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YORK REGION'S CONTRIBUTION TO APPLIED PUBLIC HEALTH RESEARCH

The Health and Emergency Medical Services Committee recommends that Council adopt the recommendation contained in the following report dated December 17, 2008, from the Commissioner of Community and Health Services.

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk circulate this report to the Province's Chief Medical Officer of Health, the Public Health Agency of Canada, Public Health Research, Education and Development Program (PHRED) of Ontario, York University's Knowledge Mobilization Unit, University of Toronto's Community Medicine Residency Program, and the Central Local Health Integration Network for information.

2. PURPOSE

This report provides an overview of the contribution of Community and Health Services Department staff in research and knowledge exchange activities in the past two years and how these activities play a part in determining how programs and services are delivered in York Region.

3. BACKGROUND

Research and knowledge exchange is an important public health role

The Mandatory Health Program and Services Guidelines (1997) requires that the Board of Health collaborate with researchers and practitioners to ensure the development of innovative, cost effective, evidence based programs and services. The Board of Health is also required to disseminate knowledge gained from program development and evaluation. In 2008, the revised Ontario Public Health Standards recognized research and knowledge exchange as a foundational standard of public health.

Applied scientific research provides evidence to support effective, efficient and accountable public health practice

Public health activities are built on strong evidence-based science. Public health practitioners need sound and credible knowledge to guide their work in protecting and promoting the health and well-being of the public. This knowledge facilitates better

decision making in health standards, policies, and programming. In turn, the overall effectiveness, efficiency and accountability are enhanced in public health practice.

Publication in peer-reviewed journals facilitates knowledge exchange

New public health knowledge requires validation by the scientific community in the field. This often takes place when the knowledge is published in well- respected scientific journals. These journals ensure that the articles they publish undergo a rigorous peer-review process, where the author's work, research or idea is placed under the scrutiny of a panel of qualified experts in the relevant field. This approach enhances validity and reliability of the evidence. The scholarly communication facilitates knowledge dissemination and exchange.

4. ANALYSIS AND OPTIONS

Fifteen peer-reviewed articles, authored by the Region's Public Health Branch staff, have been published in renowned scientific journals in the last two years

To determine the accomplishments of York Region Public Health staff in the area of research and knowledge exchange, the number of peer reviewed journal publications was used as a measure. This indicator was identified as a performance measure of staff engagement and continuing professional development in the York Region Public Health Branch Balanced Scorecard (2007). To prepare for this report, two parameters were included:

1. The article must be published in an academic peer-reviewed scientific journal from 2006 to present.
2. The author (s) must be incumbent staff when the article was written.

A total of fifteen articles were identified.

The articles cover a wide range of public health issues

The articles identified were published in five renowned journals:

1. *Canadian Journal of Public Health* (CJPH)
2. *Canadian Medical Association Journal* (CMAJ)
3. *Epidemiology and Infection*
4. *Journal of Obstetrics and Gynaecology Canada* (JOGC)
5. *Environmental Health Review*

A wide range of subject matters were being addressed, from health protection issues such as lead in drinking water to infectious disease control issues such as West Nile Virus and Severe Acute Respiratory Syndrome (SARS). A brief synopsis of these articles is included in *Attachment 1*.

Different levels of public health staff participated in publication activities

Public health staff who authored these articles hold positions in the Region as medical officer of health, associate medical officer of health, director, manager, environmental health specialist, environmental research and policy analyst, epidemiologist, public health nurse, senior public health inspector, and solicitor. Some of the staff also hold appointments in accredited academic institutions such as the University of Toronto, Queen's University and York University.

Research findings are applied to improve public health practice in the Region and beyond

Findings from research activities are translated into practices to improve the quality of public health services in York Region. For example, in collaboration with the Town of Richmond Hill, a study on the efficacy of goss traps has resulted in improved methods to control mosquitoes that can potentially carry the West Nile Virus. Goss trap catch basin was once theorized to be an effective means of reducing mosquito population. However, when the theory was put to test it was discovered that not only the goss trap did not reduce mosquito breeding, it actually increased mosquito larval prevalence and abundance. As a result, the findings changed the mosquito control practice at the Town of Richmond Hill and across the Region as well as influenced decisions at the Ontario Ministry of Environment, Durham Region and Peel Region.

Staff engaged in developing national guidelines that led to policy changes in York Region Sexual Health Clinics and other jurisdictions

Incorporating expert consensus guidelines into policies and programming promote best practices. In 2007, York Region's Public Health staff participated in the development of national consensus guidelines on continuous and extended hormonal contraception. Clinical practice guideline is a tool often used to assist clinicians and practitioners make decisions about appropriate health care. Using a systematic approach, best practices are recommended based on consensus from an expert panel who reviewed an enormous amount of medical literature on the subject. Findings from this national initiative resulted in policy changes in sexual health clinics at York Region and other jurisdictions.

York Region Public Health contributed to the understanding of new and emerging public health crisis

The outbreak of SARS in 2003 presented significant challenges and opportunities to the public health system in Ontario. To further understand SARS and its implications, Region staff were involved in two research studies that generated new knowledge and contributed to the scientific community. These findings would be useful in studying, preventing and managing pandemics worldwide. For example, the study on household

transmission of SARS, published in 2006, has been cited by other research studies in the field.

Sharing of information promotes awareness and knowledge transfer

Many of these articles were aimed to increase awareness, educate, dispel myths and promote transfer of knowledge into practice. They were targeted to physicians and public health practitioners in the Region and other health units. For example, physicians would be more likely to adhere to the *Health Promotion and Protection Act* communicable disease reporting guidelines if they thoroughly understand the public health implications. Furthermore, sharing knowledge on issues such as distribution of raw milk and invasion of round goby in the Town of Georgina could also influence public health practitioners in other jurisdictions in their deliberations in programming and policy development.

Research and knowledge exchange aligns with York Region's Vision 2026

York Region values continuous learning, quality ideas, innovation and leading in best practice. Aligning with the Region's Vision 2026, the Public Health Branch engages in research and knowledge exchange activities to promote best practices and improve the quality of public health services to York Region residents as well as provide leadership in the public health science community that is not confined by geographical boundaries.

5. FINANCIAL IMPLICATIONS

All costs associated with the activities identified in this report are included in the York Region Public Health Branch base budget.

6. LOCAL MUNICIPAL IMPACT

Knowledge gained from participation in research activities is transferred into improved public health practice in York Region. As a result, programs and services are reviewed, modified or refined to better meet the needs of York Region residents.

7. CONCLUSION

Engaging in research and knowledge exchange activities, the Community and Health Services staff facilitate the improvement of public health practice, contribution to the public health science community and enhancement of York Region's profile.

Report No. 1 of the Health and Emergency Medical Services Committee
Regional Council Meeting of January 22, 2009

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.

(The attachment referred to in this clause was included in the agenda for the January 8, 2009 meeting.)