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THREE NEW PUBLICLY FUNDED VACCINES

The Health and Emergency Medical Services Committee recommends the adoption of the recommendations contained in the following report, March 7, 2005, from the Commissioner of Health Services:

1. RECOMMENDATIONS

It is recommended that:

1. The Regional Chair write a letter to the Federal Minister of Health, endorsing the development of a national immunization strategy.
2. The Regional Chair write a letter to the Ontario Minister of Health and Long-Term Care requesting that the Province provide 100% funding to York Region for the purchase of a back-up generator to protect the vaccine supply in the Markham Public Health office.

2. PURPOSE

The purpose of this report is to inform Committee and Council of the three new publicly funded vaccine programs being introduced into the routine immunization schedule in 2005 by the Ministry of Health and Long-Term Care (MOHLTC) and to request 100% funding from the MOHLTC for the purchase of a back-up generator for the Markham office vaccine refrigerators.

3. BACKGROUND

Immunization is the single most effective public health practice available to prevent infectious diseases. Canadian children are routinely immunized against many infectious diseases under programs offered and paid for by provincial governments. As of 2004, all provincial programs funded the following vaccines: the combined tetanus, diphtheria, pertussis, polio and haemophilus influenza type b vaccine; the combined measles, mumps and rubella vaccine; and hepatitis B vaccine.

In recent years, new vaccines that prevent debilitating, and potentially fatal infectious diseases have been licensed in Canada, and recommended for use by both the National Advisory Committee on Immunization (NACI) and the Canadian Pediatric Society. However, these vaccines have not all been uniformly included in provincial programs across the country. New vaccines include the conjugate meningococcal vaccine, conjugate pneumococcal vaccine and varicella vaccine. Since 2003, the Ontario MOHLTC offered the conjugate pneumococcal vaccine free of charge for children under

two years of age who meet high risk criteria (i.e. conditions such as congenital immune deficiency or HIV infection). The adolescent/adult pertussis vaccine (combined with tetanus and diphtheria) was added to the provincial program in 2003, and offered for the adolescent booster dose, but the varicella and conjugate meningococcal vaccines, and universal pneumococcal vaccine were not covered by Ontario's program until the fall of 2004. These vaccines were introduced at different times over the past few years into provincially-funded immunization programs in some provinces but not others, leading to a patchwork of immunization coverage across the country.

Since the Canadian National Immunization conference in 2002, immunization policy makers and experts from across the country have endorsed a national immunization strategy, to be created by a provincial/territorial/federal collaboration with strong federal leadership. One of the key components of this strategy is equitable access to vaccines across the country. In February 2004, Regional Council endorsed a national immunization strategy, and requested that the Government of Ontario publicly fund the varicella, conjugate meningococcal, and conjugate pneumococcal vaccines (Report No. 2, Clause No. 2, of the Health and Emergency Medical Services Committee).

On June 9, 2004, the MOHLTC announced that three new vaccines against pneumococcal disease, meningococcal disease and varicella would be added to the routine immunization schedule in September 2004 and January 2005 (*see Attachment 1*).

4. ANALYSIS AND OPTIONS

4.1 Impact on Rate of Disease

The diseases that these three vaccines protect against place a strain on the health care system, especially if complications ensue. Studies have estimated that varicella (chickenpox) increases the risk of severe infection with invasive beta haemolytic streptococcus (flesh-eating disease) in previously healthy children by 40–60 times. Meningococcal disease (serogroup C) presented with blood infections in 88% of cases and had a case fatality rate of 14% between 1985 and 2000 in Canada. Pneumococcal disease is the leading cause of invasive bacterial infections, meningitis, bacterial pneumonia and acute middle ear infections in children.

All three vaccines offer a high rate of efficacy. It is estimated that the varicella vaccine will offer 70% to 90% protection against chicken pox of any severity and over 95% protection against varicella for at least 7 to 10 years after immunization.

Meningococcal C conjugate vaccine was found to be 87% to 100% effective in protecting against invasive meningococcal C disease (IMD-C) in children aged 1 to 17 years. When it was used in the United Kingdom in a large scale immunization program, the number of deaths due to IMD-C in people under 20 years of age fell by 91%.

In a major clinical trial in the United States involving more than 37,000 children, pneumococcal conjugate vaccine was 97.4% effective in fully immunized subjects (received the full four doses) against invasive pneumococcal disease (e.g. bloodstream infection) caused by the seven strains contained in the vaccine.

Based on the efficacy rates of all three vaccines, it is expected that the risk and incidence of varicella, invasive meningococcal disease and pneumococcal disease will decrease dramatically after the eligible groups (as identified in Attachment 1) have been immunized with the new vaccines.

4.2 Options for Delivery of Vaccines

The three vaccines will be distributed to physicians to administer to eligible individuals in their offices, as is done with most publicly-funded vaccines in Ontario (except for Hepatitis B vaccine that is distributed through grade 7 school clinics only). As well, the MOHLTC is funding meningococcal C vaccine clinics for the 12 year old and 15–19 year old age groups.

In York Region, the Infectious Diseases Control Division (IDCD) will be holding community based meningococcal C immunization clinics in schools, community centres and malls from May to September, 2005. The clinics will be held in the afternoon, evenings and weekends to provide these age groups with easy access to this important vaccination.

4.3 Vaccine Storage and Handling

York Region IDCD receives weekly deliveries of publicly-funded vaccines from the MOHLTC to its Vaccine Depot at the Newmarket Health Centre. From there, the vaccines are packaged by IDCD staff for redistribution to community physicians, walk-in clinics, nursing agencies, acute and long-term care facilities and for use in IDCD clinics (e.g. influenza, hepatitis B and meningococcal C). The redistribution is done through smaller vaccine distribution stations located at other IDCD sites in Newmarket, Richmond Hill and Markham.

Vaccine refrigerators are necessary to maintain the cold-chain (the vaccine has to be kept at the proper temperature from the time it's manufactured to the time it's administered) and protect the efficacy of the vaccine. Currently all vaccine refrigerators, except at the Markham office, are protected by back-up generators.

A back-up generator for the vaccine refrigerators at the Markham IDCD office will cost \$75,000 and could protect as much as \$300,000 worth of publicly funded vaccine at any one time. It is recommended that the Region seek funds from the MOHLTC for this generator as it is already providing funding for the vaccines and the refrigerators.

4.4 Relationship to Vision 2026

The introduction of three new vaccines into the publicly funded immunization program is consistent with York Region's Vision 2026 specifically the action areas included under

Goal #4, Responding to the Needs of Our Residents, e.g. High Quality of Life, Promoting Public Wellness and Meeting Peoples Basic Needs.

5. FINANCIAL IMPLICATIONS

This new, mandatory vaccine program will increase the amount of vaccines distributed to the physicians in York Region by an estimated 40%.

5.1 Meningococcal C Vaccination Clinics

The following table outlines the cost associated with the provision of the Meningococcal C Vaccination Clinics provided by York Region Public Health.

Table 1
Meningococcal C Vaccination Clinic Costs

	2005 Expenditures
Clinic Operating Costing (casual staff)	\$180,000
Advertising/Program Supplies	30,000
Administrative Support	96,000
Total Expenditures	\$306,000
Revenue: 100% MOHLTC Funding @ \$8.50 per dose	306,000
Net Tax Levy	\$ 0

6. LOCAL MUNICIPAL IMPACT

The introduction of the three new vaccines will have a positive local municipal impact in that it will result in a healthier population, with fewer hospitalizations and deaths due to complications of varicella disease, pneumococcal disease, and invasive meningococcal C disease.

7. CONCLUSION

Infectious diseases have been a very important public health issue in York Region in recent years. With the introduction of three new vaccines into the publicly-funded immunization program, we can look forward to the decreased incidence of three more vaccine preventable diseases, which will reduce the costs and stress on our health care system, and improve the overall quality of life for the population.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the April 7, 2005 Committee meeting.)