among fully vaccinated populations;

⁷ <http://www.saskatchewan.ca/live/births-deaths-marriages-and-divorces/starting-a-family/early-learning-and-child-care/child-care>

- remind healthcare personnel to not rule out mumps on the assumption that individuals have evidence of mumps immunity because outbreaks have occurred in highly vaccinated populations in high transmission settings, including school settings (e.g., elementary school, middle school, high school, and college students) (Centers for Disease Prevention and Control, 2018).

Prevention Measures

Refer to the [Respiratory and Direct Contact Introduction and General Considerations](#) section of the manual that highlights topics for client education that should be considered as well as provides information on high-risk groups and activities.

Immunization

Immunize infants, children, and adults according to the recommended schedule. Refer to the Saskatchewan Immunization Manual.⁸

Education

- Education should be provided regarding respiratory etiquette and measures to prevent transmission of mumps.
- Educate the public about the disease and the need for active immunization with a mumps-containing vaccine. Immunization information fact sheets can be used to guide discussion.

⁸ <http://www.ehealthsask.ca/services/manuals/Pages/SIM.aspx>.

Revisions

Date	Change
September 2018	<ul style="list-style-type: none">• Updated to align with Panorama configuration• Clarified the purpose for notification of cases to public health• Incorporated an Epidemiology and Occurrence section with Canadian information and included Saskatchewan Immunization program history from Sask Immunization Manual to provide context.• Updated period of communicability to remove outer limit of 14 days following parotitis.• Rearranged and updated the style into the new format of the Manual.• Added information into Epidemic section regarding transmission among fully vaccinated individuals.• References reaffirmed or updated as necessary.

References

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Mumps Data Collection Worksheet

Panorama QA complete: Yes No
Initials: _____

Please complete all sections.

Panorama Client ID: _____
Panorama Investigation ID: _____

A) CLIENT INFORMATION

LHN -> SUBJECT -> CLIENT DETAILS -> PERSONAL INFORMATION

Last Name:	First Name: and Middle Name:	Alternate Name (Goes by):
DOB: YYYY / MM / DD Age: _____	Health Card Province: _____ Health Card Number (PHN): _____	Preferred Communication Method: (specify - i.e. home phone, text): Email Address: <input type="checkbox"/> Work <input type="checkbox"/> Personal
Phone #: <input type="checkbox"/> Primary Home: <input type="checkbox"/> Mobile contact: <input type="checkbox"/> Workplace:		
Place of Employment/School:	Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other <input type="checkbox"/> Unknown	
Alternate Contact: _____ Relationship: _____ Alt. Contact phone: _____	Address Type: <input type="checkbox"/> No fixed <input type="checkbox"/> Postal Address <input type="checkbox"/> Primary Home <input type="checkbox"/> Temporary <input type="checkbox"/> Legal Land Description Mailing (Postal address): Street Address or FN Community (Primary Home): Address at time of infection if not the same:	

B) INVESTIGATION INFORMATION

LHN -> SUBJECT SUMMARY -> RESPIRATORY & DIRECT CONTACT ENCOUNTER GROUP -> CREATE INVESTIGATION

Disease Summary Classification:	Date	Classification:	Date	LAB TEST INFORMATION:
CASE		CONTACT		<i>Date specimen collected:</i>
<input type="checkbox"/> Confirmed	YYYY / MM / DD	<input type="checkbox"/> Contact	YYYY / MM / DD	YYYY / MM / DD
<input type="checkbox"/> Does Not Meet Case	YYYY / MM / DD	<input type="checkbox"/> Not a Contact	YYYY / MM / DD	<i>Specimen type:</i>
<input type="checkbox"/> Person Under Investigation	YYYY / MM / DD	<input type="checkbox"/> Person Under Investigation	YYYY / MM / DD	<input type="checkbox"/> Blood
<input type="checkbox"/> Probable	YYYY / MM / DD			<input type="checkbox"/> Urine
				<input type="checkbox"/> Stool
Disposition:				
<i>FOLLOW UP:</i>				
<input type="checkbox"/> In progress	YYYY / MM / DD	<input type="checkbox"/> Complete	YYYY / MM / DD	
<input type="checkbox"/> Incomplete - Declined	YYYY / MM / DD	<input type="checkbox"/> Not required	YYYY / MM / DD	
<input type="checkbox"/> Incomplete - Lost contact	YYYY / MM / DD	<input type="checkbox"/> Referred - Out of province	YYYY / MM / DD	
<input type="checkbox"/> Incomplete - Unable to locate	YYYY / MM / DD	(specify where)		
REPORTING NOTIFICATION		Location:		
Name of Attending Physician or Nurse:				
Physician/Nurse Phone number:		Date Received (Public Health): YYYY / MM / DD		
Type of Reporting Source: <input type="checkbox"/> Health Care Facility <input type="checkbox"/> Lab Report <input type="checkbox"/> Nurse Practitioner <input type="checkbox"/> Physician <input type="checkbox"/> Other _____				

Mumps Data Collection Worksheet

Please complete all sections.

Panorama Client ID: _____
Panorama Investigation ID: _____

C) SIGNS & SYMPTOMS *(Bold text = part of case definition)*

LHN-> INVESTIGATION->SIGNS & SYMPTOMS

Description	No	Yes – Date of onset	Description	No	Yes - Date of onset
Abortion - spontaneous (miscarriage)		YYYY / MM / DD	Lab - platelet count low		YYYY / MM / DD
Coryza or rhinitis		YYYY / MM / DD	Lethargy (fatigue, drowsiness, weakness, etc)		YYYY / MM / DD
Cough		YYYY / MM / DD	Meningitis - aseptic		YYYY / MM / DD
Encephalitis		YYYY / MM / DD	Orchitis (inflamed testicle)		YYYY / MM / DD
Hearing loss		YYYY / MM / DD	Pain - salivary glands		YYYY / MM / DD
Infection - upper respiratory tract		YYYY / MM / DD	Parotid gland - inflammation (parotitis)		YYYY / MM / DD
Other S/S					

D) INCUBATION AND COMMUNICABILITY

LHN-> INVESTIGATION->INCUBATION & COMMUNICABILITY

Incubation for Case (period for acquisition):	
Earliest Possible Exposure Date: YYYY / MM / DD	Latest Possible Exposure Date: YYYY / MM / DD
<i>Exposure Calculation details:</i>	
Communicability for Case (period for transmission):	
Earliest Possible Communicability Date: YYYY / MM / DD	Latest Possible Communicability Date: YYYY / MM / DD
<i>Communicability Calculation Details:</i>	

E) RISK FACTORS

LHN-> SUBJECT->RISK FACTORS

DESCRIPTION	Start date Yes	N, NA, U	Add'l Info
Contact - At risk population (international travellers or immigrants)	YYYY / MM/DD		
Contact to a known case (Add'l Info)	YYYY / MM/DD		
Immunocompromised - Related to underlying disease or treatment			
Occupation - Health Care Worker - IOM Risk Factor	TE		
Risk Behaviour - Sharing personal items (cigarettes, water bottles)	TE		
Special Population - Attends childcare	TE		
Special Population - Attends school	TE		
Special Population - Lives in a communal setting	TE		
Special Population - Post secondary education institution	TE		
Special Population - Pregnancy			
Travel - Outside of Canada (Add'l Info)	YYYY / MM/DD AE		
Travel - Outside of Saskatchewan, but within Canada (Add'l Info)	YYYY / MM/DD AE		

F) IMMUNIZATION HISTORY INTERPRETATION SUMMARY

LHN -> INVESTIGATION-> IMMUNIZATION HISTORY INTERPRETATION SUMMARY

Interpretation Date: YYYY / MM / DD	
Interpretation of Disease Immunity:	<input type="checkbox"/> Disease Case - Fully immunized (for age) <input type="checkbox"/> Disease Case - Partially immunized <input type="checkbox"/> Disease Case – Unimmunized <input type="checkbox"/> Disease Case - Unclear immunization history Valid doses received: _____ Doses needed: _____
Reason:	<input type="checkbox"/> Previous disease <input type="checkbox"/> Previous responder/Previous history of immunity <input type="checkbox"/> Date Of Birth <input type="checkbox"/> Interpretation of history by investigator

Mumps Data Collection Worksheet

Please complete all sections.

Panorama Client ID: _____
Panorama Investigation ID: _____

I) Acquisition Event

LHN-> INVESTIGATION-> EXPOSURE SUMMARY-> ACQUISITION EVENT SUMMARY -> QUICK ENTRY

Acquisition Event ID: _____

Exposure Name: _____ Acquisition Start YYYY / MM / DD to Acquisition End: YYYY / MM / DD Location Name: _____ Setting Type <input type="checkbox"/> Travel <input checked="" type="checkbox"/> Health care setting <input checked="" type="checkbox"/> Public facilities <input checked="" type="checkbox"/> Recreational facilities <input type="checkbox"/> Most likely source

J) Transmission Events

LHN -> INVESTIGATION-> EXPOSURE SUMMARY -> TRANSMISSION EVENT SUMMARY -> QUICK ENTRY

Transmission Event ID	Exposure Name	Setting type (Consider the following settings for TE; if >1 select "multiple settings" in Panorama)	Date/Time	# of contacts
		<input type="checkbox"/> Congregate/Communal living <input type="checkbox"/> Health Care setting <input type="checkbox"/> Type of community contact <input type="checkbox"/> Household Exposure <input type="checkbox"/> Public facilities	YYYY / MM / DD to YYYY / MM / DD	
		<input type="checkbox"/> Congregate/Communal living <input type="checkbox"/> Health Care setting <input type="checkbox"/> Type of community contact <input type="checkbox"/> Household Exposure <input type="checkbox"/> Public facilities	YYYY / MM / DD to YYYY / MM / DD	
		<input type="checkbox"/> Congregate/Communal living <input type="checkbox"/> Health Care setting <input type="checkbox"/> Type of community contact <input type="checkbox"/> Household Exposure <input type="checkbox"/> Public facilities	YYYY / MM / DD to YYYY / MM / DD	
		<input type="checkbox"/> Congregate/Communal living <input type="checkbox"/> Health Care setting <input type="checkbox"/> Type of community contact <input type="checkbox"/> Household Exposure <input type="checkbox"/> Public facilities	YYYY / MM / DD to YYYY / MM / DD	
		<input type="checkbox"/> Congregate/Communal living <input type="checkbox"/> Health Care setting <input type="checkbox"/> Type of community contact <input type="checkbox"/> Household Exposure <input type="checkbox"/> Public facilities	YYYY / MM / DD to YYYY / MM / DD	
		<input type="checkbox"/> Congregate/Communal living <input type="checkbox"/> Health Care setting <input type="checkbox"/> Type of community contact <input type="checkbox"/> Household Exposure <input type="checkbox"/> Public facilities	YYYY / MM / DD to YYYY / MM / DD	
	Mumps Contacts – Inv ID# _____	<input type="checkbox"/> Multiple Settings	YYYY / MM / DD to YYYY / MM / DD	

K) TOTAL NUMBER OF CONTACTS

LHN -> INVESTIGATION-> EXPOSURE SUMMARY -> TRANSMISSION EVENT SUMMARY -> TE HYPERLINK -> UNKNOWN/ANONYMOUS CONTACTS

Anonymous contacts: _____ (total number of individuals [including groups that 1:1 follow-up is not required or is not feasible])	
Initial Report completed by:	Date initial report completed: YYYY / MM / DD