

Training Residents to Address Cancer Health Disparities

BEVERLY D. TAYLOR, MD
 AYANNA V. BUCKNER, MD, MPH
 CARLA DURHAM WALKER, MA
 IJEOMA AZONOB, MD, MPH

Abstract

Introduction Cancer is the source of significant morbidity and mortality in the United States, and eliminating cancer-related racial and ethnic disparities has become an ever-increasing focus of public health efforts. Increasing workforce diversity plays a major role in the reduction of health disparities, and a well-trained professional workforce is essential for the prevention, control, and ultimate elimination of this disease.

Methods To help address this need, the Public Health/General Preventive Medicine residency program at Morehouse School of Medicine (MSM) developed an innovative Cancer Prevention and Control Track (CPCT). We describe the structure of the track, funding, examples of resident activities, and program successes.

Results Since the development of the track in 2007, there have been 3 graduates, and 2 residents are currently enrolled. Residents have conducted research projects and have engaged in longitudinal community-based activities, cancer-focused academic experiences, and practicum rotations. There have been 3 presentations at national meetings, 1 research grant submitted, and 1 research award.

Conclusion The CPCT provides residents with comprehensive cancer prevention and control training with emphasis in community engagement, service, and research. It builds on the strengths of the diversity training already offered at MSM and combines resources from academia, the private sector, and the community at large.

Introduction

Cancer is the second greatest cause of death in men and women in the United States,¹ causing 23% of deaths annually.² The clinical and economic burdens of cancer are severe, with an estimated 1 479 350 new cases diagnosed in 2009 and over \$228 billion spent on cancer-related medical

care in 2008.³ Racial and ethnic minorities often have higher incidence and mortality rates as well as poorer survival rates from cancer than their non-Hispanic white counterparts.³ Increasing workforce diversity is important to reducing health disparities as it contributes to minority patient satisfaction and access to and quality of care, all of which may affect the development of these disparities.⁴ Workforce development initiatives designed to mitigate cancer health disparities focus primarily on oncologists^{5,6} rather than medical professionals trained in cancer prevention to address this issue at the community level.

We describe the design and implementation of the Cancer Prevention and Control Track (CPCT) in the Public Health/General Preventive Medicine residency program at Morehouse School of Medicine (MSM), a historically African American medical school whose mission focuses on training physicians to address the primary health care needs of underserved populations through programs in education, research, and service. Both MSM and the residency program have affiliations with governmental agencies, academic partners, nonprofit organizations, and community-based groups.

Curriculum Design

The CPCT is designed to follow the pattern of the existing preventive medicine residency program structure, with

All authors are at the Morehouse School of Medicine. **Beverly D. Taylor, MD**, is Director of the Public Health and General Preventive Medicine Residency Program and Interim Chair of the Department of Community Health and Preventive Medicine; **Ayan V. Buckner, MD, MPH**, is Associate Director of the Public Health and General Preventive Medicine Residency Program; **Carla Durham Walker, MA**, is Residency Program Manager of the Public Health and General Preventive Medicine Residency Program; and **Ijeoma Azonobi, MD, MPH**, is a graduate of the Public Health and General Preventive Medicine Residency Program.

Funding: The Morehouse School of Medicine Public Health/Preventive Medicine Residency Program receives funding from US Department of Health and Human Services Health Resources and Services Administration (grant D33HP19039), American Cancer Society (grant PTAPM-07-094-05), and Georgia Board for Physician Workforce.

The authors wish to thank Virginia Krawiec, Program Director of the Physician Training Awards in Cancer Control at the American Cancer Society. The authors also wish to thank the faculty and staff who participated in training residents in the Cancer Prevention and Control Track.

Corresponding author: Beverly Deaderick Taylor, MD, Morehouse School of Medicine, 720 Westview Drive, SW NCP 335-A, Atlanta, GA 30310, btaylor@msm.edu

Received January 28, 2011; revision received August 26, 2011; accepted September 1, 2011.

DOI: <http://dx.doi.org/10.4300/JGME-D-11-00027.1>

specific emphasis on cancer prevention and control in each phase. The program is composed of an academic phase and a practicum phase.

Academic Phase

Residents choose a track in the Master of Public Health (MPH) program as their area of focus. A specific cancer prevention and control focus is incorporated into the academic phase through 2 study courses: Cancer Epidemiology and Clinical Preventive Services. The cancer epidemiology course was developed to provide an overview of epidemiologic approaches to the most prevalent cancers. BOX 1 lists cancer epidemiology lectures and the faculty presenters. The Clinical Preventive Services course provides an overview of the specific screening guidelines for preventable cancers and is taught during the regularly scheduled educational seminars provided by the program. Seminar topics on cancer prevention and control are also incorporated in the program's weekly didactic sessions. This enhances the learning experience of all residents in the program and allows CPCT residents to share their knowledge with residents who are not in the track. Additionally, CPCT residents choose articles relevant to cancer-related research and policy for journal club presentations. This allows additional focus on cancer risk factors, policies, and health disparities.

Practicum Phase

Residents complete competency-based objectives designed for the preventive medicine residency program that reflect the cancer prevention and control focus. Residents complete 9 rotations during the practicum phase at the program's affiliated sites (BOX 2). For example, at the Georgia Division of Public Health, residents work with

What was Known

Racial and ethnic minorities have a higher incidence of cancer and lower survival rates than non-Hispanic whites. Increasing health care workforce diversity can reduce health disparities by enhancing access to care.

What is new

A workforce development in the Public Health/Preventive Medicine residency at a historically African American medical school focuses on training health professionals in prevention to reduce the cancer in minority communities.

Limitations

A small number of residents in the program, necessitating the teaching of much of the curriculum as study courses. Expanded funding should reduce this problem.

Bottom line

The intervention educates residents in cancer prevention and control, with an emphasis in community engagement. It builds on the sponsoring institution's expertise in increasing health workforce diversity.

cancer prevention and control programs directed by the state of Georgia and its affiliated local health districts. Residents also rotate through the national American Cancer Society office where they assist in program planning, review, and implementation.

Additional activities include an experience in community-based participatory research (CBPR) at the MSM Prevention Research Center, which focuses on risk reduction and early detection in African American and other minority communities. This experience consists of didactic sessions covering topics such as principles of CBPR, community engagement, health communications, and program evaluation. The sessions culminate with resident participation in a local radio program in which they present a cancer prevention and

BOX 1

LECTURE COMPONENTS OF DIRECTED STUDY COURSE IN CANCER EPIDEMIOLOGY

Cancer Epidemiology Topics	Lecturer's Institution
Prostate cancer	Emory University
Colorectal cancer and cancer genetics	Emory University
Nutrition and cancer	Centers for Disease Control and Prevention
Ovarian and endometrial cancer	Emory University
Skin and cervical cancer	Centers for Disease Control and Prevention
Cervical and pancreatic cancer	Centers for Disease Control and Prevention
Tobacco and cancer	Georgia State University
Cancer surveillance	American Cancer Society
Pediatric cancers	Emory University
Breast cancer	Morehouse School of Medicine

BOX 2 SAMPLE OF PRACTICUM ROTATIONS FOR RESIDENTS IN THE CANCER PREVENTION AND CONTROL TRACK

■ Social/Cultural/Behavioral Aspects of Health

Resident worked with the American Cancer Society in Health Promotions to develop informational materials for both the public and health care professionals to complement the release of the revised ACS prostate cancer screening guidelines; the resident also met with ACS staff in a wide range of areas from fundraising, to epidemiology, to administration in an effort to gain insight into the breadth of activities

■ Health Policy

Resident worked with the Medical Director of the National Breast and Cervical Cancer Early Detection Program (NBCCEDP) in the Division of Cancer Prevention and Control at the Centers for Disease Prevention and Control (CDC) to develop a project to compare cervical cancer screening and diagnosis outcomes of participants who presented primarily for screening and those who were referred into the NBCCEDP.

■ Occupational Medicine

The rotation at Caduceus Occupational Medicine provided the resident with an overview of the dynamic between the workplace and workers' health. The medical director of the clinic performed Independent Medical Examinations (IME) as well as clinical occupational medicine. The resident observed several IME's in which workplace exposure to carcinogenic toxins was the source of concern. The resident presented the facts from one such case during a Friday lecture on how to conduct an occupational history.

■ Health Administration

The resident worked with the Georgia Department of Human Resources in the Division of Public Health, Office of Health Behaviors where the resident evaluated the state's readiness for statewide colorectal cancer screening of adults 50–64 years of age. The resident also participated in meetings regarding the statewide efforts with the Georgia Cancer Coalition in order to coalesce cancer survivor resources. The resident also attended the steering committee meetings devoted to identifying ways to implement the Georgia Cancer Control Plan.

■ Epidemiology

Resident worked with the Applied Epidemiology Branch of the Chronic Diseases and Cancer Control at the CDC. The rotation was used to develop a thesis on a comparison of cancer outcomes for African Americans in impoverished areas. The resident also learned critical analysis of literature regarding cancer health disparities as well as the strengths and weaknesses of the datasets used in the project: census data, NCPH/SEER databases, and mortality data. Resident also learned to use SEER*Stat.

control topic and respond to questions from the call-in audience. Residents can participate in community board meetings and assessment, intervention, and evaluation components of ongoing projects. Through the center's Cancer Prevention and Control Research Network, residents participate in cancer prevention and control projects in colorectal, tobacco-related, and prostate cancer.

Residents have a "research home" in the Cancer Prevention Network of the MSM Prevention Research Center. CPCT residents identify a cancer-related research project by the end of their first year and pursue it as the topic of their master's degree thesis in the MPH program.

Residents are required to submit at least one abstract of their cancer research to a national meeting each year. In addition to the CBPR experience, all residents receive a longitudinal assignment to a church in an underserved community. Residents receive the longitudinal community assignment shortly after entering the residency program and spend at least 30 hours per semester at the sites for

continuity activities and serve as public health consultants to the church. They design, implement, and evaluate health promotion activities related to cancer disparities, prevention, and control. Churches initially became used as community assignment sites in an effort to assist the local American Cancer Society (ACS) unit in meeting its community outreach goals.

Results

Since receiving the grant in 2007, the program has successfully recruited 5 residents for the CPCT. Three residents have completed the program, and 2 residents are currently enrolled. Their experiences reflect a multidimensional training experience to prepare them to address racial and ethnic cancer disparities.

The 3 program graduates are African American women in their mid-30s, who have completed master's thesis projects with a cancer focus, and who have presented at the annual meeting of the American College of Preventive Medicine. One graduate was awarded "Best Cancer Prevention and Control Poster" at the 2010 national meeting. All program graduates have accepted employment opportunities that reflect the aim of the grant. Two graduates are developing careers in teaching and cancer research at academic medical institutions, and another graduate has entered the Epidemic Intelligence Service at the Centers for Disease Control and Prevention.

Residents also integrated cancer prevention and control activities into their longitudinal community assignments at local churches. One resident assisted the church with writing a grant to support a cancer prevention and control program within the congregation. The resident also planned cancer education activities, participated in the Pennies for Leukemia Patients campaign, and wrote cancer prevention and control articles for distribution in the church's weekly bulletin. Three residents were trained as facilitators for the "Body and Soul" program, an evidence-based, faith-based cancer prevention initiative funded by the National Cancer Institute and ACS.

Finally, residents evaluate their experiences in the CPCT through 3 mechanisms: the program evaluation system, the ACS funding guidelines, and resident portfolios. All program residents complete a formal assessment of the content and supervision of each rotation. Additionally, residents provide feedback on their training experiences to the program administration during their semi-annual evaluations. In adherence to the grant requirement, residents in the CPCT submit a final report summarizing their academic and practicum activities in the track to the funding agency. Third, residents record their experiences quarterly in learning portfolios, which are reviewed by each resident's advisor as

well as the residency program director and associate director and are discussed with the resident after each review.

Discussion

The MSM Public Health/General Preventive Medicine residency program has experienced early success with its CPCT. Residents have acquired comprehensive cancer prevention and control training with an emphasis in community engagement, service, and research.

The major limitation of the CPCT is the small number of residents in the track. This necessitates that the cancer prevention and control is often taught as directed study courses. This problem will be alleviated with the implementation of a newly funded cancer prevention and control focus within the MSM MPH program. This addition will enhance the potential for continuing the CPCT should ACS funding end.

CPCT resident experiences have been strengthened through a strong, longitudinal affiliation with the local ACS

unit and national headquarters. It is expected that residents' experiences will translate into a life-long commitment to cancer prevention and control. This program serves as a model for other residency and fellowship programs that may have an interest in developing specialized training through cancer prevention and control tracks or rotations.

References

- 1 Heron M, Hoyert DL, Murphy SL, Xu J, Kochanek KD, Tejada-Vera B. Deaths: final data for 2006. *Natl Vital Stat Rep.* 2009;57(14):1–134.
- 2 Goldman L, Ausiello D (eds). *Cecil Medicine*. 23rd ed. Philadelphia: WB Saunders Elsevier; 2008.
- 3 American Cancer Society. *Cancer Facts and Figures 2009*. Atlanta: American Cancer Society; 2009.
- 4 Smedley BD, Butler AS, Bristow LR. *In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce*. Washington, DC: National Academies Press; 2004.
- 5 Newman LA, Pollock RE, Johnson-Thompson MC. Increasing the pool of academically oriented African-American medical and surgical oncologists. *Cancer*. 2003;97(suppl 1):329–334.
- 6 Schmidt C. Komen/ASCO program aims to swell ranks of minority oncologists. *J Natl Cancer Inst.* 2009;101(4):224–227.