



HPV Vaccination: The Patient Perception

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BACKGROUND

The Sentara Mobile Health Van, located in Prince William County Virginia, is a stopgap program providing primary health care for patients that fall below 200% of the poverty level with no insurance. This program services primarily those who are ages 18 and above. Papanicolaou (PAP) smears are provided as part of primary health care; however, the Human Papillomavirus (HPV) catch-up vaccine for our patients 18-26 years of age is not offered. Instead of spending limited resources on trying to treat abnormal smears and cervical cancer, the Sentara Mobile Health Van staff could be preventing HPV. A needs assessment needs to be implemented prior to instituting an HPV immunization program. The full vaccination series costs an estimated \$500.

GOAL

To establish the knowledge base of patients at Sentara Northern Virginia Medical Center who are 200% below the poverty level and assess their understanding of Cervical Cancer along with their perception of the HPV vaccination. This was implemented before performing a quality improvement of the vaccination program by adding the HPV vaccination to the primary/preventive health care that is already provided by Sentara Northern Virginia Medical Center’s Mobile Health Van.

Clinical Questions

- Does the patient feel that cervical cancer is a health risk and the HPV vaccine is an option for decreasing that heath risk in their life? Does this perception change after education?
- Can the use of the Health Belief Module and the Theory of Planned Behavior assess the patients perceived benefits and perceived barriers of the HPV vaccine? Do any of the patients’ perceptions change after the Cervical Cancer and HPV vaccine education?
- How much are patients willing to pay for the HPV Vaccine?

METHODS

- A needs assessment was conducted to assess if patients at Sentara Northern Virginia Medical Center and Sentara Mobile Van felt that the HPV vaccination is an important part of health care prevention and would be willing to participate in an immunization program.
- Participants were chosen by convenience sampling by visits to the emergency room and mobile van
 - Patients were screened
 - 1) Via demographic information
 - 2) Discussion with their primary medical provider or nurse to ensure that by participating in this needs assessment would not compromise or hinder their health care.
 - Consent obtained and Sentara certified translator was used if needed.
 - The needs assessment consisted of a 30-minute individual meeting with each patients 18-26 year old female with no insurance.
 - A Social Demographic form, a 24 question screening test based on Bandura’s Self-Efficacy Theory and an 11 question survey based on the Health Belief Module (HBM) and Theory of Planned Behavior (TPB) were used.
 - HPV & Cervical Cancer education done by primary investigator via power point
 - After the education, the 11 question survey and 24 question screening were then repeated.
 - Surveyed on amount willing to pay for each HPV Vaccine using a \$0-\$170 scale.

RESULTS

- Thirty-five participants total
 - Five patients agreed to participate but were unable to complete due to
 - 1) pain medication,
 - 2) a decline in clinical status
 - 3) being transported to the operating room.
- Bandura’s Health Belief Module**
(Scale:1= strongly disagree to 5= strongly agree)
- All patients possessed a perceived susceptibly to cervical cancer this belief increased after education.
 - Patients perceived the severity of cervical cancer as high but statistically unchanged after education.
 - The perceived barriers to obtaining an HPV vaccination were low
 - With education, the patients realized that immunizations did not diagnose cancer and the HPV vaccine is safe.
 - The perceived benefits of a PAP screen and HPV immunization remained high
 - With education, patients realized that early cervical screening could detect cervical changes before they become cancer.
 - Patients recognized that cervical cancer is curable after education.

Health Belief Module

(Scale: 1= very unlikely to 7= very likely)

- Patients felt that they were susceptible to HPV if not vaccinated, with an increase of this belief after education.
- The patient perceived the severity of being infected with HPV as high; however, there was no change in this perception after education.
- Patients perceived benefits of the HPV vaccination as high but increased after education.
- Cost did not seem to be a deterrent from patients receiving the vaccine, but this opinion also decreased with education.
- The safety of the HPV vaccine did not appear to be a concern among patients.
- A health care worker had not recommended the HPV vaccination to this patient demographic

Theory of Planned Behavior

(Scale: 1= very unlikely to 7= very likely)

- Attitudes were positive for the benefit of the HPV immunization; an increase was noted after education.
- Patients did not feel that any of their parents, doctors or female friends felt they should receive the HPV vaccine; however, a significant statistical change was noted before and after education (p 0.018).
 - This statistical significance can be credited to the primary researcher was an FNP.
- Patients denied that parents, doctor or female friend’s opinions had any effect on their actions regarding the HPV vaccine.
- Patients perceived they would be able to get the HPV vaccine despite the cost, with an increase in this perception after education.
- Patients also anticipated, in the next year, they would try to get more information about HPV vaccination.

Bandura's Health Belief Module N=30	Before Education Mean ± SD	After Education Mean ± SD	P Value
Perceived Susceptibility			
I am risk for developing cervical cancer	2.03 ± 1.351	2.70 ± 1.601	0.028
My chances of getting cervical cancer in the next few years are high	1.80 ± 1.186	2.10 ± 1.242	2.04
There is a good possibility that I will get cervical cancer	1.93 ± 1.202	2.13 ± 1.224	0.423
If I don't not have symptoms, I do not need a HPV vaccination	1.60 ± 1.070	1.33 ± 0.711	0.293
My family history puts me at risk for cervical cancer	1.80 ± 1.126	1.43 ± 1.104	0.25
Perceived Severity			
Cervical Cancer may lead to death	4.27 ± 1.143	4.37 ± 1.159	0.647
Cervical Cancer may lead to hysterectomy	3.80 ± 1.349	4.13 ± 1.306	0.224
Cervical Cancer is a serious problem	4.50 ± .974	4.53 ± 1.074	0.889
Cervical Cancer can lead to a female needing to receive chemotherapy or radiotherapy treatment	4.27 ± 1.081	4.37 ± 1.27	0.742
Perceived Barriers			
Getting HPV vaccine would only make me worry	1.80 ± 1.160	1.33 ± .661	0.095
HPV Vaccine is not necessary since there is no cure for cancer	1.60 ± 1.070	1.20 ± .551	0.103
HPV Vaccine is painful	2.37 ± 1.30	1.90 ± .923	0.07
It is too expensive to have a HPV vaccine	2.27 ± 1.285	2.10 ± 1.296	0.578
It is too embarrassing to have a HPV vaccine	1.33 ± .884	1.23 ± .626	0.557
I haven't gotten an HPV vaccine because I don't want to know if I have cancer	2.00 ± 1.414	1.37 ± .765	0.016
I don't know where to go if I want an HPV vaccine	2.63 ± 1.542	2.10 ± 1.322	0.096
If don't know what age it is necessary to get the HPV vaccine	2.80 ± 1.648	1.33 ± .922	0
I don't know how often I should get and HPV vaccination	3.30 ± 1.601	1.67 ± 1.06	0
If don't know what age it is necessary to get the HPV vaccine	2.80 ± 1.648	1.33 ± .922	0
I don't know how often I should get and HPV vaccination	3.30 ± 1.601	1.67 ± 1.06	0
I think that getting the HPV vaccine series might be unsafe or harmful to my health	2.07 ± 1.23	1.40 ± .932	0.041
Perceived Benefits			
A pap screening can find cervical changes before they become cancer	3.97 ± 1.25	4.53 ± 1.14	0.045
If cervical cancer changes are found early they are easily curable	3.43 ± 1.22	3.97 ± 1.19	0.047
It is important for females to have Pap screening so they will know that she is healthy	4.70 ± .877	4.67 ± .922	0.873
The pap screen can save a women's life	4.63 ± .890	4.73 ± .868	0.62
The innovative HPV vaccine is an effective primary preventive strategy for cervical cancer	3.90 ± 1.16	4.20 ± 1.095	0.184

CONCLUSION

- Bandura’s Self-Efficacy Theory screening tool illustrated that cervical cancer is a perceived health risk and HPV vaccine is an option for decreasing this health disparity in their life.
- Education did abet some misconceptions, including the safety of the vaccine and that early detection of cervical cancer can save their lives.
- The Health Belief Module and The Theory of Planned Behavior tool successfully assessed the patients perceived benefits and perceived barriers of the HPV vaccine.
- In general, patients felt that cervical cancer was a health risk and HPV immunization decreased this health risk, with some increased understanding after education.
- Twenty-five dollars is the average amount that the 18 thru 26-year-old, uninsured females, residing in Prince William County was willing to pay for the HPV vaccination.
- Subsequent clinical inquires should include implementing the catch-up immunization program for the Sentara Northern Virginia Medical Center Mobile Van and acquiring funding for this program.
- Does this same patient demographic have the same perception about HPV and cervical cancer when addressing their children under the age of 18 or male demographic? This is a future clinical question that needs to be addressed.

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