The planning activities for Syrian refugee resettlement remain fluid and dynamic and it is likely that aspects of this annex will evolve as the process progresses. Updated versions of the annex will be issued as required.

This annex was developed in partnership with Public Health Ontario.

This annex builds on information provided in the Ontario Health System Action Plan: Syrian Refugees. It outlines more detailed information about surveillance for Syrian refugees who are resettling in Ontario.

Purpose
The purpose of this surveillance annex is to provide an overview of potential public health threats among refugees to Ontario and to summarize how surveillance of infectious disease routinely operates in Ontario. A variety of data sources will be highlighted that may be utilized to support situational awareness, public health action and policy development associated with the resettlement of Syrian refugees in Ontario. The information contained in this annex is subject to change as more information becomes available.

Scope
The following surveillance objectives and recommendations pertain to public health threats that may impact refugees, as well as the potential impact to our health system. Given the impact of displacement and ongoing insecurities experienced overseas, the scope of surveillance not only focuses on communicable disease in Ontario, but non-communicable diseases including mental health.

Surveillance objectives
1. To facilitate early recognition of public health threats in order to rapidly implement prevention and control measures, particularly in group accommodation settings;
2. To assess refugee impact on the health system, particularly during the influenza season;
3. To provide a general overview of the incidence of infectious diseases among Syrian
refugees in Ontario to inform future planning in Ontario and Canada, and other countries receiving Syrian refugees in the near future.

Routine surveillance of infectious disease in Ontario
In Ontario, the Health Protection and Promotion Act (HPPA) and its relevant regulations create a framework by which healthcare providers and laboratories, as well as other individuals (including school principals and superintendents of institutions), have a legal duty to report certain illnesses, known as Reportable Diseases, to public health authorities. The Ontario Public Health Standards’ Infectious Disease Protocol, 2015, incorporated under s.7 of the HPPA, provides direction on the public health management of reportable diseases in Ontario.

Public Health Units (PHUs) in Ontario are responsible for the management of reportable infectious diseases of public health importance with an aim to prevent further transmission. Their responsibilities include:
• case and contact management;
• identification, investigation and management of outbreaks, which includes complying with all active Enhanced Surveillance Directives (ESDs);
• tracking reportable diseases through the integrated Public Health Information System (iPHIS) or any other method specified by the ministry;
• reporting immunization coverage using Panorama or any other method specified by the ministry;
• interpretation, use, and communication of surveillance data to relevant audiences;
• notification of MOHLTC and Public Health Ontario (PHO) as specified in the Infectious Disease protocol.

PHO supports PHUs by providing scientific and technical advice for infectious disease surveillance, epidemiology, case and contact management, and outbreak management, and operates the Public Health Ontario Laboratory (PHOL).

The data sources routinely and most commonly used to conduct infectious disease surveillance in Ontario include reportable disease notifications through iPHIS and data from PHOL; however, other sources are used where available depending on the disease under surveillance. Administrative data may also be used under certain circumstances. At the local level, surveillance varies by public health unit.

PHO will maintain the process for interjurisdictional notifications that is currently in place should landed refugees with a reportable disease migrate within Canada. As per the International Health Regulations, the MOHLTC will continue to ensure Ontario fulfills the surveillance and reporting requirements included within the regulations.

Citizenship and Immigration Canada and the Health Screening Process
As millions of Syrians continue to be displaced due to conflict in their home country, the Government of Canada will work with Canadians, including private sponsors, non-governmental organizations, provincial, territorial and municipal governments to welcome 25,000 Syrian refugees.
As part of the immigration process, a full immigration medical exam (IME) has been conducted for each person, including screening for some communicable diseases before arrival into Canada. As per the Quarantine Act, upon arrival, refugees will be screened for signs of illness when they arrive in Canada and treatment will be available if required.

The Emergency Medical Assistance Team (EMAT) will be onsite at the airport to support this process.

Please note, there are no changes to the reporting and notification process for incoming refugees to Canada who have been diagnosed with a reportable disease through the IME. These notices will be shared with public health units via PHO.

**Potential infectious disease threats to Ontario**

According to the Public Health Agency of Canada (PHAC), the risk of infectious diseases spreading within the Canadian population due to the Syrian refugee operation is generally quite low, although low immunization coverage is an issue in this group (PHAC, Infectious Disease Risks Associated with Transporting Refugees into Canada: Rapid risk assessment, November 17, 2015). Refugees do not currently represent a threat to Ontario/Canada with respect to communicable diseases, but they are a priority group for communicable disease prevention and control efforts because they are more vulnerable, particularly in group accommodation settings (ECDC, Communicable disease risks associated with the movement of refugees in Europe during the winter season; 10 November 2015). Based on the ECDC review and other rapid risk assessments, the potential infectious disease-related threats, their likelihood of occurring within this group of refugees, and public health impact in Ontario are listed in Table 1 below. The following list of health events is for information and planning purposes as they have been observed in a number of refugee populations.

**Table 1: Potential infectious disease threats by likelihood among refugees and impact to Ontario**

<table>
<thead>
<tr>
<th>Higher public health impact</th>
<th>Moderate likelihood of occurring</th>
<th>Low likelihood of occurring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Measles</td>
<td>Active tuberculosis</td>
</tr>
<tr>
<td></td>
<td>Hepatitis A</td>
<td>Respiratory diseases (e.g., MERS)</td>
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<tr>
<td></td>
<td></td>
<td>Rabies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cutaneous diphtheria</td>
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<tr>
<td></td>
<td></td>
<td>Bacterial meningitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(meningococcal disease, <em>Haemophilus influenza</em> type b)</td>
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<tr>
<td></td>
<td></td>
<td>Invasive Group A <em>Streptococcus</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rubella</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Polio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pertussis</td>
</tr>
<tr>
<td>Lower public Health Impact</td>
<td>Varicella</td>
<td>Malaria and other vector-borne diseases</td>
</tr>
<tr>
<td></td>
<td>Influenza</td>
<td><em>Streptococcus pneumoniae</em></td>
</tr>
</tbody>
</table>
• Sexually transmitted infections
• Skin infections/infestations (e.g., scabies, bed bugs, head lice, cutaneous leishmaniasis)
• Blood borne infections (hepatitis B, hepatitis C and HIV)
• Gastroenteritis

Sources:

Surveillance Recommendations
The following data sources are recommended in order to meet the above mentioned surveillance objectives.

Integrated Public Health Information System (iPHIS)
iPHIS is the database used by public health units to report information on cases of reportable diseases to PHO and the MOHLTC. PHO will be releasing an Enhanced Surveillance Directive (ESD) in order to increase awareness of the incoming Syrian refugee population and communicate data entry and other enhanced reporting requirements for PHUs so that cases or outbreaks of reportable diseases related to Syrian refugees can be easily identified and reported. This will allow for control and prevention methods to be rapidly implemented, particularly in group accommodation settings, and will also provide data to inform future planning within and outside Ontario.

Public Health Ontario Laboratory (PHOL)
PHOL tests primary clinical and environmental specimens that are submitted directly to PHOL by clinicians, health units, hospitals or community laboratories, as well as specimens and isolates that are sent for confirmatory or additional testing by other laboratories such as hospital or community laboratories. PHOL’s laboratory information system stores the results of all tests performed by PHOL, however, it does not capture results of testing performed by other laboratories. PHOL data is used as an early information source for some pathogens in clinical or environmental samples. No enhancements will be made to PHOL data to reflect the incoming Syrian refugee population.
Acute Care Enhanced Surveillance (ACES)
The primary goals of ACES are to monitor changes and trends in the incidence of endemic disease with a focus on respiratory and gastrointestinal illness, and to detect new or emerging infectious disease threats. Currently, the syndromic surveillance system monitors visits to Emergency Departments (ED) at more than 100 hospitals across Ontario (over 80% of all Ontario hospitals), covering 27 of Ontario’s 36 public health units. It captures data for approximately 12,000 visits and 3,000 admissions per day. Information from each ED visit across all sites is collected centrally within the system where it is then classified into syndromes based on the patient’s chief complaint or admission diagnosis.

ACES currently has available a number of syndromes that it monitors from ED room visits and hospital admissions that may see an impact from the incoming Syrian refugee population. These include communicable and chronic disease, injury, environmental health, substance misuse and mental health.

For more information regarding ACES, please visit: [http://www.kflaphi.ca/?page_id=59](http://www.kflaphi.ca/?page_id=59)

Tracking of Immunizations Administered
Immunization data will be reported to the MOHLTC. Further information will be communicated as to how this will be done.

Surveillance and public health response for refugees while in Interim Lodging Sites
Should an Interim Lodging Site (ILS) be activated to assist with the refugee response, surveillance within the site will occur. The purpose of this surveillance is to facilitate early recognition of outbreaks or diseases of public health concern and prompt implementation of prevention and control measures within the ILS. The MOHLTC and PHO are working in collaboration with PHAC and the Red Cross to develop and implement a surveillance strategy.

Influenza surveillance
As the incoming refugee population arrives in Canada during the influenza season, increased monitoring of the impact of influenza on the population and the health care system is encouraged. The following resources may be of assistance:

- PHO produces a weekly [Ontario Respiratory Pathogen Bulletin](http://www.flaphi.ca), which summarizes laboratory confirmed respiratory illnesses entered into iPHIS and from PHOL. It also summarizes transmission activity levels by public health unit and respiratory outbreaks in institutions;
- Critical Care Services Ontario produces a weekly Influenza Like Illness (ILI) report, accessible via the website, that summarizes by LHIN the number of patients in Critical Care Units in addition to the number of laboratory confirmed influenza from ILI patients;
- ACES developed an [ILI mapper](http://www.kflaphi.ca/), accessible via the website, that monitors syndromic surveillance of ILI in emergency room visits and hospital admissions across Ontario;
- From November to April, the Ministry of Health and Long-Term Care reviews a set of indicators on a weekly basis to assess how the province is progressing through the
**influenza season.** These indicators include data from syndromic and laboratory surveillance systems, as well as health system utilization data.

**Global communicable disease monitoring**

As per routine practice in Ontario, PHO and the MOHLTC encourage health system partners to monitor the following established information sources for situational awareness (please see Table 2).

**Table 2: Recommended established information sources to monitor public health threats**

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
</table>
| **Media Reports** | • Public media reports from internet, television, print, etc.  
                    • Reports can be local, provincial, national, and global. | • Provides situational awareness on local, provincial, national, and global issues, including countries from which refugees may be arriving. |
| **ProMed**     | • Internet-based reporting system of information on communicable diseases and outbreaks and acute exposures to toxins that affect human health on a global scale.  
                    • Reports are typically global. | • Provides situational awareness on global public health issues, including from countries from which refugees may be arriving. |
| **CIDRAP news** | • E-mail newsletter containing curated news scans on infectious disease topics impacting humans. | • Provides situational awareness on global public health issues, including from countries from which refugees may be arriving. |

**Communication of surveillance information for situational awareness and to inform public health action and decision making**

A coordinated approach for communicating surveillance information will occur in order to ensure all stakeholders have the necessary information for situational awareness regarding any impacts to human health, increased burden to Ontario’s health care system or issues which would result in public health action.

Surveillance information will be communicated via the MEOC’s Situational Reports and other routine or enhanced data sharing mechanisms as appropriate.