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Promoting Adult Pertussis Vaccination in the Workplace

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A project submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

Promoting Adult Pertussis Vaccination in the Workplace

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Master of Science

Vaccines are an important disease prevention strategy among individuals of all age groups. Despite the success of vaccinations in preventing communicable diseases, adults, in particular, often have sub-optimal vaccination rates. Consequently, some vaccine-preventable diseases, such as pertussis, are still on the rise in the United States despite the availability of the Tdap vaccine. As most adults can be found in the workplace, occupational health and environmental health nurses (OHEHNs) are in a unique role to encourage employers to promote adequate Tdap vaccination among their employees. As specific resources regarding Tdap vaccination are lacking, the Pertussis Prevention Toolkit was developed to help OHEHNs promote Tdap vaccination in the workplace.

Keywords: vaccinations, Tdap, immunization, employee, employer, toolkit, pertussis
ACKNOWLEDGEMENTS

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Promoting Adult Pertussis Vaccinations in the Workplace

Vaccination rates are commonly promoted and tracked in children and, as a result, vaccination uptake among the pediatric population is at an all-time high in the United States (Children’s Hospital of Philadelphia [CHOP], 2013a). Such success is partly attributed to childhood vaccination mandates in all 50 states, which must be met prior to school enrollment (American Academy of Pediatrics, 2013). In contrast, very few adults are subjected to vaccination mandates with the exception of a limited number of employees working with children or in the healthcare environment (Immunization Action Coalition, 2014). Nevertheless, vaccines are an important disease prevention strategy in children and adults alike. The Centers for Disease Control and Prevention [CDC] (2014a) recommends all adults be vaccinated against influenza yearly and vaccinated against pertussis if they did not receive booster vaccination as an adolescent (Centers for Disease Control and Prevention, 2014a). Furthermore, the Advisory Committee on Immunization Practices now recommends routine pertussis vaccination for pregnant women during the third trimester (Sawyer, Liang, Messonnier, & Clark, 2013). Additional adult vaccines may be needed, depending on age, lifestyle, co-morbidities, employment, and international travel (CDC, 2014b).

Pertussis is a highly contagious respiratory illness caused by the bacterium *Bordetella pertussis*, a pathogen that can have serious and life-threatening consequences, especially for children (CDC, 2013a; Mooi, Van Der Maas, & De Melker, 2014). More than 48,000 confirmed cases of pertussis were reported in the United States alone during 2012, the highest incidence since 1955 (CDC, 2013b). Pertussis, however, is not a disease limited to childhood. Individuals are believed to become susceptible to pertussis approximately 6-10 years after childhood.
vaccination (Sharland, 2011). In adults and adolescents, the disease is often unrecognized, undiagnosed, and underreported (Guiso, Liese, & Plotkin, 2011). As a result, an estimated 600,000 to 900,000 unreported pertussis cases occur among adults and adolescents each year in the United States (CHOP, 2013b). Despite the availability of a pertussis booster vaccine, pertussis vaccination rates among adults are sub-optimal and, as a result, contribute to the high incidence of pertussis in the United States (Olyarchuk, Willoughby, Davis, & Newsom, 2012). Not surprisingly, hospitalizations and deaths due to pertussis have also increased in the United States (Jakinovich & Sood, 2014).

The economic consequences of pertussis are notable, costing on average more than $13,000 per hospitalization for adults and children (Clark, 2013). These estimated costs, however, do not account for additional and indirect costs associated with the disease, including time spent away from work, costs for follow-up provider appointments, recovering at home, or prescriptions for medications continued once discharged from the hospital. The most common symptom of pertussis is a distinctive cough, which can last approximately 3 months. Pertussis is, in fact, often referred to as the 100 day cough (National Foundation for Infectious Diseases, 2012). Employees infected with pertussis miss, on average, 6 days of work, although some may miss up to 77 days (Lee et al., 2004). In the workplace, the spread of pertussis is especially problematic as symptoms may develop anywhere from 5 days to 3 weeks after exposure (CDC, 2013a). Unfortunately, during that time frame one undiagnosed person with pertussis can infect up to 15 other people, unaware he or she is sick or contagious (CDC, 2013c). Though treatments for pertussis are available, the CDC (2013d) highly recommends the tetanus, diphtheria, and pertussis (Tdap) vaccination as the most important preventive measure.
Occupational health and environmental health nurses (OHEHNs) are in an inimitable role in the workplace, recognized as the “authority on health, safety, [and] productivity… for worker populations” (American Association of Occupational Health Nurses [AAOHN], n.d.a, para. 3). This role places occupational health and environmental health nurses in an ideal position to educate adults in the workplace on the importance of Tdap vaccination. Though being up-to-date on all vaccinations is an important disease prevention strategy, few resources are available to help promote vaccination of adults against pertussis. Therefore, the purposes of this article are to review a Utah program developed to promote pertussis vaccinations among adult employees and share toolkit resources with OHEHNs as they strive to improve pertussis vaccination rates among adult employees.

**Evolution of Program and Development of the Pertussis Prevention Toolkit**

In 2012, pertussis outbreaks in Utah were over three times higher than the national incidence (CDC, 2013e). During 2013, 1,033 pertussis cases were reported in Utah and of those diagnosed, 43% were over the age of 15 years (Utah Department of Health, 2013). While healthcare providers are generally successful in assessing pertussis vaccination status of children and ensuring they are up-to-date, pertussis vaccination is not always as closely monitored in the adult population. In fact, healthcare providers often miss opportunities to vaccinate adults against pertussis because they do not routinely assess the vaccination status of adult patients (CDC, 2014c). As outbreaks of pertussis often stem from adults, it is important to identify alternate locations wherein adult Tdap vaccination status can be assessed and appropriate vaccinations, like Tdap, can be promoted beyond the outpatient clinic setting (CDC, 2015). In Utah, 78% of adults work full-time (Lee, 2013), which is slightly higher than the national
employment average of 65.8% (Ryan & Newport, 2014). Therefore, place of employment is where over half of all Utah adults, as well as American adults, can be reached with health-related messages including vaccination information.

Knowing the majority of adults are found in the workplace setting provides an opportunity to develop work specific resources to promote Tdap vaccination. The Pertussis Prevention Toolkit was originally designed for OHEHNs to provide education and resources to employers and their employees regarding the importance of Tdap vaccination among adults in the workplace. Specific approaches were taken as the need for different types of educational materials for employers and employees were recognized. Materials were initially piloted among the 30 largest employers in Utah County, the second largest county in Utah. After adaptation of the materials to fulfill the unique education needs and requests among both the employees and the employers, the project was expanded. A more inclusive directory of businesses was obtained from the Utah County Department of Workforce Services. The document listed all licensed businesses in Utah County and included the ability to sort businesses by name, city, and number of employees. During the second phase, the adult Tdap vaccination program included the top 100 largest businesses in Utah County based upon number of employees.

As employers were contacted via phone with a brief description of the project, some requested additional information prior to scheduling meetings with a human resource or health/wellness representative. An information packet with a one-page flyer providing facts about pertussis in Utah and the importance of vaccination, along with a frequently asked questions handout, was presented to the business representative. These printed materials included information on pertussis transmission rates, the pertussis vaccination, potential costs
associated with pertussis outbreaks in the workplace, and available resources to assist the employer in administering pertussis vaccinations to employees.

After meeting with the business representative, mobile vaccination clinics were scheduled in collaboration with partners at the Utah County Health Department (UCHD) Immunization Clinic and the Utah County Immunization Coalition. To make the vaccination process convenient, the UCHD Immunization Clinic agreed to provide mobile vaccination clinics at no additional cost to the employer. For employees with health insurance, the UCHD Immunization Clinic directly billed the insurance company for the cost of the vaccine. In addition, the UCHD Immunization Clinic offered pertussis vaccines at a discounted rate for uninsured employees.

Some business representatives also requested development of a short presentation to deliver in employee staff meetings prior to the mobile vaccination clinic date. Hence, presentation materials were created with a focus on the importance of Tdap vaccination with a general overview of other adult vaccines available during the mobile vaccination clinic. The presentation included education on the incidence, symptoms, and treatment options for pertussis, as well as graphs representing recent pertussis outbreaks in the local community. General information regarding vaccine safety, potential contraindications, and common side effects of Tdap was also included, as well as the importance of timely vaccination and what to bring to the mobile vaccination clinic. After the presentation, a registered nurse from the health department was available to answer additional questions or concerns.
Program Participation

Many businesses in Utah County participated in the program, allowing a scheduled date for the mobile vaccination clinic and promotion of Tdap and other adult vaccines for their employees. Of the 100 Utah County businesses contacted, 64 scheduled a day for the mobile vaccination clinic during which a total of 4,080 vaccinations were administered between February 2013 and September 2014.

While there has not yet been a significant decrease in pertussis cases in Utah County, controlling the spread of pertussis in communities is a complex process confounded by multiple factors such as achieving adequate vaccine immunogenicity, promoting regular booster uptake in the population, and reaching pertussis vaccination rates of at least 92-94% to maintain a healthy herd immunity (Guiso, 2013a; Plotkin, Orenstein, & Offit, 2013). Nevertheless, the most cost-effective intervention at this time is to improve herd immunity by vaccinating adolescents and adults (Guiso, 2013a; Guiso, 2013b).

Toolkit for Occupational Health and Environmental Health Nurses

Poor health outcomes of employees has the potential to cost American businesses about $1 trillion every year, and OHEHNs are often charged with the task of maximizing employee productivity and decreasing absenteeism in the workforce (AAOHN, 2012). Promoting uptake of adult vaccinations is an important, effective strategy to promote health and prevent illness in employee populations (AAOHN, 2012). Various vaccination toolkits exist, some of which are specific to businesses, although most toolkits specifically address only influenza vaccine uptake. In contrast, the Pertussis Prevention Toolkit presents resources for OHEHNs regarding Tdap vaccinations.
Information for the Employer

As on-site vaccination champions, OHEHNs can make employee vaccination suggestions to business managers/owners, highlighting the health benefits of promoting Tdap vaccination as well as the economic risk and potential impact of having an unvaccinated workforce. Generally speaking, primary barriers to implementing a workplace vaccination program include concerns regarding cost. However, vaccinating employees against pertussis has a cost benefit when considering both direct employer costs of having an unvaccinated workforce—such as the average number of work days missed for illness and decrease in productivity while ill at work—as well as indirect costs associated with healthcare provider visits and antibiotic treatments (Coudeville, Van Rie, Getsios, Caro, Crepey, & Nguyen, 2009). Other costs of pertussis include the average number of missed work days for parents whose children also contract the illness (Joint Commission on Accreditation of Healthcare Organizations, 2011).

Offering on-site vaccination clinics also has economic benefit for employees who are traditionally vaccinated off-site, decreasing the amount of work time employees must miss to travel to and from a traditional clinic setting to obtain their vaccinations (Mattke, Schnyer, & Van Busum, 2012).

Currently, all health insurance marketplace plans and most private health insurance plans cover the cost of Tdap (CDC, 2014d), thus removing any associated employer or employee out-of-pocket expense. Even uninsured employees may be eligible for low cost Tdap vaccines through a Federally-funded health center such as a local or state health department (CDC, 2014d).
The OHEHN may want to use these specific discussion points when suggesting on-site vaccination clinics with the employer. Adaptable templates to create employer-specific handouts or pamphlets are available at www.utahcountyimmunizationcoalition.org (see Figures 1, 2, 3 and 4).

**Information for the Employee**

After obtaining employer approval for an on-site vaccination clinic, it is necessary to educate employees regarding the importance of the Tdap vaccine in their professional as well as personal life. While the employer’s chief vaccination concerns may be focused upon cost, employees may have different concerns or educational deficits. Most commonly, adults are inadequately vaccinated because they simply do not realize they need additional vaccines during adulthood (CDC, 2014e). It is helpful, therefore, to provide information explaining the need for adults to be vaccinated against pertussis. For instance, adult employees should understand their childhood doses of pertussis wane with time, requiring a booster. Appropriate Tdap vaccination helps employees prevent absenteeism and decreases healthcare costs associated with medications, provider visits, and in some cases, hospitalization.

Employee education should include basic information not only about vaccine side effects, but the pertussis infection, including local pertussis statistics, how long the employee can expect to be ill, symptoms of the pertussis disease, disease incubation period, and how many days of work the employee could expect to miss (see Figure 3). The OHEHN may want to consider using an educational PowerPoint when discussing these points, an example of which can be downloaded and easily adapted at www.utahcountyimmunizationcoalition.org. Furthermore, OHEHNs may also want to highlight the importance of being vaccinated with Tdap, not only for
the employee’s health benefit, but to also protect the health of his or her loved ones, including vulnerable family members such as aging parents, infants and children (CDC, 2013d).

When promoting Tdap vaccination among employees, OHEHNs may also want to include information on various items employees should bring to the mobile vaccination clinic. Such items may include the employee’s health insurance card, photo identification, list of employee allergies, personal vaccination record, co-pay if applicable, and acceptable forms of payment. If the mobile vaccination clinic also vaccinates dependents of the employee, similar items should be presented for each dependent.

**Suggestions for Occupational Health and Environmental Health Nurses**

Mobile vaccination clinics can be scheduled after identifying a source of vaccinations. OHEHNs may consider collaborating with local health departments and inquiring about the possibility of a mobile vaccination clinic. If mobile vaccination clinics are not offered through the local or state health department, consider contracting with a mobile vaccination nursing service, local healthcare provider office, or local hospital facility. The insurance company primarily responsible for providing healthcare benefits to employees may also be able to assist in identifying a local nursing service that offers mobile vaccination clinic services to businesses. If, after exhausting the aforementioned options, scheduling an on-site vaccination clinic is not possible, consider distributing vouchers to employees that can be exchanged for vaccination at a local healthcare facility.

As the date for the mobile vaccination clinic approaches, the clinic should be promoted within the workplace. To boost attendance, OHEHNs may want to consider sending reminder emails 5-7 days prior to the clinic and/or posting information with the date and time of the clinic
in high population areas, such as break rooms or near a time clock. A sample vaccination clinic poster is available, at no cost, for download to promote the vaccination clinic at www.utahcountyimmunizationcoalition.org (See Figure 5).

Though the Tdap vaccination is not seasonal in nature and may be administered at any time of year, OHEHNs may want to consider simultaneously promoting Tdap with seasonal influenza vaccines. If annual influenza vaccination clinics are already a routine event at the workplace, consider querying the mobile vaccination service about offering Tdap vaccinations in addition to influenza vaccines. Tdap and influenza vaccinations may be administered concurrently (Immunization Action Coalition, 2011).

While pertussis outbreaks are common in the United States, it may be helpful to offer local pertussis-related statistics in addition to national data as statistics vary from state to state. Being familiar with the number of pertussis cases per state or county may help the employee understand their risk for contracting the illness. The number of pertussis cases per state is available and updated each week by the CDC, and can be accessed at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6252md.htm?s_cid=mm6252md_w. In addition, state health departments routinely report the number of pertussis cases, categorized by county, on individual state websites.

Supplementary web-based resources are also available to OHEHNs who wish to promote vaccinations among workers. Such resources, found at www.utahcountyimmunizationcoalition.org, can be utilized to augment the Pertussis Prevention Toolkit. For example, a Tdap Vaccine Information Statement (VIS) can be downloaded from the
CDC website: http://www.cdc.gov/vaccines/hcp/vis/vis-statements/tdap.html. These supplementary resources are listed in Table 1.

**Implications for Occupational Health and Environmental Health Nurses**

Offering adult vaccinations to employees in the workplace is an important strategy for increasing adult vaccination rates and, as a result, lowering an employee’s risk of developing a vaccine-preventable disease. Two strong determinants of whether or not an employee receives vaccinations include: 1) if the vaccination is offered in the workplace; and 2) if the vaccinations are free to employees (Ofstead et al., 2013). Indeed, adults without high-risk health conditions are more likely to be adequately vaccinated when vaccinations are offered in a nontraditional and nonmedical setting (Lu, et al., 2014), such as the workplace. Thus, while the traditional clinic setting is often utilized to administer adult vaccines, the workplace is a suitable and effective nonmedical site for adult vaccination (Lu et al., 2014).

Because OHEHNs are in a unique position to promote health and reduce communicable disease risk among employees in the workplace, OHEHNs can positively influence Tdap vaccination rates among workers. When promoted by OHEHNs, a work-based vaccination program is an effective strategy to reduce the number of vaccine-preventable diseases in the workplace, and is an integral part of keeping workers healthy and productive (AAOHN, n.d.b).

**Conclusion**

Appropriate vaccination among all age groups and populations is an important strategy to reduce the spread of vaccine-preventable communicable diseases. Despite availability of a pertussis vaccine, Tdap vaccination rates among American adults remain sub-optimal. As a result, the incidence of pertussis in the United States is high. Adequate vaccination of highly
virulent and contagious diseases, such as pertussis, provides many economic benefits. While several toolkits are available to promote influenza vaccination among adults, such resources specifically addressing pertussis vaccination are lacking. The purposes of this article were to review a Utah program developed to promote pertussis vaccinations among adult employees as well as to share pertussis-specific toolkit resources with OHEHNs. All healthcare providers share the responsibility of ensuring adequate vaccination of adults. However, since over half the adult population in America is employed, OHEHNs are in a unique, influential position to promote adult vaccinations in the workplace. The *Pertussis Prevention Toolkit* is a valuable resource now available to help OHEHNs develop, promote, and implement a successful adult immunization program.
References

http://www2.aap.org/immunization/families/schoolentry.html


Table 1: *Additional Web-based Resources*

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<tr>
<td>All Vaccine Information Statements</td>
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<td>Top Reasons to Get Vaccinated</td>
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</tr>
<tr>
<td>Young Adults Need Vaccines, Too</td>
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</tr>
<tr>
<td>Free Subscriptions to Periodicals and Email News Service</td>
<td><a href="http://www.immunize.org/subscribe/?gclid=Cj0KEQjwquOhBRCupYiu4an13scBEiQAss2XklMG7QzV5VFQAcETs2kyy_1VvsHHpjZHEx_2kDMz2DYaAtib8P8HAQ">http://www.immunize.org/subscribe/?gclid=Cj0KEQjwquOhBRCupYiu4an13scBEiQAss2XklMG7QzV5VFQAcETs2kyy_1VvsHHpjZHEx_2kDMz2DYaAtib8P8HAQ</a></td>
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<td>Recommendations from the National Vaccine Advisory Committee: Standards for Adult Immunization Practice</td>
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</tr>
<tr>
<td>What Vaccines do You Need?</td>
<td><a href="http://www2a.cdc.gov/nip/adultImmSched/">http://www2a.cdc.gov/nip/adultImmSched/</a></td>
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Figure 1: Employer Handout “What is Pertussis?”

PERTUSSIS
(Whooping Cough)

What is Pertussis?

• Pertussis is a **highly contagious** respiratory disease
  o A person with pertussis can infect up to **15 other people**
  o The incubation period for pertussis can be up to 3 weeks
    ▪ The incubation period is the time from when someone is exposed
to a disease to when they start to develop symptoms

• All adults are at risk
  o There were [insert number of outbreaks] in [insert state] in [insert year]
  o There were [insert number of outbreaks] in the United States in [insert year]
  o Many adults pertussis cases go unreported and untreated

• One of the most common symptoms adults with pertussis may develop is a
  cough that can last up to **3 months**
  o Other complications may include vomiting, pneumonia, rib fractures,
    and even seizures

• Infants and children are often exposed to pertussis by an adult
  o Parents lose an average of 6 workdays (but can loose up to as many
    as 77 days) to care for ill family members
  o The **cost** for a hospitalization related to pertussis is approximately
    $13,000

What can you do about it?

• The best way to avoid getting pertussis is to get the Tdap vaccine
  o The Tdap vaccine is recommended at least once every ten years
  o Most insurance companies cover the cost of immunizations which means **little to no** out-of-pocket expense

Get your Tdap vaccine today!

Information obtained from www.cdc.gov/pertussis
Flyer can be downloaded for distribution at www.utahcountyimmunizationcoalition.org

To find the number of outbreaks in your area, go to
Figure 2: Employer Handout FAQ

**PERTUSSIS (WHOOPING COUGH) FAQ**

**Q:** Why is pertussis often referred to as whooping cough?

**A:** The name “whooping cough” comes from the sound people make gasping for air during a pertussis coughing fit. However, not everyone with pertussis will “whoop.”

**Q:** Is pertussis contagious?

**A:** Yes. Pertussis spreads easily from person to person through coughing and sneezing. A person with pertussis can infect up to 15 other people. That’s why being up-to-date on your pertussis vaccination and practicing good cough etiquette are so important.

**Q:** Are most coughs pertussis?

**A:** No, not every cough is pertussis. Pertussis generally starts off with cold-like symptoms including a mild cough or fever. After 1 to 2 weeks, severe coughing can begin. Unlike the common cold, pertussis can become a series of coughing fits that continues for weeks or months. Those who get the coughing fits say it’s the worst cough of their lives. The cough causes major disruptions to daily life and complications like interrupted sleep, vomiting, pneumonia, broken ribs, ruptured blood vessels, and seizures.

If you or your child develops a cold that includes a severe cough or a cough that lasts a long time, it may be pertussis. The best way to know if you have pertussis is to see your healthcare provider, who can make a diagnosis and prescribe antibiotics if needed.

**Q:** Doesn’t herd immunity protect most people?

**A:** No. Herd immunity is a situation in which, through vaccination or prior illness, a sufficient proportion of a population is immune to an infectious disease, making the spread from person to person unlikely. With herd immunity, those who cannot receive the vaccination because of illness or age may still be protected from the disease if everyone around them are up-to-date on vaccinations. Because pertussis is so contagious, vaccination rates must be very high to have healthy herd immunity. Most communities do not have high enough vaccination rates to have healthy herd immunity.

**Q:** Can pertussis be prevented with vaccines?

**A:** Yes. A pertussis vaccine is available and recommended for adults. Getting the Tdap vaccine is especially important for pregnant women and anyone else who comes into contact with infants.

**Q:** Do pertussis vaccines protect from severe disease?

**A:** Yes. If you’ve been vaccinated and get still catch pertussis, you are less likely to have a severe infection. Typically, the cough won’t last as many days and coughing fits, whooping, and vomiting after coughing won’t occur as often. When vaccinated children get pertussis, fewer have apnea (life-threatening pauses in breathing), cyanosis (blue or purplish skin coloration due to lack of oxygen), and vomiting.

**Q:** If I received the pertussis vaccine as a child or if I’ve had whooping cough, do I still need a pertussis booster?

**A:** Yes. Getting the pertussis vaccine as a child or getting sick with pertussis doesn’t provide lifelong protection. A person can still get pertussis and pass it to others. Pertussis vaccines typically offer high levels of protection within the first 2 years of getting vaccinated. Protection decreases over time. Similarly, natural infection may also only protect the individual for a few years.

Individuals can get the Tdap booster dose no matter when the last regular tetanus booster shot (Td) was administered. Keep in mind that fewer than 10 percent of adults have had their Tdap booster dose.

**Q:** Are reported cases of pertussis increasing?

**A:** Yes. Reasons reported cases are increasing include increased awareness, improved diagnostic tests, better reporting, more frequent circulation of the bacteria in the community, and lack of booster vaccinations.

Vaccines provide the best protection against pertussis. It’s important for everyone to get pertussis vaccines to protect themselves and their families.

FAQ adapted from CDC: Pertussis Frequently Asked Questions www.cdc.gov/pertussis/about/faqs.html

Flyer can be downloaded for distribution at www.utahcountyimmunizationcoalition.org
What’s the Big Deal about Pertussis?

- [Insert number of cases] cases in [insert state] in [insert year]
- 48,000 cases in the United States in 2012, the highest number since 1955
- 3 months of being sick
- 100 days of coughing
- 1-3 weeks of being contagious before symptoms appear
- 6 days of calling in sick

Information obtained from www.cdc.gov/pertussis
To find the number of outbreaks in your area, go to www.cdc.gov/mmwr/publications/index.html, Weekly Report, Notifiable Diseases and Mortality Tables, then Pertussis.
Did you know that [insert vaccine service] could hold a Vaccination Clinic at your business, for your staff?

Each year in the U.S., up to 30,000 adults die from vaccine preventable diseases or their complications.

70% of adults do not have all the recommended vaccines.

Do what you can to protect your staff!

For more information contact:
[Insert contact information]

[Insert desired logo or picture]
**Recommended Adult Vaccines**

- **Tetanus, Diphtheria, Pertussis—Tdap/Td** (every 10 years for all adults)
- **Human papillomavirus—HPV** (3 doses for females 11-26 years of age)
- **Measles, Mumps, Rubella—MMR** (2 doses for all adults born after 1957)
- **Varicella** (2 doses for adults under 60 who have never had chickenpox)
- **Zoster** (1 dose for adults 60 and over)
- **Influenza** (annual vaccination for all adults**)
- **Pneumococcal** (1 dose for adults 65 or older or adults with high-risk conditions**)
- **Hepatitis A** (2 doses for adults at risk** or who have never had the disease)
- **Hepatitis B** (3 doses for adults at risk**)
- **Meningococcal** (1 or more doses for adults at risk**)

**DID YOU KNOW…**

- In 2012, **48,277 CASES** of pertussis were reported in the United States.
- The last time the rates of Whooping Cough were this high was in 1955, 10 years after the vaccine was created.
- There were **[insert number of cases]** CASES of Whooping Cough in [insert your state] in [insert year].
- Whooping cough is carried by an adult carrier for adults and can be fatal for infants and young children.

**WHY DOES THIS MATTER TO YOU AND YOUR COMPANY?**

- The average person who gets Pertussis will cough for **100 DAYS**. This causes an average of **6 DAYS** of calling in sick to work.
- Pertussis is highly contagious. An employee with pertussis could be contagious for **2 WEEKS** before showing any symptoms. If one of your employees gets pertussis, he or she could spread it to **10 PEOPLE**.
- If any 1 EMPLOYEE comes to work after being exposed to pertussis, you will likely have an OUTBREAK at your company.

**WHAT CAN YOU DO ABOUT IT?**

- **VACCINATE** your employees so you won’t end up with an OUTBREAK.
- **CALL [INSERT VACCINE SERVICE]** to set up a vaccination clinic.
- **[Insert vaccine service]** will bring a MOBILE CLINIC that will come to your company to vaccinate your employees.

**OUT-OF-POCKET EXPENSE**

**Insured employees pay**

- [Insert insurance company]: [insert out-of-pocket cost]
- [Insert additional insurance companies and respective out-of-pocket costs, if applicable]

**Uninsured employees pay [insert out-of-pocket cost]**

To find the number of outbreaks for your area, go to www.cdc.gov/mmwr/publications/index.html, Weekly Report, Notifiable Diseases and Mortality Tables, then Pertussis.
Adams need immunizations too! Immunizations provide protection against many diseases. Get your immunizations and STOP THE RISE of potentially deadly diseases.

Location:

Date:

Time:

STOP THE RISE...IMMUNIZE!
Utah County Immunization Coalition
www.utahcountyimmunizationcoalition.org

Adapted from CDC and Dept. of Health & Human Services