Cleopatra White Polyclinic II Project: Desensitizing Teachers in Belize on HPV

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Author’s note

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**The Problem**

Cervical cancer is the fourth most common cancer worldwide (American Cancer Society [ACS], 2018). The American Cancer Society estimates that in 2018, approximately 13,240 new cases of invasive cervical cancer will be diagnosed in the United States. Of this rate, 4,170 women will die from cervical cancer (ACS, 2018). The World Health Organization [WHO] (2013) has found that cervical cancer is the second most common women’s cancer worldwide, causing more than 270,000 deaths each year. Of these deaths, about 85 percent occur in low and middle income countries as a result of poor access to screening and treatment services (WHO, 2013). In Belize, where roughly 43 percent of individuals live below the national poverty line and 16 percent face extreme poverty (Lano, 2018), about 43 new cervical cancer cases are diagnosed annually (Institut Catalàd’Oncologia [ICO], 2017). Of this rate, 17 women die from cervical cancer annually (ICO, 2017). Cervical cancer ranks as the leading cause of female cancer deaths in Belize, as well as the most common female cancer in women aged 15-44 years of age (ICO, 2017). When comparing Belize to the United States, one will note the extremely high rates of both morbidity and mortality cases of cervical cancer in Belize.

The human papillomavirus, or HPV, is the cause of almost all cervical cancer cases, as well as causes a significant fraction of vaginal, penile, anal, and oropharyngeal cancers (ICO, 2017). HPV is one of the most prevalent sexually transmitted disease as it is spread through vaginal, anal, and/or oral sex, as well as through intimate skin to skin contact (ICO, 2017). Because HPV is so common and there are over 150 strains, almost all sexually active males and females will be infected with HPV at some point in their lives. Most of the HPV strains, or “non persistent” strains, will enter the body and will be naturally eliminated over time without the person ever becoming aware of their contraction of the virus. This is due to the common absence of symptoms, a typicality of the HPV strains that cause them (WHO, 2013). Although most strains run their course and go undetected, there are four problematic strains, or “persistent” strains, of HPV. Strains 6 and 11 are linked to causing genital and anal warts. Strains 16 and 18 are linked to causing cancers such as cervical, penile, vaginal, oropharyngeal, and anal cancers (WHO, 2013). According to the ICO (2017), there is no data available on vaginal, penile, anal and oropharyngeal cancers in Belize as they are so rare, but it is noted that these cancers are generally attributable to HPV (ICO, 2017).

There are several different ways to prevent becoming infected with HPV such as the use of condoms and other barrier method contraceptives, abstinence, and receiving the Gardasil vaccine. The Centers for Disease Control and Prevention (CDC, 2018) recommends that all boys and girls ages 11-12 get vaccinated against HPV, although both sexes can be vaccinated from ages 9-26 years of age (Merck Sharp & Dohme Corp., 2017). As HPV is spread through all forms of sex and intimate skin to skin contact, younger children are especially encouraged to receive the vaccine as they are less likely to be sexually active at those ages. Children ages 9-14 are scheduled to get two vaccines six months apart, while those ages 15-26 are scheduled to get three vaccines-- the first on site, the second one to two months after the first, and the last six months after the second (Merck Sharp & Dohme Corp., 2017). Vaccinating against HPV creates lifetime protection against the human papillomavirus and is considered a cost-effective solution compared to the high expense of treating cervical cancer (Walwyn et al., 2015).

The Ministry of Health of Belize did not introduce the Gardasil vaccine until November 2016, leading to the drastically lower rates of vaccinations when compared to more developed countries, like the United States, who introduced universal HPV vaccinations back in 2006 (Pan American Health Organization [PAHO], 2013). The United States initially targeted females to receive the vaccine, but now offers it to both sexes. More than 100 million doses have been disseminated in the US since its introduction (CDC, 2018). As the introduction of the vaccine is so recent, data regarding its distribution among the population of Belize has yet to be conclusively studied. Data from the Cleopatra White Polyclinic II in Belize shows that districts like Corozal, Orange Walk, and Punta Gorda have met the national target of 95 percent of female students, 9-14yrs, vaccinated against HPV, while Belize City has only completed around 46 percent. Table 1 depicts the outline of 15 schools within Belize City, the target number of students to receive vaccination, and the completed number of vaccinated students in the year 2016-2017. The percentages that surpass 100 percent occurred due to low amounts of targeted students and high outcomes of completed vaccinations.

**Table 1:** Students Given the HPV Vaccination in Belize City Schools 2016-2017

|  |  |  |  |
| --- | --- | --- | --- |
| **School Name** | **Amount of Students Targeted** | **Amount of Completed Vaccinations** | **Percentage of Completed Vaccinations** |
| All Saint’s Anglican Primary School | 35 | 19 | 54.3% |
| Bernice York Elementary | 6 | 4 | 66.7% |
| Bethel Primary School | 4 | 2 | 50% |
| Buttonwood Bay Nazarene Primary School | 19 | 2 | 10.5% |
| Belize Elementary | 24 | 25 | 104.2% |
| Central Assembly of God School | 14 | 0 | 0% |
| Ebenezer Primary School | 17 | 0 | 0% |
| Ephesus S.D.A Primary School | 9 | 0 | 0% |
| Holy Redeemer Primary School | 63 | 38 | 60.3% |
| Horizon Academy Primary School | 6 | 0 | 0% |
| Hummingbird Elementary School | 14 | 22 | 157.1% |
| Queen Street Baptist School | 9 | 5 | 55.6% |
| St. Joseph Primary School | 61 | 32 | 52.5% |
| St. Mary’s Anglican School | 19 | 8 | 42.1% |
| Trinity Methodist School | 13 | 8 | 61.5% |

Due to the high rates of cervical cancer in Belize, Cleopatra White Polyclinic II has undertaken the mission of educating the population on HPV in order to improve HPV vaccination rates, with hopes of ultimately decreasing the rates of cervical cancer. The goal of this program is to increase vaccination rates in both male and female students. Initially, Belize only targeted standard four female students to give the vaccine to. Due to increased government aid and education on HPV, both male and female students will be targeted to vaccinate because males can carry and transmit the virus to females (Merck Sharp & Dohme Corp., 2017). Some challenges that have been confronted thus far include a lack of understanding among the population on vaccines and how they work, a lack of knowledge and acceptance of the vaccine, and backlash from parents as they fear the vaccine will promote sexual activity in their children (M. Melendez, personal communication, 2018). HPV is a substantial problem for the community as many infections go undetected due to the common absence of signs or symptoms, which leads to inadvertent spread and infection of HPV (CDC, 2018). Currently, Cleopatra White Polyclinic II is providing a great deal of outreach to schools and patients and educating them on the topic of HPV in the best ways possible. By correctly, effectively, and promptly educating the public on HPV, more people are likely to protect themselves and others by receiving the vaccination.

**Intervention**

As research on HPV has shown, one of the best ways to prevent HPV is to get the Gardasil vaccine. For this project, maternal and child health (MCH) nurses at Cleopatra White Polyclinic II decided to educate the teachers of Belize City on HPV as a new, yet advantageous, way to disseminate information to a broader audience. Prior to the establishment of this intervention, Cleopatra White Polyclinic II recounted their previous attempts to educate parents and children on the vaccine as unsuccessful; the results of these former attempts indicated they were not close to meeting the target percentage, 95, set by the Ministry of Health in Belize City. Former attempts to educate only met 45 percent. Cleopatra White Polyclinic II decided that brainstorming was needed to determine new and more potent means of getting through to children and parents as the rates of vaccinations were far lower in comparison to surrounding districts. The difference between Belize City and other districts is the education that occurred when the vaccine was first introduced. Nurses in other districts provided parents, students and teachers with educational sessions on the vaccine when the vaccine was first introduced. Belize City did not follow this same protocol (M. Melendez, personal communication, 2018).

Teachers are highly regarded and respected in Belize (M. Melendez, personal communication, 2018). For this reason, along with the assumption that they are already well educated, Cleopatra White Polyclinic II MCH nurses decided that teachers would be the best target population for this intervention. If teachers are well taught and well versed on the topic of HPV, they can help to provide information on the virus, as well as counsel parents to make the best and most informed decisions regarding the vaccination of their children. Again, there is also the added benefit of teachers’ opinions being so well respected in the Belizean culture (M. Melendez, personal communication, 2018). Belize schools offer health education on topics that encompass healthy lifestyles, but vary on whether or not sex and reproductive health education is offered to their students. Some teachers attempt to take it upon themselves to do so, but most are limited in their power to, so they do not (M. Melendez, personal communication, 2018). Most schools in Belize City stress abstinence as their only sex and reproductive health education (M. Melendez, personal communication, 2018). The intervention itself consisted of a PowerPoint presentation that went into great depth and detail on what HPV is, statistics that highlighted the high rates of cervical cancer in Belize compared to places that heavily vaccinate against HPV, and how the HPV vaccine works to create immunity against the infection. The presentation was delivered to the teachers of approximately nine schools and 119 teachers within Belize City.

My role in this intervention was to create the PowerPoint, present it to the teachers of nine schools, answer any questions the teachers had about the vaccine or HPV, and offer teachers the education they needed to facilitate a conversation with parents and students about the vaccine and HPV. Additionally, I created a survey that tested the teachers’ pre-knowledge and post-knowledge about HPV and the vaccine, as well as measured their values and attitudes of both the HPV vaccine and HPV virus. Afterwards, I analyzed the data collected from said surveys and conducted an evaluation of the presentation. I also helped the MCH nurses to administer the vaccine to students who had signed consent from their parents. The expected outcomes of this intervention were that the teachers’, parents’, and students’ awareness and knowledge of HPV and the HPV vaccine will be increased, which will then, in turn, increase the vaccination rates of girls and boys ages 9-26 in Belize City.

From this experience, my skills in community health were certainly developed as my own knowledge expanded on health topics (i.e., vaccinations, reproductive health, safe sex, immunity, etc), my presentation skills were enhanced, my data collection and analysis skills were improved upon, and I felt empowered by educating others.

Based on research done by Moodley, Tathiah, Mubaiwa, and Denny (2013), the intervention completed in Belize is considered “evidence-based.” In this study, 31 primary schools in South Africa were identified for the inclusion of the HPV vaccination program (Moodley et al., 2013). Education and training sessions were held to with all stakeholders including departments of health and education, school health teams, primary healthcare nurses, hospital doctors and nurses, private practitioners, school principals, teachers, parents and community leaders. These said education and training sessions were meant to increase the uptake of vaccines by females 9-12 years old using school health teams, such as teachers and nurses (Moodley et al., 2013). The study indicated overall uptake of the vaccine was high, 97.8 percent for all three vaccines, and no adverse events were attributed to the vaccine. This study showed the importance of disseminating information about HPV in schools in order to increase vaccination rates, which will ultimately decrease HPV related health problems and cancers (Moodley et al., 2013).

**Health Belief Model**

The health belief model (HBM) was used during this intervention to appraise the attitudes and beliefs of teachers on HPV and the HPV vaccine. Hochbaum, Rosenstock and Kegels developed the HBM in the 1950’s to investigate failed disease prevention and screening initiatives (Rosenstock, 1974). The HBM highlights the likelihood an individual may have to engage in a recommended health behavior, as well as assumes that three variables will impact their ability to participate in the behavior modification: their desire to avoid illness, the belief that engaging in a specific action will prevent illnesses, and the belief in themselves in relation to completing the specific action, also known are self-efficacy (Janz & Becker, 1984). There are six constructs of the HBM: perceived susceptibility, perceived severity, perceived benefits, perceieved barriers, cues to action, and self-efficacy (Rosenstock, 1974). In order to accurately and successfully modify a behavior, each construct must be comprehensively addressed.

**Perceived susceptibility.** Perceived susceptibility is one’s perception of the possibility of contracting a certain health condition (Janz & Becker, 1984). In this intervention, the perceived susceptibility was tested by asking questions in the survey that reveal the opinions teachers may have in relation to: (1) their students contracting HPV, and (2) their or their students’ susceptibility to cervical cancer and other health concerns HPV may cause.

**Perceived severity.** Perceived severity is one’s feeling regarding the seriousness of a specific health condition (Janz & Becker, 1984). This intervention heavily educated on the health conditions caused by HPV, and related statistics regarding the prevalence and severity of these conditions (i.e. mortality and morbidity rates of cervical, penile, anal, oropharyngeal cancers in Belize, and the frequency of genital and anal warts in Belize). By doing this, teachers had a better understanding of the undeniable and critical link between HPV and these other health conditions.

**Perceived benefits.** Perceived benefits include the alleged benefits one may receive from the recommended health behavior, including the decreased risk and severity associated with the health concern (Janz & Becker, 1984). From this intervention, teachers gained knowledge on all of the benefits their students will gain from receiving the HPV vaccine. These benefits include longtime protection against becoming infected with HPV, thus a reduced chance of ever developing HPV related cancers and genital/anal warts.

**Perceived barriers.** Perceived barriers include the obstacles involved in participating in a certain health behavior (Janz & Becker, 1984). The barriers that can be assumed for this intervention include both long term and short term impediments such as general opposition towards the vaccine due to common misconceptions on how vaccines work, fears teachers and parents may have surrounding the vaccine, access to the vaccine, and beliefs parents have about the vaccine (i.e., that the vaccine will promote sexual activity). Perceived barriers to teaching about the vaccine include lack of access to technology (i.e., projectors, computers, etc), conflicting attitudes and knowledge teachers may have about the vaccine already, and lack of willingness of teachers to educate their students and the parents of students on HPV.

**Cues to action.** Cues to action are used to motivate participants to initiate the recommended health behavior (Janz & Becker, 1984). In this intervention, the PowerPoint presentation given to teachers served as the cue to action, inspiring them to help educate their students and their students’ parents on the HPV virus and HPV vaccine in order to promote a healthy life.

**Self-efficacy.** Self-efficacy is one’s confidence in their ability to perform a particular action or perform a certain behavior (Janz & Becker, 1984). The PowerPoint presentation better educated the teachers and gave them the information they need in order to inform their students and their students’ parents on HPV and the HPV vaccine. By improving their knowledge on HPV, they can empower parents to make a crucial and informed decision to have their child/children vaccinated.

**Data Collection**

Data collected throughout this intervention came from a survey, pre test, and post test (see Appendix A). The purpose of data collection in this intervention was to measure the current opinions, knowledge, beliefs, and values teachers may have about HPV and the HPV vaccine before and after the intervention. Questions asked in the survey also measured some of the constructs within the HBM (i.e., self-efficacy, perceived barriers, perceived susceptibility). The questions asked consisted of both qualitative and quantitative data. The sample consisted of 119 teachers and it began on May 30th, and continued on until June 21st. The data collection showed whether or not the teachers gained any knowledge on HPV and the HPV vaccine through the use of pre and post tests, as well as measured the likeliness that the teachers would educate their students and the parents of their students by asking them on the post test and allowing them to describe why or why not after answering.

**Results and Analysis**

In this intervention, approximately 119 teachers were surveyed, given the pre and post presentation tests, as well as were given the intervention (PowerPoint presentation on HPV virus and vaccine). Some teachers failed to complete certain questions, and one school, Holy Trinity Primary School, was not given the post-test survey due to an insufficient amount time. These professionals taught at All Saints Anglican Primary School, Ebenezer Primary School, Bethel Primary School, St. Josephs Primary School, Ephesus S.D.A Primary School, Queen Street Baptist School, Holy Trinity Primary School, Buttonwood Bay Nazarene Primary School, and Trinity Methodist Primary School.

A total of 119 pretests and 91 post tests were collected and analyzed. *Figure 1* indicates that the intervention was successful due to higher scoring on the post test in comparison to the pretest. From this data, it is clear that the intervention was successful in improving the teachers’ knowledge regarding HPV and the HPV vaccine.

Figure 1: Amount of Questions Incorrect on Pre and Post Tests

The final question on the post test asked, “Would you encourage the parents of your students to get their child/children vaccinated against HPV? Why or why not?” Of the 55 who answered this question, 52 (94 percent) answered “yes”, one (two percent) answered “no”, and two (four percent) answered “unsure.” This question was amended to include this question after several presentations were given, explaining why the number of teachers who answered the question is low. Common and reoccurring answers to the “why” section of the question emphasized on prevention, immunity, safety, and the high rates of cervical cancer in Belize. Some written answers included: “yes- in order to safeguard our death rate due to cervical cancer”, “yes- as a preventative measure for their children in the future”, “yes-this will help prevent HPV and cancer. It will help them survive out their lives”, “yes- if children are aware from a young age, they would be able to get their shot at an early age range which will prevent possible future illnesses”, “yes- because at some point in their lives they will be exposed”, “yes- prevention is better than the cure”, “yes- parents need to be aware of how we can prevent this disease and where the vaccine is available”, “yes- to have a healthier society”, and “yes- parents need to take the extra step in educating their children and getting them vaccinated to prevent HPV from spreading.” Teachers who answered “no” and “unsure” were not confident in their ability to teach the parents and requested more information. Pamphlets on HPV and the HPV vaccine were distributed to the teachers after the presentation to help assist them, when and if, discuss the topics with parents.

Of the teachers surveyed, 45 percent were in the age range of 27-39 years old and 54 percent defined themselves as Creole. *Figure 2* and *Figure 3* show the breakdown of teacher’s ages and ethnicities. Only 20 percent of those surveyed were in the vaccine target age range, 9-26. No one under the age of 18 was given the intervention or survey, hence why the age group 18-26 was created.

Figure 3: Teacher's Ethnicities

Figure 2: Teacher's Ages

Of the teachers surveyed, 64 percent answered “yes” to the question “Do you know what HPV is?” When asked if they had ever received the HPV vaccine, 43 answered “unsure”, 80 answered “I have not received the vaccine”, one answered “3 shots”, and three answered “1 shot.” The reasons that teachers did not receive the HPV vaccine are outlined in *Table 1*.

Table 1: Reasons Teachers Did Not Receive HPV Vaccine

Before the presentation was given, 88 percent of teachers said that they would encourage their students to get vaccination, and 90 percent of teachers said that they would encourage the parents of their students to get their child vaccinated. Although these percentages are high, only 19 percent said that they have ever educated their students on HPV and the HPV vaccine, and 11 percent said that they have ever educated the parents of their students on HPV and the HPV vaccine. From this, it can be concluded that the teachers may feel educating both parents and students on HPV and the HPV vaccine is important, but have not been able to or had the opportunity to do so. Barriers to following through on their beliefs and educating their students and their students’ parents may include lack of knowledge, fear or opposition, the belief it is not in their power to do so, lack of time, or lack self-efficacy in their teaching ability on the topic.

Those who answered “yes” and explained why they would encourage their students to get vaccinated reported claims such as, “I believe vaccines are necessary to prevent any epidemic”, “because of high cervical cancer rate in Belize”, “because it is beneficial to the students health”, “to prevent them from getting the virus”, “earlier age of sexual activity than ever before”, “beneficial in years to come”, “because vaccination was created for health and prevention”, and “to educate our students of the benefits of the vaccine and develop a positive attitude towards the vaccine.” Those who answered “no” and explained why included statements such as, “they are not in the age of deciding”, “it opens a window of opportunity for them to become promiscuous knowing some injection protects them”, “I believe that everyone’s body responds to certain things differently-- the fear of its side effects is what concerns me”, “I need more info to do so”, “I don’t know enough about the vaccine”, “I believe no vaccine is good for you”, and “they are too young.”

Those who answered “yes” and explained why they would encourage their students’ parents to vaccinate their child/children included answers similar to the previous question: “for prevention”, “it is a financial and health investment”, “role model to children”, “because anyone can be effected”, “because they don’t know if their child is sexually active”, “to ensure their child is not at risk for serious future health problems”, “I’d encourage them to be educated on the topic first then go ahead if they see fit”, “to make them more aware”, “prevent not lament”, and “because it can save lives.” Those who answered “no” and included why stated things like, “the side effects concern me—I have no problem mentioning it to them but not to the point of encouraging them to do so”, “I need more information”, “because I believe no vaccine is good for you”, “unsure what it is”, “teach safe sex instead of pumping chemicals into body”, “don’t know how they will react”, and “choice of parent.”

When teachers were asked to rate the statement, “I feel very confident in my ability to teach about HPV and the HPV vaccine” on a on a Likert Scale before the presentation, 41 percent said “agree”, 38 percent said “disagree”, 18 percent said “strongly disagree”, and three percent said “strongly agree.” As for whether or not the teachers believed their students were at risk for getting HPV, 49 percent said “yes”, 18 percent said “no”, and 33 percent said “unsure.”

**Discussion**

Following this intervention, and the conversations with teachers that followed it, I believe that those whom received the intervention have received a transformative experience in which they gained a surplus of information on HPV and the HPV vaccine. However, the information may have been slightly excessive at the time, as it is a relatively new topic to the teachers and the pure amount of information was significant. To keep from overwhelming the teachers or discouraging them from teaching about HPV, resources were given following the presentation, such as brochures and the intervention PowerPoint, so that they could review privately and build their own understanding and confidence in the topics of HPV and the vaccine.

From the information gathered by surveys and pre/post tests given to teachers, it is clear that Belize City possesses the potential to achieve the 95 target vaccination percentage set by the Ministry of Health. The data collected, both qualitative and quantitative, indicates that teachers are willing, and eager, to help educate on HPV and the HPV vaccine. However, first, they need to become properly educated on the topics themselves. This was confirmed in seeing that almost all of the teachers were unaware of the correlation between cervical cancer and HPV, as well as the high rates of cervical cancer in Belize. Based on their post intervention reactions, I believe that the teachers will promote the HPV vaccine to their students and to their students’ parents. It is clear that they recognize the vaccine as a crucial part of cancer prevention, as well as an important defense, and step, to living a long and healthy life. Now that they have received the intervention, teachers must continue their own education on HPV to strengthen and gain the confidence necessary to follow through on their beliefs and promote the HPV vaccine. Lastly, though the teachers now have the knowledge and resources necessary to make a change, it is pertinent to consider that in order to improve the vaccination rates in Belize City, effort needs to be encouraged from far more than the teacher population.

**Recommendations and Reflections**

Based on the results I gathered, I believe that Cleopatra White Polyclinic II should arrange times with each school to present to both teachers and parents on HPV and the HPV vaccine. This could be in a form of a parent teacher association (PTA) meeting, or perhaps a public health forum where community members are free to join as well. Though previous meetings did not prove to be successful for CWPC, I think that they need to target a much broader audience, especially those responsible for or involved with younger children. Because the topic of safe sex isn’t typically discussed in association to younger children, I believe parents may be more open to the vaccine if they have younger children. Heavier importance also needs to be placed on educating the people of Belize City in order to break down the stigmas they may have surrounding the vaccine. As the HPV vaccine is a form of cancer prevention, it should be regarded with greater importance and help to deconstruct the misconception that is promotes sexual activity. Health issues are inevitable in today’s world. However, the HPV vaccine is a simple, effective, and safe way to eliminate a number of potentially detrimental future health concerns.

Through my significant involvement in the HPV intervention, I feel that I have enhanced many different areas of my life—both professional and personally. I believe that my presentation skills have been heightened, as well as my ability to effectively teach others on difficult and/or controversial topics. Through my presentations, in depth research, and discussions with all that have been involved in this intervention, I was able to demonstrate, and practice, a great deal of patience, compassion, confidence, thoughtfulness, diligence, and dedication. I hope that my involvement prompts a positive change in not only vaccination rates, but the overall health of Belizean people.

The most challenging parts of this intervention were scheduling visitation times with schools to present the intervention and gaining, and maintaining, the respect and attention of the teachers to which I delivered the presentation. A number of factors caused many teachers not to grant me the respect I was hoping to be shown when I entered the classroom. These factors included the close proximity to summer vacation in which the intervention was delivered, being an American visitor to their country, and the fact that I was younger than many of the teachers I hoped to educate. Many teachers rudely spoke over me, used their cell phones, and simply did not pay attention during my presentations. On one occasion, it took the raised voice of another nurse to regain the attention of these teachers and demand respect. Experiences such as these were extremely frustrating, yet transformative as I learned a lot from them. Following these situations, I found myself more confident in front of the classroom, demonstrating that I was a strong presenter, and established clear expectations before I began to present. This helped aid in far smoother deliveries of future presentations.

The most rewarding experience I had from this intervention was witnessing the outward eagerness to help in the majority of teachers to which I presented. Often near the end of, and even during, my presentations, many teachers asked excellent questions that helped to generate and facilitate genuine conversations. The day after one particular presentation at Trinity Methodist Primary School, a teacher came in with but her daughter and son to receive the HPV vaccination. The teacher approached me enthusiastically and saying, “See, I told you I’d bring them!” It was in this moment that I authentically witnessed the success of all of my efforts. During my time participating in the intervention, I was only able to educate 119 teachers. However, in observing their devotion and willingness to help improve the health of their country, I have no fear that far more will follow in their inspired footsteps.

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**Appendix A**

**INFORMED CONSENT INFORMATION**

You are being asked to participate in a research study that will help us learn about the current awareness and knowledge of teachers on the topic of HPV (Human Papillomavirus). If you choose to participate, you will be asked to answer a few questions about your knowledge, experience and attitude towards the HPV vaccine. The survey is anonymous and participation is completely voluntary. You may choose to stop at any time. Your decision to participate will not affect your relationship with Cleopatra White Polyclinic II. Thank you for your time!

Would you like to participate in this survey?

* Yes
* No

Directions: Please answer each question to the best of your ability.

1. What is your age? ­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is your ethnicity? (Select one or more responses)
   1. Asian
   2. Creole
   3. East Indian
   4. Garifuna
   5. Maya
   6. Mennonite
   7. Mestizo
   8. Other ­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Do you know what HPV is?
   1. Yes
   2. No
   3. Unsure
4. Have you received the HPV vaccine (Gardasil)?
   1. 1 shot
   2. 2 shots
   3. 3 shots
   4. I have not received the HPV vaccine
   5. Unsure
5. (Skip if answered yes to question 4) If answered “I have not received the HPV vaccine” to question 4, what is your main reason for not receiving the HPV vaccine? (Select all that apply)
   1. I have never heard about the vaccine
   2. I have never thought about the vaccine
   3. I don’t know enough about the vaccine
   4. I am afraid of needles
   5. It is too painful/unpleasant
   6. I do not have time to get the vaccine
   7. My healthcare provider never suggested the vaccine to me
   8. The vaccine was not available
   9. I don’t think I need the vaccine
   10. I think that getting the HPV vaccine will give me HPV
   11. Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Would you encourage your **student** to get vaccinated? Why or why not?
   1. Yes
   2. No
   3. Why:

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1. Would you encourage the **parents** of your students to get their child/children vaccinated? Why or why not?
   1. Yes
   2. No
   3. Why:

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1. Have you ever educated your **students** on HPV and the HPV vaccine?
   1. Yes
   2. No
2. Have you ever educated the **parents** of your students on HPV and the HPV vaccine?
   1. Yes
   2. No
3. Do you think your students are at risk for getting HPV?
   1. Yes
   2. No
4. I feel very confident in my ability to teach about HPV and the HPV vaccine:
   1. Strongly disagree
   2. Disagree
   3. Agree
   4. Strongly agree
5. *Part 1:* If you are under the age of 26 and have not already received the HPV vaccine, would you be interested in receiving the vaccine? (If answered “yes”, we have the vaccine available with us and can administer it after today’s presentation)
   1. Yes
   2. No

*Part 2:* If you are not able or willing to get vaccinated today, you can get it for free at Cleopatra White Clinic M-F from 1-4pm. Do these times work for you?

1. Yes
2. No

HPV- Pre test questions

1. What is HPV (Human Papillomavirus)?
   1. The most common STD caused by vaginal, anal or oral sex, and/or intimate skin-to-skin contact
   2. A bacterial infection caused by sexual intercourse
   3. An infection that you must be sexually active for years to be infected with
   4. An STD with only 4 different strains
2. What cancers do HPV cause?
   1. Cervical
   2. Penile
   3. Anal
   4. Oropharyngeal
   5. All of the above
3. What HPV strains lead to **cancer**?
   1. 1 and 2
   2. 6 and 11
   3. 16 and 18
   4. All of the strains cause cancer
4. What cancer has the highest rates in women in Belize?
   1. Vaginal
   2. Cervical
   3. Anal
   4. All of the above
5. What HPV strains lead to **genital/anal warts**?
   1. 1 and 2
   2. 6 and 11
   3. 16 and 18
   4. All of the strains cause genital/anal warts
6. How can you prevent HPV?
   1. By getting the Gardasil vaccine (aka HPV vaccine)
   2. By having safe sex
   3. By abstaining from sex
   4. All of the above
7. T/F: Nearly all sexually active males & females will have HPV at some point in their lives.
   1. True
   2. False
8. What are the target ages for children to be vaccinated against HPV?
   1. Before 5
   2. 9-26
   3. 20-30
   4. 1-8

HPV- Post test questions

1. What is HPV (Human Papillomavirus)?
   1. The most common STD caused by vaginal, anal or oral sex, and/or intimate skin-to-skin contact
   2. A bacterial infection caused by sexual intercourse
   3. An infection that you must be sexually active for years to be infected with
   4. An STD with only 4 different strains
2. What cancers do HPV cause?
   1. Cervical
   2. Penile
   3. Anal
   4. Oropharyngeal
   5. All of the above
3. What HPV strains lead to **cancer**?
   1. 1 and 2
   2. 6 and 11
   3. 16 and 18
   4. All of the strains cause cancer
4. What cancer has the highest rates in women in Belize?
   1. Vaginal
   2. Cervical
   3. Anal
   4. All of the above
5. What HPV strains lead to **genital/anal warts**?
   1. 1 and 2
   2. 6 and 11
   3. 16 and 18
   4. All of the strains cause genital/anal warts
6. How can you prevent HPV?
   1. By getting the Gardasil vaccine (aka HPV vaccine)
   2. By having safe sex
   3. By abstaining from sex
   4. All of the above
7. T/F: Nearly all sexually active males & females will have HPV at some point in their lives.
   1. True
   2. False
8. What are the target ages for children to be vaccinated against HPV?
   1. Before 5
   2. 9-26
   3. 20-30
   4. 1-8
9. After this presentation, would you encourage the parents of your students to get their child/children vaccinated against HPV?
   1. Yes
   2. No
   3. Unsure
   4. Why?
10. Please provide any feedback you may have for this presentation.