THE MULTICARE GROUP

October 2013 Louise Massé

ROI of Immunization

The recent booklet from ROI OneLife-Immunization published in Benefits Canada demonstrates that immunization in the Workplace can have a tremendous return on saving Just One Life. Every year, Ontario's population of 13.5 million suffers more than seven million episodes of infectious disease severe enough to require health care, according to a study by the Institute for clinical Evaluative Sciences. This translates into almost 15,000 year-equivalents of reduced functioning and more than 68,000 years of life lost due to premature death.[1] It is always cheaper to prevent illness than it is to treat it. Higher levels of immunization against the following five diseases (Influenza, Pneumococcal, HPV, Shingles, and Hepatitis) can significantly reduce workplace absenteeism and treatment costs.

In This Issue:

Influenza – Incidence and Impact

An estimated 12% of employees are sick with seasonal influenza every year (from November to April).[2] Flu results in an average of 20,000 hospitalizations and between 2,000 and 8,000 deaths annually.[3] In addition, research also shows that influenza can trigger heart attacks and strokes.[4]

Risks Factors

- Anyone can become sick with the flu and the virus is easily caught and spread.
- People with chronic conditions such as diabetes and cancer are at greater risk of complications such as pneumonia.

Cost of Illness in the Workplace

- One to six sick days initially.[5]
- Reduced productivity due to fatigue may persist for another two weeks or more.
- Drug expenditures for antiviral and antibiotic medications (the latter for secondary infections).

Cost of Vaccine

- All provinces except British Columbia, Quebec, New Brunswick and Newfoundland and Labrador, cover the cost of the vaccines (between $10 and $20) for all residents annually. In the remaining provinces, public funding extends to high-risk groups such as those with chronic conditions.
- Vaccination services for on-site flu-shot clinics cost about $20 per employee.

Pneumococcal Disease – Incidence and Impact

The incidence of invasive pneumonia, which occurs when the bacteria invade otherwise sterile body sites to cause complications such as meningitis, ranges from two to five cases per 100,000 adults aged 20 to 39 per year to nine cases for those aged 40 to 59, and 23 cases for those aged 60 and older.[6] Pneumococcal meningitis, a serious form of invasive pneumococcal disease, is associated with high mortality (30%) as well as neurological complications in a significant proportion of survivors.[7] Non-invasive or community-acquired pneumonia is approximately 10 times more common than invasive pneumonia. Combined, pneumonia and influenza rank eighth as a leading cause of death in Canada.[8]

Risk Factors

- The risk of both types of pneumonia increases with age. People with cancer, HIV, asplenia, rheumatologic disease and other immunosuppressive conditions or treatments are at highest risk. Chronic heart, lung, kidney and liver disease, as well as diabetes, also increase the level of risk, as do alcoholism and tobacco use.
- Anyone can become sick with the flu and the virus is easily caught and spread.
- People with chronic conditions such as diabetes and cancer are at greater risk of complications such as pneumonia.

Cost of Illness in the Workplace

- Five or more sick days, with possible hospitalization for three weeks on average.[9]
- Reduced productivity due to fatigue may persist for several more weeks.
- Drug expenditures for antibiotic medications.

Cost of Vaccine

- All provinces fund the polysaccharide pneumococcal vaccine for adults with certain chronic conditions; some provinces fund the conjugated pneumococcal vaccine for certain adult high-risk groups.
- For remaining adults, the recommended one-time dose costs about $30 for the polysaccharide vaccine and about $130 for the conjugated vaccine.

Human Papillomavirus (HPV) – Incidence and Impact

Human Papillomavirus (HPV) is the most common sexually transmitted disease. An estimated 3 out of 4 Canadian men and woman will have at least one HPV infection in their lives.

Risk Factors

- All sexually active men and women are at risk.
- The peak risk period is 5 to 10 years after the first sexual experience; a second smaller peak occurs among women aged 45 years or older. [10]

Cost of Illness in the Workplace

- The diagnosis of an HPV infection often begins with abnormal results to a Pap smear, resulting in more time off work for more tests.
- The duration of an episode of genital warts is four months and requires time off for doctor visits. The average cost per visit is $190.
- Women may be off work for more than six weeks to recover from surgery for cervical cancer; treatment often requires chemotherapy which reduces productivity.
- Other HPV related cancer and precancerous lesion often result in short term disability and productivity costs.[10]

Cost of Vaccine

- Between $270 and $440 for three doses over six months.

Herpes Zoster (Shingles) – Incidence and Impact

One third of people will experience an episode of shingles in their lifetime. A painful rash that can appear anywhere on the body.[11] 60% of cases occur in adults younger than 65. One in three cases of herpes zoster leads to postherpetic neuralgia, a potentially severe form of chronic pain that can persist for more than a year.

Risk Factors

- Anyone who has had chickenpox is at risk of shingles which equates to 90% of the populations, according to Public Health Agency of Canada.

Cost of Illness in the Workplace

- People with shingles report missing 27 hours of work on average, plus an additional 34 hours of reduced productivity while at work.
- Presenteeism for those with postherpetic neuralgia climbs to an average of 159 hours or the equivalent of approximately 21 sick days.
- Drug expenditures for antivirals, which are moderately effective in treating shingles, as well as antidepressants anticonvulsants and possibility opioids, to treat and manage pain associated with the post herpetic neuralgia.

Cost of Vaccine

- Estimated cost is approximately $175 to $200 for a one time dosage.

Hepatitis – Incidence and Impact

The reported incidence of hepatitis A is 1.5 cases per 100,000. However, under-reporting and under-diagnosis suggest an actual rate that is seven times higher.[12] The incidence of hepatitis B is about 2.7 per 100,000. This climbs to between 4.7 and 5.6 among people aged 25 to 39.36. Twenty-five per cent of adult hepatitis A cases result in hospitalization; the illness recurs in 15% of cases. Hepatitis B can lead to chronic liver disease in 10% of cases.[13] Symptoms of hepatitis A can include fatigue, nausea, diarrhea, fever and jaundice. Mild cases last one to two weeks; severe cases can be disabling for several months. About half of the people infected with hepatitis B do not show symptoms yet are carriers.

Risk Factors

- Anyone who travels to countries where hepatitis is endemic is at higher risk, particularly for hepatitis A.
- Outbreaks in non-endemic countries such as Canada are often linked to contaminated food.
- Vaccinations are recommended for those who work in food service, including bartending, supermarkets, the military, garbage collection/waste disposal, veterinary clinics and zoo-keeping.
- About half of the people infected with hepatitis B do not show symptoms yet are carriers

Cost of Illness in the Workplace

- Absences range from one week to several months for hepatitis A, while hepatitis B typically results in short-term disability leaves of several months.
- Additional drug expenditures to assist in recovery.

Cost of Vaccine

- Between $200 and $260 to vaccinate against both diseases; a single vaccine for both is available.
- Number of doses and scheduling varies; completed dose gives lifetime immunity.

Employer Solutions to Consider

The Public Health Agency of Canada suggests that 30% is a reasonable participation level for most workplace flu-shot clinics, while health care settings should aim for 80%. Here's how to reach that target:

- Recruit employee volunteers. Peer support and word-of-mouth advertising work best to boost participation.
- Provide incentives, which can be as simple as coffee and cookies. One employer increased participation by one-third with a web-based points system that awarded gift cards (www.bestliferewarded.com).
- Share your target and post your progress. Enter names as ballots for a prize or donate $2 for every shot to charity.
- Make it mobile. Some occupational health nurses visits employees at their desk or work stations and can provide over 50 shots from a trolley. If you have occupational health staff, consider offering the service to employees' families as well
- In addition, employers should discuss the importance of the getting the flu shot with their staff, especially since many employees may feel that since they're young or healthy, they don't need it. The message to this young audience is the flu shot helps protect them and avoids them from being a carrier that can spread it to the staff—particularly those who may not be able to get the shot due to allergies or illness.
- Communicate the value. Explain the benefits and criteria and dispel misconceptions. Use free educational materials from public health units and Immunize Canada (www.immunize.ca) and enlist senior management and union stewards to give messages of support (ideally accompanied by photos of them "getting shot").
- You can also tell them about a new website called Vaccines 411. The online portal makes it easy for people to find their local vaccination clinic by using a postal code search. It also provides up-to-date and reliable information on influenza and other necessary immunizations.
- The portal's mission is to help Canadians stay healthy by providing them with relevant immunization information by province. The listings currently include more than 2,600 vaccinating clinics located in Public Health Units, private medical clinics, pharmacies and doctor's offices.
- Permit—and encourage—employees to stay home if they're sick. All too often, employees come into work when they're not well because they're worried about using up sick days or vacation days, or because they're worried about the repercussions of taking time off. To battle this perception management should lead by example.
- If an employee absolutely must work while sick, allow him or her to telecommute, so that the illness is not spread to other employees in the workplace.
- Educate and communicate. Send the message that the company is committed to employees' health and wellbeing, and ensure employees know how to prevent themselves from catching the flu. Provide tips and suggestions, such as reminding employees to cover their noses and mouths when coughing or sneezing, to wash their hands with soap and water, and to avoid touching their eyes, noses and mouths since germs are easily spread this way. And above all, emphasize the company's commitment to wellness.
- Talk to your account executive to flesh out your company's rationale for covering vaccines. Use specific wording to ensure that the definition of "vaccine" isn't open-ended in your contract; you don't want to cover all injectables.
- Small employers with insured plans may want to consider setting up an additional cost-plus contract so you can pay your carrier for vaccine claims as they're incurred, plus an administration fee.

In Conclusion

In conclusion, if this newsletter has interested you in exploring the ROI for your company by enhancing your immunization program for your members, please contact your account executive to explore cost effective alternatives in reducing your absenteeism and your long term costs.

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Sources:

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  - www.immunize.ca
- Public Health Agency of Canada
  - www.phac-aspc.gc.ca
- FightFlu.ca
  - www.fightflu.ca
- Victoria Order of Nurses
  - 613-233-5694 or 1-888-VON-CARE (866-2273)
  - www.von.ca
- The Society of Obstetricians and Gynaecologists of Canada
  - 613-730-4192 or 1-800-561-2416
  - www.hpvinfo.ca
- Canadian Liver Foundation
  - 416-491-3353 or 1-800-563-5483
  - www.liver.ca
- Canadian Lung Association
  - 613-569-6411
  - www.bestliferewarded.com

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