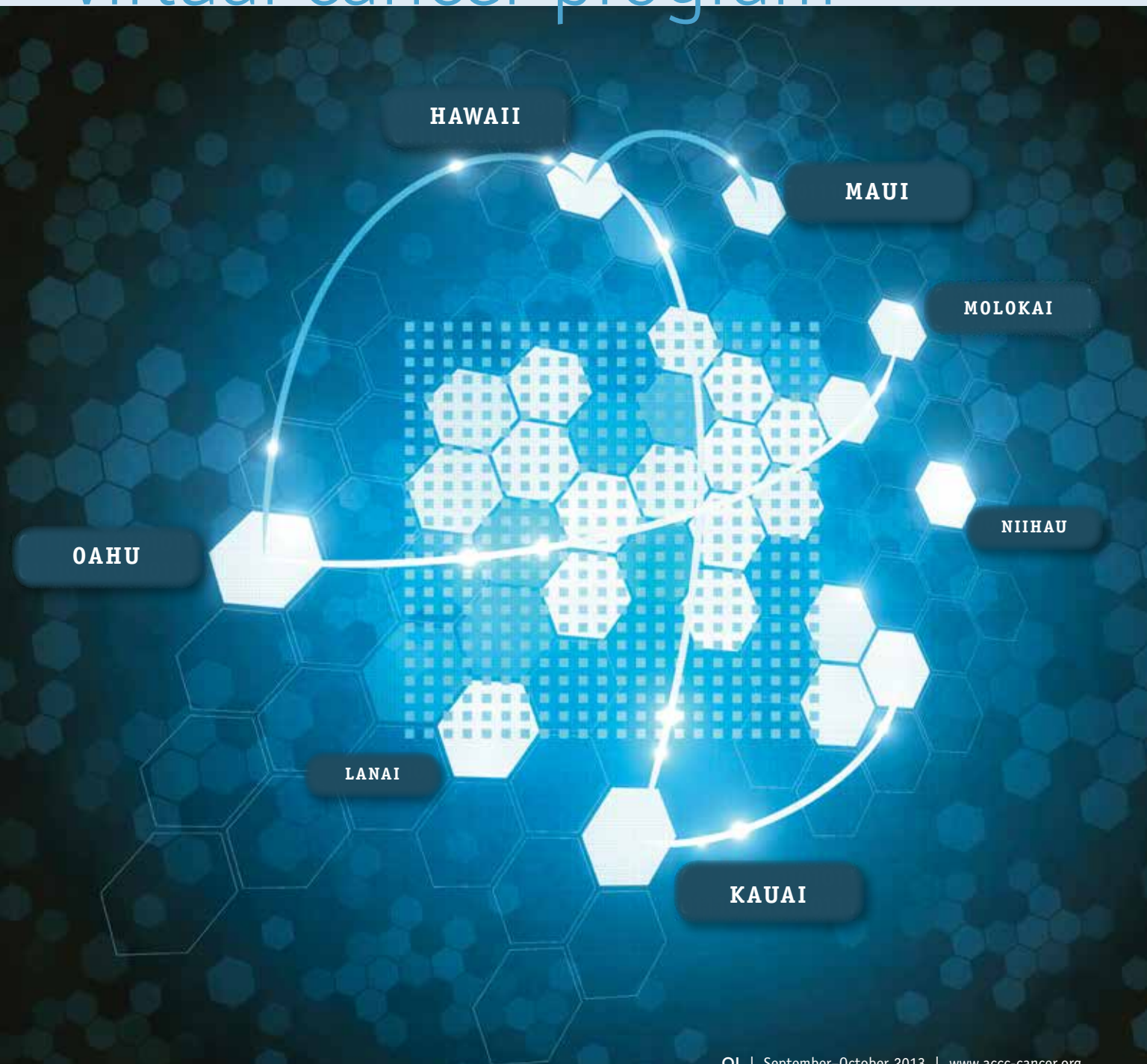


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# Virtually There

## Developing a virtual cancer program





**CANCER IS A COMPLEX DISEASE**, and its treatment often requires a host of specialized care providers. In recent years, due to advancements in technology and clinical care, the breadth of services and treatment options available to patients has proliferated. While the expansion in clinical care options is tremendously valuable to patients, it has also created a number of challenges, not the least of which is coordinating clinical care among interdisciplinary care providers. Today, many health-care organizations recognize the need for a well-developed and well-organized cancer program. Also, numerous entities have undertaken, or are undertaking, efforts to develop and expand their cancer programs. Several forces are driving organizations to enhance their programs, including:

- Recognition of the typically strong operating margins associated with cancer services.
- Increasing demands by employers, patients, providers, and payers that organizations provide cost-effective, comprehensive, coordinated, and cutting-edge cancer care.
- The need to respond to evolving payment models (e.g., bundled payments, accountable care organizations, narrow networks) that demand that organizations deliver high-value care at lower costs. (A narrow network commonly refers to an arrangement in which a health plan contracts with a limited number of providers in a given specialty to provide care to its members. Generally, providers are selected based on perceptions of value, for example cost of care combined with clinical outcomes.)
- The need to create an environment that is attractive to recruit and retain providers.

Despite the forces driving cancer program development, there are countervailing tensions that must be carefully considered such as declining reimbursement, increasing competition, and changing technology. Some organizations face more acute challenges to developing a comprehensive cancer program. Two major obstacles are:

- **Limited funding.** Development of a traditional “destination” comprehensive cancer center typically requires significant financial investment, yet declining reimbursement and the funding needs of other hospital service lines may limit an organization’s access to the necessary capital.
- **Geographic constraints.** Cancer programs may be impacted

by various geographic barriers (e.g., services spread over a broad geographic region, physical barriers such as mountains or bodies of water that could impede patient travel) that impair an organization’s ability to bring services together in a traditional centralized comprehensive cancer center.

This article explores specific strategies that organizations facing the financial and/or geographic challenges discussed above may adopt to enhance their cancer services program. In short, the answer may be a virtual cancer program.

### Thinking Outside the Box

A virtual cancer program model offers organizations with capital and/or geographic challenges an opportunity to develop a comprehensive program. Typically, a cancer program is defined by eight characteristics, as outlined in Table 1, page 2.

For purposes of this discussion, a virtual cancer program is defined as an “integrated network of facilities, providers, and support services linked through technology, physician leadership, clinical protocols, and robust navigation and clinical coordination programs.” This definition includes the minimum criteria to characterize a virtual program; often a virtual program possesses additional elements of a comprehensive cancer program. The key distinguishing feature of a virtual program compared to a traditional comprehensive cancer center model is that sites of service are geographically disparate, for example, across multiple islands as illustrated by the Hawaii Pacific Health (HPH) case study described on page 3-4. The virtual model offers an innovative and viable alternative for cancer programs struggling with financial or location-related obstacles.

Of the eight elements that define a cancer program, the first three are critically important to a virtual cancer program, helping to tie the overall program together despite physical and organizational separation. These elements are discussed in greater detail below.

Cancer care, by nature, spans the inpatient-outpatient continuum and crosses specialty disciplines. When the additional complexity of geographic separation is factored in, a strong partnership between physicians and hospitals is necessary for effective program unification and management. Here are three critical elements of the hospital and physician relationship within a cancer program:

**Table 1. Cancer Program Characteristics**

COMPONENT	DESCRIPTION & POTENTIAL STRATEGIC TACTICS
Physician Alignment, Leadership & Expertise	Strategies and tactics to ensure adequate physician programmatic leadership and participation; includes specialists dedicated to the program.
Clinical Care Coordination	Improved coordination of clinical care (navigation, patient tracking, multidisciplinary tumor boards).
Clinical Protocols	Adoption of and adherence to National Comprehensive Cancer Network (NCCN) or other guidelines.
Technology	Investment in diagnostic and treatment technologies.
Patient Support Services	Breadth of services offered and ease of access to services.
Research	Breadth and coordination of clinical research available to patients.
Quality Improvement Tools	Use of real-time, tumor site-specific quality data to monitor and improve quality of care and patient outcomes.
Screening, Outreach & Prevention	Tumor-specific screening protocols, accessibility of outreach services, and availability of prevention programs.

- **Physician alignment.** Physicians are economically aligned with the hospital, leading to improved decision making and fewer redundancies in clinical services, as the hospital and physicians have aligned interests to support each other and the program. This element is especially important in environments where the full continuum of services is not available in a single location.
- **Leadership.** Physicians are actively engaged in providing leadership and direction to the cancer program, as well as to peers in their disciplines and/or service locations. Arguably, this is the single most important element in a cancer program. In a decentralized care model, greater leadership and communication is needed to ensure that the program is operating consistently throughout the network. Physician leaders and champions are critical to this process.
- **Expertise.** The cancer program has the necessary physician expertise to grow and attract patients and other providers. For a decentralized model, this element means ensuring that the appropriate talent is deployed per location, as well as that mechanisms are in place to foster peer-to-peer interaction.

### Physician Alignment

A variety of potential alignment options offer varying degrees of financial and operational integration with the health system, as depicted in Figure 1, page 3. Generally, tighter integration is achieved through economic alignment. Depending on the circumstances in the local community, tight integration and economic alignment may or may not be necessary to achieve the organization's objectives. Economic alignment may be necessary to address specific or acute needs of select subspecialties in the community, but it may not be necessary or appropriate for the broader oncology medical staff.

However, all organizations will benefit from strategic alignment with the oncology medical staff. Through strategic align-

ment models, the organization engages with the physicians to develop and drive the oncology program, creating a shared vision for the cancer program and collaboratively participating in implementation of that vision. Typically, strategic alignment will include elements of defined responsibility for the physicians and shared (hospital and physician) decision-making processes. Increasingly, strategic alignment models also incorporate performance- or outcomes-based payment models, rewarding physicians for achieving mutually established program goals.

### Leadership

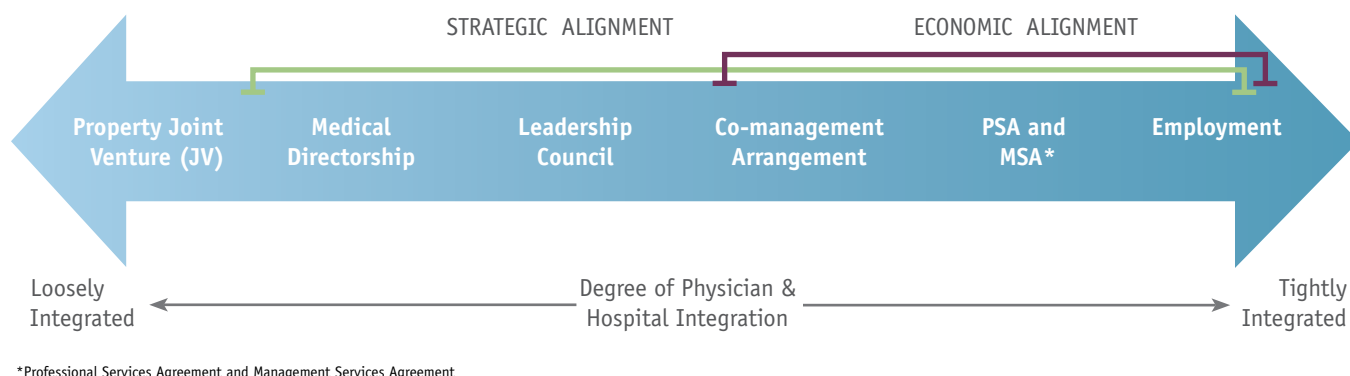
Often, the formation of a physician-led leadership council with representation across specialties and service locations presents a significant opportunity to both align providers and enhance physician participation in and leadership of the cancer program.

Typically, the leadership council provides guidance to the cancer program and makes recommendations to the health system's senior management. Figure 2, page 6, illustrates an example organizational structure and membership of such a council.

The leadership council would meet regularly (e.g., every one to two months) and have broad responsibilities for the cancer program that can include:

- **Strategic planning and program development.** Guide and prioritize program development efforts, allocate resources, recommend additional service offerings, monitor performance relative to goals, and develop physician workforce plans.
- **Medical advisory and quality role.** Develop clinical protocols and pathways, monitor and manage physician compliance with protocols and pathways as clinically appropriate, and monitor patient quality and outcomes data.
- **Research.** Define and implement research growth plans and monitor, assess, and coordinate research efforts.
- **Technology.** Identify deficiencies in current technological capabilities, evaluate new technologies, and develop recom-

**Figure 1. Potential Alignment Options**



mentations for equipment and capital expenditures.

The leadership council provides a number of benefits for a decentralized program:

- It brings together physicians from a variety of locations and specialties to provide direction to the cancer program. Thus, the council serves both as a leadership tool and a physician integration tool.
- The physicians have the best “real world” experience with the program, know how it works, and realize what it needs to operate at the next level. This perspective is critical in a decentralized cancer program to understand how the program

functions and how it could improve.

- When making difficult decisions (e.g., where capital resources will be invested, what elements of the program to develop), the leadership council may be best able to represent the perspectives of clinicians and patients from across the network. Additionally, the council may serve a vital role in “selling” decisions to the various communities or parts of the cancer program.

In conjunction with the leadership council, many organizations find that their cancer programs benefit from a dyadic management model that includes an administrative director and a medi-

## THE HPH EXPERIENCE

In 2010 Hawaii Pacific Health (HPH) embarked on a journey to develop a virtual cancer program. HPH operated a variety of cancer services across five islands and at four locations on Oahu (see Table 2, page 5).

While each of the services was effective clinically, the program as a whole faced a number of challenges. Most significantly, clinicians and administrators tended to take a siloed approach to programs and services, missing opportunities to leverage the healthcare system. The silo model created challenges at the operational level when attempts were made to integrate services and resources. As a result, services had a different look and feel at each location, with minimal cultural integration. Following an assessment of its current state, HPH identified the following areas of opportunity for its program:

- Creating a program-wide (rather than site-centric) vision and direction.
- Developing program-wide physician leadership.
- Extending exemplary programs and services across the system.

- Reducing inefficiencies through standardization of policies, formularies, and processes.
- Marketing HPH as a unified system of care. The breadth of HPH oncology services was a well-kept secret; at the time, marketing had not emphasized HPH’s full network of services, support, and research.

Next, HPH leadership began a strategic planning exercise to craft a new direction for the program. The result of this process was a four-part vision for the program:

1. **Organizational structure.** Create a dyadic leadership structure. Connect key operations managers for all projects.
2. **Infrastructure.** Enhance IT capabilities to provide an integrated resource for evaluating and treating patients. Standardize formulary. Develop a coordinated marketing program.
3. **Care management.** Establish clinical protocols. Develop multidisciplinary treatment planning. Coordinate physician outreach, as well as research efforts.



cal director of cancer services. This dual business and clinical structure has proven particularly effective for management of integrated clinical service lines such as cancer care. The role of the administrative director is to support program development efforts, with an emphasis on monitoring financial performance, managing resources to ensure operational objectives are met, and supporting the leadership council and its subcommittees (e.g., collecting quality data). The medical director's potential duties include guiding development of clinical pathways, reviewing quality measures, and ensuring compliance with professional standards of practice by all individuals who provide clinical services.

## Expertise

Beyond managing their overall oncologist “bench strength,” virtual cancer centers must give consideration to the distribution of the physician talent pool across the network. Virtual programs may find it beneficial to co-locate tumor site expertise at select hubs in the network so that they are able to offer key services in a single locale. The location of tumor site expertise can be tailored to the needs of the local patient population and the program as a whole.

In addition, virtual cancer programs should develop a structure that enables peer-to-peer networking. This may include a practice support infrastructure for subspecialists, rotational models that transition providers through various communities, or the formation of highly-specialized clinics with tumor site expertise at specific locations in the network.

4. **Operations.** Create a shared structure of support services. Develop program-wide metrics and reports to assess clinical, financial, and operational performance.

Next, the organization developed a strategic plan to realize this vision. Today, approximately three years later, HPH has implemented a number of changes that have had a meaningful impact on the program, including:

- Created a dyadic leadership model that includes a medical director of oncology and executive director of the oncology service line. These individuals work as service line co-leaders, are matrixed to campus CEOs, and report to HPH system leadership. They address issues at individual campuses and across the system.
- Centralized management of all clinical trial practices, including a single Institutional Review Board used at all sites. HPH developed a formalized consortium partnership with the University of Hawaii Cancer Center to gain access to National Cancer Institute trials and to increase communications between other leading oncology providers in the state.
- Instituted shared clinical standards, best practices, and policies and procedures across the campuses.
- Implemented Epic Systems Corporation's EMR at all hos-

## Clinical Care Coordination

When organizations lack the funding or space to centralize services, patients are likely seen at multiple sites of care or conduct telehealth visits with off-site clinical and support service providers. This practice introduces added complexity to the patient experience, along with opportunities for confusion, delays, or patients becoming “lost” in the system, which can lead to patient and provider dissatisfaction and the ultimate decline of program volumes.

A well-designed care coordination infrastructure and thoughtful placement (location) of services can help minimize the impact of care transitions and consultations with off-site providers. In a virtual oncology program, the essential elements of clinical coordination are patient navigation, technology, and multidisciplinary care.

## Patient Navigation

Navigators play a crucial role in tying the pieces of a virtual cancer program together for patients and their families. Decentralized services can heighten the difficulties patients face in navigating the cancer care continuum. In a virtual model, navigators are a key resource, assisting patients with identifying and accessing both clinical and support services. The goals for a navigation program in a virtual cancer program include:

- Making patients, caregivers, and providers in the system aware of available clinical and support services.
- Helping patients to access (making appointments, providing directions, etc.) various services and answering questions during the course of their care.

pitals and clinics to improve clinical information sharing. Broader installation of the Epic system in community physician offices is forthcoming. In addition, Epic's Beacon Oncology Information System has gone live in all adult oncology sites and will be installed in pediatric oncology by the end of 2013.

- Consolidated marketing across the HPH network, including a single marketing specialist and marketing plan assigned specifically to the oncology service line.

As a result, the elements of the cancer program are beginning to function in a more coordinated manner, which has translated into patients and clinicians finding the program easier to utilize. While some of the strategic plan is still evolving, the positive momentum has provided a solid platform for ongoing collaboration and change. Over time, HPH expects that this approach to clinical coordination and integration will translate into increased market share, improved patient and provider satisfaction, and, ultimately, improved clinical outcomes.

- Easing handoffs between providers by providing a common point of contact.

For virtual programs that include a mixed medical staff (employed and non-employed) located across the community, a navigator can be an invaluable resource by “tying the pieces together.” And in so doing, the navigator may not only improve patient and provider satisfaction, but also enhance the program’s financial performance by reducing out-migration and/or ensuring that patients access key services such as financial counseling.

The primary objective of navigation services in a virtual program is to help patients locate services and overcome barriers to care. Typically staff in such a role does not serve in a clinical or consulting role, therefore nursing or social work expertise should not be considered a requisite for this position. Key roles for the navigators should include:

- Helping patients overcome barriers to care, including finding services in the network.
- Ensuring that patient transportation needs are met.
- Interfacing with finance staff to minimize financial barriers.
- Coordinating other support services, such as translators, that enable patients to interact with clinical providers.

As the navigation program grows, however, it may benefit from clinical navigators in specific tumor site programs, as these staff may work more closely with select groups of patients throughout their journey.

## Technology

A robust electronic medical record (EMR) is vital to the success of a virtual cancer program. The EMR enables providers across the continuum and sites of care to access and use the same clinical information. Instantaneous, shared access to a patient’s history, workup, and current care plan makes transitions between settings smoother, more efficient, and safer. Not only will successful EMR integration bring significant clinical care advantages, but also provider and patient satisfaction advantages. The EMR may also improve the patients’ perceptions of a “unified” cancer program when providers at different locations have a common understanding of their story and care pathway. Additionally, technology can also facilitate centralized data extraction, compilation and comparison across sites, and reporting, the results of which can be used for research, program redesign, and quality improvement efforts.

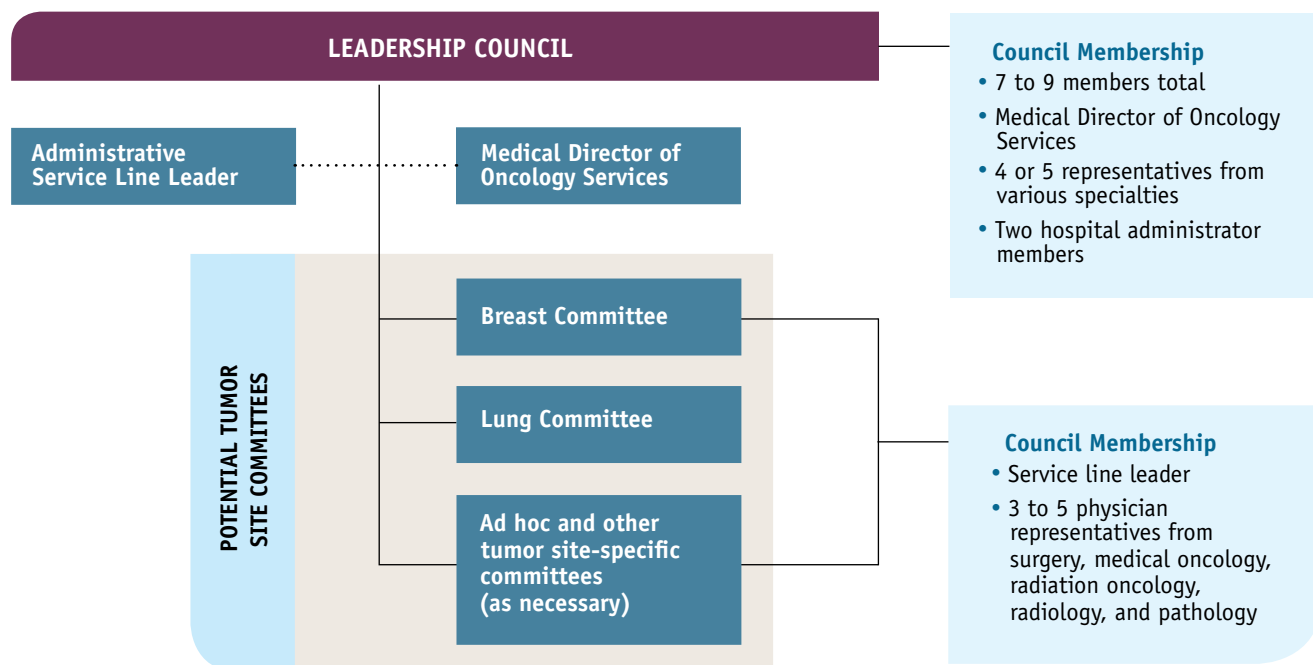
## Multidisciplinary Care

Multidisciplinary care is a cornerstone of many traditional comprehensive cancer programs that are striving to offer seamless evaluation, diagnosis, and treatment planning. For organizations where services are decentralized, facilitating multidisciplinary care is a challenge. Yet, virtual programs can employ structures similar to those of traditional programs in order to accommodate multidisciplinary care. For example, tumor conferences, either via video conference or in person, allow for prospective treatment planning by a multidisciplinary team, regardless of provider location. Moreover, placing tumor site-specific expertise and services at select net-

**Table 2. HPH Cancer Services**

ONCOLOGY SERVICE	ISLAND	SITES OF SERVICE
Adult Oncology	Oahu Kauai Maui	<ul style="list-style-type: none"> <li>• Straub Cancer Center</li> <li>• Kapi’olani Women’s Cancer Center</li> <li>• Kauai Medical Clinic</li> <li>• Wilcox Infusion Center</li> <li>• Pali Momi Medical Center</li> </ul>
Pediatric Oncology	Oahu	<ul style="list-style-type: none"> <li>• Kapi’olani Pediatric Ambulatory Unit</li> <li>• Kapi’olani Medical Specialists Pediatric Oncology Team</li> <li>• Young Adult Survivorship Transition Program</li> </ul>
Women’s Specialty	Oahu Kauai Maui Hawaii Molokai	<ul style="list-style-type: none"> <li>• Kapi’olani Women’s Center</li> <li>• Kapi’olani High Risk Breast Cancer Program</li> <li>• Pali Momi Women’s Center</li> <li>• Kauai High Risk Breast Cancer Program</li> <li>• Wilcox Women’s Center</li> <li>• Wilcox Infusion Center</li> </ul>
Radiation Oncology (Joint Venture Partnership)	Oahu Kauai	<ul style="list-style-type: none"> <li>• Cancer Center of Hawaii (CCH)</li> <li>• On-island consultations via CCH physicians</li> </ul>
Clinical Research (Partnership with the University of Hawaii Cancer Center [UHCC])	Oahu Kauai	<ul style="list-style-type: none"> <li>• UHCC and pharmaceutical clinical trial access (via HPH Research Institute)</li> </ul>

**Figure 2. Leadership Council Organizational Structure**



work locations enables operating a multidisciplinary clinic or conducting coordinated consultations for the evaluation of the new patients. The multidisciplinary clinic model in a virtual program may also be an efficient approach to introducing patients to providers located at other sites in the network in order to minimize barriers to transition.

### Clinical Protocols

Variation in clinical practice patterns and patient care pathways may be exacerbated when providers practice out of different locations. In a virtual cancer program, providers must develop and follow a consistent set of clinical protocols so that reliable, high-quality care is delivered across the network. Many successful oncology programs rely on treatment guidelines developed by national or regional networks and alliances, such as NCCN.


The physician leadership council, or subcommittees of the council, can select the appropriate pathways and customize them as necessary for a particular patient population, institutional resources, and provider expertise. Using a robust EMR platform and data analysis tools, cancer programs can monitor provider compliance with the selected pathways. In turn, the leadership council and medical director should review compliance reports and address variances with individual providers, as clinically appropriate.

Complete integration and population-based customization of protocols for all tumor site programs helps oncologists to make clinical decisions, while giving patients access to consistent care, regardless of the provider selected or the point of

service in the virtual program. This practice leads to greater consistency in clinical care across a program, reducing concerns about receiving variations in care in a particular location.

### Integration of Virtual Cancer Program Elements

Ultimately, in a high-performing virtual cancer program, the patient and provider experience should closely mirror that of a destination cancer center. The virtual program could offer a full complement of diagnostic, therapeutic, and support services at various locations across the network.

All providers and services in the program are integrated through an EMR system, share clinical pathways, and are led by a physician leadership council. The keys to developing such a program are to attain the proper array of dedicated providers and navigators and enact an effective leadership structure through which physicians and administrators can guide and grow the program. Yes, there are resource requirements, particularly regarding integrated information technology systems, but the investment is often notably lower than costs associated with developing a destination center. Through the virtual model, cancer centers with financial and geographic limitations can achieve the functionality of a comprehensive program. 

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