MIDDLESEX-LONDON HEALTH UNIT

REPORT NO. 111-12

TO: Chair and Members of the Board of Health

FROM: Graham L. Pollett, MD, FRCPC
Medical Officer of Health

DATE: 2012 September 13

INVESTIGATION OF AN INCREASE IN REPORTED INVASIVE GROUP A STREPTOCOCCUS INFECTIONS

Recommendation

It is recommended that Report No. 111-12 re Investigation of an Increase in Reported Invasive Group A Streptococcus Infections be received for information.

Background

Group A Streptococcus (GAS) is a naturally occurring bacteria that is commonly found in people's throats and/or on their skin. People can be carriers, meaning that they can have the bacteria but have no symptoms of infection. GAS can be the cause of common diseases such as sore throat ("Strep throat"), and skin infections such as impetigo and cellulitis. The bacteria can also cause more serious infections such as necrotizing fasciitis ("flesh eating disease"), myositis (inflammation of muscle tissue) and streptococcal toxic shock syndrome (infection in the blood). These more serious infections are referred to as "invasive Group A Streptococcus" or "iGAS". There are several risk factors associated with iGAS infection including age greater than 65 years, being immunocompromised, intravenous drug use, and certain medical conditions like diabetes mellitus.

Under the Health Protection and Promotion Act, Ontario Regulation 559/91, cases of iGAS must be reported to the Health Unit. From 2007 through 2011, Middlesex-London had between 11 and 28 iGAS cases reported per year, with the greatest number of cases occurring in 2008 (Appendix A, Figure 1), when there was a cluster of cases involving people who use injection drugs. Further information about the Health Unit response in 2008 is outlined in Board of Health Report No. 115-08.

Current Situation: Invasive Group A Streptococcus Cases in 2012

Between January 1 and August 22, 2012, 27 iGAS cases were reported to the Health Unit, two of whom have died. Typically, the greatest number of iGAS cases occurs during the winter and early spring months with decreased numbers reported in the summer and fall months. However, to-date in 2012, the greatest number of cases was reported in May (7 cases), with elevated numbers of cases also reported in June and July (5 cases in each month) (Appendix A, Figure 2). As of August 30, 2012, the most recent report of iGAS was on August 1, 2012.

Typically, the majority of iGAS cases are elderly. Among 2012 iGAS cases, the greatest proportion occurred among those in their 20s (22%), followed by those in their 30s (19%) and those 70 years and older (19%). As expected, more than one-half (56%) of cases reported having an underlying medical condition. As well, eight cases (30%) reported injection drug use as a risk factor. This is similar to 2008 when an increase in iGAS cases was reported among those who use injection drugs. The strategies used in 2008 were adapted to respond to the current increase in iGAS cases as described below.

Health Unit Response

In order to increase awareness and minimize the transmission of iGAS in the community, two main strategies were undertaken. Firstly, health care providers, community partners, and the media were notified of the increase in iGAS cases in the community (see August 9, 2012 media release). Communication to health care providers requested that they watch for potential iGAS infections in patients, and provided information for patients with a history of injection drug use regarding safer injection techniques and needle exchange programs for obtaining clean supplies (see August 7, 2012 notice to health care providers). Approximately 26 community partners who work with people who use injection drugs received information posters about iGAS infections and pocket pamphlets regarding iGAS infections, wound care, and skin abscesses, to distribute to their clients. Community partners included: Counterpoint Needle and Syringe Program at the Regional HIV/AIDS Connection, London Intercommunity Health Centre, London Housing, the Survivor Sex Worker liaison with London Police Services, methadone clinics, the Infectious Diseases Care Program at St. Joseph's Health Care, Men's Mission, Salvation Army and My Sister's Place. Educational sessions were also conducted for groups at the Elgin Middlesex Detention Centre and for staff and clients of My Sister's Place and WOTCH Community Mental Health Services.

The second main strategy has been to conduct additional investigation of reported iGAS cases using an enhanced case follow-up questionnaire. People with iGAS who report injection drug use are asked specific questions about drug purchase and use, skin care, sharing of injection drug use equipment, and patterns of health care utilization. By analyzing these data, additional risk factors specific to those who use injection drugs may be identified, thereby enabling the Health Unit to provide more specific education and awareness to reduce the risks for iGAS infections, and prevent future iGAS cases among this high-risk population.

Conclusion

Invasive GAS infections are an important source of morbidity and mortality, especially among specific high-risk populations. Among the increased number of cases in 2012, those who use injection drugs have been identified as a high-risk population; therefore, interventions have been directed towards providing information to this group on ways to reduce the risk for acquiring such infections. The Health Unit will continue to investigate reported cases of iGAS and work with community partners on prevention strategies.

This report was prepared by Dr. Simerpal Gill and Ms. Alison Locker, Epidemiologists, Oral Health, Communicable Disease and Sexual Health Services. Assistance in the management of the increase in iGAS cases has also been provided by Ms. Cassandra Brubacher, Ms. Melanie Elms, Ms Eleanor Paget, and Ms. Erica Zarins, Public Health Nurses, Oral Health Communicable Disease and Sexual Health Services.

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This report addresses the following requirement(s) of the Ontario Public Health Standards:
Infectious Diseases Protocol: Requirements 1a, 3a (v, vii)
Infectious Diseases Prevention and Control Standard: Requirement 8
Foundational Standard: Requirement 7