

TO: Halton Physicians  
Medical Chiefs of Staff: Joseph Brant Hospital, Halton Healthcare (Oakville, Milton and Georgetown Hospitals)  
Chairs of: Family Practice, Paediatrics, Internal Medicine, Emergency, Obstetrics and Gynaecology, Surgery  
Chief of Laboratory Services and Infection Control Practitioners  
Halton Midwives

POST IN: Emergency Department and Physicians Lounge

FROM: Dr. Joanna Oda, Associate Medical Officer of Health

DATE: May 14, 2019

**RE: Extensively Drug Resistant Salmonella Typhi (XDR S. Typhi)**

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In response to several recent cases of extensively drug resistant Salmonella Typhi in Ontario, the Ministry of Health and Long Term Care (MOHLTC) has issued a Memorandum to raise awareness of the ongoing outbreak of XDR S. Typhi in Pakistan and the implications for patients and practitioners in Ontario.

### **Cases in Ontario**

As of May 6, 2019, nine cases of XDR S. Typhi have been reported in Ontario. Two most recent cases were identified the first week of May 2019. All cases have recently travelled to Pakistan.

### **Transmission**

Typhoid is transmitted through contaminated food or water. While the classic food history for typhoid includes 'street food', those who are visiting friends and relatives (VFR's) or consumed other food and water sources where the disease is endemic may be at risk.

### **Clinical Presentation**

The clinical presentation of typhoid fever is highly variable. Typically, symptoms include fever, headache, constipation or diarrhea, fatigue, abdominal pain or discomfort, and loss of appetite. In more severe cases, symptoms may worsen and cause life-threatening complications involving many body systems, such as enlargement of the liver and spleen or intestinal bleeding. Constipation is more common than diarrhea in adults. A rash may occur in the first week of fever. Severity is influenced by factors such as strain virulence, quantity of inoculum ingested, duration of illness before treatment, age, and previous exposure to typhoid vaccination.

### **Recommendations for Health Care Providers**

1. **Prevention:** Advise patients who plan to travel in endemic areas to get travel medicine consultation and consider immunization before leaving. Both inactivated IM and live oral vaccines are available. Travel Advisories from Government of Canada are available at: <https://travel.gc.ca/travelling/advisories>

2. **Case identification:** Inquire about travel history to Pakistan and other endemic areas in South Asia for patients presenting with compatible sign and symptoms.
3. **Laboratory testing:** Blood culture and stool specimen for bacterial culture should be submitted to your local laboratory. Indicate travel history and ask for susceptibility testing if *S. Typhi* is isolated. All isolates should be forwarded to Ontario Public Health Laboratory for confirmation and full susceptibility testing. The requisition should indicate if the isolate is suspected XDR. Ontario Public Health Laboratory is available on line at: <https://www.publichealthontario.ca/en/laboratory-services/about-laboratory-services>
4. **Treatment:** Empirical treatment with azithromycin or carbapenems should be started for patients with suspected typhoid fever and travel to Pakistan, pending full antimicrobial susceptibility test results. Fluoroquinolones or ceftriaxone are not recommended empirically for these patients.
5. **Reporting:** All suspect or confirmed cases of typhoid fever should be reported to the Halton Region Health Department

Please report all suspected or confirmed cases of [Diseases of Public Health Significance](#) (formerly Reportable Diseases) to the Halton Region Health Department as soon as possible. Diseases marked \* should be reported immediately by telephone (24 hours a day, 7 days a week) or fax (Mon-Fri, 8:30 am – 4:30 pm only). Other diseases can be reported the next working day. Call 311, 905-825-6000 or toll free at 1-866-442-5866. For general information, please visit [halton.ca](http://halton.ca).

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