

# *Technical Appendix*

## *Health Status Reporting Series Eight*

### *Reportable Disease*

#### *Saskatoon Health Region*

#### **Data Source for Reportable Disease**

Integrated Public Health Information System (iPHIS)

Tuberculosis Information System (TBIS)

#### **Case Counts & Rates**

For all reportable disease cases except TB, cases are counted by reported date (date of positive lab or first notification to Public Health) and by confirmed case status. Annual counts are by calendar year. Rates use the annual covered population for the year as the denominator, and case totals as the numerator. Cases in individuals diagnosed while resident on First Nations reserves are not included in the Region's numbers, and are reported instead by FNHI. First Nations individuals who are not living on reserve at time of diagnosis are included in the Region's numbers.

#### **Reportable Disease**

Reportable diseases are diseases of importance to public health. For a list of nationally reportable disease see [http://publications.gc.ca/collections/collection\\_2012/aspc-phac/HP40-75-2012-eng.pdf](http://publications.gc.ca/collections/collection_2012/aspc-phac/HP40-75-2012-eng.pdf) (accessed September 2016).

In Saskatchewan the list of communicable diseases and guidelines for control are noted in the Communicable Disease Control Manual <https://www.ehealthsask.ca/services/Manuals/Pages/CDCManual.aspx> (accessed September 2016).

A list of communicable diseases in Saskatchewan for health professionals is listed at [https://www.saskatoonhealthregion.ca/locations\\_services/Services/communicable-diseases/Documents/DC-262%20Report%20Communicable%20Diseases%20poster%2004-14.pdf](https://www.saskatoonhealthregion.ca/locations_services/Services/communicable-diseases/Documents/DC-262%20Report%20Communicable%20Diseases%20poster%2004-14.pdf) (accessed September 2016).

#### *Reportable Disease by Section*

#### **Antibiotic-Resistant Organisms (AROs)**

To 2016, MRSA is entered in iPHIS when first reported through skin screening or infection. Because treatment to de-colonize MRSA organisms is not recommended, if clients subsequently present with an MRSA infection, they are not reported again. ESBL is not a reportable ARO in

Saskatchewan, so surveillance is incomplete, and, as with MRSA, clients identified through screening outnumber those reported with active infections and are not reported with infection if they have previously been reported through screening. VRE screening in hospitals has very much increased the number of reports of VRE, especially in the context of increased surveillance during outbreaks.

### Enteric Illness

Enteric, or gastrointestinal illness, is under-reported. Lab-confirmed enteric infections represent the portion of ill patients who visit their doctor and submit a specimen for testing.

### Influenza

Many factors influence the reported rates of laboratory confirmed influenza, including physician testing patterns. Lab confirmed rates greatly underestimate the true incidence of influenza in the community. Seasonal patterns (when the flu arrives and the magnitude of infection during high-season) also vary.

Vaccines change annually and protect against the strains that have been predicted by the World Health Organization (WHO) to be circulating in a given season.

In Saskatchewan a random sample of lab confirmed influenza cases are sub-typed for strain identification to ascertain whether the vaccine in a given year is a good match to the strains that are circulating.

The influenza reporting season is from September to August. This alternative reporting year is used in order to synchronize Regional surveillance with provincial and national flu surveillance. Typically sentinel surveillance (respiratory illness that is not lab confirmed) is used as a proxy to help estimate the impact of influenza on the community.

### Outbreak

An outbreak is defined as illness in excess of what is expected. Outbreaks reported here are confirmed outbreaks only (suspect outbreaks not reported).

In long term care facilities outbreak definitions are as follows: for respiratory illness a confirmed outbreak is defined as two cases of influenza-like-illness in residents or staff in one geographic area within 24 hours or two or more cases within a seven day period that includes one laboratory confirmed case. For gastrointestinal illness a confirmed outbreak is defined as three or more cases of GI illness in residents or staff in one geographic area within a 24 hour period.

Outbreaks in schools are defined as illness absenteeism in excess of 10% of the student population that is attributed to respiratory or enteric illness.

Outbreaks in the general population are usually defined as expected illness of a common nature having onset time in a defined time period and geographic area among individuals who are linked to a common event, such as a common food, or other risk exposure.

Until 2015, all outbreak reporting was from September to August, in keeping with the influenza reporting season. In 2015/16, the surveillance season changed to a fiscal year, April to March, in order to meet the needs of the PPH Disease Control Outbreak review cycle.

## Tuberculosis

Annual counts are by diagnosis date. In the case of laboratory confirmed TB (culture positive), diagnosis date is the specimen collection date. In the absence of laboratory confirmed TB, with reactive Manitou and clinical manifestation of TB, the diagnosis date is the treatment start date.<sup>3</sup>

Cases are assigned to RHA based on client residency at the time of testing (for culture positive) or time of diagnosis (if culture positive but clinically diagnosed).

TB resistance is classified as primary when a resistant strain of TB is contracted from another person with TB. Mono-resistance means that the TB organism is resistant to one type of drug. Secondary resistance is when TB has become resistant during the course of treatment. Multi-resistance means that the TB organism is resistant to several classes of drugs.

<sup>1</sup> Public Health Agency of Canada. Tuberculosis in Canada 2014—Pre-release. Ottawa (Canada): Minister of Public Works and Government Services Canada; 2016

<sup>2</sup> Canadian Tuberculosis Standards, 7th Edition

<sup>3</sup> TBIS Database Manual (page

## Zoonotic and Vector-borne Infection

<sup>1</sup> Rabies tests in animals are collected by Canadian Food Inspection Agency.

<http://www.inspection.gc.ca/animals/terrestrial-animals/diseases/reportable/rabies/rabies-in-canada/eng/1356156989919/1356157139999> (accessed Oct 2016)

## Vaccine Preventable Disease (VPD)

VPD includes disease for which protective vaccines have been developed. Routine childhood vaccines and vaccines that protect vulnerable persons (such as immunosuppressed individuals) are available at no cost to the client through the provincial immunization program. It is important to note that not all vaccines provide protection against all strains of the disease. For example, the influenza vaccine protects against three strains of influenza based on annual predictions by the WHO of the strains expected to circulate in the world. Other vaccines, like Meningococcal C protect only against the C strains; pneumococcal 23 protects against 23 strains, etc.