Retirement Home Invasive Group A Streptococcus pyogenes Outbreak

Donna Perron, BScN, RN, Infection Control Nurse
Ottawa Public Health
Sept 19, 2013
Learning Objectives

- Understand applicable legislation and/or guidelines and their application
- Describe scenario
- Review of operational requirements for the health unit and retirement home
Learning Objectives

- Review the resource requirements and potential costs for the health unit and the retirement home
- Identify challenges
- Review recommendations
Legislation and Guidelines

- Ontario Regulation 166/11 - *Retirement Home Act, 2010* (Ontario e-laws)
- Public Health Agency of Canada (PHAC), 2006, *Guidelines for the Prevention and Control of Invasive Group A Streptococcal Disease*
- Ministry of Health and Long-term Care (MOHLTC) *Infectious Disease Protocol, 2009, Appendices A and B*
What does Retirement Home Act say?
The licensee of a retirement home shall ensure that:

- Outbreaks are reported to local medical officer of health (MOH)

- Defer to MOH or designate for assistance and consultation
Retirement Home Act

- An increase in activity is immediately reported to local medical officer of health

- There are processes for meeting the requirements listed above and for recording them.
PHAC – Guidelines for the Prevention and Control of Invasive Group a Streptococcal Disease

- Specific for long-term care facilities (LTCHs) and child care facilities – not necessarily retirement homes
Public health investigation of reported cases associated with LTCHs:
- Receive report of case
- Conduct retrospective chart review and case finding
- Assess potential source of infection
- Monitor for subsequent cases – likely associated with an outbreak
Infectious Disease Protocol, 2013

- Reporting and management under Regulation 569 of HPPA
- **Consideration** for action when outbreaks or clusters identified:
  - Confirmed iGAS >1 per 100 residents
  - At least 2 cases in 1 month in facility with fewer than 200 residents
- Refer to PHAC guidelines
Facility Profile

- Large, old three story building
- Previously used as a convent
- <100 residents
- Dementia and Alzheimer residents
Facility Profile

- Secure facility

- Services:
  - Participants of an active day program
  - Residents waiting placement in a LTCH
  - Individuals needing respite care
Facility Profile

- **Rooms**
  - Only a few with toilets
  - 1 multi-use sink/room – for staff, residents and families
  - Single beds – from home or facility

- **Bathroom(shared)**
  - 2 per floor – 1 on each wing
Facility Profile

- Activities
  - Common area on ground floor
  - Small alcove sitting area on other floors
- Independent residents can move freely around the institution
Staff

- Total number of staff = 83
- Regulated staff:
  - Executive Director – RN
  - Director of Care – RPN
  - Physiotherapist – external service
- Non-regulated Staff
  - Personal support workers, activity director/assistant, dietary, maintenance manager
First case - 3\textsuperscript{rd} floor

- Admitted to RH - Oct 15, 2012
  - 79 year old male
  - History of Atypical Alzheimer’s dementia affecting speech, Parkinson

- Private room
First case continued

- Developed weakness and low blood pressure, sent to the hospital
- Nov 2, 2012 - assessed at hospital and diagnosed with septicemia from iGAS
- Deceased - Nov 4, 2012
OPH Follow Up

- Contact with Executive Director
- Assessment of situation
- Retrospective chart review
- No residents identified with positive results
- No further follow up required
Second case reported

- November 23, 2012
- 93 year old male
- Admission to home unknown
- Nov 18, 2012 – fell, injured right elbow
- Nov 21, 2012 - redness and pain in elbow, fever and general weakness
Second case continued

- Sent to Emergency Dept for assessment
- Synovial fluid drained – Streptococcus pyogenes Group A identified
- Recovered and returned to retirement home Nov 27, 2012
OPH Actions

- Reviewed legislation and guidelines
- Retirement home considered high risk due to similarity to a LTCH
- Discussed with AMOH
- AMOH consulted Dr. Lianne McDonald at Public Health Ontario (PHO)
**OPH Actions**

- Site visit done to assess situation
- Identified challenges in facility
- Decision made to continue further investigation
Site Visit – Challenges identified

OBM supervisor and ICN

- Hand hygiene challenges
- Environmental cleaning challenges
- Lack of documentation
- Inadequate assessment skills
Challenges in application of guidelines

- Documentation
- Collection of specimens
- Resident population
- No occupational health services
Secondary site visit – PHN/PHI

Assessment conducted:
- ✓ Internal services provided
- ✓ External services provided
- ✓ Hand hygiene practices and product supply
- ✓ Environmental cleaning
Organization of specimen collection

- Initially executive director and DOC stated they could not facilitate collecting samples
- Lack of staff available to swab the residents and fellow staff members
- 2 OPH staff assisted
Laboratory

- Arrangements for swabs to be delivered and picked up, some by OPH and some by courier
- Resident doctor wrote orders for all swabs
- Batch testing for samples
- Positive samples forwarded to NML for PFGE testing and M typing
Additional site visit – Environmental Inspection

Nov 28, 2012

- Furniture cleaning/surface cleaning
- Residents’ personal items
- Sanitation of facility
- Food safety – preparation area
Additional site visit – Environmental Inspection

■ Dec 7, 2012 visit
  ✔ Hand sanitizer expired

■ Dec 17, 2012 visit

■ Jan 15, 2013 visit
Testing - Residents

- Testing done Dec 5\textsuperscript{th} and Dec 6\textsuperscript{th}

- 80 residents eligible
- 5 residents not tested
- Throat, nasal, or wounds swabs attempted
- 10 colonized positive residents
Testing – Residents

- Dec 7\textsuperscript{th} treated

- Retested on Dec 28, 2012 - negative

- Retested on Jan 14, 2013 - negative
Testing - Staff

- Testing occurred between Dec 12th & 13th

- 81 staff eligible
- 10 not tested for various reasons
- 3 staff colonized
Testing Staff

- Treated Dec 13\textsuperscript{th}, 17\textsuperscript{th}, and 19\textsuperscript{th}

- Retested Dec 31, 2012 and Jan 4, 2013:
  - 1 staff remained colonized
  - Retreated - Jan 7
  - Retested - Jan 24 – negative
Negative iGAS Cases

- 2012-12-05: 67
- 2012-12-10: 27
- 2012-12-14: 15
- 2012-12-06: 22
- 2012-12-19: 1
Positive iGAS Cases

<table>
<thead>
<tr>
<th></th>
<th>2012-12-05</th>
<th>2012-12-10</th>
<th>2012-12-14</th>
<th>2012-12-28</th>
<th>2013-01-04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Staff</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Typing results

Were any of the cases related?

Initial 2 cases:
  T type: T6
  SOF: Positive
  Emm: 6

Colonized staff and residents were all same type
SUCCESS!

The outbreak was declared over on Jan 31, 2013 when the results of the third set of swabs returned negative.
Public Health – Quantifier

- Staffing ~ 100 hours of PHI/PHN time (i.e. for consultation site visits and education sessions)
- Development of letters
- Mileage
- Total = $10,000
Health Unit Implications

- PHI – PHN time commitment
  - not available for other assignments during busy outbreak season

- Set a precedent
  - Significant time and financial commitment
  - Unusual laboratory requirements
Facility Costs and Implications

- Financial cost unknown
- Increase demands on staff
- Swabbing for several days
- Treatment of staff and residents
- Increased environmental services
- Staff required to attend education session
- Repairs to furnishings and institutions.
Follow up

IPAC Presentation to staff:

- IPAC practices 101
- Routine practices
- Hand hygiene
- PPE use
- Surveillance
- Food handling
- Environmental cleaning
iGAS case reported

Chart review completed; no new cases; increased surveillance in place

Second case reported

Site visit

10 residents positive; facility physician informed

IPAC meeting with staff

Residents retested negative

All residents and staff to be swabbed

1 positive staff

November

10

20

December

10

20

January
Questions?

- Can we provide this service to other retirement homes?
- How are we to manage similar outbreaks?
- How can we mentor and increase IPAC capacity in retirement homes?
donna.perron@ottawa.ca
613-580-6744 ext. 15064