

HS-MACA COPC Summer Research

Summer 2016: Florence Clinic Vaccination Quality Improvement

Hypothesis:

Omaha has seen a steady increase in the number of refugees that it accepts every year and is well known to be a hospitable place to resettle for refugees. Creighton University's Florence Residency Clinic provides high quality health care to Omaha's growing refugee population, however, there is a struggle to achieve the recommended number of vaccinations in this vulnerable population. Through a 'mobilize, assess, plan, implement, and track' program model, we aim to improve the vaccination coverage to the nationally recommended levels in the Omaha's refugee population. This is a crucial aspect of preventing disease and giving refugees their best chance at a successful resettlement in Omaha.

Specific Aims:

The Specific aims of the project are:

- Identify major barriers that prevent patients of the Omaha Florence Clinic from receiving necessary vaccinations.
- Achieve vaccination coverage goals set by Healthy People 2020 for Influenza (90%), pneumococcal polysaccharide vaccine (90%), and varicella zoster (30%) in older adults.
- Develop a sustainable plan for achieving and maintaining the coverage goals over time.
- Generate monthly progress reports on the number of vaccines administered and the percent coverage of clinic patients.

Background and Significance:

The widespread use of vaccines is an essential part of the vast improvement in life expectancy that we have observed since the mid 20th century. Vaccines effectively prevent diseases that are difficult to treat that often result in death. Each year in the United States, 226,000 people are hospitalized for influenza and as many as 49,000 die from influenza infection and its complications. In 2012, there were 32,000 cases of invasive pneumococcal pneumonia resulting in 3,300 deaths in the United States.^[1] Nationally, the standard immunization schedule is estimated to save \$9.9 billion in direct healthcare costs as well as another \$33.4 billion in indirect costs.^[2] Therefore, sufficient vaccination can prevent undue patient morbidity, as well as the significant financial strain of developing serious disease.

The Florence Residency Clinic has had an ongoing interest in attaining sufficient vaccine coverage for its patients since it was awarded a quality improvement grant in 2013. However, due to the turnover of residents, they have not been able to meet their original goals. Dr. Vimalachandran, a second year resident at the clinic and the current project leader, is hoping to get the project back on track. With the overall goal of improved coverage in mind, the question is, what is keeping this population from reaching the national standards that have been set? The answer is likely a combination of factors such as; language barriers, lack of insurance, transportation, resources (both vaccine supply, and time with providers), and education (in both patients and providers). To improve vaccination education and coverage, the first step is to assess which of these factors are major or minor contributors to the issue. Once we

understand how these challenges contribute to the problem, we can develop a more efficient plan to sustainably improve the rate of vaccination for the patient population at the Florence Clinic. One particularly attractive approach to improving vaccine coverage in patients is to simply use the grant money to purchase a large number of vaccines, set up a few periodic vaccine clinics, and simply provide them to patients free of charge. While this would improve the number of people who get vaccinated initially, it does not address the larger issue of ever increasing population of refugee patients who will be seeking care at the Florence Clinic. As a result, we must develop a sustainable plan for improvement and maintenance. Finally, we also believe that a plan for monthly progress report will be beneficial to keep providers and staff at the clinic involved and engaged in the mission of providing vaccines for their patients. It is vital to the success of this project to have everyone in the clinic on board with our goals, and keeping them apprised of the progress may be a vital part of maintaining their support.

Student Role:

For this project, I will be involved in development of survey and educational materials, as well as preparing survey results for analysis. I will also assist in the development of monthly progress reports and their distribution to the physicians and staff at the clinic. I will also participate in project related meetings, as well as development of vaccination strategies based on the results of our survey analysis.

Experimental Design:

There will be multiple components implemented in this project. The first will be developing a questionnaire, printed in languages common to those of our patients, and distributing it throughout the clinic. This questionnaire will contain simple questions about barriers that prevent patients from getting appropriate vaccinations. This cross sectional study of patient responses will inform future interventions to help achieve our coverage goals. In addition, the survey will contain common facts about the importance of vaccines as well as an encouragement to talk to providers about what vaccines they may need. This intervention will ideally empower patients to advocate for their own care as well as improve the number of vaccines given in the clinic on a monthly basis.

The second component of our project will be to generate a pre-intervention report on the number of vaccinations given in the clinic, followed by monthly reports during the intervention. We will then have a baseline for comparison so that we may track the progress and keep the clinic as a whole involved in our efforts. Reports will be generated from data retrieved from the clinic's electronic medical records and will not contain any patient identifiers.

Works Cited:

1. *Centers for Disease Control and Prevention*. Centers for Disease Control and Prevention, 18 Sept. 2015. Web. 26 Feb. 2016.
2. *Immunization and Infectious Diseases*. Healthy People 2020, 24 Feb. 2016. Web. 26 Feb. 2016.
3. Pennant, Keyana N., John J. Costa, Anne L. Fuhlbrigge, Paul E. Sax, Lara E. Szent-Gyorgyi, Jonathan Coblyn, and Sonali P. Desai. "Improving Influenza and Pneumococcal Vaccination Rates in Ambulatory Specialty Practices." *Open Forum Infectious Diseases* 2, no. 4 (October 1, 2015). doi:10.1093/ofid/ofv119.

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