

## **Increasing the Number of Adults in Utah County Who Receive the Pertussis Vaccine**

Sarah Jones sarahejones810@gmail.com sewall

Beth Luthy College of Nursing

### **Project Purpose**

The purpose of this project is to increase the number of adults in Utah County who are adequately vaccinated against pertussis (whooping cough), thus protecting members of the community against pertussis infection. A secondary purpose is to evaluate the effectiveness of educational materials regarding the pertussis vaccine and disease.

### **Project Importance**

Pertussis is a vaccine-preventable disease that has plagued our nation for many years. Since the vaccine's creation in 1945, rates of pertussis thankfully decreased, overall. However, in recent years, due to the decrease in the number of vaccinated individuals, especially adults, pertussis cases have drastically increased, rising by 500% since 2002 (Centers for Disease Control and Prevention [CDC], 2012). For the first time since 1955, the United States (US) had more than 40,000 cases of pertussis in one year (CDC, 2012). Even more startling, however, is the fact that Utah County had 76.6 cases per 100,000 people, compared to Utah's 54.8 and the country's 13.4 (Bureau of Epidemiology, n.d.; CDC, 2012).

In the average adult, pertussis presents itself as a cold with a cough that lasts for up to 100 days. While highly virulent, pertussis is especially difficult to control because those who are infected are contagious approximately 20 days prior to showing any symptoms, during which they will infect 80% of susceptible household contacts (CDC, 2013, p. 219). Although this disease rarely causes long-term complications in adults, the disease in infants and young children can be devastating. Approximately 80% of infants with pertussis in Utah from 1995-2005 required hospitalization (Utah Bureau of Epidemiology, n.d.), many of whom needed life support services and, as a result, were at risk for death. Such devastation, however, is completely preventable with a simple vaccination.

In order to protect Utah County infants and young children from the potentially deadly effects of pertussis, an intervention project was conceived in 2013 in cooperation with the Utah County Immunization Coalition, the Utah County Health Department, and the Utah County Immunization Clinic. The project promotes pertussis vaccination among Utah County adults, since most infants and young children contract the communicable disease from a parent, grandparent, or other adult caregiver. The primary goal of the project is to increase the number of adults vaccinated for pertussis, an objective met while working with businesses throughout Utah County. During the implementation of the project, adult employees will have the opportunity to receive the pertussis vaccine at their place of employment for little to no cost. The vaccine will not only protect the adult employees against pertussis, but also protect infants and young children in the community.

### **Project Profile Body**

Specifically, the ORCA project would include contact and education for 50 of the top 200 largest businesses in Utah County. During the course of the project, meetings will be arranged with a member of the company to discuss the need for a clinic to vaccinate their employees against pertussis. During the meeting, information will be provided regarding the risks of pertussis outbreaks and the benefit to the company if they were to schedule a clinic. A mobile vaccination clinic provided by the Utah County Health Department will be available to spend approximately 4 hours at each business to provide their employees with the pertussis vaccine. Following a meeting with an employee and the scheduling of a clinic, a staff meeting will be scheduled to educate the staff on the importance of the pertussis vaccine and promote participation at the clinic. If a staff meeting is not permitted, an informational packet will be sent to employees. The price of the vaccines will be billed

to insurance companies who supplement the price of vaccines. For uninsured employees, a cost of \$14 per vaccine has been negotiated with the vaccine manufacturer. Records will be kept containing the number of employees vaccinated to show the success of the clinic and the increase in persons vaccinated.

### **Anticipated Academic Outcome**

Academic outcomes include: 1) a poster or podium presentation at the Brigham Young University College of Nursing Research Conference during 2014; and 2) publication of an article in a peer-reviewed professional nursing journal, such as *Public Health Nursing*.

### **Qualifications**

To qualify for participation in a project regarding immunizations, I have completed a nursing research course (Nursing 320 Scholarly Inquiry in Nursing) and have learned the methods, terminology, and the impact of research. This background will aid me in presenting this project as further evidence of research showing vaccine importance. Over the past 5 months, I have been working with Beth Luthy to promote adult immunizations in Utah County. During this time, I have researched the pertussis vaccine and the effects of pertussis in the community. Personally, I am a hard-working, self-motivated student who has great interest in immunizations and serving communities. Dr. Luthy is a skilled and experienced immunization researcher, and is well connected with the immunization community. Specifically, my mentor and I both have an interest in immunizations and having positive impact on immunizations in communities.

### **Project Timetable**

October 2013	Create a list of 50 companies who will be included in the project Research previous immunization projects to determine characteristics of successful projects
November 2013	Complete and submit for IRB approval Make appointments to meet with companies regarding vaccination education
Dec.-Feb. 2013	Participate in staff meetings and clinics at various businesses Gather data containing number of vaccinations administered as a result of the education and mobile vaccination clinics.
February 2013	Analyze effects of different educational strategies on success of clinics Outline article
March 2013	Complete rough draft of article with mentor
April 2013	Submit final draft of article to professional nursing journal Submit final ORCA project report

### **Scholarly Sources**

Bureau of Epidemiology. (n.d.). *Historical communicable disease report - Utah*. Retrieved from <http://health.utah.gov/epi/100yr/100yr.html>

Centers for Disease Control and Prevention. (2012). *Epidemiology and prevention of vaccine preventable diseases*. W. Atkinson, S. Wolfe, & J. Hamborsky (Eds.). Washington DC: Public Health Foundation.

Centers for Disease Control and Prevention. (2013). *Surveillance and reporting*. Retrieved from <http://www.cdc.gov/pertussis/surv-reporting.html>

Utah Bureau of Epidemiology. (n.d.). *Trends in pertussis activity, Utah 1995-2005*. Retrieved from [http://health.utah.gov/epi/anrpt/anrpt05/pert\\_ut\\_9505\\_final.pdf](http://health.utah.gov/epi/anrpt/anrpt05/pert_ut_9505_final.pdf)