Integration of Theory and Evidence-Based Practice in the Promotion of Human Papillomavirus Vaccine Acceptance on Air Force Military Bases

Shelley L. Jay

Washington State Intercollegiate School of Nursing

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Abstract

The human papillomavirus (HPV) is an increasingly common sexually transmitted disease (STD) that is proven to lead to the development of cervical cancer, genital warts and other types of cancer. With the development of the HPV vaccine Gardisal, HPV associated morbidity and mortality may now be reduced through successful vaccination programs. The purpose of this paper is to gain insight into the essential components that contribute to the development of optimal HPV vaccination programs in the Air Force (AF). Utilizing an integrated approach encompassing the Theory of Reasoned Action (TRA), proven risk communication skills and evidence-based vaccine interventions, program recommendations were made. Initial and ongoing program evaluation was also recommended to create successful and sustainable AF HPV vaccination programs.
To the Faculty of Washington State University:

The members of the Committee appointed to examine the research paper of SHELLEY L. JAY find it satisfactory and recommend that it be accepted.

Zena Higgs, EdD, RN
Kris Miller, DNS, RN
Denise Smart, Dr.PH, RN
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HPV is the most common sexually transmitted infection in the United States (U.S.) according to the Centers for Disease Control (CDC) (2007a) and is considered to be one of our greatest hidden epidemics. Approximately 20 million Americans are currently infected with this virus, primarily between the ages of 15 and 49, and about 6.2 million people are predicted to become infected each year (Cates, 1999; Weinstock, Berman & Cates, 2000). Further epidemiologic data on HPV infections suggests that at least 50% of sexually active men and women will acquire HPV at some time in their lives and that 80% of women will have acquired this virus by the age of 50 (Koutsky, Galloway & Holmes, 1988; Myers, McCrory, Nanda, Bastian & Matchar, 2000). An estimated 9.2 million sexually active adolescents and young adults ages 15 to 25 are currently infected with HPV, accounting for greater than a third of the total number of people with STDs in this country (Weinstock et al.).

HPV is considered one of the greatest risk factors for cervical cancer. In 2007, there were an estimated 11,150 women in the U.S. diagnosed with cervical cancer and 3,670 deaths resulting from cervical cancer (American Cancer Society [ACS], 2007a). Approximately 70% of these cervical cancer cases can be directly linked to HPV types 16 and 18 (ACS, 2007b). In the effort to prevent HPV infections and the resulting increase in the prevalence of cervical cancer, major emphasis was placed on the development of a vaccine. In June 2006, the U.S. Food and Drug Administration approved the vaccine Gardasil which protects against HPV types 16 and 18 that cause almost 70% of cervical cancers and also HPV types 6 and 11 that cause about 90% of genital warts (ACS, 2007b). Based on the recommendations of the Federal Advisory Committee on Immunization Practices, the vaccine is to be targeted to females ages 11 to 12, the youngest
being nine and also to women ages 13 to 26 who have not received the vaccine or completed the recommended series (CDC, 2007b). Ideally, the HPV vaccination should be administered before the onset of sexual activity, targeting the age group of 11-12 year old females. The vaccine, which can be given in conjunction with other vaccines, is to be given in three injections over six months and is currently predicted to provide protection for five years (CDC, 2007b; ACS, 2007b).

Vaccines, such as Gardisal, are considered to be one of the safest and most effective approaches to primary prevention (CDC, 2007b). Most vaccines today are readily available in the U.S. to susceptible populations in the effort to decrease the disease burden through prevention of infectious diseases such as measles, mumps, influenza, tetanus, Hepatitis A and B, plague, cholera, tuberculosis, pneumococcal disease and more recently, HPV (Valanis, 1999). Despite the accessibility and proven benefits of Gardisal and other available vaccines, the CDC reports that national immunization levels are suboptimal among all age groups (Atkinson, Hamborsky, McIntyre & Wolfe, 2007).

In the effort to analyze and understand factors associated with vaccine behavior, HPV vaccine acceptance and promotion among AF populations will be explored utilizing an approach which encompasses behavioral theory, risk communication and proven vaccination strategies (see Figure 1). Forming the theoretical foundation for the successful design of an HPV vaccination program in the AF will be Fishbean and Ajzen’s (1975) TRA. Building on an increased understanding of the motivational influences on vaccine behaviors gained from the TRA, aspects of evidence-based risk communication will be explored for their added value in the HPV vaccination program planning and implementation. Lastly, evidence-based vaccination
strategies will be examined for their application suitability and sustainability to the population of focus.

Figure 1. Integrated Approach to HPV Vaccine Program Recommendations

The Theory of Reasoned Action

- Beliefs
- Attitudes
- Subjective Norms

Risk Communication

- Risk Perception
- Evidence-based Risk Communication Skill
- CARE

Evidence-Based Vaccine Interventions/Approaches

- Provider-based Interventions
- System-based Interventions
- Vaccine Access Interventions
- Client Demand Interventions
- AFIX Approach

The Theory of Reasoned Action

Arising from the field of social psychology, the TRA was initially developed by Martin Fishbein in 1967 and was later refined and expanded through the cumulative efforts of Fishbein and Ajzen (1975). With the overall goal being the ability to predict and understand volitional behaviors, this theory seeks to aid in the understanding of how attitudes impact behavior. Housed within this theoretical framework are the four relational constructs of attitude, belief, behavioral intention and behavior (Ajzen & Fishbein, 1980). According to the TRA, behavior is a result of a person’s intention to engage in a behavior and this intention is the result of that individual’s attitude toward the behavior and their subjective norm (Ajzen & Fishbein, 1980). Attitudes are a product of an individual’s salient beliefs as to whether a given behavior will result in an expected
outcome that is either positive or negative (Ajzen & Fishbein, 1980). Montano and Kasprzyk (2002), in their analysis of the TRA, stated that a behavioral attitude “is determined by the individual’s beliefs about outcomes or attributes of performing the behavior (behavioral beliefs) weighted by evaluations of those outcomes or attributes” (p.70). This definition which encompasses an individual’s judgment of both attributes and outcomes in performing certain behaviors seems to best encompass the concept of attitudes. For example, if a mother has strong feelings regarding the prevention of HPV in her young daughter, she may exhibit a positive attitude toward obtaining an HPV vaccination. Conversely, if an individual has negative, neutral or weak salient beliefs about the attributes or outcomes of HPV preventive measures they will have a negative attitude toward the behavior of obtaining an HPV vaccination.

The normative component of the TRA theory deals with the social environment and the influence that this environment exerts upon an individual’s intentions and resultant behaviors (Ajzen & Fishbein, 1980). Subjective norms are the beliefs an individual has about what “important others” (i.e. social referents) will think about a specific behavior (Ajzen & Fishbein). It should be noted that these perceptions may or may not be representative of what parents, friends, partners, teachers, physicians etc. truly think about the individual and the behavior in question. They are the individual’s perceptions about how those around them will perceive the outcome of a certain behavior (normative belief) and the degree to which these normative beliefs motivate the individual to comply as evidenced by engaging in or not engaging in a behavior such as HPV vaccination for self or child (Montano & Kasprzyk, 2002). Behavioral intention is a measure of the probability that an individual will perform a behavior and is the product of both the attitudes and subjective norms associated with a specific behavior (Ajzen & Fishbein).
Although the TRA has not been applied to research regarding HPV vaccine acceptance, this theory has been utilized to further understanding of health behaviors and the prevailing attitudes and subjective norms that shape behavior. Of particular note is the application of the TRA to volitional health behaviors such as breast cancer screening (Gullatte, 2006; Ham 2006; Montano, Thompson, Taylor & Mahloch, 1997), oral health care (Bos, Hoogstraten & Prahl-Anderson, 2005; Syrjal, Niskanen & Knuutila, 2002), condom use (Bosompra, 2001; Sheeran & Taylor, 1999), testicular self-examination (Brubaker & Wickersham, 1990), and lastly, the seeking of cancer information (Ross, Kohler, Grimley & Anderson-Lewis, 2007). Based on the applications and interventional strategies resulting from research utilizing the TRA, certain aspects of this literature will be incorporated into the recommendations for HPV vaccine acceptance among AF military populations.

Risk Communication

In the last two decades, risk communication has garnished increasing interest by the health care industry. Health care professionals and agencies have come to understand that how we communicate health risks can influence and even predict health behavior. Health risk communication can best be defined as “communication with individuals (not necessarily face-to-face) which addresses knowledge, perceptions, attitudes, and behavior related to risk” (Edwards & Bastien, 2001, p. 147). Leiss and Powell (2004) postulate that good risk communication serves as a bridge of understanding between the science of risk and the translation of this scientific information into understandable terms that the public can easily understand. Too often, a “risk information vacuum” exists between the public and risk managers, blocking effective information exchanges that could benefit both parties (Leiss & Powell). To avoid this vacuum, it is incumbent upon those delivering risk messages to determine how the
target audience perceives and best receives the targeted risk information (Leiss & Powell).

According to Fischhoff, Lichtenstein, Slovic and Keeney (1981), factors that positively influence health risk perception include (a) risks perceived as voluntary versus imposed, (b) risks that are controlled by the individual versus others, (c) risks perceived to have clear benefits versus minimal or no benefits, (d) risks perceived to be natural versus manmade, (e) risks perceived to be statistical versus catastrophic, (f) risks perceived as coming from a trusted versus untrustworthy source, and (g) risks perceived to be familiar (in line with popular media) versus completely unfamiliar. Overall, it can be said that as a risk manager’s knowledge regarding public awareness and perceptions of a health risk increases, so does his/her ability to engage in successful risk communication efforts that are directed to these public concerns, attitudes and perceptions. As with any successful partnership, trust and credibility are the cornerstones for effective health risk communication between the public and health risk practitioners (Covello, 1993).

In endeavoring to translate evidence-based information into effective risk communication encounters, the following skills should be employed (a) use of non-technical language to explain complex information, (b) tailoring of information to patient’s needs, (c) competent use of visual aids to facilitate communication, (d) facilitating understanding of information with patient, (e) ability to weigh medical evidence and treatment recommendations based on patient’s value system, (f) objectively presenting information and explaining risk probabilities, (g) creating an environment that fosters patient involvement and shared discussion and decision making, and (h) patient negotiation (Ford, Schofield & Hope, 2003). Furthering the research efforts surrounding effective communication of evidence-based information, Epstein, Alper and Quill (2004) analyzed pertinent literature spanning almost 40 years. Based on this meta-analysis, five
recommendations for practice were determined. Encompassing many of the aforementioned risk communication skills, these recommendations include: (a) trying to understand the expectations and experiences of the patient and their family members; (b) building a trusting, collaborative partnership through relationship-building conversations; (c) presenting the medical evidence in lay terms to include benefits and potential risks; (d) presenting recommendations based on integration of medical evidence and patient values; and (e) soliciting feedback of patient understanding through simple clarifying questions (Epstein et al.).

Building on the communication skills and techniques necessary to convey evidence-based information to patients, specific strategies of conveying health risk can be explored. One of these strategies, offered by Paling (2003) is CARE: Cite the risk information in general terms, add the estimated probabilities of outcomes, both positive and negative, using descriptions such as “low risk” or “high risk”, reinforce explanations through the use of visual aids that lend perspective to the risks, and express encouragement as well as hope, striving for an approach that is competent and caring. The framing of risk, both linguistically and visually, can also have an effect on the perceived value individuals may place on the benefits or risks associated with a certain behavior. In communicating risk, the use of a decision support model can prove useful (Lipkus, 2007). First, clarify the decision to be made such as to vaccinate or not vaccinate. Next, discuss the probabilities of risk, discussing the beneficial and harm sides to vaccination. Following a clarification of the patient’s values, screen the patient and/or family for decisional difficulties regarding the pros and cons of vaccination. Lastly, refer to decisional aids (i.e. linguistic and/or visual aids) on vaccination and offer decisional coaching to clarify. When expanding on verbal descriptive terms of risk by supplementing with numerical risk data, be consistent in the numeric formats using lower denominators and absolute numbers and avoiding numbers close to zero.
Integration of Theory

(Lipkus; Paling). Visual aids should be simple, understandable and appealing, taking into account the limited numeracy and literacy skills of most audiences. Examples of visual aids favored in risk communication include highlighted human figure graphics, pie charts, bar charts (i.e. histograms), line graphs (e.g. disease trends, mortality) and marked risk perspective scales such as the Paling Perspective Scale (Lipkus; Paling; Shapira, Nattinger & McHorney, 2001).

Evidence-Based Immunization Strategies

In the effort to create widespread uptake of new and existing vaccines, it is necessary to implement strategies that will produce lasting and effective immunization systems. Although the degree of implementation can be affected by multiple factors, such as patient and provider attitudes concerning a vaccine or the provider’s ability to effectively communicate health risks, evidence-based recommendations for improved vaccination coverage are available. In 2005, “The Guide to Community Preventive Services: What Works to Promote Health?” (Zaza, Briss & Harris) was developed by the Task Force on Community Preventive Services. This publication is the result of a nine year cumulative effort by the Task Force to comprehensively evaluate population-oriented health interventions, to include effective approaches to decrease vaccine-preventable diseases through interventions that improve vaccine coverage. Through systemic review of the effectiveness of vaccine interventions targeting high-risk adolescent and adult populations, it was determined that two interventions were effective. The first evidence-based intervention is the use of provider reminder systems alone to increase coverage with targeted vaccines for high risk populations (Zaza et al.). The second was the implementation of different combinations of interventions to include increased access in health care settings and/or reducing patient’s personal cost expenditure plus the use of standing orders and/or provider reminder
systems and/or the use of provider assessment and feedback and/or reminder systems for patients and/or patient education (Zaza et al.).

The CDC also provides evidence-based guidance on immunization strategies for healthcare organizations and their providers (Atkinson et al., 2007). Similar to the recommendations of the Task Force concerning reminder and recall messages to patients and providers, the use of immunization registries, the reduction of barriers to immunization, and reduction of missed opportunities to vaccinate, the CDC also advocates and offers further guidance on these interventions. In addition to the above listed interventions, the CDC strongly advocates an approach to increase vaccination coverage that encompasses assessment, feedback, incentives and exchange of information (AFIX). In order to best match the proposed interventions or approach to the selected problem (i.e. HPV vaccination coverage) within a target population, each of these proven strategies will be further examined.

Stand Alone Intervention – Provider Reminder Systems

Strong evidence exists that reminders to providers and other healthcare staff letting them know when patients are eligible or due for vaccinations can increase vaccination coverage up to 22% (Zaza et al., 2005). Techniques utilized for reminding providers and staff can include notations in the patient’s charts, stickers or stamps (e.g. “No HPV vaccine in record” or “HPV immunization due”) attached or applied to the chart, computer generated lists of vaccine eligible patients being seen each day and computer generated immunization registries (Atkinson et al., 2007; Zaza et al). Immunization registries contain the immunization data on all children within a certain geographic area. A registry can generate reminder notices to providers and staff and also produce a provider specific immunization coverage report (Atkinson et al.). Currently, the AF maintains and utilizes a computer database tracking immunization coverage which could also
serve as a provider specific immunization list/registry for adolescents and adults who are eligible for immunization.

**Multiple Interventions – Effective When Implemented in Combination**

Strong evidence exists that the combination of interventions to increase access to vaccines along with one or more provider and system-based immunization interventions and/or interventions aimed at creating increased community command, can improve targeted vaccine coverage by 16.5% (Zaza et al., 2005). Evidence also suggests that using a combination of strategies will yield increased vaccination success regardless of the setting or the population being targeted (Zaza et al.). The interventions to improve access include the expansion of vaccine access in healthcare environments and reducing the patient costs associated with vaccination. Increased access can be achieved through (a) geographical proximity of vaccination setting to population, (b) expanding vaccination clinic hours, (c) delivering vaccines in multiple settings in the healthcare organization, and (d) decreasing administrative barriers associated with vaccine services (Zaza et al.). The interventions concerning cost reduction include paying for the vaccines, providing coverage through insurance and waiving or reducing co-payments. It should be noted that this intervention is not applicable to AF programs since HPV vaccines provided in AF facilities are free to military beneficiaries.

Although interventions aimed at physical barriers to vaccination have proven effective, overcoming psychological barriers also is important (Atkinson et al., 2007). Psychological barriers such as fear or concern related to vaccination safety or the act of vaccination or previous criticism for missed appointments can result in patients’ choosing not to receive vaccinations. The first intervention to overcome psychological barriers to vaccination includes provider knowledge concerning (a) the vaccine, (b) current evidence-based vaccine recommendations, and
The second intervention is enhanced interpersonal skill on the part of the provider to effectively create a supportive and open environment where patient fears and misconceptions can be addressed (Atkinson et al.).

The system-based intervention of standing orders allows for health professionals, other than physicians, to administer vaccinations without physician involvement. This intervention along with provider-based interventions when implemented in combination with other interventions, are proven to reduce missed opportunities to vaccinate and reduce vaccination barriers (Atkinson et al., 2007; Zaza et al., 2005). Additional provider-based interventions include provider assessment and feedback (Zaza et al.) and provider education (Atkinson et al.). Assessment and feedback furnish providers with individualized practice reports on vaccination performance. This intervention can improve vaccination practices by “changing provider knowledge, attitudes, and behaviors and by stimulating additional improvements in the vaccination delivery system (e.g. through reminders or standing orders)” (Zaza et al., 2005, p. 276). Provider education involves increasing provider knowledge regarding the principles and scheduling of all vaccines delivered. The CDC asserts that this intervention will enable providers to better educate patients, resulting in increased levels of learning and acceptance among both providers and the general public regarding vaccinations (Atkinson et al.).

Interventions proven effective in increasing vaccination demand among patients include client reminder systems and client education. Patient reminders, to include recall messages, provide vaccination advice directly to patients at high risk through various modes of communication such as postcards, letters and telephone calls (Atkinson et al., 2007; Zaza et al., 2005). Implementation of effective vaccine reminder systems can be as simple as written postcards sent in the mail or as sophisticated as computer generated mailings and telephone calls.
to the at-risk population. An additional reminder strategy is that of the healthcare provider providing verbal encouragement to patients and the parents of pediatric patients to obtain or return for a series of vaccinations (Atkinson et al.). Personal recommendations by providers to obtain vaccinations, even among patients initially reluctant to receive vaccinations, have proven effective in increasing vaccination levels among patients of all ages (Atkinson et al.). The intervention of client education involves increasing awareness and knowledge on vaccinations during any visit to the health care setting. Educational formats proven to increase at-risk patient vaccine knowledge and awareness include letters, newsletters, brochures and posters (Zaza et al.).

The AFIX Approach

AFIX is a recognized nationwide approach that endeavors to move providers from a state of unawareness regarding their practice’s immunization status to one of awareness. In gaining this awareness, it is hoped that health care providers will become motivated, concerned and more knowledgeable in order to change their current immunization practices and be capable of sustaining the new behaviors that will enhance their vaccine practices (Atkinson et al., 2007). This approach that focuses on measurable provider outcomes is begun by an initial assessment of a provider’s immunization coverage levels. This assessment of provider specific data, conducted by a representative in the organization other than the provider, helps to identify interventions to remedy the deficiencies (Atkinson et al.). Following the assessment, feedback regarding their vaccine delivery performance is provided by the representative to the provider staff in a feedback session. Feedback is then solicited from the provider staff to gain insight or clues into specific interventions that would increase vaccination coverage. In order to incite change to improve deficiencies in immunization practices, the use of incentives, tangible and/or intangible, are
recommended (Atkinson et al). Lastly, an *exchange* of information among providers concerning immunization coverage levels and successful vaccine interventions, statistically displayed by the representative, will provide further motivation for provider staff to adopt interventions to improve their practice’s vaccination performance (Atkinson et al.).

**Recommendations for Promoting HPV Vaccine Acceptance on AF Military Bases**

In January 2007 the AF introduced the HPV vaccine to its’ female populations, ages 9-26 years, with military installations utilizing individualized methods of vaccine promotion. To date, these HPV vaccine promotional efforts have garnered moderate success in the AF with only 25,867 of the eligible 275,660 females being vaccinated for HPV (M.F. Haynes, Lieutenant Colonel, personal communication, March 10, 2008). Of the vaccinated population 8,261 are active duty (AD) females and 17,606 are civilian. In the global effort to increase delivery of the HPV vaccine among the at-risk military populations, it is recommended first, that population experts at each AF installation complete a brief program evaluation to illuminate current vaccination activities and their outcomes. Secondly, it is recommended that attempts to increase the delivery of the HPV vaccine to the targeted populations utilize an approach that encompasses aspects of the TRA, evidence-based risk communication skills and strategies, and evidence-based vaccine interventions.

**Assess HPV Vaccination Levels at Community and Provider Levels**

As an indicator of current program success, AF population experts, notably Health Care Integrators (HCIs), should identify their target population, determining cumulative community/installation levels of vaccination coverage with further delineation of AD and civilian vaccination levels. Further breakdown of the civilian population into pediatric and adult, may also provide insight into the selection and implementation of future program interventions.
Provider specific vaccination reports should also be generated to assist in the identification of individual successes and deficiencies in vaccination practices. When possible, HPV rates should also be ascertained to determine the disease burden of the target population. This epidemiological data should then be measured against relevant AF and national population health goals and policies in order to determine the level of local change and improvements needed (Zaza et al., 2005).

Assessment of Community and Provider Intention: A Theory Based Approach

In order to identify factors affecting vaccination behaviors, it is important to examine the attitudes, beliefs and underlying knowledge levels of both the target population and providers with regard to the HPV vaccine. As resources allow, simple or complex assessments should be conducted utilizing assessment tools (i.e. written survey, telephone survey, questionnaire) which glean information concerning the TRA components of attitudes, beliefs and subjective norms as well as HPV knowledge (Constantine & Jerman, 2007; Duval et al. 2007; Ham, 2006; Sable, Schwartz, Kelly, Libson & Hall, 2006; Woodhall et al., 2007). Provider assessments should also address current HPV vaccine practices to include barriers and incentives. Community HPV assessment tools should be designed in accordance with most publications for the general public regarding literacy and should be administered in a setting most conducive to instrument completion and collection. Provider specific HPV assessment tools could be administered and collected via the computer to ensure widespread participation and completion tracking. This TRA assessment data can be used to further understanding and identification of factors affecting HPV vaccine intention and behavioral outcomes. Information from this theoretically based assessment in combination with other evaluative program initiatives can offer invaluable insight
regarding the change or implementation of interventions to influence HPV vaccine intention among both providers and targeted community members.

**Assessment of Current HPV Vaccination Interventions**

Prior to the implementation of any HPV vaccine program changes, a current appraisal of existing interventions must be conducted. First, existing interventions, both organizational and provider specific, must be examined for their extent of implementation and success. Specifically, are these organizational interventions being adopted in part or wholly accepted and implemented by the entire healthcare organization? If a provider has achieved notable HPV vaccination coverage levels in his/her practice, what have been the interventions that have enabled this success? Adopting the AFIX approach, installation HCI’s could assess providers’ levels of HPV vaccination success, provide feedback regarding these measured results and facilitate a collective exchange among providers regarding successful HPV vaccination strategies (Atkinson et al., 2007). Incentives could be developed such as the collective agreement of all installation providers to improve individual practice HPV vaccination rates by 15-20% within six months through the implementation of HPV vaccine interventions proven to be effective. Selection of one or two organizational “provider champions” for the HPV vaccination program may also provide professional incentive for increased vaccination performance among providers.

**Selection and Implementation of Evidence-Based HPV Vaccine Interventions and Approaches**

Upon analysis of all qualitative and quantitative assessment HPV data, HCI’s and other key population health personnel must determine what interventions may be appropriate for their health care providers and target populations. Ideally, evidence-based approaches and specific interventions should be appropriately matched to the identified problems and/or barriers regarding HPV vaccine delivery in order to maximize their effectiveness (Zaza, Briss, Harris). If
it is determined, for example, that barriers to HPV vaccination are related to missed opportunities to promote the HPV vaccine by providers coupled with provider deficits in HPV knowledge and the delivery of HPV information to patients, a combination of provider and system-based interventions could be implemented. In this scenario, the provider-based intervention of education and the system-based intervention of a provider reminder system may prove effective. Also, the providers indicate a need to be trained and educated in the initiation of effective risk communication regarding HPV vaccine efficacy, side-effects, safety, protective factors, and delivery method. Utilization by providers' of risk communication strategies such as CARE and visual risk aids could also prove useful in this example, providing patients with an increased ability to realistically weigh the benefits and risks of the HPV vaccine.

Regardless of the number of evidence-based interventions implemented, evaluation of newly introduced interventions and the overall progress of the HPV vaccination program towards its objectives must be done within an agreed upon time frame. In alignment with installation resources, these program evaluations may range from a small and informal process undertaken by the HCI to one that is more complex and formal. Based on these periodic evaluations, HPV interventions may need to be modified or added to achieve continual HPV vaccination program success.

Conclusion

In conclusion, the use of an integrative approach based on the TRA, effective risk communication skill and evidence-based immunization interventions may prove effective in creating sustainable AF HPV vaccination programs. In utilizing this three pronged evaluative approach, HPV vaccine program coordinators can determine their program’s status and gain important insight into program successes and actual and perceived HPV vaccination barriers. In
identifying HPV vaccination barriers such as attitudinal, educational and structural, appropriate evidence-based vaccine practices may then be matched to the identified problems and implemented. HPV vaccine program successes, both collective and among individual providers, can also provide guidance and stimulus for HPV vaccine interventions that will garner program success. Lastly, ongoing re-evaluation of all AF HPV vaccination programs is critical to their ongoing success and continued achievement of program objectives.
References


