

Telehealth





Connecting Patients with Nutrition Services

With nutrition playing an important role before, during, and after cancer treatment, the registered dietitian is an integral member of the multidisciplinary cancer care team. According to the World Health Organization, one-third of all cancers are preventable, and various lifestyle factors, such as tobacco use, alcohol consumption, weight, diet, and physical inactivity are associated with certain types of cancer.¹ On one side of the care continuum oncology dietitians can help educate the public about eating for cancer prevention; further along on the care continuum these professionals can help educate patients diagnosed with cancer on strategies for eating well and managing side effects during treatment.

A Team-Based Approach to Nutrition

At Baton Rouge General Medical Center Pennington Cancer Center, Baton Rouge, La., our nurses, radiation therapists, and physicians work together to keep the dietitian aware of potential at-risk patients, weight changes, or any other nutritional concerns raised by patients or staff. At the initial radiation oncology consult, patients complete two screening forms as part of their new patient paperwork. The functional screen reviews the patient's daily activities, mobility, cognition, and any need for physical therapy, occupational therapy, and/or home health services. Swallowing ability and history of speech therapy are also included in the functional screen. The nutrition screen reviews unintentional weight loss within the past six months and changes in appetite.

Implementing telehealth technology allows patients to easily address any nutritional concerns with the dietitian, including symptom management, education, and/or diet adherence.

The functional screening form is returned to the nurses; the nutritional screening is returned to the dietitian. The forms are scored and referrals are made as needed. The dietitian's role is to:

- Prepare patients for nutrition-related side effects and symptoms, depending on the treatment regimen.
- Identify at-risk patients, including those with cancers of the head and neck, pancreas, lung, stomach, and bladder.
- Monitor patients on tube feedings or total parenteral nutrition (TPN) and peripheral parenteral nutrition (PPN), and patients experiencing significant weight loss or decreased appetite.

At-risk patients receive an initial nutrition assessment and are assessed weekly in the radiation oncology center. The dietitian follows patients assessed at low nutrition risk as needed. For example, many patients gain weight while being treated for cancer.

Dietitians around the country are now using virtual counseling as a vehicle to provide medical nutrition therapy.

Dietitians can help these patients develop healthy eating strategies to maintain a healthy weight.

Growing Pains

In 2014 Baton Rouge General Medical Center Pennington Cancer Center expanded its services with the opening of a third radiation oncology center. This growth presented a unique challenge to our registered dietitian who was already traveling between the Mid-City and Bluebonnet clinic locations, which are seven miles apart. During the planning process for the new construction, we determined that it was simply not feasible for the dietitian to travel to all three locations (the new site was 16 miles north). However, physicians at the new radiation oncology center wanted their patients to have access to nutrition services. The solution: telehealth technology that would facilitate patient and caregiver access to these critical supportive care services.

Telehealth & Telenutrition Defined

Telehealth services can be a convenient option for patients in rural communities with limited access to medical care services.² The Academy of Nutrition and Dietetics defines telehealth and telenutrition as follows:³

Telehealth is the use of electronic information and telecommunications technologies to support long-distance clinical healthcare, patient and professional health-related education, public health, and health administration. Telehealth will include both the use of interactive, specialized equipment, for such purposes as health promotion, disease prevention, diagnosis, consultation, therapy, and/or nutrition intervention/plan of care, and non-interactive (or passive) communications, over the internet, video-conferencing, email, or fax lines, and other methods of distance communications, for communication of broad-based nutrition information.

Telenutrition involves the interactive use, by a Registered Dietitian or Registered Dietitian Nutritionist, of electronic information and telecommunications technologies to implement the Nutrition Care Process (nutrition assessment, nutrition diagnosis, nutrition intervention/plan of care, and nutrition monitoring and evaluation) with patients or clients at a remote location, within the provisions of their state licensure as applicable.

This technology has transformed the way registered dietitians provide nutrition counseling. Dietitians around the country are now using virtual counseling as a vehicle to provide medical nutrition therapy. For Pennington Cancer Center, telehealth means that patients at all three clinic locations can access nutrition services and continue to benefit from a multidisciplinary team-based approach to cancer care.

Patient Barriers to Nutrition Consultations

A common barrier for patients needing radiation therapy is coordinating daily transportation to and from treatment appointments. Some patients do not own a vehicle; others are unable to drive or may not have the funds for public transportation. Social services programs, such as Medicaid or the Council on Aging, may provide medical transportation to and from appointments, but patients must be eligible to participate in these programs in order to use services.

The distance from the Zachary, La., location to the Mid-City and Bluebonnet centers presents another challenge for patients who reside in the northern-most part of the region. We frequently find that patients would rather have services close to where they live and/or work, and may decline resources that require significant drive time. Patients often have various medical appointments in addition to their radiation therapy treatments, and often comment on how busy their schedules have become since their cancer diagnosis. Further, those who continue to work during treatment may not always have the extra time to schedule a separate dietitian appointment.

Getting Started

The first step in implementing our telehealth program: setting up a secure transmission to ensure patient privacy. Today our



A partnership between Baton Rouge General Medical Center and Lane Regional Medical Center to build a state-of-the-art radiation oncology treatment center on Lane's campus in Zachary, La.



Baton Rouge General Medical Center Pennington Cancer Center's registered dietitian participates in a nutrition telehealth session.

telehealth program provides free access to patients and clinicians with secure, HIPAA-compliant data transmission for video-conferencing appointments with the registered dietitian.

At each of its locations, Pennington Cancer Center has patient consultation rooms, which are private areas where patients and families can interact with staff with minimal distractions. When implementing our telehealth program, we equipped these patient consultation rooms with 60-inch flat-screen televisions, webcams, headphone sets with microphones, upgraded video telephone systems, and video-secure software. Additional equipment was installed at a work computer in the staff area.

The telehealth program is supported by Google Chrome or Mozilla Firefox. Our IT department was integral in installing Google Chrome and allowing staff access. Today our cancer patients at all three locations can access the dietitian. The dietitian uses two-way real time video-conferencing to conduct nutritional assessments and follow-ups with patients. The dietitian and social worker spend the majority of their time at the Bluebonnet location—the busiest clinic.

Our Initial Telehealth Pilot

In January 2014 we began researching telehealth options. When the new clinic in Zachary opened in March 2014, we initiated our pilot telehealth program, installing and testing a free video-conferencing program at all three clinic locations. A standard operating procedure for use of the telehealth program was developed and staff were trained at each location. The telehealth program was used by our social worker, dietitian, and any other staff member who needed to meet with a patient receiving treatment at a different clinic location. We also used the telehealth program to expand our genetic counseling offerings via our partnership with the Hayward Genetics Center at Tulane University in New Orleans. Prior to the implementation of our pilot telehealth program, the geneticist and genetic counselors commuted to the center one afternoon every six weeks. With telemedicine, we were able to offer more flexible times for patients without a long commute for the genetics team.

Per departmental policy, outpatient nutrition assessments were completed within the first week of treatment and documented in the radiation oncology electronic health record (EHR). (We use

Figure 1. Telehealth Patient Satisfaction Survey

Name (Optional): _____ Date: _____

Did you meet with the dietitian and/or social worker through the video conference? (check 'yes' or 'no')

Yes, continue with the survey below. No, do not continue with the survey.

Please place a check mark by the appropriate answer.

How satisfied were you with the video-conference meeting in the following areas?	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Quality of the visual image					
Quality of the audio sound					
Your personal comfort using the video system					
Ability to talk freely over the video					
Ability to understand the information presented and any recommendations made					
Your overall video conference experience					

1. Did you find it beneficial to have the video services available? Yes No

2. Which would you prefer? Video conference On-site visit

MOSAIQ.) All patients undergoing radiation therapy were screened and assessed. In addition to radiation therapy patients, the dietitian saw medical oncology patient referrals face-to-face and community referrals as needed.

The dietitian scheduled patients in MOSAIQ with a note in the patient’s treatment schedule for the patient to see the dietitian. For video assessments at the Zachary location, the dietitian scheduled the appointment in MOSAIQ and a flag was placed to “See RD” on the patient’s treatment schedule. From the computer, the video icon was selected and the user selected the call location. Once the location was selected, the user selected the video call button to call the secondary location. Each location also had a webcam that could zoom in and around the room. To operate the webcam, the user pressed the microphone button and then the green phone button to see the patient at the secondary location.

Our Current Telehealth Process

After using the free video-conferencing program for two years, we began researching other telehealth options in late 2015. In early 2016 we made the switch to doxy.me as we found it to be more user-friendly, HIPAA compliant, and with a more secure data transmission. Doxy.me offers both free and professional versions for its clients. Once clinicians register on the website, doxy.me will send them a personal login along with a link that can be given to patients to check-in on their appointment day. Since patients meet with the dietitian at the radiation oncology treatment center, they do not need the link to check-in. Instead, staff at each location use the link to check-in patients for their session. When patients complete their treatment, a staff person explains to the patient that they will meet with the dietitian via video link at our secondary location. The patient and/or family member is escorted into the private consultation room where the

Table 1. Responses to the Telehealth Patient Satisfaction Survey

QUESTION	n	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Total
Quality of the visual image	17	16	0	1	0	0	100%
Quality of the audio sound	18	17	1	0	0	0	100%
Your personal comfort using the video system	18	14	3	0	1	0	100%
Ability to talk freely over the video	18	15	3	0	0	0	100%
Ability to understand the information presented and any recommendations made	18	15	3	0	0	0	100%
Your overall video conference experience	19	15	3	0	1	0	100%

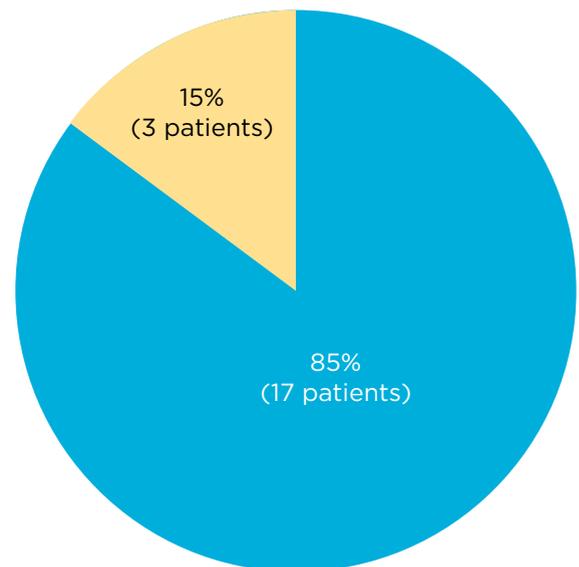
staff person opens the doxy.me link and enters the patient’s name to check-in. An alert is sent to the dietitian that the patient is in the waiting room; the dietitian selects the patient’s name and both parties can see one another and begin the consultation. Once the session is complete, the dietitian ends the session and the screen returns to the waiting room.

Patient & Staff Interaction

Interpreting a person’s tone of voice, facial expressions, and body language are important cues for effective communication. Face-to-face interaction allows the dietitian to actively engage with patients by interpreting non-verbal cues, such as facial expression and body language. At our initial telehealth session, some patients need a few minutes to get comfortable in front of the camera, but they often relax as the session progresses. In one instance, following an initial patient assessment with a patient and caregiver, the dietitian received a follow-up email from the patient thanking her for her guidance and sharing that it helped the caregiver identify and purchase foods of nutritional value. The face-to-face video interaction allows the dietitian to better assess a person’s readiness for change and/or comprehension of nutrition information.

Video-conferencing is a new concept for many of our patients, and initially some are more comfortable with this technology than others. The dietitian’s role is to engage the patient and help build rapport during each session. There are patients who are very comfortable and open up immediately. Many of our patients appreciate the telehealth nutrition consultation and frequently ask how often they can meet with the dietitian.

Figure 2. Patient Consultation Preferences



■ Prefer Video Conference
 ■ Prefer On-Site Visit

n = 20 patients

Telehealth Challenges

The initial telehealth program we used had its set of challenges. Staff frequently encountered grainy video and low sound quality; some staff found the technology difficult to operate. We were also concerned about the protection of typed data, and so we decided to stop using that particular program. Even with our current telehealth technology (Doxy.me), we occasionally experience video lag time and fading in and out of audio during a patient session.

Patient Satisfaction

We gave satisfaction surveys (Figure 1, page 52) to patients on their final radiation oncology treatment day along with a self-addressed envelope, asking patients to evaluate our telehealth program. This survey is given in addition to our standard survey evaluating the patients' overall treatment experience. Patients are instructed by staff to complete the survey and mail it back in the provided envelope.

We've found that our patients are very satisfied with the quality of the video image (94 percent) and sound (94 percent), and 83 percent were very satisfied with their ability to talk freely over the video, understand the information presented, and the overall video-conferencing experience (see Table 1, page 53). The majority of patients (95 percent) found the telehealth program beneficial and 84 percent of patients preferred the telehealth visits to an on-site visit (Figure 2, page 53).

Convenience

Telehealth nutrition counseling sessions take place while the patient is at the radiation oncology center for treatment. This technology eliminates patients having to schedule additional appointments to see the dietitian. This convenience is a benefit to patients as this patient population tends to have many appointments. As stated previously, transportation to and from daily treatment is another barrier for some patients and the telehealth option means patients do not have to drive or try to find a ride to their nutrition counseling session. The flexibility of telehealth allows the dietitian to work from any location and limits the need for additional travel for this busy staff member.

Closing Thoughts

As a part of the multidisciplinary cancer care team, registered dietitians apply evidenced-based nutrition intervention to improve patient outcomes. Implementing telehealth technology allows patients to easily address any nutritional concerns with the dietitian, including symptom management, education, and/or diet adherence. Further, telehealth options allow for easier and more frequent follow-up with high-risk nutrition patients receiving radiation therapy.

For Pennington Cancer Center, telehealth technology allows us to provide much needed supportive care services to patients who may otherwise have limited access them, including those for whom travel time for additional appointments would have been a barrier to receiving care.

Future use can include on-demand video-conferencing when



Top: Exterior shot of Baton Rouge General Medical Center's Mid-City campus.
Below: Exterior shot of Baton Rouge General Medical Center's Bluebonnet campus.

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a patient has a concern that can be addressed while he or she is at the clinic or if a staff person has a nutritional concern and feels that a follow-up would be beneficial. This on-demand feature can potentially improve patient satisfaction scores and increase access to the dietitian. 

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