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UPDATE ON THE IMPLEMENTATION OF THE INTEGRATED PUBLIC HEALTH INFORMATION SYSTEM (iPHIS)

The Health and Emergency Medical Services Committee recommends the adoption of the recommendations contained in the following report, April 20, 2006, from the Commissioner of Community Services, Housing and Health Services:

1. RECOMMENDATIONS

It is recommended that:

1. Council authorize the receipt and expenditure of $47,230 in one-time 100% Ministry of Health and Long-Term Care (MOHLTC) funding to support ongoing activities related to Integrated Public Health Information System (iPHIS) implementation (*see Attachment 1*).

2. The Chair of the Regional Council write a letter to the Minister of Health and Long-Term Care urging the provincial government to address as a priority the current limitations of iPHIS and its accompanying reporting package, with copies circulated to the Chief Medical Officer of Health for Ontario, the Chairs of the Boards of Health in the Greater Toronto Area, the Association of Local Public Health Agencies (alPHa), the Association of Public Health Epidemiologists in Ontario (APHEO), the Ontario Public Health Association (OPHA), and the Provincial Infectious Diseases Advisory Committee (PIDAC).

2. PURPOSE

The purpose of this report is to provide an update to Council on the benefits and challenges brought about by the implementation of iPHIS by York Region Health Services (YRHS) and to obtain authorization to expend 100% MOHLTC funding to assist with ongoing iPHIS implementation activities.

3. BACKGROUND

iPHIS is an integrated case, contact, and outbreak management software system mandated by the Ontario MOHLTC for infectious disease reporting. It is intended to improve the timeliness and coordination of investigations and the accuracy and quality of surveillance data for all reportable and emerging infectious diseases. This is to be accomplished through data entry into iPHIS (the data reservoir) and the extraction of data through a reporting program (Cognos ReportNet) that creates pre-formatted disease reports, letters and worksheets.

iPHIS is in use in several jurisdictions across the country, although the version of iPHIS implemented in Ontario has enhanced outbreak management functionality, custom-built to address system shortfalls identified during and subsequent to the 2003 SARS outbreak. It was fully implemented across Ontario by December 2005, replacing the Reportable Disease Information System (RDIS) that had been in use in Ontario since 1990. RDIS was based on aging technology that could no longer be supported and did not have the capacity to facilitate data sharing between health units in the province.

iPHIS has been cited in several recent key reports for its role in improving provincial public health capacity, including:

- *For The Public's Health: Initial Report of the Ontario Expert Panel on SARS and Infectious Disease Control* (December 2003), Dr. David Walker, et al.
- *The SARS Commission Interim Report* (April 2004), Justice Archie Campbell.
- *Operation Health Protection: An Action Plan to Prevent Threats to our Health and to Promote a Healthy Ontario* (June 2004).
- The *2005 Annual Report of the Chief Medical Officer of Health to the Ontario Legislative Assembly*, by Dr. Sheela Basrur.

4. ANALYSIS AND OPTIONS

YRHS began the transition from RDIS to iPHIS on April 28, 2005. The "Go-Live" date, after which RDIS was no longer used, was July 11, 2005.

4.1 Preparation for iPHIS Implementation

YRHS conducted several initiatives in preparation for iPHIS implementation, including but not limited to the following:

- An extensive review and modification of RDIS data was required to prepare for the transfer of information from RDIS to iPHIS. Approximately 53,000 historical case records were then transferred from RDIS to the iPHIS database.

- YRHS staff identified and reviewed RDIS data entry procedures. These business processes were realigned with iPHIS.

- Working groups were established to develop procedure manuals for business processes and data entry.

- YRHS trained 60 employees from the Infectious Diseases Control Division (IDCD) and the Health Protection Division on iPHIS and/or the associated reporting software. In addition, IDCD staff have been trained to perform updating and system maintenance as well as to provide ongoing support within each team.

4.2 Impact of iPHIS

Provincial implementation of iPHIS enables Ontario health units and the MOHLTC to access the entire provincial client database, thereby facilitating the comprehensive investigation of infectious diseases across jurisdictions. It decreases the duplication of services and streamlines the transfer of cases between health units.

The implementation of iPHIS and the attempt to utilize the report generation function has identified significant challenges that require intervention by the MOHLTC. For example:

4.2.1 Data Conversion

There were a limited number of data fields that were converted from RDIS to iPHIS. It has been noted that not all data is in a comparable field in the new system. Consequently, case counts for certain reportable diseases have been altered and are no longer accurate. For example, HIV case counts are higher than they should be, and reporting accurate AIDS case counts for cases entered prior to the conversion is not possible, since the date of diagnosis in RDIS was not converted to any field in iPHIS. In addition, disease trends and contributing factors to disease cannot be analyzed.

4.2.2 Data Extraction

Surveillance involves the continuous collection and analysis of data. Disease control efforts will be hampered by the inability to extract pertinent information from iPHIS including, but not limited to, hospitalization data, laboratory results, symptoms, exposures and risk factors. This compromises the identification of disease patterns that can delay timely public health interventions.

4.2.3 Data Integrity

Standards for data entry were not developed prior to the implementation of iPHIS. This can result in questionable data integrity since the system is being utilized by all health units within the province.

As a result of the current limitations of iPHIS and the report generation capabilities, health units are required to use secondary methods to evaluate data, including manual counts of disease reports and/or exporting data to other software applications prior to analysis. This is inefficient, reduces the timely identification of outbreaks, increases the potential for errors in reporting, and has the potential of placing our community at risk for disease transmission.

4.3 Relationship to Vision 2026

The implementation of iPHIS is consistent with the Vision 2026 goal of Responding to the Needs of our Residents.

5. FINANCIAL IMPLICATIONS

YRHS received a one-time 100% funding allotment of $34,664 from the MOHLTC for iPHIS implementation in 2005. This funding was spent on hardware and clerical costs required for data conversion and on training initiatives. Ongoing software costs for iPHIS and Cognos ReportNet are covered 100% by the MOHLTC. An additional one-time 100% funding allotment of $47,230 was provided from the MOHLTC for iPHIS implementation on November 21, 2005. This money will be spent on clerical time to address the backlog of data entry resulting from iPHIS implementation. All other costs associated with the daily maintenance of iPHIS have been included in the approved 2006 Public Health budget.

6. LOCAL MUNICIPAL IMPACT

Although the intent with the provincial implementation of iPHIS was to improve the tracking and capturing of data of reportable diseases for all York Region residents, its potential has not yet been reached. The limitations of iPHIS and the Cognos ReportNet report generation package must be addressed prior to health units maximizing the benefits from iPHIS.

7. CONCLUSION

All Ontario health units have adopted iPHIS, a new system for reportable disease case, contact, and outbreak management and reporting. YRHS undertook several internal initiatives which resulted in the successful implementation of iPHIS in 2005. YRHS has realigned key business processes and have started to experience the benefits of this integrated system by being able to access reportable disease client records from across the province.

However, for iPHIS to reach its full utility, it requires the MOHLTC to make a concerted effort in correcting the deficiencies in both the communicable disease information system and the accompanying reporting package. This is essential to provincial public health units in their efforts to establish efficient and effective surveillance to manage disease transmission and outbreaks.

It is requested that Council approve the receipt and expenditure of $47,230 in one-time 100% MOHLTC funding to support ongoing activities related to iPHIS implementation.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the Agenda for the May 11, 2006 Committee meeting.)