Increasing the Uptake of the Human Papillomavirus Vaccine in Adolescents

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Structured Abstract

LOCAL PROBLEM
Cervical cancer is the third most common cancer among women worldwide and the second most frequent cause of cancer-related deaths. The human papillomavirus (HPV) vaccine can prevent cervical cancer, but the uptake of the HPV vaccine is low across the United States. The HPV vaccine is not a required vaccine, but a recommended vaccine that has the capability of eradicating cervical cancers, as well as head and neck cancers, caused by HPV. Approximately 60% of adolescent boys and girls receive at least one dose of the recommended two doses of the HPV vaccine. The HPV vaccination rates vary by state, from 28% of adolescents being HPV up to date in Mississippi to 78% in Washington, D.C.

PROJECT PURPOSE
The purpose of this project is to increase the uptake of the HPV vaccine in adolescents in the clinic through reminder interventions and educational interventions for the healthcare providers and parents of the adolescents over a three-month period.

METHODOLOGY
The Health Belief Model supports the concepts associated with this DNP project to increase the number of adolescents in the clinic receiving both recommended HPV vaccine doses through education and reminders for the nurses, advanced practice nurses, and the parents of the adolescents. This framework assists in identifying a person’s perception of the risk of acquiring cervical cancer, feelings on the seriousness of cervical cancer and its sequelae, the perception of the effectiveness of the HPV vaccine, and the barriers to receiving the initial and subsequent doses in adolescents. Implementation of the project included a health care provider educational Power Point presentation regarding the HPV vaccine safety and benefits, Centers for Disease Control and Prevention (CDC) HPV handouts for the parents, phone call reminders for the parents, and electronic health record pop-up reminders for the health care providers. A pre-educational and post-educational intervention survey regarding the health care providers HPV knowledge, perception, ability to provide a strong recommendation, fear, and safety was provided. The HPV vaccine data regarding the number of adolescents who received the HPV vaccine was collected from the Mississippi State Department of Health from January 1, 2019, to March 29, 2019, and compared to the same months in 2018.

RESULTS
The results of the pre-educational and post-educational intervention surveys (n = 10) for the health care providers revealed an increase from 50% to 100% regarding knowledge about the benefits of the HPV vaccine, an increase from 40% to 100% regarding knowledge about adherence to the HPV vaccine schedule, and a increase from 40% to
100% regarding knowledge of interventions to increase the uptake of the HPV vaccine. There was an increase from 30% to 90% regarding the knowledge of perceived barriers to the HPV vaccine, an increase from 70% to 90% agreeing that they would allow their children to receive the HPV vaccine, an increase from 60% to 100% of the participants stating that they felt comfortable providing a strong recommendation for the HPV vaccine. In both surveys, 100% of the participants agreed that they were knowledgeable about the purpose and schedule of the HPV vaccine. 100% of the participants in both surveys believed that the vaccine was safe and 100% denied being fearful of the HPV vaccine. The HPV vaccine rate for the clinic increased from nine HPV vaccines administered during the months of January, February, and March of 2018 to twenty-four HPV vaccines administered during the same months of 2019. This was a 63% increase in 2019 after the parent and health care provider education and reminder interventions were implemented in January 2019. The effect size is 0.60 which indicates the interventions had a moderate effect on the increase in HPV vaccines that were given in 2019.

**IMPLICATIONS FOR PRACTICE**

The result of this project reflects that education and reminders for the parents and health care providers, along with a strong recommendation by the health care providers increased the uptake of the HPV vaccine. The results were presented to the physician clinic owner and the health care providers. A policy was approved to continue the reminder phone calls to the parents, the strong recommendation to the parents by the health care providers, and electronic health record (EHR) pop-up reminders for the health care providers. The pop-up reminders encourage providers to check the current status of the patient’s HPV vaccinations and to schedule a well visit while the adolescent is in the clinic, if indicated. The CDC handout will continue to be given to the parents. Further research is recommended utilizing the interventions for larger numbers.

*Keywords:* HPV vaccine, cervical cancer, adolescents, reminder interventions, educational interventions

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