

# Increasing Human Papilloma Virus Vaccine Rates in Young Women

Brianna Noel Acosta, DNP, WHNP-BC

# Disclosure



The author of this presentation certifies there are no potential or actual conflict of interest in this presentation. There are no affiliations or organizations with any financial interests or non-financial interests with the subject matter and materials.

# Acknowledgements

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Larry Brown MS, CPH

# The Human Papilloma Virus and Gardasil 9

- The Human Papilloma Virus (HPV) is a sexually transmitted infection that causes genital warts, cervical, anal, oropharyngeal, penile, and vaginal cancer.
- Gardasil 9 prevents HPV types: 6, 11, 16, 18, 31, 33, 45, 52, and 58.
- Gardasil 9 is available for females ages 9 to 26 and males ages 9 to 15.

(Centers for Disease Control and Prevention [CDC], 2016; National Cancer Institute [NCI], 2016)

# Background and Identification of the Problem

- 14 million people get HPV every year (CDC, 2016)
- HPV is the most predominant sexually transmitted infection in the United States (CDC, 2016)
- Lower socioeconomic groups and males have significantly lower Gardasil uptake rates (Daniel-Ulloa, Gilbert, & Parker, 2016; McClure, MacSwain, Morrison, & Sanford, 2015; Tiro et al., 2012)
- The CDC predicts increasing vaccination rates to 80% may prevent 53,000 women from developing cervical cancer (Merck, 2014)

# PICOT Statement

In females ages 18 to 26 from a low socioeconomic background at the Oak West Women's Health Clinic in Dallas, Texas, (P) how does an educational leaflet that explains HPV facts and safety of the vaccine (I) compare to omitting the leaflet, (C) and how will it affect the likelihood of HPV vaccination uptake within a four week study (T)?

# Literature Review/Critique

| # Articles | Grade   |
|------------|---------|
| 3          | Grade A |
| 14         | Grade B |

\*Based on the John Hopkins Evidence-Based Model

| Study                    | # Articles | Level of Evidence |
|--------------------------|------------|-------------------|
| Randomized Control Trial | 4          | I                 |
| Quasi-Experimental       | 1          | II                |
| Qualitative              | 3          | III               |
| Cross-Sectional          | 9          | IV                |
|                          | 17         |                   |

# Best Practice

**An effective method for increasing Gardasil 9 rates is to provide an educational leaflet that explains HPV facts and the safety of the vaccine.**

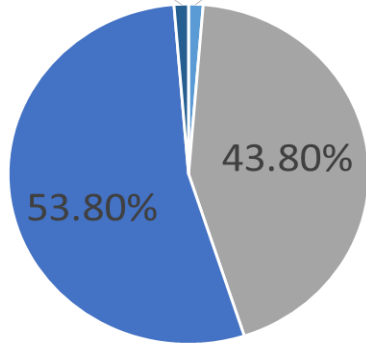


# Implementation

- Location: Oak West Women's Health Clinic at Parkland Hospital
- Stetler Model:
  1. Preparation: August - December 2016
  2. Validation: September 2016- January 2018
  3. Decision Making: January 2017- February 2018
  4. Translation: April 2018 - May 2018
  5. Evaluation: May 2018 - June 2018
- Convenience Sampling: All females ages 18-26
  - Spanish or English Speaking
  - Have not previously completed the Gardasil 9 series

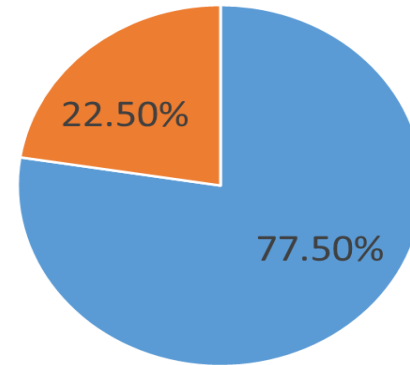
# Demographic Data

Race



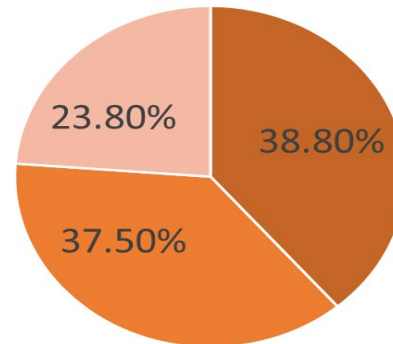
■ White ■ Black ■ Hispanic ■ Other

Language



■ English ■ Spanish

Age



■ 18-21 ■ 22-24 ■ 25-26

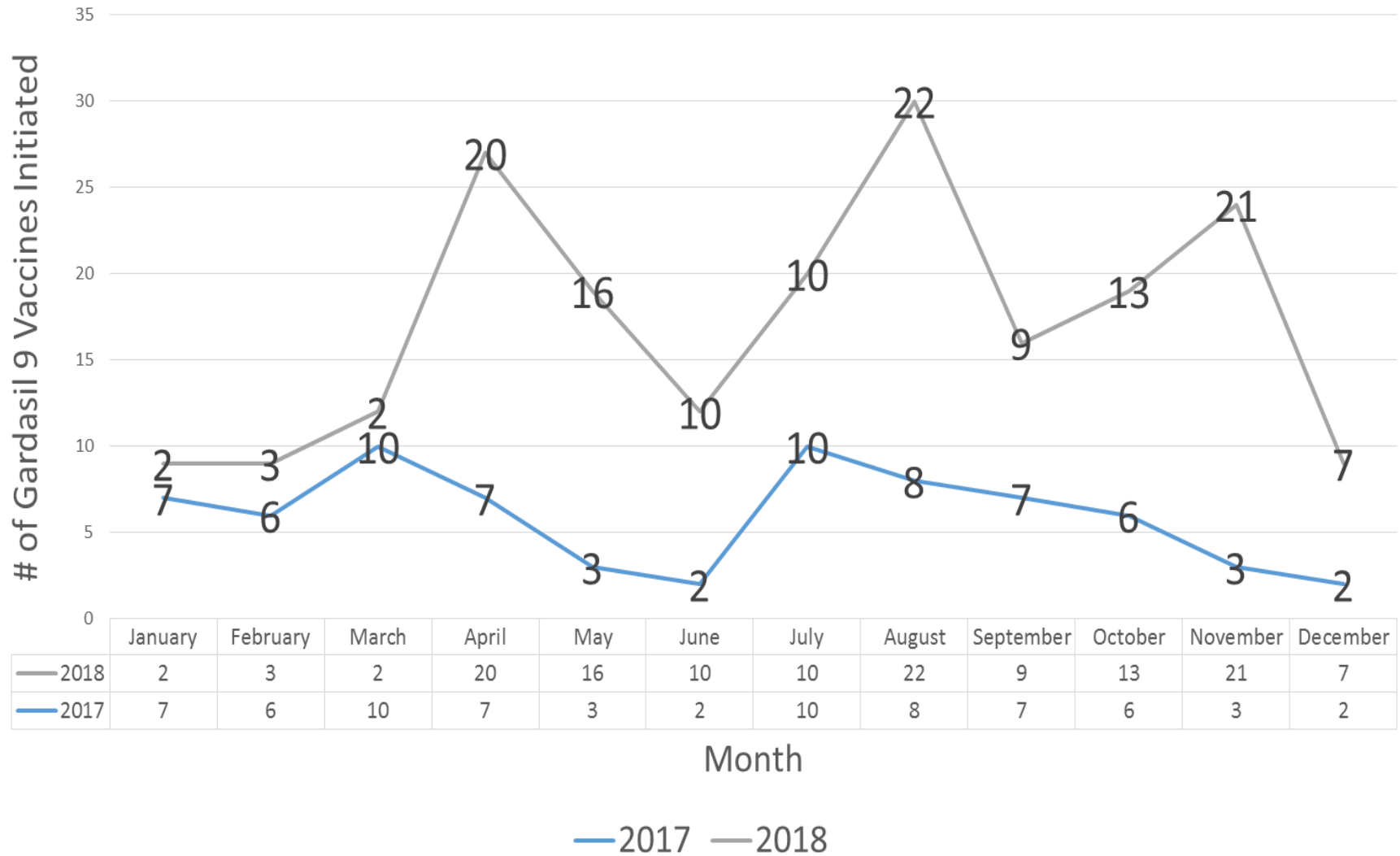
# Results

- 80 participants
  - 32 participants initiated the vaccine
  - 1500% increase compared to a 4 week period prior to the quality improvement project
  - No statistical significance between demographic data variables

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# Results

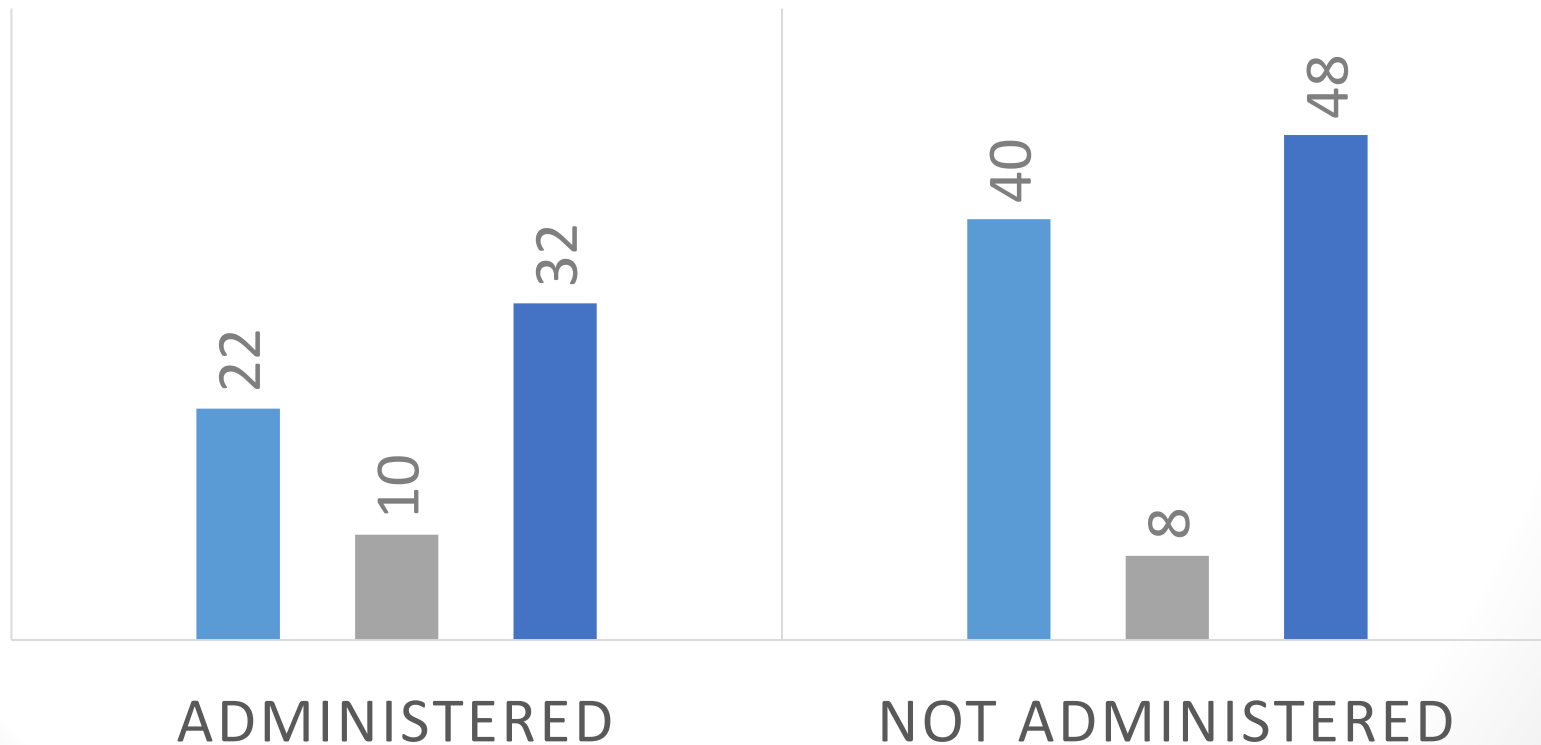
## Gardasil 9 Vaccinations at the Oak West Women's Health Clinic



# Results

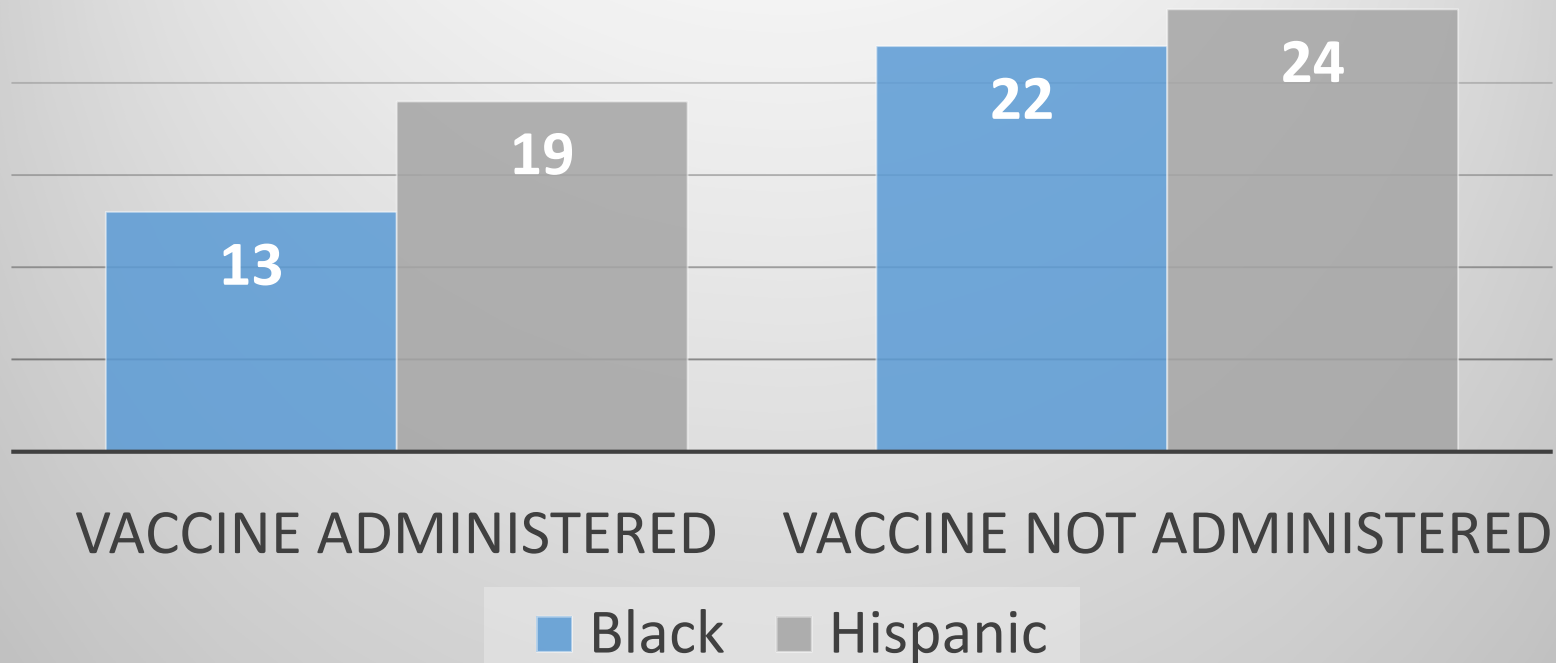
## GARDASIL 9 VACCINATIONS

■ English ■ Spanish ■ Total



# Results

Comparing Administration Rates Between Races



# Evaluation

- Goal to increase the number of patients initiating Gardasil 9 using an educational leaflet during the quality improvement project was successfully met.
  - Findings in this study coincide with previous research that educational leaflets are effective in increasing Gardasil 9 rates : reliability
- Findings from this study do not necessarily support research in the past which indicates Blacks are not influenced by leaflets to get the vaccine.
  - 59% of Black participants initiated the vaccine.
  - Future research needs to evaluate appropriate framing messages to encourage the Black population to initiate Gardasil 9.

# Evaluation

- Limitation: Increase in uptake of the vaccine may have been influenced by provider recommendation in addition to the leaflet decreasing validity
- Limited generalizability:
  - Sample consisted of primarily Blacks and Hispanics
  - All participants were from a low socioeconomic position
  - Small sample size
- Strength:
  - Limited bias via convenience sampling



# Evaluation

- Further research at the Oak West Women's Health clinic needs to address methods to ensure patients complete the entire vaccination series.
- Additional research is required to understand the reasons for non-vaccination.
- Other implementation methods need to be evaluated: videos and provider reminders on the electronic charting.
- The leaflet used in this project was obtained from the CDC.
  - Framing messages and other leaflets need to be evaluated for the most effective educational tool to tailor to the Oak West Women's patient population.

# Implications

- This study may be used to help achieve the CDC goal of a female Gardasil vaccination rate at 80%.
- This study may be used for clinics with primarily Spanish Speaking patients.
- The leaflet may be used in medically underserved populations.
- Low Cost intervention to possibly decrease the costs for cervical cancer screenings and treatments

# Conclusion

- An educational leaflet is successful in increasing Gardasil 9 initiation rates in a predominantly Hispanic and Black population in a medically underserved area.
- The recommendation is to continue using the leaflet in combination with provider recommendation.

\*\*\*Special Note: There was an increase in 89 Gardasil vaccinations administered in the Oak West Women's Health Clinic in 2018 compared to 2017.\*\*\*

Questions ???????

# References

- Centers for Disease Control and Prevention. (2016). Genital HPV infection fact sheet. Retrieved from <http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a7>
- Daniel-Ulloa, J., Gilbert, P. A., & Parker, E. A. (2016). Human papillomavirus vaccination in the United States: Uneven uptake by gender, race/ethnicity, and sexual orientation. *American Journal Of Public Health, 106*(4), 746-747. doi:10.2105/AJPH.2015.303039
- McClure, C. A., MacSwain, M., Morrison, H., & Sanford, C. J. (2015). Human papillomavirus vaccine uptake in boys and girls in a school-based vaccine delivery program in Prince Edward Island, Canada. *Elsevier. 33*(15), 1786-1790. doi: 10.1016/j.vaccine.2015.02.047
- Merck. (2014, December 11). *FDA approves Merck's HPV vaccine, GARDASIL®9, to prevent cancers and other diseases caused by nine HPV types: Including types that cause about 90% of cervical cancer cases.* [Press release]. Retrieved from <http://www.mercknewsroom.com/news-release/prescription-medicine-news/fda-approves-mercks-hpv-vaccine-gardasil9-prevent-cancers-an>
- National Cancer Institute. (2016). Human papilloma virus (HPV) vaccines. Retrieved from <http://www.cancer.gov/cancertopics/factsheet/prevention/HPV-vaccine>
- Tiro, J. A., Tsui, J., Bauer, H. M., Yamada, E., Kobrin, S., & Breen, N. (2012). Human papillomavirus vaccine use among adolescent girls and young adult women: An analysis of the 2007 California health interview survey. *Journal of Women's Health, 21*(6), 656-665. doi:10.1089/jwh.2011.3284