

## LEADERSHIP & PROFESSIONAL DEVELOPMENT

### Implementation of an Oncology Continuing Education Course for Nurses in Nicaragua

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In January 2004, I was the first graduate student with a specialty in oncology from George Mason University in Fairfax, VA, to go to Nicaragua. My goal was to learn how cancer care was delivered in a developing nation that continues to struggle with basic healthcare delivery. The clinical experience brought me to two hospitals, Hospital Bautista, a nonprofit private hospital, and Hospital Berta Calderon, a public hospital. Both hospitals have busy oncology units, and the nurses provided me with a review of their practice regarding chemotherapy administration. They also demonstrated the procedures they used to mix and administer chemotherapy. From the discussions and my observations, I could see that the nurses had not been trained adequately in safe handling of chemotherapy. They had never had a class or any formal instruction about chemotherapy preparation or administration. They did not use any special precautions or protective equipment (e.g., gloves, gowns, face and eye shields) when mixing chemotherapy. The rooms where medications were mixed lacked any type of ventilation. Some of the nurses stated that they had experienced hair loss and skin changes since working with chemotherapy. The nurses said that they had no access to information related to chemotherapy. Their primary source of information came from

medication package inserts, which are written in English and, therefore, were difficult to understand.

In regard to patient care, the Nicaraguan nurses told me that they were unsure what information was provided to patients, because they assumed that physicians appropriately instructed patients. When they were asked about the side effects of chemotherapy, they listed nausea, hair loss, headache, and hypotension. The nurses had no understanding of how chemotherapy works and why it is effective against cancer cells. Additionally, they did not seem to understand concepts such as myelosuppression and nadir. The nurses were familiar with mucositis but did not know what caused it or how it should be treated. Moreover, they believed that all people with cancer have problems with depression and that they, as nurses, could do nothing to relieve depression.

While on the nursing unit, nurses were told about the importance of using personal protective equipment when mixing and administering chemotherapy and the potential side effects of exposure to chemotherapy, but more education was needed. Upon returning to the United States, I submitted an educational grant to the ONS Foundation, and funds were awarded. The primary goal was to increase the knowledge of Nicaraguan nurses

about oncology care and the safe administration of chemotherapy. The objective was to make the nurses aware of strategies to avoid hazardous exposure to chemotherapy and the types of personal protective equipment they should use to keep themselves safe. The grant provided funds for the development of a video or DVD discussing safety measures necessary when mixing and administering chemotherapy and the purchase of a DVD player. A three-ring binder was developed with information in Spanish about management of the side effects of chemotherapy. Most importantly, the grant enabled me to return to Nicaragua as an instructor to present the information with the assistance of an interpreter.

Nicaragua, a country of 5.5 million people, is ranked as the second poorest country in the Western Hemisphere (U.S. Department of State, 2005). In 2004, the annual per capita expenditure on health care was \$206 compared to \$5,274 in the United States (World Health Organization, 2006a, 2006b). The average income per family in Nicaragua in 2004 was \$710 per year (World Bank, 2004). According to the National Quality of Life Survey conducted in 1998 by the National Statistics and Census Bureau, 47.9% of the population live in poverty and 17.3% live in conditions of extreme poverty (Pan American Health Organization, 2003). The present unemployment rate in Nicaragua is 22%, and the underemployed rate is 36% (U.S. Department of State). In 2005, the Pan American Health Organization reported that Nicaragua's cancer death rate was 101.7 per 100,000, a 4.2% increase from 1997, when

#### 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, interviews with nurse leaders, and accounts of the application of leadership principles or theories to practice. Descriptions of activities, projects, or action plans that are ongoing or completed are

welcome. Manuscripts should clearly link the content to the impact on cancer care. Manuscripts should be six to eight double-spaced pages, exclusive of references and tables, and accompanied by a cover letter requesting consideration for this feature. For more information, contact Associate Editor Paula Klemm, DNSc, RN, OCN®, at klemmpa@udel.edu or Associate Editor Paula T. Rieger, RN, MSN, CS, AOCN®, FAAN, at ptrieger@pdq.net.

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