

# The Development of a Cervical Cancer Prevention Program for Underserved Women in the Dominican Republic

Kymerlee Montgomery, DrNP, WHNP-BC, and Owen C. Montgomery, MD, FACOG

Often referred to as the “Jewel of the Caribbean,” the Dominican Republic (DR) boasts more than 1,000 miles of majestic, white sandy beaches outlining the clear, blue, sparkling Caribbean Sea. However, beyond the golden sunsets of the beautiful country lie the tragedy and stark reality for many women living in poverty: the extremely high incidence and mortality rates of cervical cancer. Cervical cancer, a largely preventable disease, is taking the lives of women in the DR at an alarmingly high rate.

The purpose of this article is to explore the challenges for nurses in understanding the magnitude of the cervical cancer burden and the existing barriers to risk reduction and prevention in the DR. The article will help nurses develop a plan for a comprehensive, multifaceted, and culturally sensitive cervical cancer prevention program.

The College of Nursing and Health Professions at Drexel University in Philadelphia, PA, has the first and only clinical research doctor of nursing practice (DrNP) degree in the nation and encourages advanced practice nurses (APNs) to rigorously identify and explore global nursing practice issues and utilize research and leadership skills to advocate for improvements to benefit the population and nursing practice. DrNP-educated nurses are highly capable of engaging in evidence-based, informed nursing practice in a variety of settings; participating in and leading interdisciplinary research teams; and conducting clinical research in practice settings (Dreher, Donnelly, & Naremore, 2005). As a nurse practitioner and DrNP candidate at Drexel University, the first author of this article organized a mission to the DR in 2007 as part of her course work for the DrNP “Clinical Role Practicum” course. The goal of the mission was to reach out to underserved

populations in the island nation in an attempt to further broaden her exposure to health and education issues related to human papillomavirus (HPV) and cervical cancer. The experience—providing actual care and education to the poor DR women in urban Santo Domingo and rural Jarabacoa, evaluating barriers to cervical cancer preventive measures, and identifying possible research opportunities—led to recommendations for possible cervical cancer prevention strategies.

## The Dominican Republic

The DR comprises the eastern two-thirds of the island of Hispaniola, between the Caribbean Sea and the North Atlantic Ocean, and shares a long area of border on the east with Haiti, one of the poorest, least developed, and least stable countries in Latin America (USAID, 2008). Approximately nine million citizens live in the DR, with 60% of the population living in urban areas and 40% sprinkled throughout the rural, mountainous areas (Central Intelligence Agency [CIA], 2008). Thirty percent of Dominicans live below the poverty line, with an average per-capita income of \$2,500. The DR has a maldistribution of income, with the top 20% of the population receiving 55% of the total income (CIA). In addition, on average, Dominicans have only 4.9 years of schooling, and the education spending as a percentage of gross domestic product (GDP) is 2.3%, which ranks the DR in the bottom 10 countries in the world. Public health is a low priority for the government, as exemplified by the total health expenditure on the public as a percentage of the GDP—1.9%, which ranks in the bottom quarter of all countries (World Health Organization [WHO], 2008). The large number of poor, illegal Haitian immigrants

augments the DR poverty burden and mortality rates. The statistics describe the harsh reality of life in the DR and are predictors of the barriers to the success of cervical cancer prevention programs.

## Cervical Cancer Conditions in the Dominican Republic

The incidence of cervical cancer in Latin America and the Caribbean is among the highest in the world, with an average regional estimate of 29.2 cases per 100,000 women (Parkin et al., 2008). Specifically, the DR has a population of approximately 2.98 million women aged 15 years or older who have an increased risk of developing cervical cancer. WHO (2008) reported that every year approximately 1,032 women are diagnosed with cervical cancer. More than half of the women die from the disease. Ranked as the second most frequent cancer in the DR, cervical cancer is grossly underestimated; thousands of women in the DR, including Haitian immigrants, never receive medical care and die undiagnosed.

Advances in scientific technology have led to promising primary prevention opportunities in developed countries. They include prophylactic HPV vaccines, which can eradicate the cause of 70% of worldwide cervical cancer cases, and new screening technology to facilitate early detection. Numerous valiant efforts to bring scientific advances to poor, underserved populations are ongoing; however, they have been unsuccessful in substantially reducing mortality from cervical cancer in the DR.

## Barriers to Cervical Cancer Prevention

Women in the United States and other developed nations benefit from primary

prevention strategies such as Pap tests, HPV DNA testing, and, more recently, HPV vaccination. In contrast, the women of the DR have several substantial impediments that prevent them from getting the same benefits as women in developed countries. Through her mission experience in the DR, the first author of this article identified three primary barriers to cervical cancer diagnosis and prevention: lack of access to health care, low levels of education, and limited healthcare resources.

## Lack of Access to Health Care

Women living in the rural areas of the DR are faced with three compounding challenges to healthcare access: geographic difficulties, absence of providers, and overwhelming financial burden. Women need to travel for hours to reach the most rudimentary healthcare facilities with no appropriate transportation or passable roads. As a norm, the healthcare facilities lack women's healthcare providers to screen, treat, or follow cervical disease. Ironically, even if the women can overcome the geographic and provider barriers, they cannot afford necessary services such as Pap tests, medications, surgery, and follow-up. Dominican women living in urban areas, specifically Santo Domingo or Santiago, share the same provider and financial barriers as women in rural areas, although their geographic burdens are less steep and easier to overcome.

## Low Levels of Education

The first author spent days with rural women in Jarabacoa, investigating their knowledge, health beliefs, and preventive practices regarding cervical cancer. None of the women seen by the mission team had an understanding of cervical cancer or its causes and preventive measures. Low literacy coupled with the absence of health literacy puts women in the DR at a grave disadvantage and increases their risk for cervical cancer mortality compared to those in developed countries.

Social customs of the DR, such as a lack of condom use for prevention of pregnancy and protection against sexually transmitted infections, accepted infidelity, and the high rate of prostitution, increase the incidence of cervical cancer. This is compounded by poor understanding of the consequences of such risky behaviors on health and wellness.

Nurses in the United States and Canada are the front-line educators for patients, families, and other members of the interdisciplinary team. In addition, nurses teach other nurses to enhance and promote the profession. In the DR, however, nurses are noticeably absent from the healthcare team. Patients on ventilators, those receiving chemotherapy, and postoperative patients line overcrowded hospital wards without any nursing staff to care for their needs. This is one of the most glaringly obvious differences between healthcare systems in the United States and the DR.

## Limited Healthcare Resources

The total public healthcare expenditures in the DR are among the lowest in the world. Health care is not a priority for the government of the DR; therefore, women who cannot afford private health care have few or no options. They can go to the national hospital with an extremely poor reputation or they can choose to receive no care, which may end in death because of a lack of other choices. Women in the rural areas do not have the resources to pay for health care or transportation to get to it.

In the DR, many socioeconomic factors contribute to poor risk reduction and detection of cervical cancer. The primary reason is that DR women are unable to participate in screening or vaccination programs. Other factors may include cultural and religious factors, competing healthcare needs, lack of cervical cancer knowledge and preventive measures, and poor hygiene (Murillo et al., 2008; Pan American Health Organization [PAHO], 2008). Many researchers and scientists have suggested the development of improved programs using affordable innovative technology to overcome the barriers.

## Recommendations

DrNP graduates are uniquely positioned because of their tradition of empathetic caring, culturally sensitive education, and clinical expertise to lead a renewed effort to decrease cervical cancer mortality utilizing a three-pronged approach: clinical practice, education, and research (see Figure 1). Strategies for affecting change also exist in these areas (see Figure 2).

## Clinical Practice

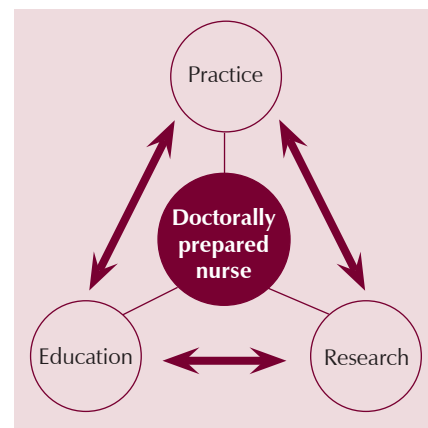
To fully understand the magnitude of healthcare issues in poor, underserved

populations, nurse clinicians must travel outside normal practice areas and experience the true culture. Although this often is a challenging feat to accomplish, a roll-up-your-sleeves, hands-on approach and immersion into a population's reality are the only ways to genuinely appreciate and assess cultural differences and needs. Nurses can reach out to mission programs, community centers, religious organizations, and national and international foundations to learn about a variety of volunteer expeditions. After an initial assessment visit, a nurse can act as a catalyst to improve the lives of the underserved by leading a specialized interdisciplinary team back to the area for future visits.

Nurse clinicians can facilitate cervical cancer prevention in the DR by possessing advanced proficiencies in the diagnosis and treatment of preinvasive cervical disease. In the absence of healthcare infrastructure, nurses need to creatively utilize their knowledge and training to adapt to the local environment. For example, in resource-poor communities where the standard biopsy-directed therapy is impossible, nurses must be competent, resourceful, and flexible in finding alternative treatment approaches such as screening and treating (PAHO, 2008). Therefore, nurses traveling to rural areas should be well trained in colposcopic evaluation and treatment of preinvasive cervical cancer.

## Education

Addressing overall literacy in the DR is outside oncology nurses' scope of practice. However, they can improve cervical cancer health literacy through persistent teaching of prevention modalities to women, families, community



**Figure 1. The Doctor of Nursing Practice Preparation Triad**

groups, and other healthcare providers. Ultimately, nurses can have a much more dramatic effect on the DR society and cervical cancer mortality if they create culturally sensitive nursing programs in the DR. The challenge to oncology nurses, then, is to accept that to reduce worldwide cervical cancer mortality, a global education initiative is necessary.

## Research

Research is the backbone of evidence-based care and the method by which changes to improve health care can be justified. After years of investigation, the first cervical cancer prevention vaccine was approved and recommended in 2006 by the Centers for Disease Control and Prevention (2008) to be given at the routine pediatric visit and for women aged 9–26 years in the United States. In the DR, following birth, females generally are not seen again by healthcare professionals for preventive care until they are pregnant or delivering a baby. Therefore, the recommended cancer prevention program in the United States will not be effective in the DR because of little or no access to preventive care. However, approximately 95%–99% of pregnant women receive prenatal care and have their births attended by skilled healthcare staff (WHO, 2008). A bold new cervical cancer prevention research program administered through neonatal and birth mother vaccination must be developed and implemented. Research of this magnitude needs governmental, pharmaceutical, and healthcare provider support. The authors of this article met with national and international pharmaceutical representatives, specifically with the director of vaccine programs for Latin America, and international cancer specialists to discuss vaccine support, provider education, and research opportunities in the DR and Latin America. The authors are planning subsequent visits and educational programs to partner with healthcare providers and industry for political support to further research opportunities.

## Conclusion

Cervical cancer, a preventable disease, continues to be a major public health issue and significant cause of mortality for women in the DR. The authors of this article have had personal experience with the DR healthcare system from the dirt-floor clinics to the finest private hospitals in the capital city. The unique clinical

### Clinical Skills

- Site visits and hands-on experiences
- Strong diagnostic skills
- Alternative treatment approaches

### Education Commitment

- Improve health literacy.
- Educate women, families, communities, and healthcare providers.
- Develop nursing as a profession and nursing education.

### Research Initiatives

- Neonatal vaccinations
- Political lobbying
- Pharmaceutical and healthcare provider support

## Figure 2. Cervical Cancer Reduction Program Recommendations

cal expertise, commitment to education, and research training of nurses bridge the gap from the DR rural clinics to the pharmaceutical board room to continue multidimensional efforts to reduce cervical cancer. The first outreach experience in the DR by the authors has generated enthusiasm from all disciplines to continue the effort to reduce cervical cancer mortality and increase prevention strategies through clinical practice, education, and research opportunities.

Kymberlee Montgomery, DrNP, WHNP-BC, is a clinical assistant professor and coordinator of the Women's Health Nurse Practitioner Program Track and Owen C. Montgomery, MD, FACOG, is chairman of Obstetrics and Gynecology, both at Drexel University in Philadelphia, PA. No financial relationships to disclose. Mention of specific products and opinions related to those products do not indicate or imply endorsement by the *Oncology Nursing Forum* or the Oncology Nursing Society.

## Leadership & Professional Development

This feature provides a platform for oncology nurses to illustrate the many ways that leadership may be realized and professional practice may transform cancer care. Possible submissions include, but are not limited to, overviews of projects, accounts of the application of leadership principles or theories to practice, and interviews with nurse leaders. Descriptions of activities, projects, or action plans that are ongoing or completed are welcome.

Kymberlee Montgomery can be reached at [kae33@drexel.edu](mailto:kae33@drexel.edu), with copy to editor at [ONFEditor@ons.org](mailto:ONFEditor@ons.org).

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## References

- Centers for Disease Control and Prevention. (2008). HPV vaccine information for young women. Retrieved November 8, 2008, from <http://www.cdc.gov/std/hpv/STDFact-HPV-vaccine-young-women.htm>
- Central Intelligence Agency. (2008). The World Fact Book: Dominican Republic. Retrieved November 10, 2008, from <https://www.cia.gov/library/publications/the-world-factbook/geos/dr.html>
- Dreher, H., Donnelly, G.F., & Naremore, R. (2005). Reflections on the DrNP and an alternate practice doctorate model: The Drexel DrNP. *Online Journal of Issues in Nursing*, 11(1). Retrieved November 6, 2008, from [www.nursingworld.org/ojin/topic28/tpc28\\_7.htm](http://www.nursingworld.org/ojin/topic28/tpc28_7.htm)
- Murillo, R., Almonte, M., Pereira, A., Ferrer, E., Gamboa, O., Jeronimo, J., et al. (2008). Cervical cancer screening programs in Latin America and the Caribbean. *Vaccine*, 26S, L37–L48.
- Pan American Health Organization. (2008). *A situational analysis of cervical cancer in Latin America and the Caribbean*. Washington, DC: Author.
- Parkin, M., Almonte, M., Bruni, L., Clifford, G., Curado, M.P., & Pineros, M. (2008). Burden and trends of type-specific human papillomavirus infections and related diseases in the Latin America and Caribbean region. *Vaccine*, 26S, L1–L15.
- USAID. (2008). Dominican Republic. Retrieved November 10, 2008, from <http://www.usaid.gov/pubs/cbj2003/lac/dr/#top>
- World Health Organization. (2008). WHO/ICO (Institut Català d'Oncologia) information centre on HPV and cervical cancer. Retrieved November 6, 2008, from <http://www.who.int/hpvcentre/en/>

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