



Market Innovation Center
and Oncology Roundtable

Telehealth Primer: Oncology

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Market Innovation Center and Oncology Roundtable

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Project in Brief



The following report describes trends in the application of telehealth technologies to deliver oncology services. The analysis is designed for program or strategic leadership at health care provider organizations interested in exploring telehealth opportunities.

The brief includes definitions of key terms, discussion of investment considerations, and sample case studies from two leading health care organizations with established oncology telehealth programs.

Want to learn more?



For additional resources and custom assessments relating to telehealth strategy, implementation, and evaluation, please contact your Dedicated Advisor or Relationship Manager.

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Increasing Volumes, Provider Shortages Driving Adoption

How is telehealth being used in oncology?

In the face of growing cancer volumes and expected workforce shortages, cancer programs are beginning to consider telehealth a critical tool in delivering care. Telehealth can be used for provider-to-provider collaboration, patient consults, education and engagement, and ongoing monitoring and coordination.

Currently, telehealth is most commonly used in cancer to provide access to genetic counseling services. To a lesser degree, telehealth is also used for virtual visits with physicians, but uptake has been limited due to physician and patient concerns, required technology investments, and unfavorable reimbursement policies. Wearables and mobile health apps are two new areas of exploration, and there are a number of research studies currently testing the feasibility and effectiveness of these innovations within oncology.

Telehealth Applications in Oncology

- Symptom management
- Genetic counseling
- Distress screening
- Survivorship
- Nutrition counseling
- Support groups
- Tumor boards
- Biometric monitoring
- Clinical trial follow-up visits
- Follow-up patient visits
- Patient-provider consults
- Provider-to-provider consults
- Subspecialist consults (e.g., onco-fertility specialist, onco-psychiatric counseling)
- Post-discharge monitoring

What are the emerging trends driving telehealth adoption in oncology?



Increasing Volumes

The number of newly diagnosed cancer patients in the U.S. continues to increase as the population ages.

▶ **45%**
Estimated increase in newly diagnosed cancer patients in the U.S. between 2010 and 2030



Provider Shortages

Despite growth in demand for cancer care, the number of oncologists remains flat. There are also national shortages of genetic counselors, certified tumor registrars, gynecologic oncologists, and oncology nurses.

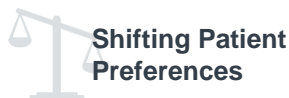
▶ **18%**
of medical oncologists in the U.S. who were 64 years or older in 2015, outnumbering oncologists 40 or younger



Budget Constraints

Cancer program budgets are becoming more constrained as they are faced with an increasing number of unfunded mandates, such as navigation, distress screening, and survivorship.

▶ **61%**
of cancer programs reported budget restrictions as one of their biggest challenges in a 2015 ACCC survey



Shifting Patient Preferences

Cancer patients are becoming more self-directed and are increasingly demanding more convenient care and better customer service.

▶ **39%**
of cancer patient "switchers"¹ changed cancer centers for a more convenient location

Where can I learn more on this topic?

- Related content from the Oncology Roundtable: "[Special Report: Oncology Telehealth](#)"
- Related content from the Market Innovation Center: "[Telehealth Primer: Reimbursement](#)", "[Telehealth Industry Trends for 2016](#)"

1) "Switchers" are the 8% of patients who reported changing cancer centers during treatment in the Oncology Roundtable's 2015 Cancer Patient Experience Survey.

Sources: American Society of Clinical Oncology, "[The State of Cancer Care in America, 2016](#)," *Journal of Clinical Oncology Practice*, 12, no. 3 (2016): 1-47; Association of Community Cancer Centers, "2015 Trends in Cancer Programs," <https://www.accc-cancer.org/surveys/CancerProgramTrends-2015-Overview.asp>; 2015 Cancer Patient Experience Survey; Market Innovation Center interviews and analysis; Oncology Roundtable interviews and analysis.

Assessing the Value Proposition for Telehealth in Oncology

How are telehealth services in oncology reimbursed?

Reimbursement for telehealth services vary by state and include stipulations related to the originating site (spoke site), distant site practitioner (hub site), geographic location, type of service delivered, and technology used.

There are no cancer-specific billing codes for services delivered via telehealth. Under Medicare, cancer programs can bill for telehealth visits using one or more of the CPT codes listed in the table to the right, depending on the specific services delivered and patient characteristics.





Widespread adoption of telehealth in oncology has been stymied by reimbursement and regulatory hurdles, such as physician cross-state licensure restrictions and limitations on where care is delivered and received.

| Description | CPT Code |
|---|-------------------------------------|
| Office or other outpatient visits | 99201-99215 |
| Chronic care management | 99490 |
| Translational care management | 99495, 99496 |
| Individual or group medical nutrition therapy | 97802-97804; (HCPCS code: G0270) |
| Telehealth pharmacologic management | (HCPCS code: G0459) |
| Individual psychotherapy | 90832-90834, 90836-90838 |

What is the business case for using telehealth in oncology?

With the introduction of new reimbursement and care delivery models, cancer programs must improve care quality while lowering costs. Furthermore, as cancer patients become more self-directed, they are increasingly demanding more convenient care. This is particularly important for patients living in remote areas. In fact, while 21% of the US population live in rural areas, only 5.5% of hematologists and medical oncologists practice in those areas. At the same time, volumes are rising, budgets are tightening, and provider shortages are looming. Using telehealth to deliver services and monitor oncology patients can help cancer programs improve patient access, decrease health care costs, and increase provider- and practice-level operational efficiencies.

A systematic review of studies evaluating the use of video-consultation to deliver cancer care found that, among patients who were given the choice of video-consultation or in-person consultation, most patients preferred video-consultation. It also found that video-consultations reduced the amount of time required for each consult, increased the number of patients seen each day, and increased the percentage of the day providers spent seeing patients.

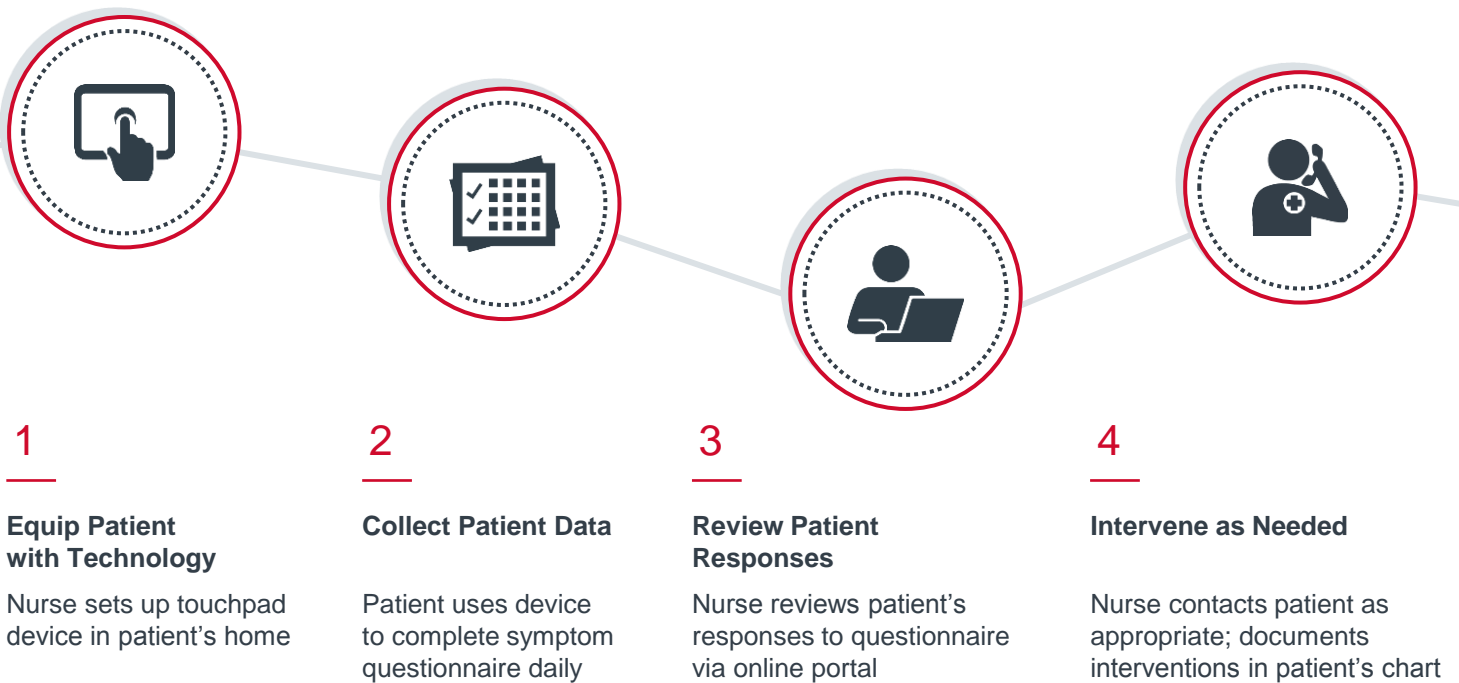
| VALUE PROPOSITION | HEALTH SYSTEM CHALLENGE | STRATEGIC BENEFIT FOR VIRTUAL ONCOLOGY SERVICES |
|---|--|---|
|  Subspecialist Access | Cancer programs lack subspecialists due to budget or volume constraints; patients who live in remote areas lack access to specialists and subspecialists | ▶ Expands provider and patient access to subspecialists and support services |
|  Cost Avoidance | Cancer patients with unmanaged symptoms and side effects contribute to high ED utilization, inpatient admissions, and readmissions | ▶ Enhances patient monitoring and treatment adherence, potentially reducing unnecessary health care utilization and costs |
|  Provider Efficiency | Insufficient provider capacity to meet current and future patient demand | ▶ Reduces provider time spent traveling to satellites; improves practice-level operational efficiencies |
|  Patient Convenience | Patients increasingly demanding more convenient and timely care | ▶ Improves patient convenience and access to appropriate care |

Sources: "Telehealth Services," Centers for Medicare and Medicaid Services, <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/MLN-Publications-Items/CMS1243327.html?DLPage=1&DLEntries=10&DLFilter=telehealth&DLSort=0&DLSortDir=ascending>; Thomas L, Capistrant G, "State Telemedicine Gaps Analysis: Coverage and Reimbursement," American Telemedicine Association, http://www.americantelemed.org/policy/state-policy-resource-center/Vv6_E_krKCh; "State Telehealth Laws and Medicaid Program Policies," Center for Connected Health Policy, <http://chcpa.org/telehealth-medicare-state-policy>; American Society of Clinical Oncology, "The State of Cancer Care in America, 2016," *Journal of Clinical Oncology Practice*, 12, no. 3 (2016): 1-47; Kitamura C, et al., "How effective is Video Consultation in Clinical Oncology? A Systematic Review," *Curr Oncol*, 17, no. 3 (2010): 17-27; Market Innovation Center interviews and analysis; Oncology Roundtable interviews and analysis.

VA Leveraged Telehealth for Symptom Management

The Department of Veterans' Affairs recognized that the side effects of cancer treatment, if left unaddressed, can lead to serious complications. In response, researchers developed a telehealth symptom management program that prompts prostate cancer patients to provide daily updates about their health. Patients who participated in a pilot study examining the effectiveness of the system completed a questionnaire about their symptoms each day. A nurse care coordinator monitored their responses and followed-up with patients as needed to provide self-care instructions or schedule a physician office visit.

At the conclusion of the six-month pilot study, patients participating in the pilot group had 57% fewer unplanned hospitalizations and 50% more planned hospitalizations. Patients using the telehealth system also had 97% fewer unplanned clinic visits and 64% fewer planned clinic visits. These results suggest that telehealth can be an effective strategy to monitor and manage patient symptoms, ultimately reducing unnecessary utilization and costs.



97%
Fewer unplanned clinic visits among patients using telehealth system compared to those who were not

57%
Fewer chemotherapy-related unplanned hospitalizations among patients using telehealth system compared to those who were not

+

Case in Brief: Department of Veterans Affairs

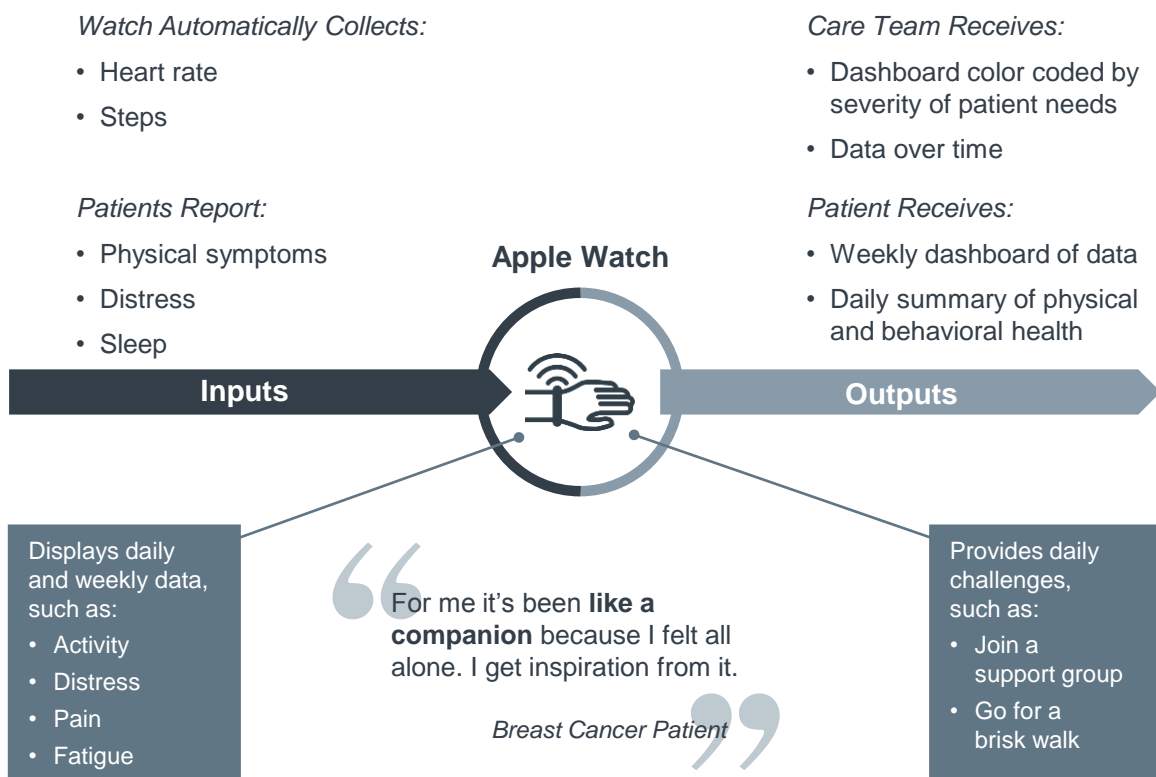
- Six-month pilot study conducted at VA hospital with 43 patient participants
- To improve symptom management, patients were equipped with a touchpad device to complete daily symptom questionnaires from home
- Nurses received results in a color-coded report to distinguish high-, moderate-, or low-severity symptoms; nurses contacted patients when needed
- At conclusion of study, pilot group had 57% fewer unplanned hospitalizations and 97% fewer unplanned clinic visits compared to the control group

Source: AHRQ Health Care Innovations Exchange, "Daily Remote Monitoring, As-Needed Nurse Contacts Reduce Unexpected Clinic Visits, Hospitalizations for Chemotherapy Patients," available at: <http://www.innovations.ahrq.gov/content.aspx?id=2466>, accessed July 28, 2010; Market Innovation Center interviews and analysis; Oncology Roundtable interviews and analysis.

MD Anderson at Cooper Extends Care Beyond the Office

MD Anderson Cancer Center at Cooper has partnered with Polaris Health Directions to conduct a pilot study testing the feasibility of using Polaris' emPOWER app for Apple Watch and Apple iPhone to capture psychosocial and physiological data from breast cancer patients. Built-in sensors on the watch track physiological data, such as heart rate and patient activity levels, while the emPOWER app collects patient-reported symptom and distress data via daily, weekly, and bi-monthly check-ins.

Data is transmitted to the behavioral health director at MD Anderson Cooper, who triages physiological data to the breast care team and psychosocial data to the appropriate member of the behavioral health care team. Both the care team and patients can track their data and progress over time. The app also motivates patients by providing inspiring messages, offering social and physical challenges, and allowing them to communicate with other patients. To scale the program up beyond the pilot, MD Anderson at Cooper will need to invest in additional technology infrastructure and support, develop triage protocols for identified patient needs, secure funding beyond the initial pilot, and evaluate the impact on cancer center workflow.



Case in Brief: MD Anderson Cancer Center at Cooper

- Comprehensive cancer center with three locations in Voorhees, Willingboro, and Camden, New Jersey
- Partnered with Polaris Health Directions to study feasibility of using Polaris' emPOWER app to capture psychosocial and physiological data from breast cancer patients
- Tracks physiological data and patient-reported outcomes, transmitting data to the behavioral health director at MD Anderson Cooper
- Motivates patients by providing inspirational messages, offering social and physical challenges, and allowing them to communicate with other patients

Source: Scipioni J, "How the Apple Watch Helps Cancer Patients in Treatment," *Fox Business*, February 29, 2016, <http://www.foxbusiness.com/features/2016/02/29/how-apple-watch-helps-cancer-patients-in-treatment.html>; MD Anderson Cancer Center at Cooper, Camden, NJ; Polaris Health Directions, Wayne, PA; Market Innovation Center interviews and analysis; Oncology Roundtable interviews and analysis.



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