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STRENGTHENING INFECTIOUS DISEASES CONTROL

The Community and Health Services Committee recommends the adoption of the recommendation contained in the following report dated December 19, 2011, from the Commissioner of Community and Health Services and Medical Officer of Health.

1. RECOMMENDATION

It is recommended that Council receive this report for information.

2. PURPOSE

This report is prepared for Council in order for it to carry out its legislative duties and responsibilities as the board of health under the *Health Protection and Promotion Act*. It describes plans to strengthen the Infectious Diseases Control Division of the Public Health Branch so it can better prevent and respond to infectious diseases of public health importance.

3. BACKGROUND

The Public Health Branch is mandated to carry out infectious disease prevention and control activities

The Public Health Branch is responsible for preventing and controlling infectious diseases of public health importance. These include diseases that may have a serious impact on the health of the population, that are likely to spread, and/or that have the potential to be controlled through public health action. Examples of infectious diseases of public health importance include, but are not limited to:

- Reportable diseases as set out in Regulation 559/91 under the *Health Protection and Promotion Act* (e.g. Measles, Tuberculosis)
- Zoonotic diseases (e.g. Eastern equine encephalitis)
- Emerging or re-emerging infections (e.g. Methicillin Resistant Staphylococcus aureus)

The Ontario Public Health Standards mandate specific programs that must be undertaken by public health units to prevent and/or control infectious diseases, such as:

- Investigating suspected and confirmed reportable disease cases and instituting control measures to prevent spread.
- Responding to infectious disease emergencies.
- Promoting and providing publicly funded vaccines.

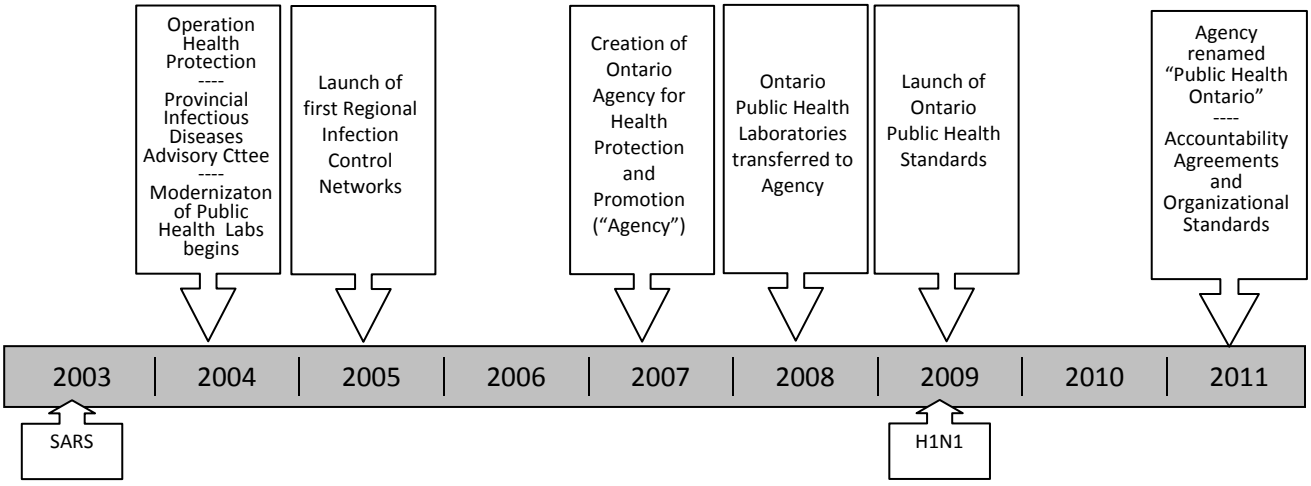
- Achieving target vaccine coverage rates.
- Enforcing the *Immunization of School Pupils Act.*

These functions are conducted by the Public Health Branch's Infectious Diseases Control Division. The current division has a complement of 97 FTE, made up mostly of public health nurses along with other health professionals such as public health inspectors.

Following SARS, the Province enhanced system-wide components of public health infrastructure and infectious diseases capacity

The SARS outbreak of 2003 demonstrated how infectious disease prevention and control is a critical area of public health, in that a large outbreak may have far-reaching consequences not only for the community's health locally, but also nationally and even internationally, as well as for the economy and other sectors of government. Investigations into the SARS crisis led to a range of reports recommending renewal of the public health system. The Province of Ontario responded with Operation Health Protection, which outlined the provincial plan to build up public health in general and infectious disease control in particular. As Figure 1 shows, the Province has implemented numerous initiatives to this end, including an agency (now "Public Health Ontario") to support the healthcare system with expert advice and practical tools, Regional Infection Control Networks, and a public health laboratory system.

Figure 1: Provincial renewal of public health/infectious disease control 2003-2011



As part of a renewed focus on accountability, the Province also introduced a comprehensive public health performance management framework. Initiatives related to this framework have included the release of the Ontario Public Health Standards in 2009 to replace previous guidelines for public health programming and the introduction of Accountability Agreements with health units in 2011. Accountability Agreements outline terms and conditions for provincial funding of public health programs, and require

Boards of Health to provide annual reports on performance to the Ministry of Health and Long-Term Care.

An internal review has identified the need to enhance infectious disease control programs and infrastructure at the local level

Provincial revitalization of several components of the public health system has strengthened the infrastructure and support available to all health units. However, as the pandemic H1N1 influenza outbreak in 2009 demonstrated, infectious diseases are by nature unpredictable. In recent years, factors such as increasing global travel, climate change and antibiotic-resistant organisms have led to a rise in the number and complexity of certain infectious diseases. Locally, the Region's rapidly growing population has amplified pressures for the Public Health Branch's Infectious Diseases Control Division.

In light of these pressures and with the H1N1 experience fresh in mind, the Public Health Branch took first steps in 2010 to renew infectious disease prevention and control at the local level. For example:

- In May 2010, a review of the local H1N1 response was presented to Council through Report No. 4 of the Community and Health Services Committee. Amongst recommendations to improve management of future infectious disease emergencies were recommendations to the Province to make more consistent use of community physicians for pandemic vaccine delivery. The Province has since indicated that it is looking into how to ensure that primary care physicians are systematically integrated into a pandemic immunization program.

- In June 2010, a new Associate Medical Officer of Health with infectious disease expertise was appointed to The Regional Municipality of York.

In 2011, the Infectious Diseases Control Division conducted an internal review to assess readiness to respond to infectious diseases of the 21st century and compliance with the Ontario Public Health Standards and Accountability Agreements. Staff paid special attention to areas where health risk is high, where response is most urgently required, where public concern is greatest and where public health has unique responsibility. The review identified the need for:

- Increased expertise in case and contact management.

- Increased surge capacity to respond to large infectious disease outbreaks. (Proactively training an adequate number of managers and staff will enable them to assume the different functions required during an emergency.)

- A comprehensive vaccine strategy.

(Vaccine-preventable diseases have a costly impact, resulting in doctor's visits, hospitalizations, and premature deaths. The most cost-effective intervention in medicine to prevent infectious diseases and save lives is immunization. It is responsible for the control of many diseases that were once common in this country, including polio, measles, diphtheria, whooping cough, German measles, mumps, tetanus, and *Haemophilus influenzae* type b.)

4. ANALYSIS AND OPTIONS

Strategy to strengthen Public Health Branch's infectious disease control will be implemented over the next several years

In order to address the gaps that have been identified, the Infectious Diseases Control Division has devised a multi-year strategy to strengthen its own internal resources. Key components of the strategy are:

- Development of core competencies in staff (including emergency response capacity)
- Expansion of divisional capacity internally and through partnerships
- Business practice improvement

While some measures to boost local infectious diseases control have already been put into place, others will be ongoing, or will be phased in step by step over the course of upcoming budget cycles (Figure 2).

Figure 2: York Region Public Health strategy to strengthen infectious disease control 2011-2015

	2011	2012	2013	2014	2015
Internal audit and gap analyis					
Core competency training					
Policy + procedure review					
CQI activities (e.g. chart audits, data verification)					
Expansion of school + community immunization	(Begin clinics in schools w/ low enrolment)	(Begin increasing no. of community clinics)			
Expansion of school immunization record review procecss		(Expand to daycares)	(Expand to private schools)		

Development of core competencies will improve case and contact management and provide surge capacity during emergencies

Efforts are underway to provide Infectious Diseases Control Division staff with increased workshops and training. Program policies and procedures are also being aligned with best practices and guidelines from Public Health Ontario and other expert agencies. This will

bolster day-to-day case investigation and outbreak management and also make additional surge capacity available to address future public health emergencies.

Augmenting divisional capacity will address needs in areas such as immunization program

The Infectious Diseases Control Division is exploring various means of expanding its capacity, both internally and externally. For example, it is looking at how to bring in expertise in areas such as information management and program evaluation, as well as the possibility of introducing supervisory positions to the division. It is also exploring further development of partnerships with external organizations such as Welcome Centres in order to reach a broader target population.

In high-priority areas, the addition of new resources, including new FTEs, will help fill gaps. For 2012, the division has determined that hiring 4.0 FTE public health nurses would help address needs in the immunization program (expanding immunization review to more schools in the Region and increasing access to immunizations in the community) and case management (improving response time to lab reports of infectious diseases). Further, the addition of casual administrative support would enable more timely data entry of immunization records, communication of school suspension orders, and other administrative processes mandated under the Ontario Public Health Standards. In coming months, a new divisional director will also be hired to fill an existing vacancy.

Ongoing monitoring of business processes will identify areas for improvement

The Infectious Diseases Control Division has begun to critically review its program structure to see how best to allocate staff and resources based on provincial requirements, epidemiological information and client needs. In recent months, certain programs targeting similar risk groups have been combined (for example, harm reduction programming has been incorporated into the Sexual Health/Blood-Borne Infection program). Process mapping of all Infectious Diseases Control Division programs, which began in early 2011, are now complete. Key performance indicators are being selected so programs can be monitored at each quarter and problems addressed promptly. For example, staff follow up time to lab reports has been shortened by increasing administrative support.

The next step is to redesign programs based on public need and provincial standards to incorporate latest guidelines and best practices. Following the principles of continuous quality improvement, this will be an ongoing, iterative process.

Link to key Council-approved plans

Enhancing the strengths and controls of the Public Health Branch’s Infectious Diseases Control Division through refocused resources has been identified as an indicator of

success for the 2011 to 2015 Strategic Plan objective of optimizing the health of the community.

5. FINANCIAL IMPLICATIONS

The Infection Diseases Control Division of the Public Branch has put forward a 2012 Proposed Budget to deliver the program as described above with gross expenditures of $10.8 million, offset by revenues of $8.3 million for a net tax levy of $2.4 million. Funding sources for these programs include fees and charges, OHIP, and 75% to 100% provincial funding provided by the Ministry of Health and Long-Term Care.

6. LOCAL MUNICIPAL IMPACT

A public health initiative to strengthen infectious disease control resources will optimize the well being of the York Region community at large.

7. CONCLUSION

The Public Health branch has specific mandate in relation to infectious disease prevention and control in the community. In line with provincial realignment of several components of the public health system, York Region Public Health has undertaken a renewal of its Infectious Diseases Control Division. This will entail, over the next several years, development of core competencies, improvement of business processes, and expansion of divisional capacity, in order to strengthen infectious diseases prevention and control locally.

For more information on this report, please contact Dr. Karim Kurji, Medical Officer of Health at Ext. 4012.

The Senior Management Group has reviewed this report.