

**Report to
Rapport au:**

**Select Committee_ENG
Select Committee_FRE
17 June 2024 / 17 juin 2024**

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**Submitted by
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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE File Number: ACS2024-OPH-EHI-002

**SUBJECT: Ottawa Public Health's Approach to Infectious Disease Case and
Contact Management**

**OBJET: Approche de Santé publique Ottawa en matière de gestion des cas et
des contacts de maladies infectieuses**

REPORT RECOMMENDATIONS

THAT, the Ottawa Board of Health receive information about Ottawa Public Health's case and contact management work as outlined in this report and Document 1;

AND THAT, the Chair of the Board of Health send a letter to the Minister of Health to convey:

- a. The need to review the funding formula alongside the review of the OPHS to grow capacity for infectious disease case and contact management work;**

- b. The need to accelerate the development of a provincial infectious diseases case and contact management documentation and surveillance tool integrated with the Ontario Laboratory Information System (OLIS) to provide significant efficiencies in infectious disease case and contact management work.**

RECOMMANDATIONS DU RAPPORT

QUE le Conseil de santé d'Ottawa reçoive de l'information au sujet du travail de gestion des cas et des contacts de Santé publique Ottawa, tel qu'il est décrit dans le présent rapport et dans le document 1;

ET QUE la présidente du Conseil de santé envoie à la ministre de la Santé une lettre pour lui faire part de ce qui suit :

- a. la nécessité de revoir la formule de financement parallèlement à l'examen des NSPO afin de renforcer la capacité quant au travail de gestion des cas de maladies infectieuses et des contacts en lien avec celles-ci;**
- b. la nécessité d'accélérer la mise au point d'un outil provincial de documentation et de surveillance de la gestion des cas de maladies infectieuses et des contacts en lien avec celles-ci, outil qui sera intégré au Système d'information de laboratoire de l'Ontario (SILO), et ce, afin d'améliorer considérablement l'efficacité de ce travail de gestion.**

EXECUTIVE SUMMARY

A core activity of Ottawa Public Health (OPH) is to prevent and reduce the spread of infectious diseases locally through case and contact management. OPH follows the Ontario Public Health Standards (OPHS), relevant protocols and individual disease-specific guidance related to reportable diseases of public health significance (DOPHS).

In recent years, workload related to infectious disease case and contact management has substantially increased due to increased disease rates, population growth and immigration and travel, and emergence or amplification of new diseases due to climate change. Complexity of case and contact management work has also increased workload pressures as clients may face a number of challenges including access to primary care to ensure effective testing and treatment for infectious diseases, especially individuals from equity-denied groups (EDGs). In addition, the lack of an integrated provincial case and contact management digital solution for surveillance and documentation results in significant workload inefficiencies.

Current resources are not sufficient to sustain the work efforts needed to meet objectives set out in provincial protocols given the increases in disease rates and trends described in this report. Further strain is anticipated on the program as infectious

disease rates are likely to continue to rise in 2024 and beyond. A review of the funding formula, alongside the introduction of the revised OPHS, is essential for ensuring that OPH can continue to protect the health of the population by providing high-quality, equitable, and sustainable prevention and public health management for people directly impacted by infectious diseases. In addition, implementation of an updated provincial digital solution for documentation and surveillance would improve program efficiencies greatly.

RÉSUMÉ

L'une des principales activités de Santé publique Ottawa (SPO) consiste à prévenir et à réduire la propagation des maladies infectieuses à l'échelle locale par la gestion des cas et des contacts. SPO se conforme aux Normes de santé publique de l'Ontario (NSPO), aux protocoles pertinents et aux directives propres à chaque maladie en ce qui concerne les maladies à déclaration obligatoire d'importance pour la santé publique.

Ces dernières années, la charge de travail liée à la gestion des cas de maladies infectieuses et des contacts en lien avec celles-ci a considérablement augmenté en raison de l'augmentation des taux de maladies, de la croissance démographique, de l'immigration et des voyages, ainsi que de l'émergence de nouvelles maladies ou de l'amplification d'autres maladies que provoquent les changements climatiques. La complexité du travail de gestion des cas et des contacts a également contribué à accroître la charge de travail, car les clients peuvent être confrontés à de multiples difficultés, y compris en ce qui concerne l'accès aux soins primaires pour garantir le dépistage et le traitement efficaces des maladies infectieuses, en particulier pour les personnes appartenant à des groupes privés d'équité. En outre, l'absence d'une solution numérique provinciale intégrée pour la surveillance et la documentation de la gestion des cas et des contacts entraîne des pertes d'efficacité importantes quant à la charge de travail.

Les ressources actuelles ne sont pas suffisantes pour soutenir les efforts nécessaires à l'atteinte des objectifs fixés dans les protocoles provinciaux, vu l'augmentation des taux de maladies et les tendances décrites dans le présent rapport. On s'attend à ce que le programme soit encore plus sollicité, car les taux de maladies infectieuses devraient continuer à augmenter en 2024 et pendant les années suivantes. Il est essentiel de revoir la formule de financement, parallèlement à l'introduction de la version révisée des NSPO, pour veiller à ce que SPO puisse continuer de protéger la santé de la population en assumant des fonctions de grande qualité, équitables et durables de prévention et de gestion de la santé publique pour les personnes directement touchées par les maladies infectieuses. De même, la mise en œuvre d'une solution numérique provinciale actualisée pour la documentation et la surveillance améliorerait considérablement l'efficacité du programme.

BACKGROUND

Provincial Context

The Ontario Public Health Standards (OPHS) and Protocols identify the minimum expectations for public health programs and services that every Board of Health in Ontario must follow. They are published by the Minister of Health under the authority of section 7 of the *Health Protection and Promotion Act* (HPPA). The standards applicable to the Infectious Disease Case and Contact Management Program (IDP) include the Infectious Diseases Protocol, 2023 (or as current); the Rabies Prevention and Control Protocol, 2023 (or as current); the Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2019 (or as current); and the Tuberculosis Prevention and Control Protocol, 2018 (or as current).

Under the HPPA, there are approximately 70 [diseases of public health significance](#) (DOPHS) that must be reported to the local Medical Officer of Health by designated healthcare practitioners, administrators of hospitals, superintendents of certain institutions, school principals, and operators of laboratories. This requirement enables public health to respond and implement measures to prevent or limit the spread of disease to others. Local public health units report on DOPHS via the provincial integrated public health information system (iPHIS) for all DOPHS. The iPHIS tool was introduced nearly 20 years ago in 2005. Recently, OPH was required to revert back to using iPHIS for COVID-19 data entry, as the provincial COVID case and contact management (CCM) solution with its automated functions is no longer available. The Ministry of Health provides detailed guidance expectations for Boards of Health related to each DOPHS, as outlined in [Appendix 1 of the Infectious Disease Protocol](#) (2023).

The Ministry of Health is currently doing a review of the Ontario Public Health Standards and associated protocols and guidelines.

Local Context

The response to reports of infectious diseases through case and contact management is a cornerstone of OPH's role in controlling the spread of infectious diseases in the community. Case management is the process of ensuring that an individual diagnosed with an infectious disease receives appropriate treatment, follow-up care, and support to prevent the spread of the disease to others. Contact management refers to the process of identifying and monitoring individuals who have been in contact with a person diagnosed with a communicable disease to interrupt further transmission. Case and contact management are typically performed by Public Health Nurses (PHNs) working in the Infectious Disease Case and Contact Management Program (IDP). This program is the focus of this report, recognizing that other areas of OPH work also contribute to the control of infectious diseases.

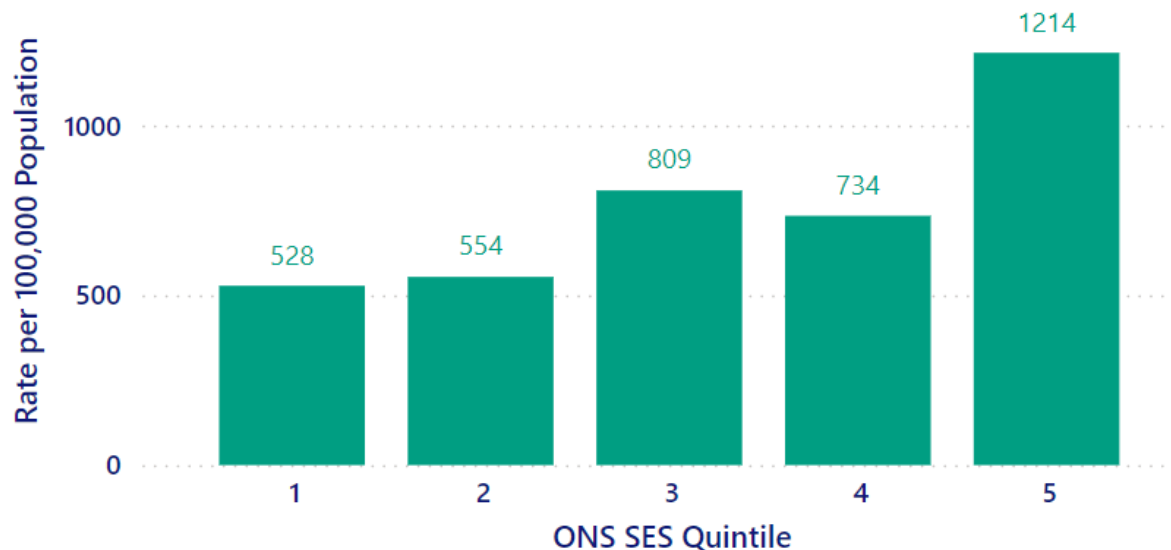
In response to reports of DOPHS, IDP nurses assess the individual's symptoms, risk factors, and potential for transmission, as well as provide counselling and education on prevention. A key activity within this response is to determine the likely source of

acquisition for each infection and to identify potential contacts if transmission occurs person to person, or to identify an environmental source such as food, water or exposure to an infected animal or insect (vector) to try to eliminate any ongoing risk to others. IDP also conducts larger investigations in schools, workplaces, and community settings for diseases where prevention of transmission to contacts requires rapid administration of post-exposure prophylaxis (PEP) through vaccination, for example against measles or hepatitis A, or identification of possible individuals exposed to identify those that require additional clinical follow-up such as in the case of tuberculosis (TB). IDP provides a 24-hour-a-day, 7 days-a-week on-call system for case and contact management for DOPHS that require immediate follow-up.

Infectious disease prevention and control overall in our community is accomplished by many OPH programs and services working together to achieve the expectations as outlined by the Ministry of Health, including surveillance/epidemiology, the Public Health Medicine Unit, Immunization and School Partnerships, and the Environmental Health Branch, whose programs are responsible for infection prevention and control, outbreak management, vector-borne disease management, and the prevention of infectious diseases related to food and water. Case and contact management activities are often at the core or are the connection point for these OPH services, leading to the identification of outbreaks or health hazards in the community or the need for prevention initiatives such as mass vaccination clinics. IDP contributes data from case and contact management work to support local and provincial surveillance that monitors the incidence and prevalence of DOPHS within the community. The program also conducts enhanced surveillance as guided by Public Health Ontario (PHO) or during local outbreaks. IDP works with OPH epidemiologists on early detection of disease outbreaks and clusters and monitoring for unusual patterns of disease transmission to help guide responses. Epidemiology analyzes surveillance data to identify trends, determinants of disease, and populations at higher risk to enable targeted interventions and resource allocation.

IDP collects sociodemographic data on some infectious diseases (such as mpox, TB) to help understand how the disease impacts equity-denied groups (EDGs). Case and contact management activities are an important contributor to health-equity. EDGs are disproportionately impacted by infectious diseases and face access barriers to healthcare and social supports in the community which are required to ensure adequate treatment and opportunities for protection against infectious diseases. While people living in all Ottawa neighbourhoods experience DOPHS (see Figure 3 in Document 1), people living in the least advantaged neighbourhoods (quintile 5) experienced infectious diseases at 2.3 times the rate of the most advantaged neighbourhoods (quintile 1) (Figure 1). In addition, geographical analysis shows neighbourhoods with less advantage experienced a bigger increase in invasive group A streptococcal disease (iGAS) from 2019 to 2023, and 35% of people diagnosed with iGAS in 2023 were underhoused and/or used injection drugs.

Figure 1. Rate of DOPHS per 100,000 population by Ottawa Neighbourhood Study (ONS) neighbourhood socio-economic status (SES) quintile, 2023, excluding influenza and COVID-19



Source: Ontario Ministry of Health, iPHIS, extracted May 6, 2024.

Note: Influenza and COVID-19 are excluded because a disproportionate amount of influenza and COVID-19 testing occurs in long-term care homes and retirement homes to support outbreak management, and neighbourhood SES is not available for all influenza cases.

A critical part of preventing and managing infectious diseases is working with community partners such as local hospitals as well as with organizations that specifically serve EDGs such as Community Health Centres (CHCs) and local shelters to ensure effective testing, treatment, support and education. The IDP case managers assist clients in connecting to care, especially for those experiencing health equity barriers. Examples of this include assisting clients who do not have a health care provider and have a concerning animal bite to access rabies post exposure prophylaxis (RPEP) vaccine through OPH neighbourhood health and wellness hubs, or when TB is a concern, to facilitate referral to the Ottawa Hospital or CHEO for assessment by a specialist physician.

IDP also works with OPH's Physician and Nurse Practitioner (NP) Engagement Team to provide Ottawa area physicians and NPs with timely information on emerging infectious disease topics and urgent situations. Community service providers are also routinely provided information on infectious disease topics. A recent example of this involved IDP collaborating with the IPAC program to share prevention strategies for invasive group A streptococcus (iGAS) with local shelters. IDP also collaborates with neighbouring public health units in Ontario and Quebec as necessary.

Increased Burden of Infectious Disease Management in Ottawa

In 2023, 7608 confirmed reports of infectious diseases (excluding influenza and COVID-19) were received by OPH, which is 6.3% higher than the pre-pandemic average (2017 to 2019) and 47% higher than the average in 2020 to 2021 when pandemic restrictions were in effect. An additional 9826 reports of people with laboratory-confirmed infections that no longer require individual follow-up were received (912 influenza and 8914 COVID-19) in 2023. While reports of most infectious diseases decreased during the pandemic, many are now increasing and exceeding the average annual number of reports from 2017 to 2019 (Table 1). In addition to lab confirmed reports, OPH receives reports from physicians and nurse practitioners with concerns about the possibility of a DOPHS before a confirmed diagnosis is made. IDP works with the clinician – often recommending lab testing or consultation with specialist physician – to assist in a way that proactively protects the health of the community. As not all reports go on to represent confirmed diseases, some of this work is not captured by the number of confirmed reports.

The burden of infectious diseases has been growing in Ottawa and continues to grow for a variety of reasons. These include population growth, travel and immigration, climate change with increases in vector-borne infection distribution locally, and a re-emergence of some vaccine-preventable infections due to outbreaks occurring worldwide and pandemic-related decrease in population vaccine coverage. Additional information and data supporting these reasons can be found in Document 1.

Table 1. Ten diseases of public health significance with the greatest increase in confirmed reports from 2017-2019 average to 2023, Ottawa

Disease	2017-2019 Average Reports	2023 Reports	Percentage Increase
LTBI (latent tuberculosis infection)	790	982	24%
Gonorrhea	762	967	27%
Lyme disease	154	306	99%
Syphilis	241	294	22%
Hepatitis B	176	230	31%
iGAS	70	147	110%
HIV	77	133	73%
IPD (Invasive pneumococcal disease)	72	119	65%
Tuberculosis	57	70	23%
Cyclosporiasis	28	48	71%

Source: Ontario Ministry of Health, iPHIS, extracted May 6, 2024.

Increased Complexity of Case and Contact Management Work

There is an increase in the number of people with an infectious disease that experience significant social and economic barriers that impact their ability to isolate safely away

from others and access adequate food and housing, mental health supports, addiction services and primary care. To support clients' complex needs, IDP nurses rely heavily on the expertise and resources of various community partners, many of which have limited capacity such as isolation spaces in shelters.

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Healthcare system challenges are also negatively impacting case and contact management work. In Ottawa, there is a worsening lack of access to regular primary health care providers to support assessment, testing, and treatment of individuals that have an infectious disease and their contacts. In 2019-2020, 14% of the people living in Ottawa, or approximately 122,000 people, did not have access to a regular health care provider¹. This proportion was higher among people who had immigrated in the past 10 years with 38% not having access to a regular health care provider. This proportion is likely higher now with an estimated 171 family physicians required to fill the gap in Ottawa.² When a person impacted by a DOPHS does not have a primary care provider this can add a significant increase in the workload for the nurse responsible as there is often a need to find alternate locations for affected individuals to access recommended services for assessment, treatment or prevention.

Resistance to common antibiotic treatments prolongs or increases complexity of case management for certain infections such as gonorrhea, multidrug and extensively drug-resistant (XDR) TB, and XDR shigellosis. Overall, drug resistant cases of TB have nearly doubled from a three-year average in 2016 of 2.6 cases per year to a three-year average in 2023 of 4.6 cases per year. Drug resistant TB is a challenging illness to manage and contact trace, with some treatments lasting up to 24 months, compared to a typical 6-month TB treatment. While outbreaks of XDR shigellosis have been reported elsewhere in Ontario in the past year, Ottawa received the first reports of locally acquired XDR shigellosis in March 2024.

Technological and Logistical Challenges

The continued use of an aging provincial reporting tool (iPHIS) is not sufficient to meet many of the documentation requirements needed to fulfill guidance expectations, as well as other legislated standards. This has resulted in the use of multiple digital systems to complete infectious disease follow-up. These fragmented tools create a significant amount of additional work to use, increase training needs, slow data entry, require intensive quality assurance processes to ensure data quality, and create duplication of data entry to report within the provincial system.

Furthermore, the expectation of partners in the community and those impacted by infectious diseases is that IDP will be able to communicate and share information through modern tools such as electronic file sharing or via text/email that may not always meet privacy standards and cannot be done through iPHIS. As a result, healthcare providers and persons impacted by infectious diseases may not respond to

¹ Canadian Community Health Survey 2019-2020, Statistics Canada, Share File, Ontario Ministry of Health.

² <https://www.oma.org/newsroom/news/2024/january/ontarios-doctors-warn-of-worsening-health-care-crisis-if-family-doctor-shortage-is-not-addressed-immediately/>

repeated phone calls or be willing to provide critical follow-up information via telephone, as used to be commonplace in case and contact management work.

In addition, the number of lab reports being sent to OPH for processing for some diseases has increased over time and generates significant work related to data entry, lab interpretation and review for new infections. Over 14,000 total lab reports were received and manually processed by OPH in 2023; this includes 5,660 follow-up or repeat lab results received in addition to the initial reporting of the infection that may still require follow up. Follow up lab results require review by a case manager as there may have been additional testing performed on the initial sample, or to determine whether the result is a new or previous infection. All lab results need to be reviewed and entered into iPHIS, An additional 8,914 COVID-19 lab reports were automatically processed by CCM; however, the Ministry of Health recently demobilized the CCM solution, meaning that a manual review of lab results for people with confirmed COVID-19 is required. While the Ministry of Health is working on a new provincial tool for comprehensive case and contact management, this tool will likely not be available for several years. As such, outdated technology currently remains a major driver of case and contact management workload.

DISCUSSION

Recommendation 1: That the Board of Health receive information about Ottawa Public Health's Infectious Disease Case and Contact Management Program for 2024 as outlined in this report and Document 1.

When workload exceeds the available resources, such as during seasonal increases in infectious diseases, or during large investigations or outbreaks, OPH is not able to ensure that case and contact management activities are performed so as to be in compliance with provincial protocols for all diseases (e.g., complete required follow-up actions of all reports of DOPHS according to specified timelines.). During these times IDP is forced to prioritize work based on considerations that include the volume of reports OPH receives, the level of effort of public health interventions, directives that are given by the province, whether the work is achieved by others within the health care system, and the impact of changes on other OPH programs and local service providers. Additional considerations are disease-specific and include whether a disease has a high risk or likelihood of transmission and/or outbreak potential in the community, high severity of illness if contracted, and potential negative impact on equity-denied groups (EDGs). OPH is aware that other public health units in Ontario also frequently encounter difficulties in achieving all expectations for all infectious disease case and contact management activities during times of increased workload pressure which can last many weeks to months and require alternative approaches.

As OPH worked through re-imagining what to shift in our approach after the peak of the pandemic, and implemented organizational changes in April 2023, an investment in infectious disease case and contact management occurred with a reallocation of 8 full-

time equivalents (FTEs) to the IDP team. Additional efforts have been taken to improve organizational surge capacity for infectious disease case management work through new staffing models (e.g., casual pool) and alignment of infectious disease case management teams. Program and process efficiencies are continuously being made within the program and the use of technology to improve efficiencies has been leveraged when available, and experiences learned within the COVID-19 pandemic have been applied. Nevertheless, any new infectious disease event such as an outbreak, an emerging or re-emerging infectious disease or a surge in case reports for a particular disease can easily overburden the IDP case and contact management program's capacity and necessitate prioritization efforts. In an effort to mitigate the impact of any reduction of case and contact management activity to meet extraordinary demands, OPH has established a committee comprising of Associate Medical Officers of Health, epidemiologists and representatives from the IDP team to review case and contact management practices.

Recommendation 2: That the Chair of the Board of Health send a letter to the Minister of Health to convey:

- a. **The need to review the funding formula alongside the review of the OPHS to grow capacity for infectious disease case and contact management work;**

Given the increasing infectious disease rates in our community, complexity of case and contact management work, and technical and logistical challenges, an investment of 5 FTEs is required to ensure that all expectations are met for infectious disease case and contact management work with current standards, practices and systems. Given the projected population growth and increasing infectious disease rates, additional FTEs will be required in the coming years.

The existing funding formula for local public health units does not specifically consider infectious disease case and contact management burden nor the increasing disease trends that currently exist. This request would emphasize the need for a funding structure that: a) accurately reflects the resource needs dictated by the OPHS and related protocols for infectious disease case and contact management; b) supports sustainable infectious disease case and contact management; c) enhances our capacity to better support EDGs; and d) enables strategic investments in prevention and public health initiatives to those at higher risk of various infections. These initiatives are crucial for reducing the incidence of infectious diseases and improving overall public health outcomes.

- b. **The need to accelerate the development of a provincial infectious diseases case and contact management documentation and surveillance tool integrated with the Ontario Laboratory Information System (OLIS).**

OPH's experience during the COVID-19 pandemic using the provincial COVID-19 case and contact management tool (CCM) demonstrated the effectiveness of one integrated

system. CCM was integral in supporting health units by meeting provincial reporting requirements, storing confidential information securely, meeting various documentation standards, assisting with management of case reports and outbreaks through automated tools for outreach and auto-linking of case reports to outbreaks, facilitating real-time data analysis and reporting, including fields for data collection of social determinants of health, and allowing secure communication across teams and health units. It also allowed for automatic data entry of infectious disease lab reports from the Ontario Laboratories Information System (OLIS), which relieved the workload pressures from manual entry of lab reports, decreased the time required to process lab reports, increased data accuracy and allowed for timely follow up. The CCM tool also allowed IDP to reach clients through more modern communication methods such as text, email and webforms instead of relying on phone call and mail as the main channels of communication. These additional communication methods are often required to successfully reach clients in an age where they are the predominant modes of communication.

OPH is pleased that the Ministry of Health is embarking on updates to the current provincial surveillance tool, iPHIS, which is unable to provide many of the benefits to workload and efficiency mentioned above. OPH is advocating that the features described above are considered for inclusion in the updated tool. OPH's infectious disease case and contact management program could benefit immensely with implementation of an updated tool, and requests that the Ministry accelerate their timelines to provide this tool to local public health units as soon as possible.

RURAL IMPLICATIONS

There are no rural implications associated with this report.

CONSULTATION

No interest holder or public consultation was required in preparing this report.

LEGAL IMPLICATIONS

There are no legal impediments to implementing the recommendations in this report.

RISK MANAGEMENT IMPLICATIONS

There are both perceived and real risks with the approach taken by OPH to prioritize infectious disease case and contact management work. Meeting the expectations outlined by the Ministry for infectious diseases is strived for as much as possible, but when work outpaces resourcing, prioritization of the highest-risk work occurs. This helps to ensure that those infections that could pose the greatest risk to the community where public health intervention is critical to reducing this risk, are maintained.

The challenges described by the available tools to support case management are also a risk, as multiple systems are used to support the work. Multiple systems create fragmented documentation, increased risk for privacy issues, and potential data errors. Mitigation strategies have been implemented to help reduce these risks, yet without an integrated surveillance and documentation tool provided by the province, the risks will persist.

ASSET MANAGEMENT IMPLICATIONS

There are no asset management implications to this report.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

ACCESSIBILITY IMPACTS

There are no direct accessibility impacts with this report.

ALIGNMENT WITH OTTAWA PUBLIC HEALTH STRATEGIC PRIORITIES

This report aligns with OPH's Strategic Plan in the following ways:

1. **Equity Driven:** As discussed in the report, EDGs are disproportionately impacted by infectious diseases. They also have additional barriers and challenges with accessing care, such as a higher percentage of EDGs not having a regular health care provider. IDP works with health and community service providers to support clients with access to care for infectious diseases and partner on prevention strategies to detect and/or reduce the likelihood of infectious diseases within EDGs.
2. **Enrich Our Workplace:** Providing the required tools for employees to complete their work effectively is of critical importance. Acquiring an integrated provincial documentation and surveillance system is essential to achieving this outcome. Employees in IDP also benefit from training and professional development opportunities to advance their skills in infectious disease work and health equity, diversity and inclusion.

SUPPORTING DOCUMENTATION

Document 1: Increased Burden of Infectious Disease Work in Ottawa.

DISPOSITION

This report is provided for the information of the Ottawa Board of Health.

Document 1: Increased Burden of Infectious Disease Management in Ottawa

POPULATION GROWTH, IMMIGRATION & TRAVEL

Ottawa's population has grown 7% from 2019 to 2023 and was estimated at 1,095,575 in 2023³. The population of Ottawa is projected to continue to grow, adding 136,000 more residents by 2030. Census data shows the number of recent immigrants living in Ottawa increased 51% from 31,300 in 2016 to 47,410 in 2021 and the proportion of those recent immigrants who were admitted as refugees also increased (from 23% in 2016 to 31% in 2021). An additional 29,615 people living in Ottawa in 2021 were non-permanent residents (refugee asylum claimants or persons here on a study or work permit). About a third (29%) of the 2021 population living in Ottawa were born outside of Canada.⁴

Data from Immigration, Refugees and Citizenship Canada shows a steady increase⁵ in permanent residents (a combination of landed immigrants and resettled refugees) arriving in Ottawa from 10,890 in 2019 to 21,145 in 2023⁶. Refugee asylum claims made in Ontario also increased with an estimated 7,000 arriving in 2019 compared to 40,770 in 2023; the number who settled in Ottawa (after arrival in Ontario or another province) was unavailable at the time of publication. Refugees are more likely to arrive from countries or living situations with higher rates of some infectious diseases^{7,8}, have unique health care needs and often experience barriers to health care.

Increased DOPHS diagnosed during immigration testing among newcomers has resulted in additional case management follow up for infections acquired outside of Canada. For example, the proportion of HIV infections diagnosed by healthcare providers specializing in immigrant health in 2023 has more than doubled since before the pandemic. Similar to HIV diagnoses, the number of newcomers requiring TB immigration medical surveillance management increased from 268 in 2019 to 418 in 2023.

A corollary of migration is that Ottawa residents may travel to visit friends and relatives in a lower-income country of origin. This does - at a population level - increase their risk of travel-related infectious diseases (e.g. hepatitis A, measles) compared to other groups of international travelers due to cultural and societal barriers, healthcare provider-dependent barriers, logistical barriers and more frequent and longer travel to

³ Population Estimates 2019 and Projections 2023, 2030, Ontario Ministry of Health, IntelliHEALTH Ontario, Date Extracted: Jan 27, 2023.

⁴ Statistics Canada. 2022. [Table 98-10-0307-01 Immigrant status and period of immigration by place of birth: Canada, provinces and territories, census divisions and census subdivisions](#)

⁵ Except in 2020, the first year of the COVID-19 pandemic.

⁶ Local Immigration Partnership data portal. Permanent residents arrival, Ottawa, 2015-2023. <https://lipdata.ca/indicator/permanentresidents2015-2023/?tab=graph>

⁷ World Health Organization. 2021. WHO releases new global lists of high-burden countries for TB, HIV-associated TB and drug-resistant TB. <https://www.who.int/news/item/17-06-2021-who-releases-new-global-lists-of-high-burden-countries-for-tb-hiv-associated-tb-and-drug-resistant-tb>. Accessed May 21, 2024.

⁸ World Health Organization. 2015. WHO Estimates of the Global Burden of Foodborne Diseases. https://iris.who.int/bitstream/handle/10665/199350/9789241565165_eng.pdf. Accessed May 21, 2024.

destinations with high disease rates.⁹ For example, in 2023, three school/daycare-based hepatitis A contact follow-up investigations were related to international travel to visit friends and relatives and required post-exposure prophylaxis of more than 130 contacts. However, a similar increase in enteric infections unrelated to immigration is observed among Ottawa residents who travel outside of Canada, and international travel has increased since COVID-19-related travel restrictions were lifted in October 2022. For example, in 2023, 25% (34/135) of Ottawa residents with a confirmed salmonella infection acquired their infection at a beach resort in Latin America or the Caribbean.

Increases in DOPHS highlight the need for more resources in areas of case management and treatment to adequately respond to the growth of our population, including immigration trends, and ensure refugees and other newcomers receive equitable care and support.

EMERGENCE AND RE-EMERGENCE OF INFECTIOUS DISEASES

In July 2023, three new reportable infections (anaplasmosis, Powassan virus disease, and babesiosis) were added to the list of DOPHS. Warmer temperatures and expanding territory of blacklegged ticks associated with climate change are expected to increase the risk of these emerging vector borne diseases locally. In addition, emerging infectious diseases requiring recent responses include mpox, avian influenza, and the COVID-19 pandemic.

There has been a re-emergence of some vaccine preventable infections such as measles due to outbreaks occurring worldwide and a pandemic-related decrease in population vaccine coverage in young people in Ottawa. This requires extensive preparedness for the possibility of a single case. In 2024, as of May 15, 2024, Ontario has reported 22 confirmed cases of measles¹⁰, while Quebec has reported 51 confirmed cases of measles as of May 21, 2024¹¹. This is a significant increase from previous years in both provinces.

INCREASE IN INVESTIGATIONS

In 2023, OPH was involved in 25 separate infectious disease special investigations involving greater than 1000 total contacts - from foodborne outbreaks to hepatitis A exposures in daycare and kindergarten settings requiring post-exposure prophylaxis (PEP) vaccinations, to TB contact investigations requiring testing. This is higher than the average of 20 special investigations in 2018 to 2019. The number of contacts

⁹ CDC. 2024. CDC Yellow Book 2024: Visiting Friends and Relatives. Available online at: <https://wwwnc.cdc.gov/travel/yellowbook/2024/work-and-other-reasons/visiting-friends-and-relatives>

¹⁰ Public Health Ontario. Enhanced Epidemiological Summary, Measles in Ontario. https://www.publichealthontario.ca/-/media/Documents/M/24/measles-ontario-epi-summary.pdf?rev=dfa35ea52a6d402496f98f5c1cb745c3&sc_lang=en

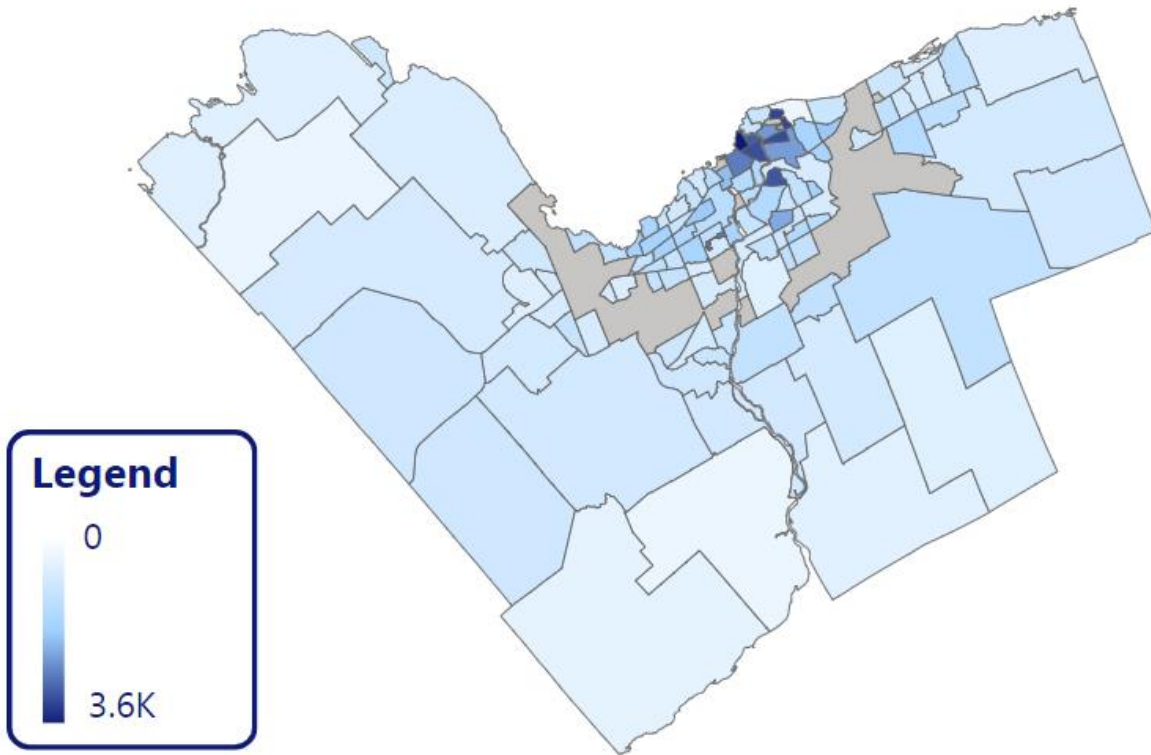
¹¹ Gouvernement de Quebec. Measles Outbreak. <https://www.quebec.ca/en/health/health-issues/a-z/measles/measles-outbreak>

requiring follow-up in TB investigations was 1.4 times higher in 2023 (179 contacts) compared to the 2018 to 2019 average (130 contacts).

DOPHS BY OTTAWA NEIGHBOURHOOD

While people living in all Ottawa neighbourhoods experience DOPHS, on average people living in the least advantaged neighbourhoods experience higher rates (Figure 3).

Figure 3. Neighbourhood rate per 100,000 population of all* DOPHS, Ottawa, 2023



Source: Ontario Ministry of Health, iPHIS, extracted May 27, 2024.

Note: *Excludes influenza and COVID-19 because a disproportionate amount of influenza and COVID-19 testing occurs in long-term care homes and retirement homes to support outbreak management, and SES is not available for all influenza cases.