Caring for Women With Gynecologic Cancers Around the World

The Need for Global Health Training in Gynecologic Oncology Fellowship Programs

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The most fundamental contribution that can be made for the strengthening of public health work is the provision of professional training for its personnel (Dr George C. Dunham, Director of Health and Sanitation, Institute of Inter-American Affairs, 1942 to 1945).1

According to the World Health Organization (WHO), 13% of all deaths were due to cancer.2 There were 7.6 million cancer deaths in 2008; 70% of these cancer deaths occur in low-income countries.3 WHO projects that death from cancer worldwide will rise to over 13.1 million in 2030. In a recent editorial in the Journal of Clinical Oncology, Patel et al4 identified an important global role for the American Society of Clinical Oncology to improve cancer care around the world by using the 4 corner-stones for good medical care: research, education, prevention, and high-quality treatment. The continuing challenges to cancer care in low-resource environments include a lack of infrastructure, a poorly trained and limited workforce, the costs of patient care, and educational deficits.5–7 These barriers in low-income and middle-income countries (LMC) to screening, evaluation, and treatment of cancers have catastrophic consequences for women.

The increasing interest in North America for global health initiatives has led to a multitude of clinical outreach missions and academic programs.8 Gynecologic oncologists and medical oncologists who care for women with gynecologic cancers are in a unique position to enrich the global health community with opportunities for education, training, and policy making as it pertains to women’s cancers. The development of a global health component to residency and fellowship training programs serves a 2-fold purpose: to increase the international knowledge base of trainees and to develop an analytic skill set to create cancer care programs where resources are scarce.

Oncologists in high-income countries have benefitted from a century of expanding knowledge from research and increasing therapeutic options through both drug development and biomedical engineering.9 The ability of the medical community to care for complex and severely ill patients also rests on the solid infrastructure of communication systems, medical record keeping, data collection, pharmacy, and an ever-expanding community of mid-level providers.10 Culturally sensitive infrastructures must be developed in LMC before efficient policies for cancer care can become available and sustainable for their populations.

A review of the current global challenges for women with cancer, and the existing programs that address women’s health and aspects of gynecologic oncology can identify areas of expertise in gynecologic oncology that can be harnessed to improve worldwide cancer care.

The plight of women with cancers in most LMC is dire, as there are few screening programs and most women present with advanced stages of cancer.11 Gynecologic cancers range from virally induced cervical cancers to genetically associated cancer clusters. Of the 12.7 million new cancer cases that occurred in 2008, 2 million cases were attributable to infections and 30% of infection-attributable cases occurred in people younger than 50 years of age.12 The incidence of infection-associated cancers was higher in less developed countries (22.9%) than in more developed countries (7.4%). In women, cervical cancer accounted for about half of the infection-related burden of cancer.12 Although complex cultural and social taboos continue to prevent early detection, ethnic intermarriage may lead to increased genetic and familial associations with breast cancer in LMC.13 For instance there is a 13.5% BRCA mutation rate in women with breast cancer in Malaysia compared with 5% in North America.14

The leading causes of cancer death for women in LMC are from cervical and breast cancers with 275,000 and 458,000 deaths reported worldwide in 2008, respectively.2 These cancers impact women throughout their life cycle. Young women with potentially preventable and treatable cancers, such as cervical cancer and breast cancer, risk losing their fertility and their lives because they do not have access to current screening and treatment modalities.15

In many societies, the cultural stigmatization of cancer leads to ostracism of women with cancer.13 In addition to fear of abandonment by spouses because of cancer, women in LMC struggle with access barriers to care and structural conditions such as inequalities related to place, sex, and class.16

In the absence of cancer screening, most women will succumb from their cancers in LMC. These societies have few resources such as pain relief to alleviate the common causes of suffering at the end of life.17 Sophisticated technology and interventions such as safe, long-term intravenous access, drainage of malignant effusions, and intestinal diversions are taken for granted in high-income countries but are unavailable in parts of the world with the highest death rates from cancer.18

This loss of women in the community takes a huge toll beyond the loss of that 1 individual. In many societies, women are the primary caretakers of children and carry the primary...
responsibility for finding food, water, and providing sanitation. There is compelling data from examining the impact of maternal mortality that the chance of children reaching adulthood is devastatingly compromised by their mother’s death. For instance, a study in rural Bangladesh reported the chance of survival to age 10 was 24% for children whose mothers died compared with 89% for children with surviving mothers.19

With the complex interplay of economics, political shifts, and rapid industrial development, LMC now are experiencing increasing cancer rates from a larger aging population, environmental pollutants, and infection-related cancers.20 The public health infrastructure that has developed over the past 50 years, including the WHO, the International Union against Cancer, the American Cancer Society, the US Centers for Disease Control, and the US National Cancer Institute, is now harnessed to help develop recommendations for national cancer control plans.21 Although policy and guidelines are a crucial component to a unified standard of medical care, an existing infrastructure with trained practitioners is necessary to actualize the recommendations.22

There have been 3 major global efforts to improve outcomes in gynecologic cancers. The first, low-cost cervical cancer screening programs using visual inspection with acetic acid (VIA) have become established in many LMC countries. A recent review of the literature describing these programs summarizes current guidelines for HPV vaccination of girls, the validity of VIA for cervical cancer screening, and the safety of see-and-treat programs for preinvasive disease.23 One challenge that arises from the VIA programs is the lack of resources to treat advanced cervical cancers when they are identified. Lack of resources can be due to a women’s inability to pay for treatment. One study reviewed cervical cancer screening coverage in different regions of Colombia, which ranged from 28.7% to 65.6%, and found that increased screening did not correlate with decreases in mortality rates from cervical cancer. Higher death rates were directly related to a lack of health insurance.24 Another barrier to treatment is the lack of treatment facilities. For instance, there is currently 1 radiation facility in the whole country of Uganda that is located in Kampala. Women do not receive treatment either because of the impossibility of traveling to Kampala or because the long waiting time to receive radiation prevents curable treatment.5

The second approach to improve cancer outcomes has been for physicians from LMC to visit high-resource countries for educational programs, observorships, and training programs. The difficult financial and political situations in some LMC have led many physicians to emigrate, a brain drain that worsens the already overstrained medical resources of these countries. For instance, among sub-Saharan African countries most affected by existing physician shortages, the investment lost from the emigration of doctors is devastating.25

A third approach is to develop curriculums that are portable and to bring gynecologic and medical oncologists to teach cancer care to physicians in resource-poor countries. For instance, the Gynaecologic Oncologists of Canada has created a teaching module to intensively train a small number of locally identified gynecologists to perform radical hysterectomy and pelvic lymphadenectomy. The curriculum includes didactic modules of preoperative and postoperative care, surgical anatomy, and complications.26

Expertise in global health requires the application of public health principles to the health problems and challenges that transcend national boundaries. Free-standing, online programs and college and university-based global health certificate programs have become abundant with approximately 200 programs in the United States.27 Currently the majority of American medical schools offer international electives.28 Yet programs with postgraduate medical training in general cancer care and cancer care for women in resource-poor regions are currently lacking.

Gynecologic oncologists stand at the intersection of maternal health, human rights for women, the surgical burden of disease, the screening and management of cancers, and the long-term consequences of cancer and cancer treatment. The future generations of oncologists who care for women with cancers will need the skills to not only care for each individual patient but to use and recycle waning resources, and to have tools to develop an infrastructure for global and universal care. Gynecologic oncology training programs should develop academically rigorous training electives to address this need.

REFERENCES


