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How to Improve the Quality of Rural Oncology Care

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It was not news to Joseph Unger, PhD, MS, that patients in rural areas had worse oncology outcomes than their urban counterparts. But what did astonish him in his research, presented at the 2018 American Society of Clinical Oncology (ASCO) Annual Meeting, was that patients in clinical trials had similar outcomes, regardless of ZIP code. “To our surprise—and it was a surprise— we found very little evidence that outcomes were different between rural and urban patients receiving protocol- directed therapy,” said Unger, an assistant member of the Cancer Prevention Program in the Public Health Sciences Division at Fred Hutchinson Cancer Research Center in Seattle, Washington.

Simply by being in a study protocol, they’re getting care, and it’s guided by high standards, whereas “patients who aren’t in a clinical trial can be receiving the best care in the world to no care at all. It spans the entire spectrum,” Unger said.

However, beyond clinical trials, some rural clinics are finding ways to successfully raise the level of cancer care for their patients, and methods vary according to the amount of time and other resources available. For example, clinics are finding that systematically calling higher-risk patients to check on them makes a difference. Others are forming alliances with larger urban care centers, which provide expert opinions and consultations via virtual tumor boards and telehealth visits. Although rural clinics may have financial challenges, some of these improvements can be instituted without a large cash outlay.

Rural Care Quality

There are many reasons why rural patients with cancer tend to have worse outcomes. Resources, both financial and human, are stretched. Clinicians and staff do the best they can within time constraints and other limiting circumstances. Rural clinics don’t usually have a variety of cancer specialists on hand, nor are there unlimited support personnel to transport patients for appointments or ways to provide the medications they need at affordable prices.

Since it is a multidisciplinary disease, cancer involves surgeons, medical oncologists, radiation oncologists, and other specialists. Often, the local community may not have the expertise needed. In some rural areas, cancer care is spearheaded by primary care physicians, said Laurence J. Heifetz, MD, medical director of the Gene Upshaw Memorial Tahoe Forest Cancer Center in Truckee, California. When he started working in Lake Tahoe, he was the area’s only medical oncologist, and there was no radiation oncologist. The rural clinics that now send

patients to his cancer center lack oncologists of their own and are staffed by primary care physicians and physician extenders.

It's difficult, also, to stay current on treatment standards. In some rural communities, "you end up with physicians who may not be up-to-date on what is now standard of care. We see that a lot," said Gladys Rodriguez, MD, a medical oncologist/ hematologist at the START Center for Cancer Care, serving patients in San Antonio and rural South Texas. She has seen many doctors in rural areas using the same treatment regimens they did 10 to 15 years ago. Even oncologists who are more current may not be familiar with newer treatments that can improve patient survival, she said. "I see that with new drugs that are 2 or 3 years old. They are not familiar with them and don't know which patients benefit from them," she said.

At ASCO this year, Rodriguez was surprised to learn that treatment has changed for one cancer in which she specializes. To keep up with advances, she's now considering reducing the number of tumor types she treats. She anticipates that for many oncologists, staying current will be an increasing challenge.

Patients need to take some responsibility for their care as well, and in rural areas, patients don't always know to go regular screening exams. "The patient base itself is somewhat responsible for its poor statistics," Heifetz said. He said most of the patients with colon cancer coming to his clinic from deep rural areas present at stage III or IV, while patients in Tahoe typically begin treatment at stage I or II.

Finances can be an issue for patients in rural areas. Not everyone can travel to cancer clinics out of the area to seek more specialized care. Others can't take a day off work to drive several hours each way or don't have a friend or a family member who can take time off to accompany them. Some cannot afford the gas to make the trip to San Antonio, Rodriguez said.

Even if they can travel, some in rural areas choose not to. Ramya Thota, MD, academic medical oncologist at Intermountain Healthcare in Murray, Utah, has talked with patients with a colon cancer diagnosis who live 300 miles away who would rather avoid treatment than travel for it. The travel is tiring, and it's not the quality of life they want. "They're living in a rural farming area, and they have their own mindset and lifestyle," she said.

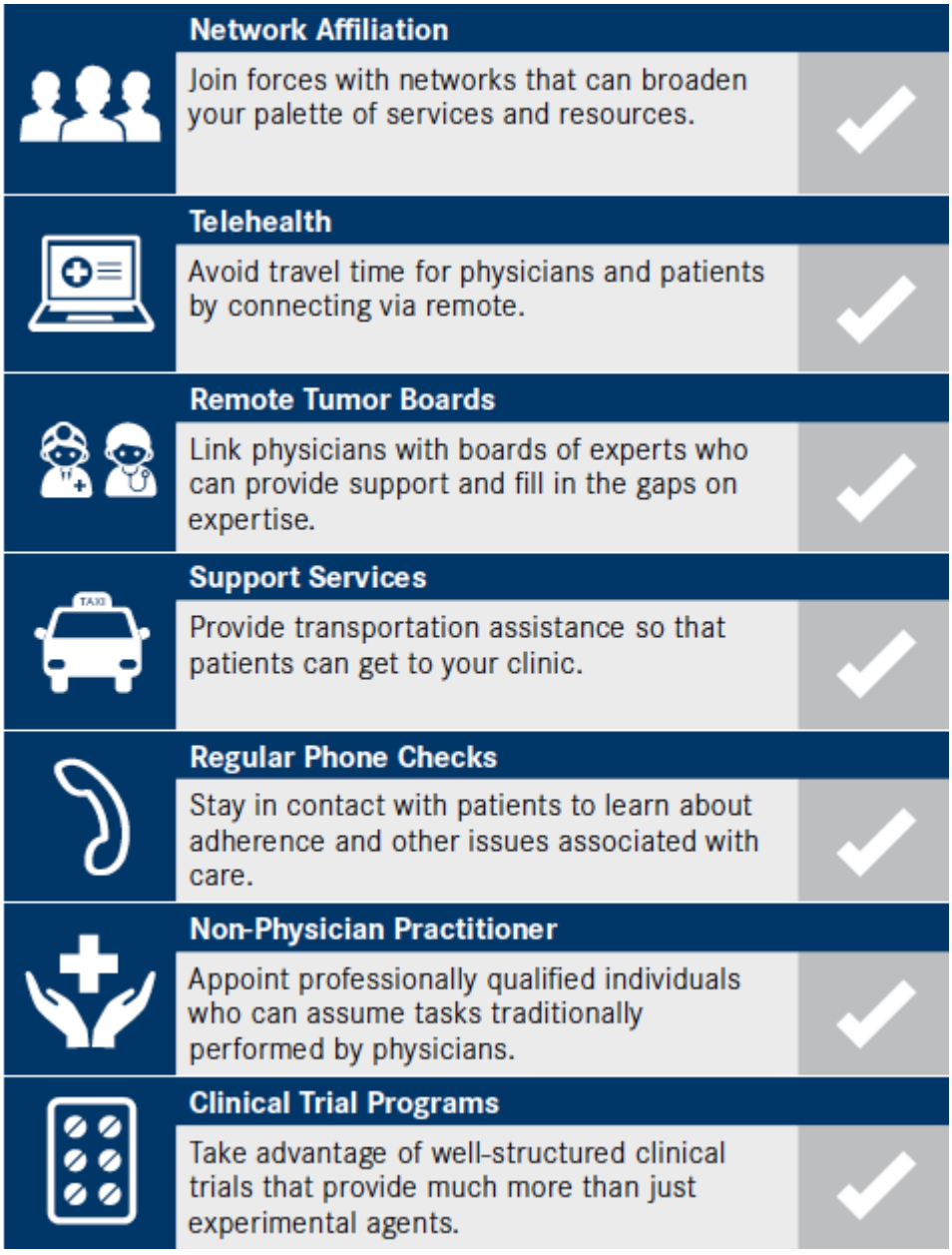
Finances play a role in other ways as well. Pharmaceutical companies sometimes subsidize patient prescriptions with programs to cover their brand name drugs. But patients prescribed generic chemotherapies sometimes encounter financial barriers, too. Even the generic drugs can be too costly for some patients. "A lot of patients say the pharmacy wants $100, and they don't have that money," Rodriguez said. There's not always a way to get them free or low-cost medication.

Families may not be able to take a day off to accompany a relative to treatment out of town. It can happen in town, too, when a patient undergoes surgery or needs local transportation. The patient outcomes are generally lower without this support. Family help in picking up prescriptions or taking the person to the doctor or the hospital for follow-up matters, too.

How to Introduce Standardized Cancer Care in Rural Communities

With some thought and planning, clinicians can introduce high-quality standardized care into rural communities (Table). “It’s one thing to say that the solution is that everyone should get protocoldirected or systematic care, by a standard approach. It’s another to deliver that to everybody. That’s where the real world inserts itself,” Unger said. Making changes can be a policy issue, if government support is needed. But some healthcare organizations are finding ways to provide that systematic care in rural areas.

Table. Checklist for Better Rural Care



Alliances

One of the best ways to improve rural care standards is through the formation of alliances with larger cancer networks, something that all physicians interviewed for this story agreed with. “It’s harder to support highly sophisticated care if you’re not in or affiliated with a larger program,” said Frederick M. Schnell, MD, medical director of the Community Oncology Alliance. Now retired from practice in urban Georgia, he also treated many patients from rural areas. Such urban–rural alliances provide a more consistent quality of care because patients are on the same platform.

When Heifetz joined the staff at his Truckee hospital, oncology patients traveled elsewhere for care. He built a program from scratch, focusing on the 4 cancer types that encompassed the most cases (colorectal, prostate, lung, and breast). He contacted several California academic medical centers, settling on the University of California, Davis (UCD), which committed to support rural communities in its catchment area. UCD helped him develop the infrastructure to treat these cancers.

The medical center organized lunchtime tumor boards and provided Heifetz with technology to participate. In rural areas, there can be a several-year lag before a practice learns about new drugs that have come to market, Heifetz said. These rural practices now incorporate new drugs into treatment regimens as quickly as UCD does because their knowledge is up-to-date. “The adaptation phase shrank down to instantaneous,” he said.

Truckee’s healthcare system pays a fee to be part of the UCD cancer care network. In exchange, UCD provides business management, academic support, radiation treatment planning support, staff training, and an institutional review board for clinical trials. The cancer center Heifetz helped build treats 500 new patients a year, and its success helps keep the hospital in a good financial position. “Oncology is a profit center, not a cost center,” he said, and the program supports other departments, such as pediatrics and delivery.

UCD derives many benefits from working with local clinics. In addition to fees for affiliation and support services, it gets referrals for the advanced surgical cases and more patients enrolled in clinical trials. It also meets their community outreach requirements for National Cancer Institute comprehensive cancer center designation.

Telehealth

Telehealth is another recommendation. Thota notes that in the Utah catchment area, some rural clinics are 300 miles from the nearest cancer center, with patients having to travel through mountains and sometimes bad weather. Intermountain Healthcare currently uses telehealth services at 4 rural clinics and plans to implement a standard oncology treatment model throughout its system. It treats patients face-to-face at 6 Intermountain oncology clinics, which are also set up with telehealth to serve the rural clinics.

The oncologists at the flagship hospitals have relationships with primary care physicians at the participating rural clinics and emergency departments (EDs) to have a chemotherapy nurse deliver standard chemotherapy with the ED handling reactions. If possible, the patient has an initial in-person visit with an oncologist at a flagship hospital and is seen in person periodically during treatment by the oncologist. For the first visit and for

patients with rare cancers, Intermountain Health assembles an oncology team, which may include a medical oncologist, a radiation oncologist, a surgeon, and a nutritionist. Surgery might be performed at the flagship hospital, with patients returning to their own community clinics for chemotherapy, if the case is uncomplicated.

Thota has treated 4 or 5 patients with gastrointestinal (GI) cancer and melanoma at her clinic using telehealth, and the oncology department has treated roughly 19 patients in the past 6 months with this model.

Truckee has 1 cancer center and 4 associated rural clinics equipped for telemedicine, so patients can be followed between and after chemotherapy and radiation treatments, which are provided at the cancer center. A local nurse practitioner performs the basic exams and is with patients at the teleconference session. The center has 100 patients actively engaged in telemedicine and treats 500 new patients a year. “There was a 100% out-migration of patients with cancer before we started our program. Now we have 3 medical oncologists, 1 radiation oncologist, and a 52% in-migration from areas outside our primary catchment area because they have a sense of security that they’re not getting yesterday’s therapy,” Heifetz said.

Virtual Tumor Board

Discussing cases with experts is an invaluable way to get second opinions and confirm the best treatment options. Heifetz and his team meet daily via teleconference with UCD oncologists, with a different day of the week devoted to GI, genitourinary, breast, and lung cases. “We use technology to develop human relationships between doctors in the middle of nowhere and those at academic thought centers,” he said. These discussions make Tahoe doctors more confident when referring a patient for advanced surgery.

Intermountain Health also has virtual tumor boards with surgeons and medical and radiation oncologists. They present patient cases and imaging to be reviewed as a panel. “It’s very helpful,” Thota said.

Patient Support

Some patients don’t go for cancer care in larger settings because they don’t have transportation. START arranged with the Guadalupe County government to provide bus service 2 days a week to communities 100 miles south of San Antonio. The clinic provides treatment from 10 am to 3 pm on those days. A local foundation covers copays for patients in certain economic categories, plus nutrition, exercise, and other support.

Phone Follow-Up

Patients in clinical studies do better because they have someone from the office calling them to confirm appointments and ask how they’re doing. “That allows for an extra level of care,” said Rodriguez. On the phone, the patient might share that they have nausea or other problems and may not come into the office unless someone recommends it. START is conducting a study in which nurses identify patients considered high risk, because of age, lack of family support, or other reasons. They’re calling them on a regular basis, asking how they’re doing and reminding them to take their medications. “We have so far been able to show a decrease in emergency room visits,” said Rodriguez. The difference is in systematically making scheduled efforts to call

patients instead of expecting them to call if they're having trouble. Rodriguez recently had a patient who lives 300 miles away who stopped taking oral chemotherapy because of diarrhea but didn't call anyone about her symptoms or for medical advice.

Physician Extenders

Increasing the number of nonphysician providers and educating them in oncology can help provide better cancer care. Nurse practitioners and physician assistants reporting to a medical oncologist can increase access to cancer care when the oncologists are unable to keep up with demand, and the number of new cancer cases increases, said Rodriguez.

Clinical Trials

Patients in clinical trials get "all kinds of bonuses and extras" that most patients don't get, Schnell said, including prescribed diagnostic studies, follow-up studies, and attachment to a research professional specially trained in cancer care management.

While they can be difficult to set up, alliances with larger cancer care organizations are a good way to become involved in clinical trials. Heifetz said his center participates in 30 clinical trials with UCD. START has outreach programs and clinical trials in rural areas. The doctors in the main START centers provide support, a research manager, and study drugs on location, even if it's just a day a week.

Rural physicians may need some encouragement to reach out to larger centers; however, "I've found the academic facilities more than willing to roll up their sleeves and help their neighbors," Heifetz said.

Unger JM, Moseley A, Symington B, et al. Geographic distribution and survival outcomes for rural cancer patients treated in clinical trials. *J Clin Oncol.* 2018;36(suppl; abstr 6569).