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Short Reports and Communications

Making the invisible visible: Oncology nursing efforts of NCI-designated cancer centers in LMICs

Annette Galassi*, Camille Morgan, Catherine Muha

Center for Global Health, U.S. National Cancer Institute, 9609 Medical Center Drive, Rockville, MD 20850, United States

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ABSTRACT

An increasing majority of new cancer cases and mortality occur in low- and middle-income countries (LMICs). Nurses provide most cancer care in LMICs, yet receive limited, if any, oncology education and training. To better understand the efforts taking place to address this need, the Center for Global Health (CGH) at the US National Cancer Institute (NCI) undertook a study of global oncology nursing projects at NCI-designated cancer centers. The 62 comprehensive and clinical NCI-designated cancer centers were surveyed about the nature and scope of their efforts in strengthening oncology nursing internationally. We received responses from 43 of the 62 cancer centers, with 21centers reporting a total of 29 projects. Twenty-three of 29 projects had involvement in an LMIC. The most common types of projects were research studies and short-term intensive trainings, most of which were for discrete tasks. Unsurprisingly, of the projects that had specific foci, most focused on breast or cervical cancer, and palliative care. Of the 22 projects that reported project costs, almost 90% were under $200,000 USD, suggesting that strengthening the global cancer workforce can be done with limited expense. While this study is limited to efforts of NCI-designated cancer centers, the findings reveal limited engagements in education and training of oncology nurses, who provide most of the cancer care in LMICs, but also provide tangible areas for strengthening this workforce and improving oncology care delivery.

1. Introduction

In 2012 there was an estimated14.1 million new cases of cancer and 8.2 million cancer deaths, with more than 57% of all new cancers and 65% of cancer deaths occurring in low- and middle-income countries (LMICs) [1,2]. Worldwide, cancer now causes more deaths than HIV/AIDS, tuberculosis, and malaria combined. By 2025 there will be an estimated 20 million new cancer cases, with the greatest increases in low-income countries [3]. Action is needed now to implement known effective strategies both to reduce cancer incidence and to treat those with the disease.

Although nurses provide the majority of care in LMICs, the nursing workforce generally receives limited education or training in caring for the patient with cancer [4,5]. Outside of nursing, there is little attention and few resources focused on this issue. In 2012 the Center for Global Health (CGH) at the US National Cancer Institute convened a group of key stakeholders to raise awareness of the critical role of nurses in cancer care in LMICs, focus resources, and provide recommendations to the global health community. This group included representatives from the International Society of Nurses in Cancer Care, Union for International Cancer Control, International Network for Cancer Research and Treatment, Partners in Health, St. Jude Children's Research Hospital, Boston Children's Hospital, as well as nurses from LMICs. The countries and regions represented by stakeholders included: Africa (Kenya, Rwanda), Asia (Hong Kong, India), Middle East (Jordan), North and South America (United States, Canada, Colombia). The group drafted a Call to Action that described nursing's potential contributions to cancer care and the challenges in education, training and practice confronting nurses in LMICs [6,7]. Recommendations were also developed aimed at Ministries of Health, Ministries of Education, Schools of Nursing, professional associations, and potential funders to highlight immediate nursing education needs in LMICs and to highlight the importance of allocating resources towards education and training of nurses in cancer care [8]. Subsequently, CGH undertook a study to learn more about the activities of NCI-designated clinical and comprehensive cancer centers in oncology nursing education and training efforts in countries outside the US, especially in LMICs. This study was initiated as previous reports of NCI-designated cancer centers' work in global oncology in 2011 and 2013 did not include nursing efforts. The study was reviewed and

* Corresponding author.
E-mail address: agalassi57@gmail.com (A. Galassi).

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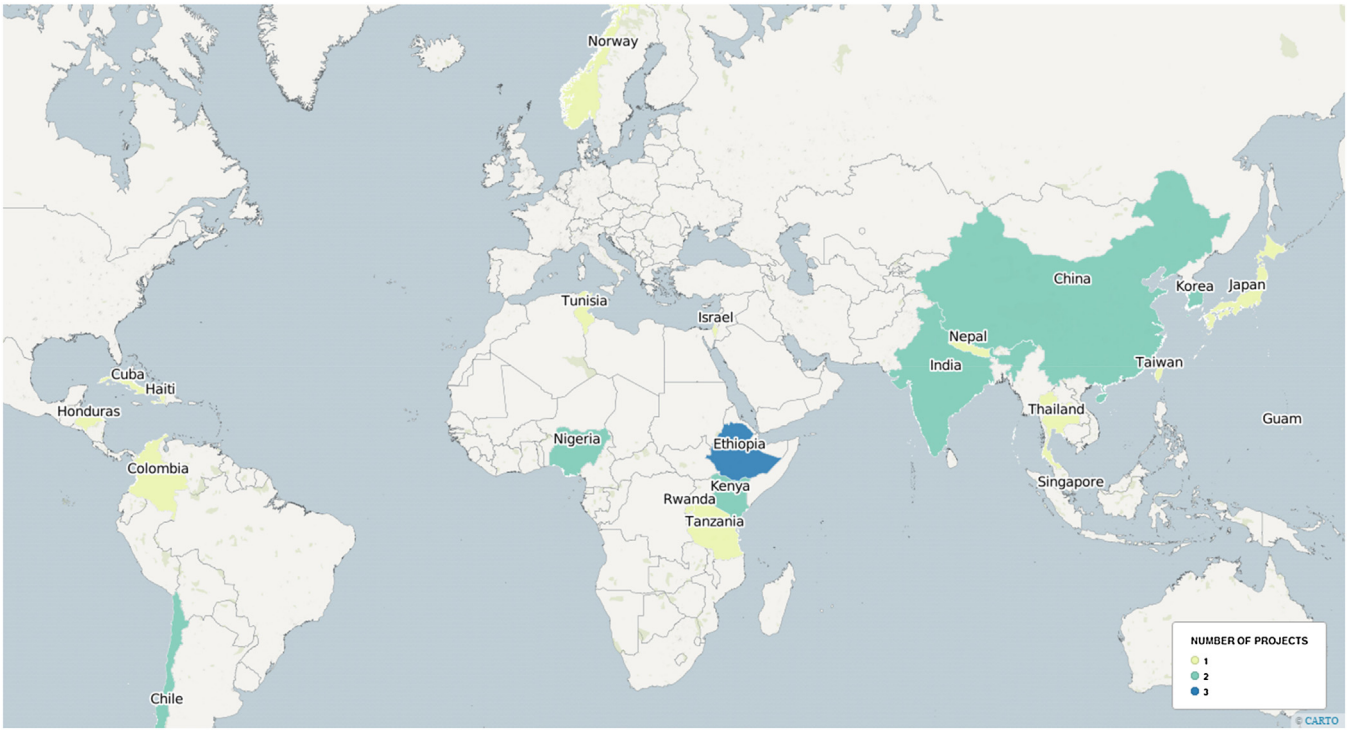

Fig. 1. Locations of 25 of 29 projects.
Note: Excludes 4 large, multi-country projects. Of the 25 projects mapped, 6 projects focused in a single HIC, 2 projects focused in a combination of HICs and LMICs, and 17 focused in one or multiple LMICs.

approved by the United States Office of Management and Budget (OMB # 0925-0719).

2. Material and methods

Instrument. A 21-question web-based survey was developed by NCI staff and a partner organization and pilot-tested by 4 individuals with expertise in oncology nursing in LMICs and revised based on their feedback. The survey included questions about the project's title, description, partners (both US and foreign), and location (country, city and institution). The survey also asked about the cancer organ site(s) of focus, whether the project focused on an adult or pediatric population, what part of the cancer continuum the project addressed (prevention through end-of-life care), the project outcomes and publications, and total cost in US dollars. Survey instructions specified that projects must be ongoing in nature— single activities such as an overseas trip as guest faculty for a conference were excluded—address oncology services in countries outside the US, and include the cancer center's nursing department as a partner in the project. The definition of nursing department was broad so as to include school of nursing projects since many cancer centers are affiliated with academic medical centers that include schools of nursing. Projects that did not have a nursing component were excluded.

Survey Administration. An email requesting participation in the study, which included a link to the survey, was sent to the 62 NCI-designated clinical and comprehensive cancer centers in 3 waves. In wave 1, a contact list of nurse leaders at 30 cancer centers, obtained from a nurse colleague, was utilized. In wave 2, the authors' personal contacts plus cancer center web sites were used to identify an additional 8 nurse contacts. In wave 3, an email contact list of the cancer center administrators was used to send a request for the name and email of the nurse contact for their cancer center. Cancer center administrators who were unresponsive to the initial email received a reminder email or telephone call within 2 weeks of initial contact.

3. Results

In wave 1, 30 cancer centers were contacted. Ten responded, 6 had projects and 4 did not have projects. In wave 2, 8 cancer centers were contacted. Two responded and both of those centers had projects. In wave 3, 50 cancer centers were contacted. This included the 20 centers that did not respond from Wave 1, the 6 that did not respond from Wave 2 and the remaining 36 centers. An additional 31 cancer centers responded. Thirteen had projects and 18 did not. This gave us a total of 43 of 62 centers responding for a response rate of 69%.

Twenty-one cancer centers reported a total of 29 projects. Four projects were large, multi-country projects that spanned high, middle and low-income countries. Six projects included activities solely in a high-income country (Chile, Guam, Israel, Korea and Singapore). Nineteen of the remaining 25 projects included educational activities targeted at nurses from a low or middle-income country. Fig. 1 shows the locations of the projects.

Project type was categorized using the education and training approaches described by So and colleagues [7]. An additional category, research study, was included as there were a sufficient number of these types of projects, especially pilot studies, to warrant this. The majority of projects are short-term intensive training or research studies (Table 1). The short-term intensive training includes both in-country training, meaning one or more US nurses go to the country to provide training, or the reverse, meaning the foreign nurse or nurses come to the US for training, or a combination of both. Nineteen of 29 projects are not cancer site-specific; the remaining 10 projects address one or more cancer sites with cervix and breast being most common.

Eight of the 29 projects focus on a single point in the cancer continuum, with 3 projects focusing on cancer screening and 5

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