PERCEPTION OF HPV IN ADULTS AGES 27 THROUGH 45

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INTRODUCTION

- Gardasil 9 Approval October 2018

- Advisory Committee on Immunization Practices June 2019
  - "ACIP recommends vaccination based on shared clinical decision making for individuals aged 27 through 45 years who are not adequately vaccinated" (Centers for Disease Control and Prevention, 2019, para 4).

BACKGROUND AND SIGNIFICANCE

- HPV Related Cancers
- Vaccine approval versus insurance coverage
- HPV vaccination rates in 19-26 year old population only 36% (Wisconsin Department of Health Services, 2016)

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Cancer site	Average number of cancers per year in sites where HPV is often found (HPV-associated cancers)	Percentage probably caused by any HPV type[a]	Number probably caused by any HPV type[a]
Cervix	11,866	91%	10,751
Vagina	846	75%	635
Vulva	3,934	69%	2,707
Penis	1,269	63%	803
Anus[b]	6,530	91%	5,957
Female	4,333	93%	4,008
Male	2,197	89%	1,949
Oropharynx	18,226	70%	12,885
Female	3,412	63%	2,160
Male	14,814	72%	10,725
TOTAL	**42,671**	**79%**	**33,737**
Female	**24,391**	**83%**	**20,260**
Male	**18,280**	**74%**	**13,477**

Table 1: Number of HPV-Associated and HPV-Attributable Cancer Cases per Year (CDC, 2018)

NEEDS ASSESSMENT

SWOT Analysis

- Strong Provider Support
- Education Increases Vaccination
- Identifying Specific Needs

Community Needs Assessment

- Lack of Specific Education
- Lack of Statistics

The recent FDA approval of Gardasil 9 for patients aged 27 to 45 has opened the opportunity to prevent HPV and its related cancers in a broader population. However, it is uncertain as to how patients perceive the HPV vaccine in this population.

PROBLEM STATEMENT

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PROJECT AIM AND OBJECTIVES

- Determination of positive, neutral or negative perception
  - 60 days
- Determination of related reasons patients against vaccination
  - 90 days

PICOT

How do men and women between the ages of 27 and 45, who were not previously vaccinated for HPV, perceive HPV vaccination?

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CONGRUENCE WITH ORGANIZATIONAL STRATEGIC PLAN

- Wisconsin Comprehensive Cancer Control Plan
- Adoption of Local Health Departments and Rural Medical Facilities

SYNTHESIS OF EVIDENCE

Databases

- CINAHL
- Cochrane Library
- EBSCOhost
- Google Scholar
- PMC
- PubMed

Key Words

- *HPV vaccination*
- *vaccination perception*
- *age*
- *changes in vaccines*
- *vaccine*
- *primary education*

SYNTHESIS OF EVIDENCE

- Perception of Population Not Assessed
- Relevance in Target Population (Weiss, Rosenthal & Zimet, 2011)
- Perception of susceptibility and severity
  (Freimuth et al., 2017; Thompson et al., 2016; Weiss, Rosenthal & Zimet, 2011)
- Risks and benefits of vaccination (Markowitz et al., 2016)
- Lack of Knowledge
  (Cassidy, Braxter, Charron-Prochownik & Schlenk, 2014; Daly, Halon, Arnowitz & Ross, 2016; Lazar, Imm, Petit, Conlon & LoConte, 2014; Strohl et al., 2015)
- Cue to Action (Wagner et al., 2017)

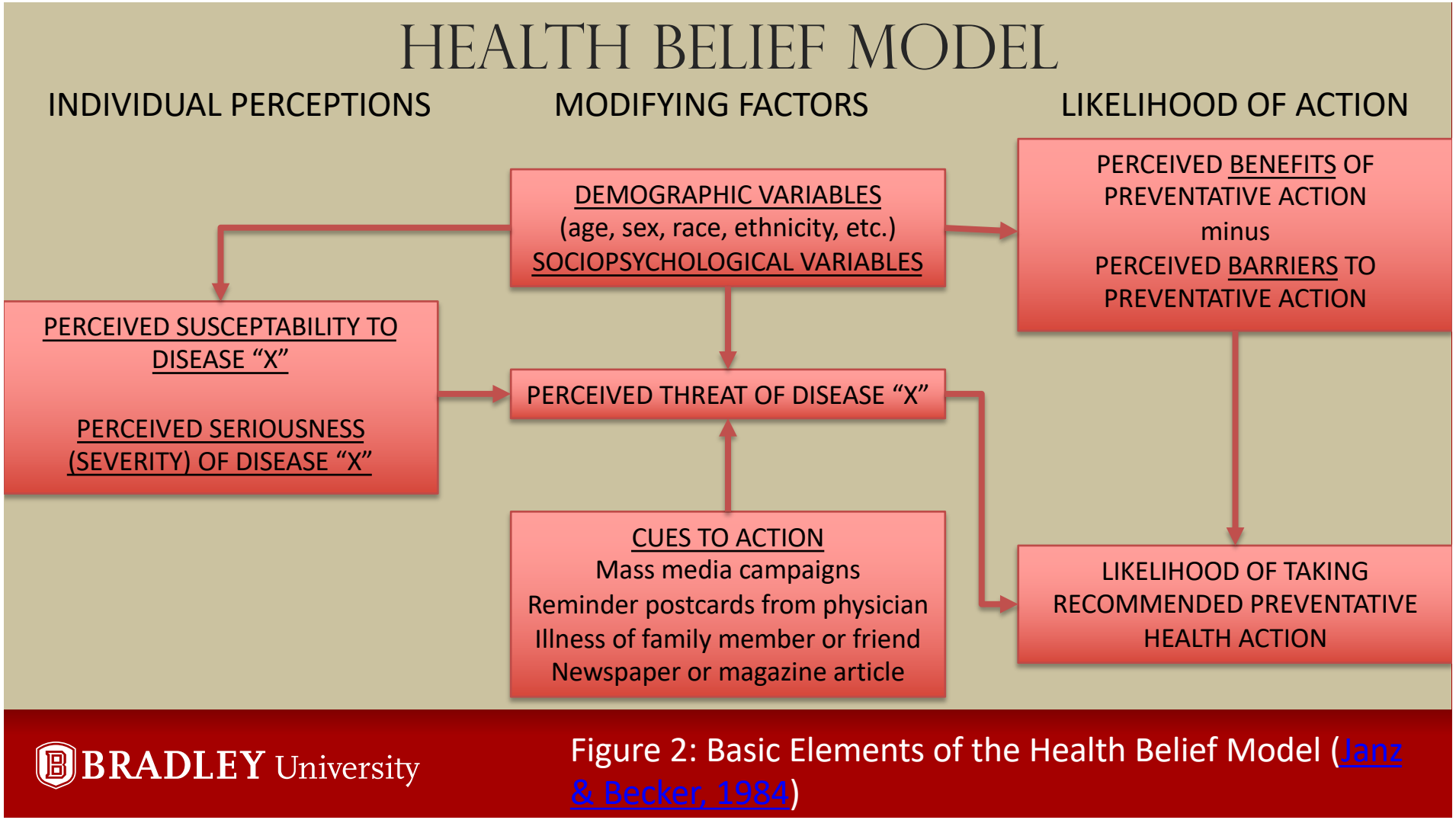

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Figure 2: Basic Elements of the Health Belief Model (Janz & Becker, 1984)

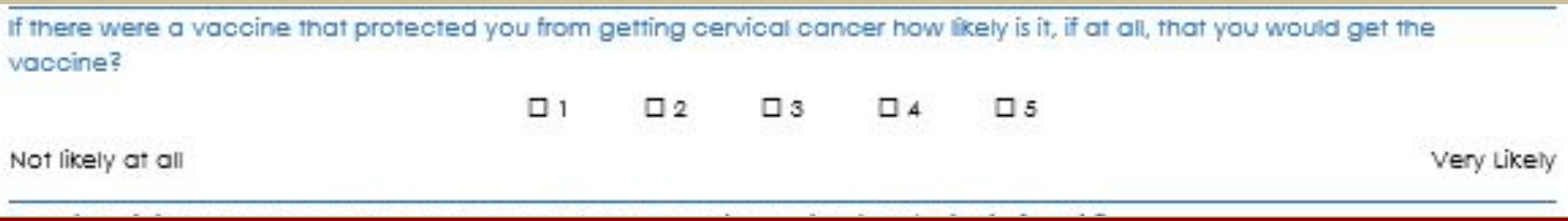
PROJECT DESIGN

- Descriptive Research
  - Valid Survey Implementation
- Community Clinic Setting
- Population
  - Rural
  - Low income/no insurance
- Inclusion Criteria
  - Age 27 to 45
  - Not previously vaccinated
  - English speaking

TOOLS

- Adapted Zika Survey (Ophir & Jamieson, 2018)
- Likert Scale
- Demographics
- 6th Grade Readability

Figure 3: HPV Survey Question Example



PROJECT PLAN

- Preparation
  - Team Members
  - Survey Permission
  - Survey Modification
- Pre-Implementation
  - Team Meetings
  - Determination of Final Survey Distribution
  - Proposal Review = Staff Education
  - Narrative/Consent

PROJECT PLAN

- Implementation
  - Narrative/Consent at Check In
  - Introduction
  - Survey Distribution
  - Survey Collection
- Conclusion
  - Manual Compilation into Excel
  - Outcomes
    - Favorable Responses
    - Barriers to Vaccination
  - Follow Up

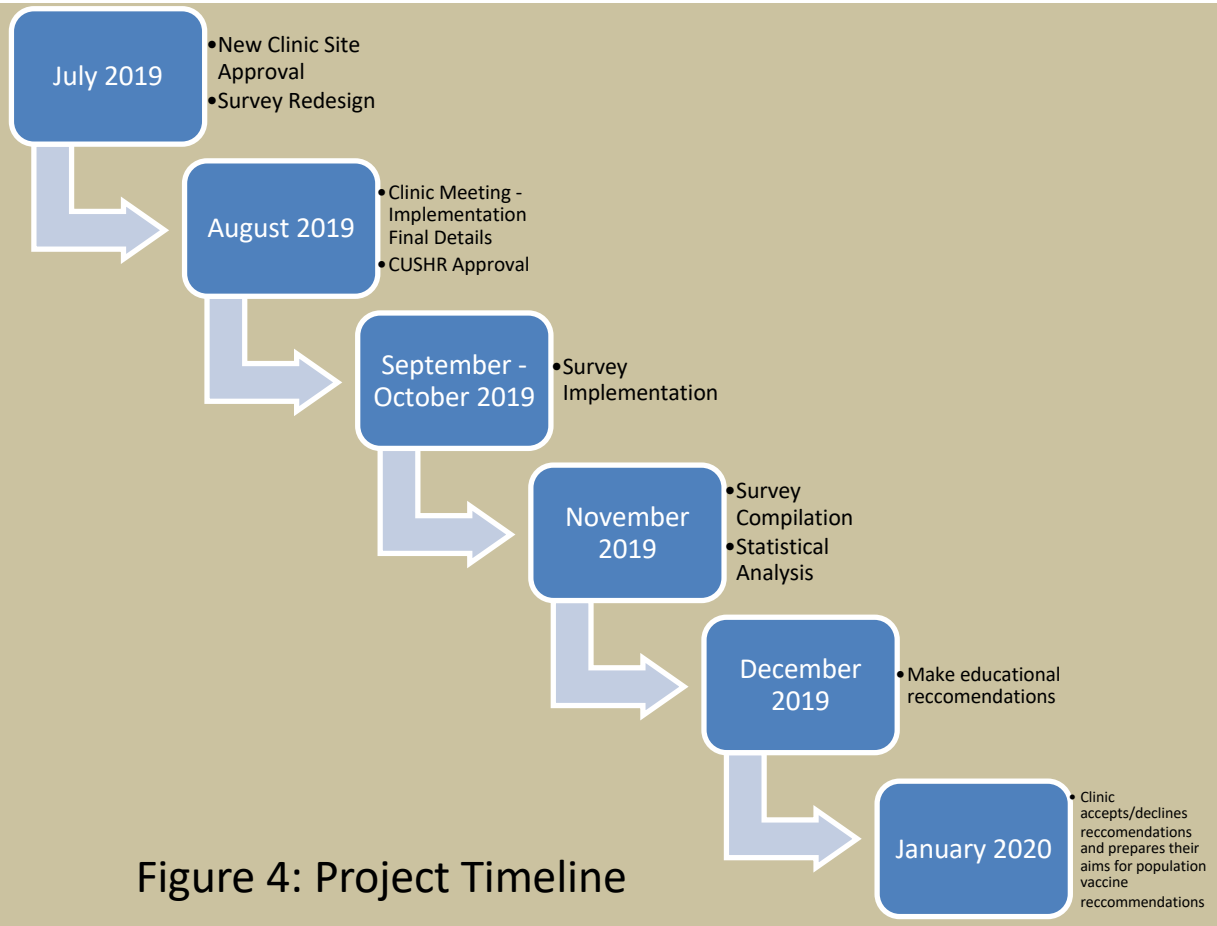


Figure 4: Project Timeline

ETHICAL ISSUES

- Bradley University CUHSR Review
- Consent provided
- Participation confidential and voluntary
- No Identifying Information Collected
- No Vulnerable Populations

ORGANIZATIONAL ASSESSMENT

- Support
- Barriers
- Risks

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Figure 5: WCCCP Logo (WDHS, 2019)

COST FACTORS

Survey Copies

- $0.20 each with the hope that at least 100 patients will participate in the survey ($20)

Transportation

- $0.58 per mile with 80 miles round trip three to four evenings per month ($380)

ANALYSIS OF IMPLEMENTATION

- Narrative versus Personal and Relational
- Timeline Extended

ANALYSIS OF DATA OUTCOMES

- Visual Representation
- Measures of Central Tendency
- Significant Relationships

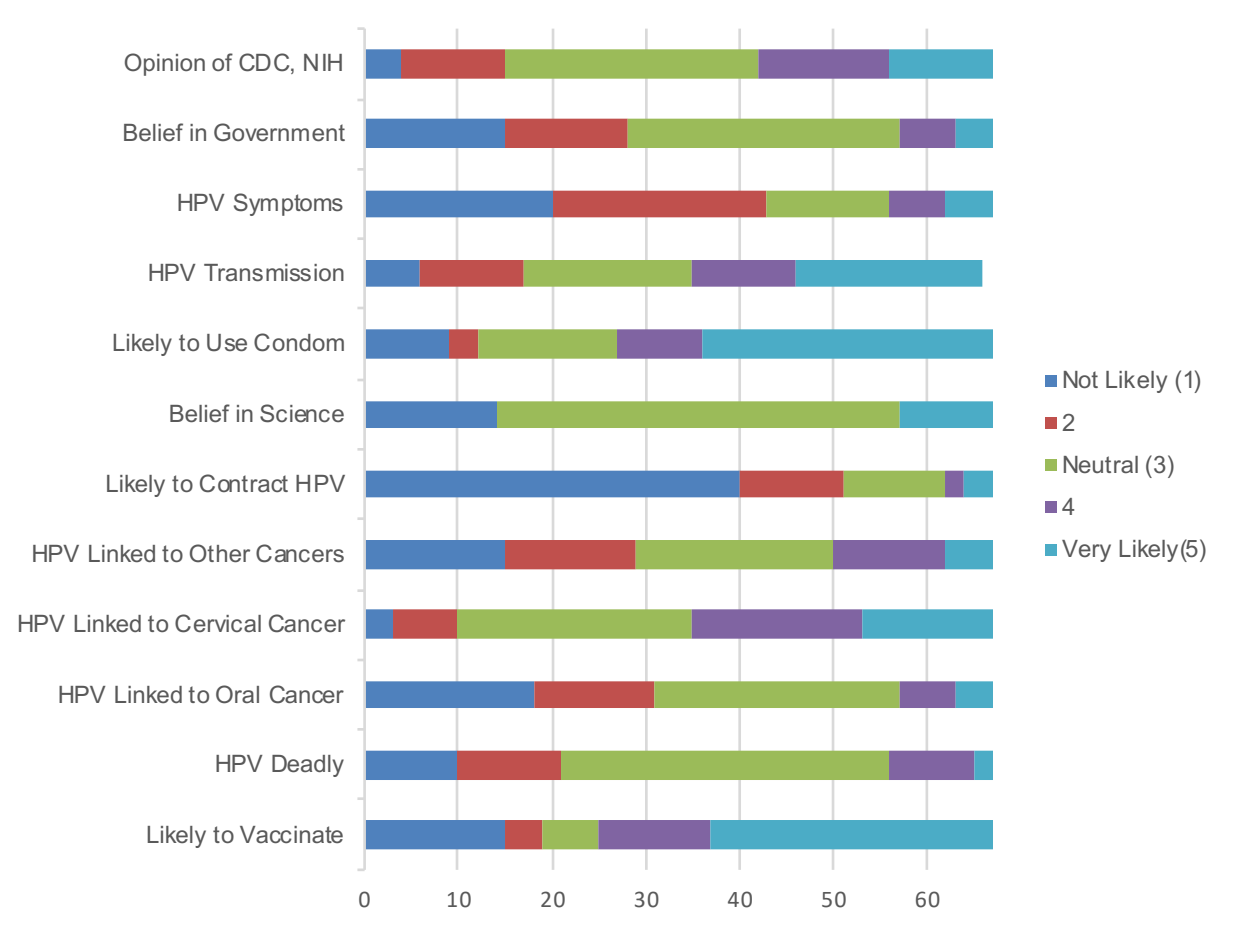

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Figure 6: Survey Responses

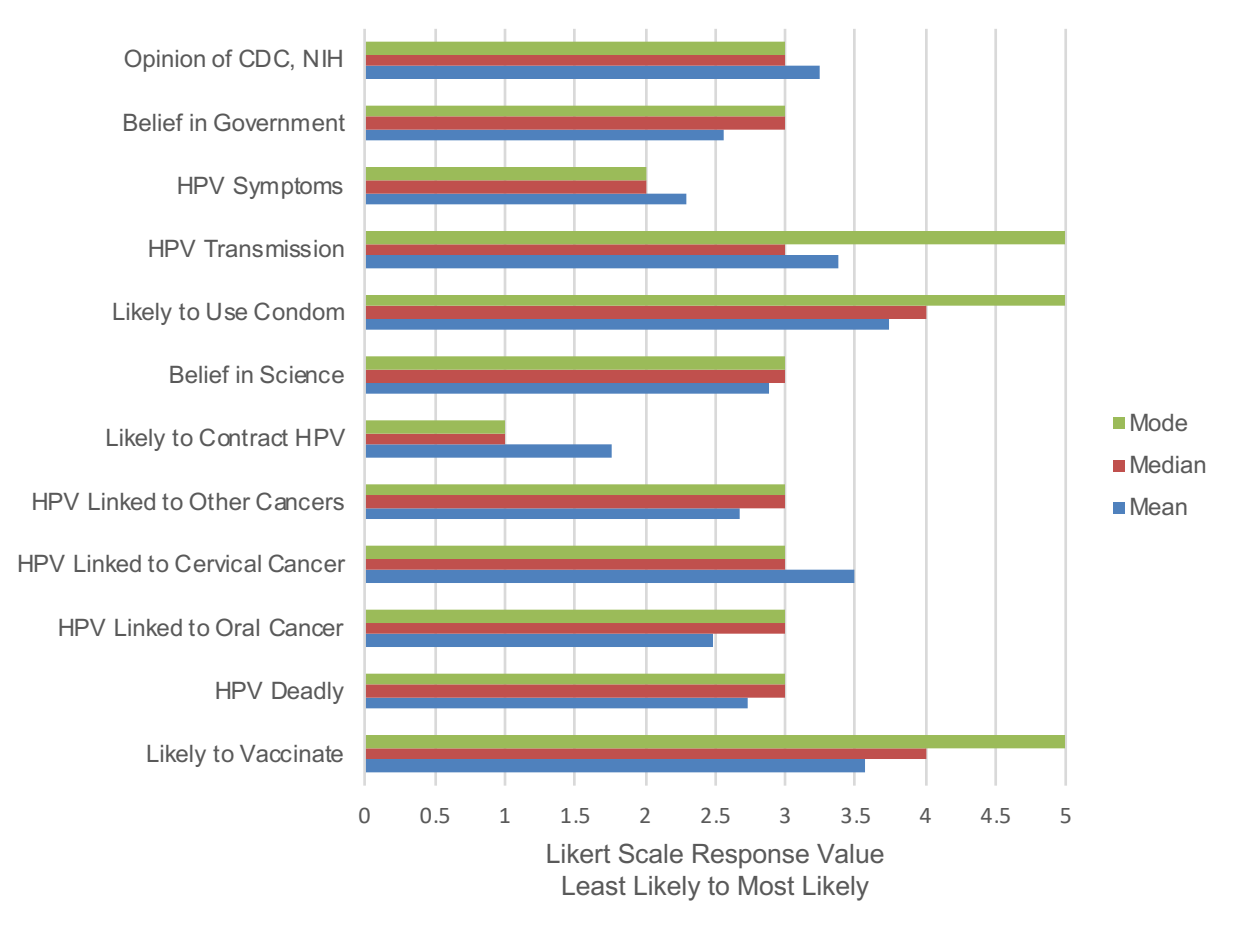

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Figure 7: Central Tendencies of Survey Responses

FINDINGS

- HPV of Little Risk
- Neutrality Toward Medical Authority
- Overall Lack of Knowledge

LIMITATIONS/DEVIATIONS

- Sample Size
- Age Verification
- Neutrality

IMPLICATIONS

- Practice
  - INEXPENSIVE
  - SIMPLE
  - IDENTIFIES NEEDS
- Future Research
  - POPULATIONS
  - SEXUAL ACTIVITY
  - TAILORED EDUCATION RESULTS

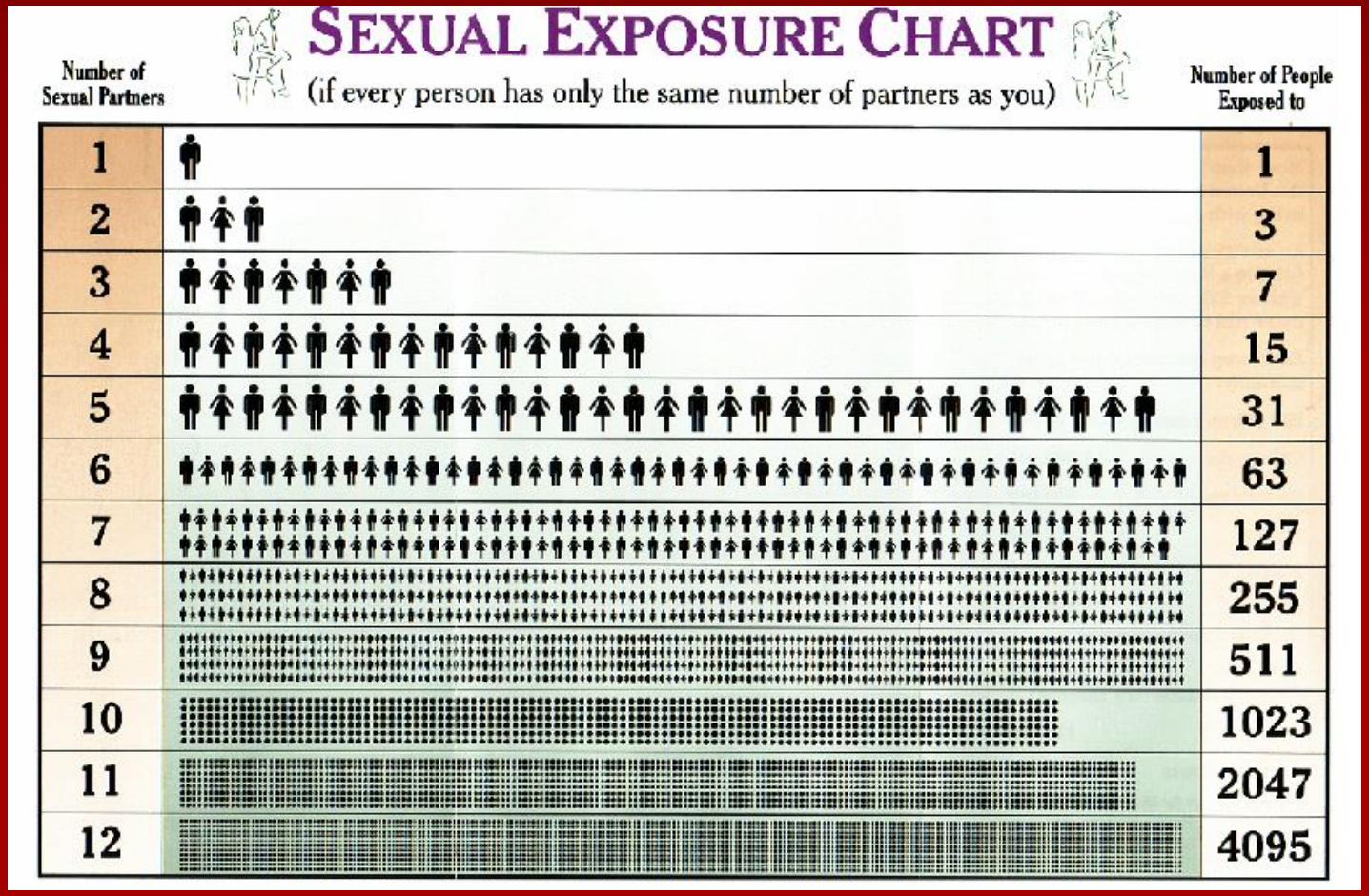

Figure 8: Sexual Exposure Chart (WVDH, n.d.)

IMPLICATIONS

- Nursing
  - PERSONALIZED EDUCATION
    - SEVERITY
    - NECESSITY
- Health Policy
  - PROVIDER EMPHASIS

VALUE OF THE PROJECT

The knowledge gained from the survey data directly relates to the what, the how and the when surrounding patient education.

DNP ESSENTIALS

- I. Scientific Underpinnings for Practice
- II. Organizational and Systems Leadership
- III. Clinical Scholarship and Analytical Methods
- IV. Information Systems/Technology
- V. Health Care Policy
- VI. Interprofessional Collaboration
- VII. Clinical Prevention and Population Health
- VIII. Advanced Nursing Practice

DISSEMINATION

- Clinic Presentations
- 2020 DNP Conference
- Publication

GOALS

- Improving interprofessional communication and leadership skills
- Improving evaluation of care delivery models in education
- Identifying a knowledge gap regarding HPV vaccination

REFERENCES

- American Cancer Society. (2019). Cancer facts & figures 2019. Retrieved from https://www.cancer.org/research/cancer-facts-statistics/all-cancer-facts-figures/cancer-facts-figures-2019.html
- American Psychological Association. (2010). Publication manual of the American Psychological Association (6th ed.). Washington, DC: American Psychological Association.
- Becker, M. H. (1974). The health belief model and sick role behavior. Health Education & Behavior, 2(4), 409-419. https://doi.org/10.1177/109019817400200407
- Bonanni, P., Zanella, B., Santomauro, F., Lorini, C., Bechini, A., & Boccalini, S. (2018). Safety and perception: What are the greatest enemies of HPV vaccination programmes? Vaccine, 36(36), 5424-5429. https://doi.org/10.1016/j.vaccine.2017.05.071.
- Browall, M., Koinberg, I., Falk, H., & Wijk, H. (2013). Patients' experience of important factors in the healthcare environment in oncology care. International Journal of Qualitative Studies on Health and Well-Being, 8, 20870. https://doi.org/10.3402/qhw.v8i0.20870
- Cassidy, B., Braxter, B., Charron-Prochownik, D., & Schlenk, E.A. (2014). A quality improvement initiative to increase HPV vaccine rates using an educational and reminder strategy with parents of preteen girls. Journal of Pediatric Health Care, 28(2), 155-64. https://doi.org/10.1016/j.pedhc.2013.01.002
- Centers for Disease Control and Prevention. (2019). Advisory Committee for Immunization Practices. Retrieved from https://www.cdc.gov/vaccines/acip/index.html
- Chamberlain, A. T., Seib, K., Ault, K. A., Orenstein, W. A., Frew, P. M., Malik, F., … Omer, S. B. (2015). Factors associated with intention to receive influenza and tetanus, diphtheria, and acellular pertussis (Tdap) vaccines during pregnancy: A focus on vaccine hesitancy and perceptions of disease severity and vaccine safety. PLoS currents, 7. https://doi.org/10.1371/currents.outbreaks.d37b61bceebae5a7a06d40a301cfa819
- Clark, S. J., Cowan, A. E., Filipp, S. L., Fisher, A. M., & Stokley, S. (2016). Parent perception of provider interactions influences HPV vaccination status of adolescent females. Clinical Pediatrics, 55(8), 701–706. https://doi.org/10.1177/0009922815610629
- Daly, K. L., Halon, P. A., Aronowitz, T., & Ross, G. (2016). A university health initiative to increase human papillomavirus vaccination rates. The Journal for Nurse Practitioners, 12(6), 281-286. https://doi.org/10.1016/j.nurpra.2016.02.013
- Fadda, M., Depping, M. K. & Schulz, P.J. (2015). Addressing issues of vaccination literacy and psychological empowerment in the measles-mumps-rubella vaccination decision-making: A qualitative study. BMC Public Health, 15(836). https://doi.org/10.1186/s12889-015-2200-9
- Freimuth, V. S., Jamison, A., Hancock, G., Musa, D., Hilyard, K. & Quinn, S. C. (2017). The role of risk perception in flu vaccine behavior among African American and white adults in the united states. Risk Analysis, 37, 2150-2163. https://doi:10.1111/risa.12790
- Gilkey, M. B., Moss, J. L., Coyne-Beasley, T., Hall, M. E., Shah, P. D., & Brewer, N. T. (2015). Physician communication about adolescent vaccination: How is human papillomavirus vaccine different. Preventive medicine, 77, 181-5. https://doi.org/10.1016/j.ypmed.2015.05.024
- Janz, N. K., & Becker, M. H. (1984). The Health Belief Model: A decade later. Health Education Quarterly, 11(1), 1–47. https://doi.org/10.1177/109019818401100101
- Lazar, K.K., Imm, P., Petit, A., Conlon, A., & LoConte, N. (2014). Human Papillomavirus Related Cancers and Vaccination Coverage in Wisconsin. Retrieved from https://wicancer.org/wp-content/uploads/2015/05/CCCBr_vol10n3_FINAL.pdf
- Markowitz, L. E., Liu, G., Hariri, S., Steinau, M., Dunne, E. F., & Unger, E. R. (2016). Prevalence of HPV after introduction of the vaccination program in the United States [PDF]. Pediatrics, 137(3). Retrieved from http://pediatrics.aappublications.org/content/pediatrics/137/3/e20151968.full.pdf

REFERENCES

- Marshfield Clinic. (2019). About Marshfield Clinic. Retrieved from https://www.marshfieldclinic.org
- Moran, K. J., Burson, R., & Conrad, D. (2017). The doctor of nursing practice scholarly project: A framework for success (2nd ed.). Burlington, MA: Jones & Bartlett Learning.
- Morrison, J. & Lasserson, T. (2018). HPV vaccination: balancing facts. Cochrane Database of Systematic Reviews, 6. https://doi.org/10.1002/14651858.ED000126.
- Nan, X., Dahlstrom, M. F., Rangarajan, S., & Richards, A. (2015). Influence of evidence type and narrative type on HPV risk perception and intention to obtain the HPV vaccine. Health Communication, 30(3), 301–308. https://doi.org/10.1080/10410236.2014.888629
- Ophir, Y. & Jamieson, K. H. (2018). Intentions to use a novel Zika vaccine: The effects of misbeliefs about the MMR vaccine and perceptions about Zika. Journal of Public Health, 40(4), e531–e537. https://doi.org/10.1093/pubmed/fdy042
- Perception. (n.d.). In Oxford English dictionary online (2nd ed.). Retrieved from http://www.oup.com
- Rosenthal, E. (2014, July 03). The Price of Prevention: Vaccine Costs Are Soaring. Retrieved from https://www.nytimes.com/2014/07/03/health/Vaccine-Costs-Soaring-Paying-Till-It-Hurts.html
- Schmid, P., Rauber, D., Betsch, C., Lidolt, G., & Denker, M. L. (2017). Barriers of influenza vaccination intention and behavior: A systematic review of influenza vaccine hesitancy, 2005 - 2016. PloS one, 12(1), e0170550. https://doi.org/10.1371/journal.pone.0170550
- Shikary, T., Bernstein, D. I., Jin, Y., Zimet, G. D., Rosenthal, S. L., & Kahn, J. A. (2009). Epidemiology and risk factors for human papillomavirus infection in a diverse sample of low-income young women. Journal of clinical virology: the official publication of the Pan American Society for Clinical Virology, 46(2), 107–111. https://doi.org/10.1016/j.jcv.2009.07.006
- Strohl, E. A., Mendoza, G., Ghant, M. S., Cameron, K. A., Simon, M. A., Schink, J. C., Marsh, E. E. (2015). Barriers to prevention: Knowledge of HPV, cervical cancer, and HPV vaccinations among African American women. American Journal of Obstetrics and Gynecology, 212(1), 65.e1-65.e5. https://doi.org/10.1016/j.ajog.2014.06.059.
- Thompson, E. L., Vamos, C. A., Vázquez-Otero, C., Logan, R., Griner, S., & Daley, E. M. (2016). Trends and predictors of HPV vaccination among U.S. college women and men. Preventive Medicine, 86, 92-98. https://doi.org/10.1016/j.ypmed.2016.02.003
- United States Census Bureau. (2018). Quick facts: Wausau, WI. Retrieved from https://www.census.gov/quickfacts/fact/table/wausaucitywisconsin/PST045218
- Van Lier, A., Ferreira, J.A., Mollema, L., Sanders, E. & De Melker, H. E. (2017). Intention to vaccinate universally against varicella, rotavirus gastroenteritis, meningococcal B disease and seasonal influenza among parents in the Netherlands: An internet survey. BMC Research Notes, 10, 672. https://doi.org/10.1186/s13104-017-3004-z
- Wagner, A. L., Boulton, M. L., Sun, X., Mukherjee, B., Huang, Z., Harmsen, I. A., … Zikmund-Fisher, B. J. (2017). Perceptions of measles, pneumonia, and meningitis vaccines among caregivers in Shanghai, China, and the health belief model: A cross-sectional study. BMC Pediatrics, 17, 143. https://doi.org/10.1186/s12887-017-0900-2
- Weiss, T.W., Rosenthal, S.L. & Zimet, G.D. (2011). Attitudes toward HPV vaccination among women aged 27 to 45. ISRN Obstetrics and Gynecology, 2011. https://doi.org/10.5402/2011/670318.
- West Virginia Department of Health. (n.d.). Sexual Exposure Chart. Retrieved from https://www.wvdhhr.org/appi/edresources/sexual_exposure_chart.pdf
- Wisconsin Department of Health Services. (2016). Facts & figures: Human papilloma virus (HPV) and cancer in Wisconsin [PDF]. Retrieved from https://www.dhs.wisconsin.gov/publications/p01573f.pdf
- Wisconsin Department of Health Services. (2017). Wisconsin comprehensive cancer control program [PDF]. Retrieved from https://www.dhs.wisconsin.gov/immunization/hpv.htm