

INCREASING HPV VACCINATION RATES IN A RURAL CLINIC: A QUALITY IMPROVEMENT PROJECT

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INTRODUCTION

The human papillomavirus (HPV) is a precipitating factor for cervical, oropharyngeal, and anogenital cancers, among other cancers found in both men and women. The rates of HPV vaccination in the United States are less than desired to create a long-term improvement in the incidence of HPV and subsequent cancers. The United States has struggled to increase the prevalence of HPV vaccination, with a minimal increase from 22.1% to 39.9% over a period of five years, from 2013-2018 (Boersma & Black, 2020).

- 12 types of HPV have been identified as high risk for causing cancer
- While the majority of HPV infections do not cause symptoms and resolve on their own, if high risk HPV types are not identified and treated appropriately, cancer can occur
- Despite the availability of HPV vaccines, the rate of vaccination in rural areas of the United States is lower than that of urban areas
- In 2019, Missouri ranked 49th nationally for those ages 13-17 who had received the Tdap, meningococcal, and HPV vaccines (United Health Foundation, 2019)
- Barriers to increase vaccination rates include: lack of knowledge, parental and physician belief the patient is not sexually active, and a concern for safety of the vaccine paired with the potential for side effects (Bratic et al., 2016)

Purpose Statement

The purpose of this project was to evaluate the impact of an educational intervention geared towards increasing provider recommendation of the HPV vaccine to patients to determine if it impacts HPV vaccination rates within the clinic.

PICOT

In a rural, family care clinic (P), how does the implementation of an educational intervention for providers (I) compared to no intervention (C) impact HPV vaccination rates in nine to 26 year-old female and male patients (O) in a three-month time period (T)?

Objectives

1. 5% increase in female and male patients ages nine to 26 receiving at least one dose of the HPV vaccine
2. 5% increase in female and male patients ages nine to 26 receiving a vaccine dose who are seen by providers who are new to the practice

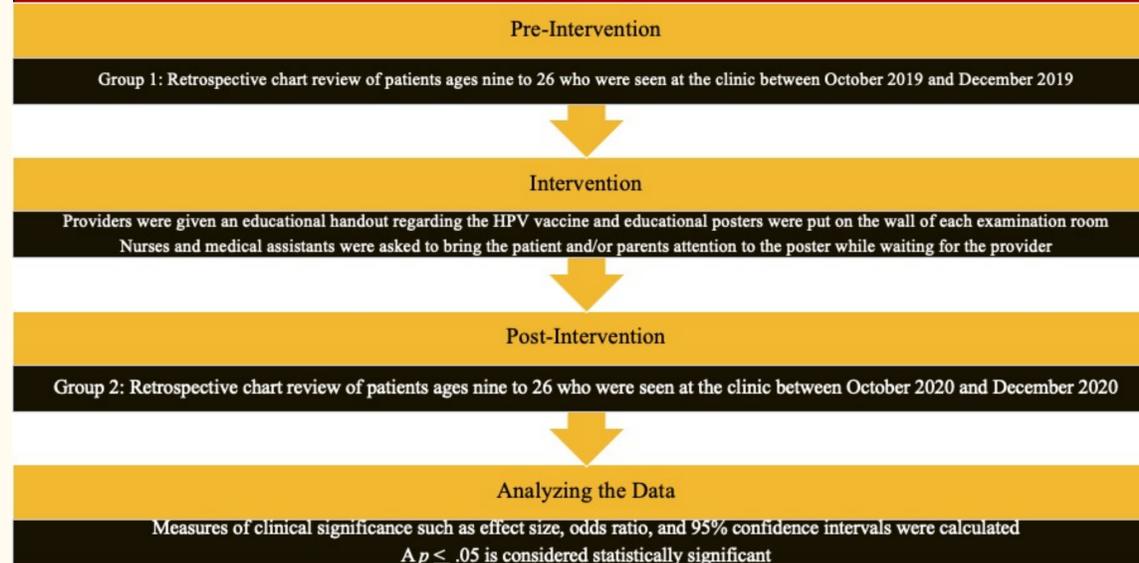
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My sincere appreciation to my DNP Project Committee:
 • Gina Oliver, PhD, APRN, FNP-BC, CNE, Committee Chair
 • Jan Sherman, PhD, RN, NNP-BC, Committee Member
 • Amanda Lewton, MD, Committee Member, Project Site Representative

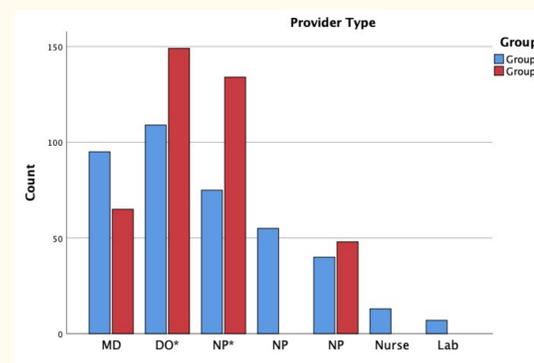
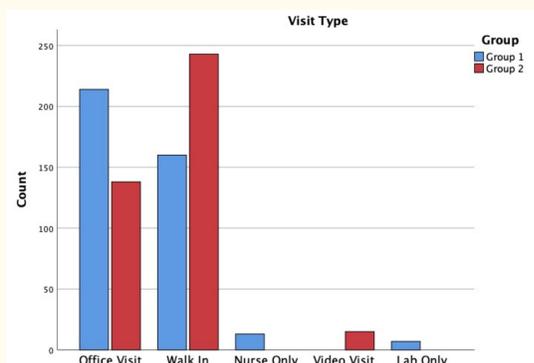
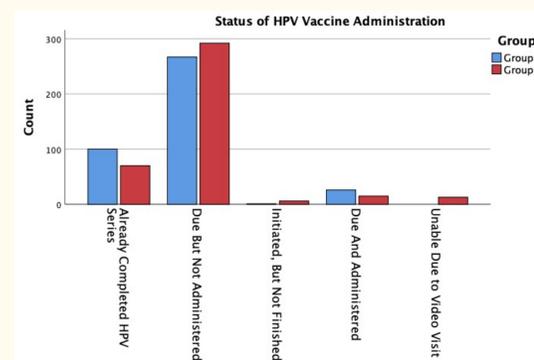
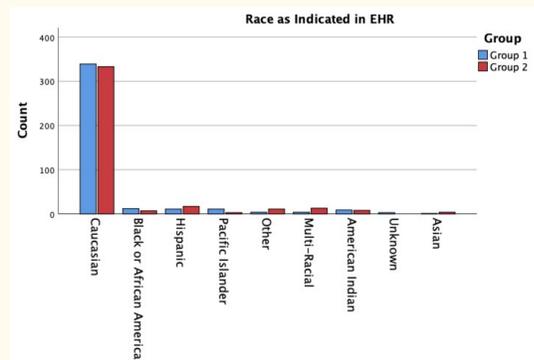
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MATERIALS AND METHODS



RESULTS



RESULTS

HPV Vaccination

- There was a small to moderate statistically significant decline in subjects who had already completed the HPV series in G2 (8.8%, $n = 70$) compared to G1 (12.6%, $n = 100$), $\chi^2 = 27.3$, $df = 8$, $p = .001$, $\Phi = .2$.
- There was an overall decline in the number of subjects who received the HPV vaccine in G1 ($n = 128$) and G2 ($n = 91$). Conversely, there was an increase in the number of subjects who did not receive the vaccine in G1 ($n = 266$) and G2 ($n = 305$).
- There was a small statistically significant decline in those who received the vaccine in G1 ($n = 128$) and G2 ($n = 91$) compared to those who did not receive the vaccine in G1 ($n = 266$) and G2 ($n = 305$) $\chi^2 = 10.08$, $df = 2$, $p = .006$, $\Phi = .1$.

Visit and Provider Type

- There was a small to moderate decrease in office visits in G2 (17.4%, $n = 138$) compared to G1 (27.0%, $n = 214$). There was a small to moderate increase in walk-in visits for G2 (30.6%, $n = 243$) compared to G1 (20.2%, $n = 160$), and $\chi^2 = 68.99$, $df = 8$, $p = .000$.
- There was a small to moderate statistically significant increase in provider visits for physician in G2 (27%, $n = 214$) compared to G1 (25.7%, $n = 204$) as well as nurse practitioners in G2 (23%, $n = 182$) compared to G1 (21.4%, $n = 170$). Nurse only visits declined with 1.6% in G1 ($n = 13$) to zero in G2 as well as lab only visits with 1.8% in G1 ($n = 7$) and zero in G2, $\chi^2 = 110.67$, $df = 12$, $p = .000$, $\Phi = .4$.

CONCLUSIONS

- The primary objective of a 5% increase in female and male patients ages nine to 26 receiving at least one dose of the HPV vaccine was not met as there was a decrease from 32% ($n = 128$) in G1 to 23% in G2 ($n = 91$).
- The secondary objective of a 5% increase in female and male patients ages nine to 26 receiving a vaccine dose who are seen by providers who are new to the practice was not met although there was an increase from 13% ($n = 51$) in G1 to 15% ($n = 59$) in G2.
- The number of scheduled office visits were decreased in G2 while walk-ins increased, likely due to the COVID-19 pandemic; with less well-child visits and more walk-ins, the likelihood of discussing vaccinations decreases
- Additional education regarding the HPV vaccine should be incorporated into information reviewed by providers, nurses, and medical assistants, especially due to turnover within the clinic

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