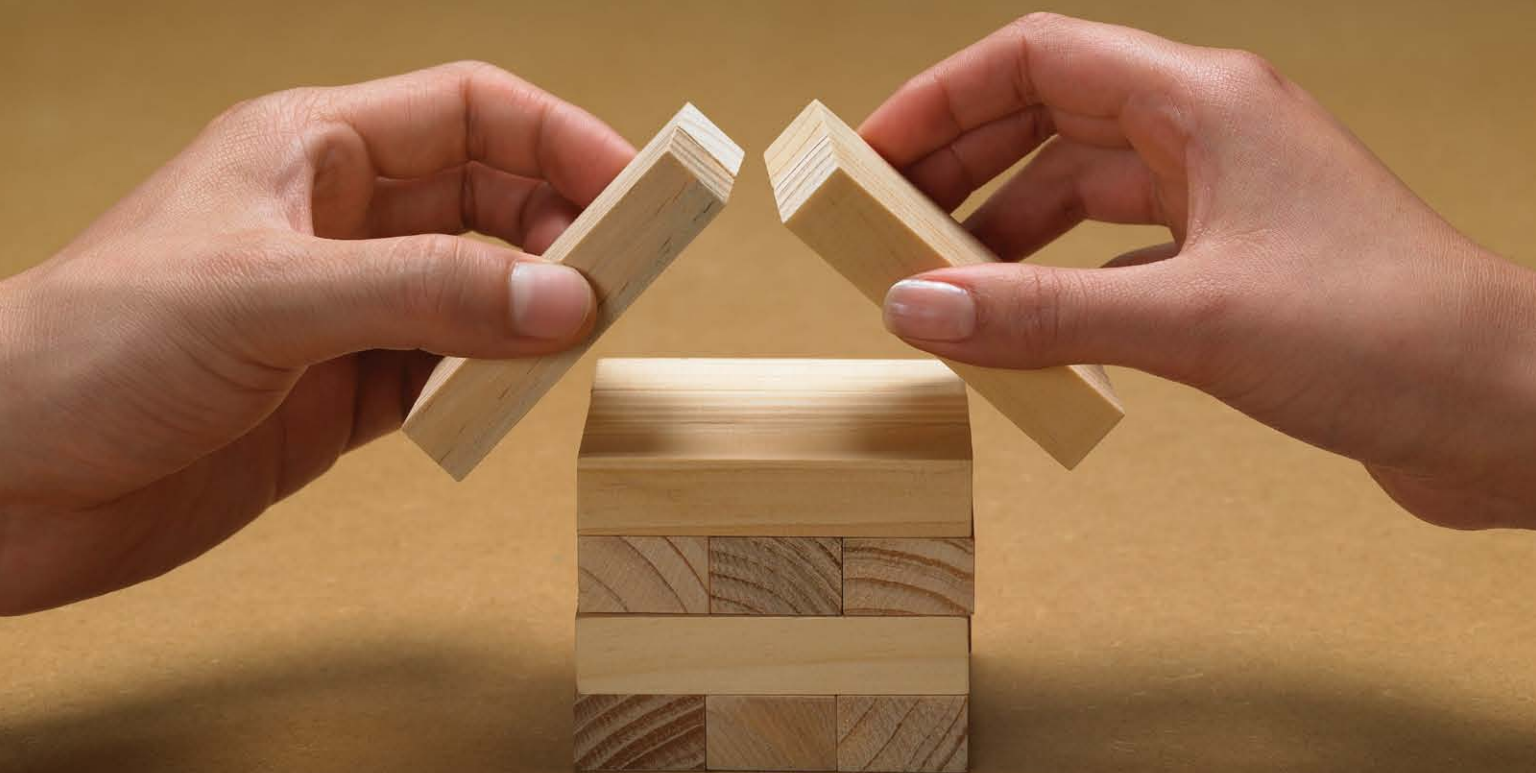


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Building an Oncology Fellowship Program

A unique hospital and school of medicine collaborative

BY SHEILA STEPHENS, DNP, MBA, AOCN®, AND MARIA TRIA TIRONA, MD, FACP





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By 2020 the United States will experience a shortage of 2,550 to 4,080 oncologists.¹ At the same time, demand for their services is estimated to increase by 48 percent.¹ Even though the number of new oncologists entering the market is projected to outnumber the oncologists retiring from the workforce, there will still be a 34 percent deficiency in visit capacity.² The American Society for Clinical Oncology's (ASCO) Workforce Strategic Plan, developed in response to this analysis, has made a number of recommendations, including increasing the number of fellowship openings and expanding sources of funding for fellowship programs.³ However, few existing oncology fellowship programs have plans to expand, citing lack of financial resources as the major barrier.²

Community cancer centers can play an important role in increasing the number of future oncologists by partnering with schools of medicine and graduate medical education committees to develop oncology fellowship programs and assist with the funding of such programs. Cabell Huntington Hospital, a regional hospital in West Virginia, stepped up to the challenge. The hospital's Edwards Comprehensive Cancer Center (an ACCC-member institution) came together with the Joan C. Edwards School of Medicine at Marshall University to create a collaborative medical oncology fellowship program. Interest in this innovative fellowship program was immediate; the program accepted its first two fellows in 2012 out of a pool of 84 applicants.

This article describes the lessons learned in the development of our medical oncology fellowship program and delineates the responsibilities of each partner (see Table 1, page 28).

The Players

Opened in 1954 as a county hospital, Cabell Huntington Hospital in Huntington, West Virginia, has cared for patients for more than 50 years. The bond between the community and the hospital remains strong and serves as the foundation for its commitment to care. Marshall University School of Medicine was established in 1977 as a state-supported, community-based medical school. Cabell Huntington Hospital has maintained a strong affiliation with both the university and the school of medicine, playing an integral role in the education of medical students, residents, fellows, and a variety of other specialized healthcare providers.

A generous donation from a local philanthropist who had needed to travel outside Appalachia for cancer care funded construction of the Edwards Comprehensive Cancer Center. This donation set the stage for collaboration between the hospital, the school of medicine, and the foundation (the Edwards Foundation, Inc.) that was created to realize the vision of the comprehensive cancer center. Medical staff at the cancer center is provided through a faculty lease agreement between Cabell Huntington Hospital and the Joan C. Edwards School of Medicine at Marshall University. Cabell Huntington Hospital also provides the staff, operational expenses, and day-to-day operation of the cancer center. The idea of a collaborative medical oncology fellowship began at the groundbreaking of the Edwards Comprehensive Cancer Center. Support from the foundation came from funds set aside for construction costs and to recruit and retain physicians at the new cancer center.

Program Development

While fellowship programs are overseen at the national level by the Accreditation Council for Graduate Medical Education (ACGME), Marshall University School of Medicine's Graduate Medical Education Committee (GMEC) provides local oversight.⁴ Medical oncology faculty at Edwards Comprehensive Cancer Center is responsible for individual oversight of the fellows.⁴ When recruiting medical staff for the new cancer center, the hospital gave strong consideration to potential faculty for a fellowship program.

A physician with experience related to oncology fellowship programs was recruited and named as program director for the Medical Oncology Fellowship Program. When the minimum number of key faculty was in place, Cabell Huntington Hospital then recruited a fellowship coordinator. This two-person team (program director and coordinator) began the process that resulted in an application to ACGME, the private professional organization responsible for the accreditation of graduate medical education programs. The application provides the framework for the fellowship program and demonstrates how requirements will be met. This application (also

Table 1. Oncology Fellowship Program Responsibilities

CABELL HUNTINGTON HOSPITAL	FOUNDATION	JOAN C. EDWARDS SCHOOL OF MEDICINE
Faculty lease agreement, including administrative time for program director	Reimbursement for fellows' salaries and benefits	Employer: medical oncology faculty and fellows, other physician faculty, residents, and fellows
Fellowship coordinator and administrative support	Conference expenses, including travel and registration	GMEC oversight and internal review
Office and clinic space for faculty and fellows	Reference texts and software	Faculty development
Clinic staff: RNs, medical assistants, infusion, scheduling, receptionists, billing, financial support, psychosocial support, and housekeeping	Lodging during BMT rotation	Guidance for program director and fellowship coordinator
Grand Rounds, Tumor Board, Multidisciplinary Clinics, and other required educational lectures and meetings		General policies and orientation
Genetic NP, clinical trials, clinical nurse specialist, and palliative care		Email and library access
Computers, phones, office supplies, Internet access, and pagers		
Lab coats and laundry service		
Meeting rooms, equipment, and refreshments		
EMR		
Pharmacy support		
Specific policies, orientation, and fellowship manual		

called the Program Information Form) must reflect a thorough knowledge of the requirements, along with the description of a well-designed program.⁵

ACGME sets the standards on requirements for key faculty along with the faculty-to-fellow ratio. With four key faculty members (board-certified medical oncologists) in place and the acceptance of the Program Information Form, the team began to develop a competency-based curriculum specific to our medical oncology fellowship program. The plan: to accept two fellows for each fellowship training year.

Although Cabell Huntington Hospital is accredited by the American College of Surgeons' Commission on Cancer (CoC) and has an active cancer conference, other components needed to be in place to provide the foundation for a medical oncology fellowship program. The program director forged a bond with the bench scientists at Marshall University and began a monthly Grand Rounds series, bringing nationally renowned speakers and researchers for faculty development. Another component was the development of an annual conference to educate primary care providers on how to recognize and treat common problems in hematology and oncology often seen in the primary care setting.

Competency-Based Fellowship Curriculum

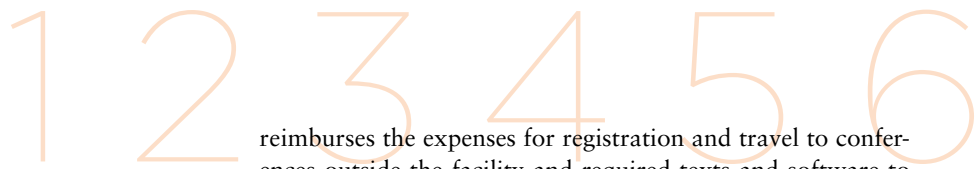
The curriculum for the oncology fellowship program must meet specific requirements based on the six competencies required by all graduate medical education programs as the

basis of instruction. It is also important to strike a balance between clinical experience and educational activities, such as mandatory lectures, journal club, research committee, case conferences, etc. While ACGME provides the oversight and the minimum criteria for an approved fellowship program, the American Board of Internal Medicine (ABIM) is the certifying body for internists and internal medicine subspecialties. With a goal for all fellows to earn board certification on successful completion of the program, the ABIM content blueprint served as a backdrop for our curriculum development.⁶ It was also necessary to integrate both the ABIM and ACGME requirements with the core curriculum recommended by ASCO.⁷ Support and review by the school of medicine's GMEC was a valuable resource for our program development and implementation.

Clinical Setting

An important aspect of our medical oncology fellowship program is the clinical experience. Cabell Huntington Hospital provides an enriched inpatient rotation and the Edwards Comprehensive Cancer Center offers patients and staff a continuity clinic and outpatient rotations. The hospital hosts an all-private 18-bed oncology unit, including four positive-air-flow patient rooms with attached ante rooms. The 70,000-square-foot cancer center houses:

- Physician offices
- Exam rooms



- A 14-chair infusion center
- A satellite lab
- An onsite pharmacy with hood
- A NAPBC-accredited breast center with mammography, ultrasound, and stereotactic biopsy
- Radiation oncology services.

The number of patients has doubled since our cancer center opened. In 2011, there were 1,098 cases diagnosed or treated, assuring an adequate number of cases and diversity of diagnoses and patients for our fellowship program.

The complement of physicians and services at the Edwards Comprehensive Cancer Center includes fellowship-trained oncology surgeons in breast, head and neck, urology, orthopedics, and gynecology, along with radiation oncologists. Other cancer center staff includes nurses, advance practice nurses, physician assistants, medical assistants, billing experts, front desk staff, technicians, and other support staff to assure optimal care and support of the cancer patient. Cabell Huntington Hospital offers specialized pathologists, radiologists, intensivists, infectious disease specialists, hospitalists, and pain and palliative medicine physicians to provide the range of experiences necessary to train future medical oncologists.

Our team developed an affiliation with a regional NCI-designated facility, The Ohio State University Comprehensive Cancer Center, to offer a bone marrow transplant rotation in the second year of the fellowship program. Fellows will be provided paid lodging near the NCI-designated facility during that rotation. In addition, the Joan C. Edwards School of Medicine has a translational research lab on the top floor of the Edwards Comprehensive Cancer Center that can be used during the research component of the fellowship, depending on each fellow's interest.

Funding the Program

The faculty lease agreement is already in place between Cabell Huntington Hospital and the Joan C. Edwards School of Medicine to provide a clinical practice site for oncology physicians at the cancer center. The school of medicine employs our oncologists as faculty and the hospital provides the school of medicine reimbursement for physician services, based on a fixed salary and productivity scale. The program director of the oncology fellowship program carves out time from her clinic schedule to carry out the program's administrative responsibilities and required duties. The program director and other key faculty must also contribute education and oversight time, which can result in decreased productivity for clinical operations. In the end, Cabell Huntington Hospital assumes fiscal responsibility for the operation of the clinical practice and the cancer center, including office and support staff, accreditation requirements, facility maintenance, overhead, equipment, supplies, and billing.

The fellows are also employees of the Joan C. Edwards School of Medicine, with their salaries and benefits reimbursed by the Edwards Foundation. The foundation also

reimburses the expenses for registration and travel to conferences outside the facility and required texts and software to assist in the education process. Cabell Huntington Hospital underwrites other expenses for the fellows, including:

- Office space
- Computers
- Phones
- Pagers
- Office support and clinical staff
- Pharmacy support
- Expenses related to the fellowship coordinator position.

One study found that annual non-salary costs of a fellowship program could be as high as \$25,000 per fellow,⁴ and all of these costs are provided by Cabell Huntington Hospital.

Lessons Learned

While the ACGME does not recommend an associate program director for fellowship programs of this size, our team believes that it should be a requirement. We suggest all oncology fellowship programs name an associate program director and that all key faculty be involved from the beginning in the development of the oncology fellowship program and the Program Information Form. When our original program director abruptly resigned and we were unsuccessful in recruiting another seasoned program director, we faced a steep learning curve to keep forward momentum for the fellowship program. Luckily, a key faculty member stepped forward to assume program director duties. Additionally, Cabell Huntington Hospital was able to provide an assistant with experience in residency programs, writing a competency-based curriculum, and developing rotation schedules and orientation manuals to aid the new program director and fellowship coordinator. Still, the start of our oncology fellowship program was delayed six months and, fortunately, the fellows who had already been accepted were able to work within the changes.

In retrospect, we've found that it would have been helpful to lay out all expenses and responsibilities prior to the beginning of our fellowship program. There have been times when it has been unclear who should receive the charge for a specific item or service.


Despite these challenges, the future shortage of oncologists remains a real concern and we believe it is important

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Edwards Comprehensive Cancer Center at Cabell Huntington Hospital opened in 2006 to treat children and adults. In addition to adult and pediatric medical oncologists, hematologists, and radiation oncologists, it has the area's only fellowship-trained surgical oncologists in the fields of breast cancer, head and neck cancer, orthopedics, and urology.

to develop similar oncology fellowship programs. Hospitals can play an important role. In partnership with schools of medicine, ACCC-member hospitals can help expand the number of medical oncology fellowship programs and available training slots.

Our new program welcomed its first fellows in July 2012, and we continue to learn together. We have found that the oncologist shortage is not due to the number of residents wanting to specialize. In fact, the first year our program was listed by the National Residency Matching Program, we received 84 applications via the Electronic Residency Application System for our two positions. We are currently reviewing applications and interviewing candidates for the second year of our fellowship program. 

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