# A Model Rural Chemotherapy Program

BY RHONDA ROESLER, RNC, BSN, MS; KRIS GASTER, RN, MSN, CNP, CNS; EMILY LAIBLE, PHARMD; CRYSTAL ENSTAD, RN, BSN, OCN; KATHY JACOBS, RN, CHSP, CHEP; AND ANN HEIMAN, MPT, MBA


**IT WAS IN ABERDEEN, SOUTH DAKOTA,** population 26,000, where third-grade teacher Pam White received a diagnosis of stage 4 breast cancer. Aberdeen is in the heart of the Northern Great Plains. Major cities are separated by several hours of driving, and the harsh winter climate can often make travel impossible. It was also in Aberdeen where Pam chose to receive her cancer treatment.

"My school is literally across the street from the clinic. I could see my kids playing on the playground," Pam said. "The clinic is just one mile from my home. Knowing that I'm getting excellent care without having to travel through the snow is such a gift."

Thanks to the Rural Chemotherapy Project initiated by the Avera Cancer Institute, Pam could be assured that she was receiving the same high level of care in Aberdeen that she would receive more than three hours away in the larger city of Sioux Falls.

As a complex diagnosis, cancer requires multidisciplinary, multimodality care; a detailed treatment plan; and exact adherence to that plan for best outcomes. The proper administration of chemotherapy according to widely accepted care standards is vital.

## The Problem

In 2011 Avera Cancer Institute, Sioux Falls, S.D., noticed an increase in questions from outside facilities asking for assistance when preparing and administering chemotherapy. This uptick in requests gave the cancer care team cause to reexamine its care protocols. Specifically, staff from outlying areas, as well as patients, were expressing concerns about inconsistencies between protocols and processes at the Avera Cancer Institute and those at rural care locations. It soon became clear to the cancer care team that standards were not clearly defined, nor implemented, at all locations where Avera Cancer Institute medical oncologists referred patients for chemotherapy.

## The Solution

In response, Avera Cancer Institute's physician-led Cancer Leadership Committee met and subsequently approved the formation of a Rural Chemotherapy Committee to identify solutions to the problem. The Rural Chemotherapy Committee consists of leaders from various aspects of cancer care delivery, including compliance, environmental safety, infusion center, pharmacy, and administration. Through relationships and professional connections, this committee looked to ensure patient safety by implementing unified chemotherapy administration standards among facilities both in and outside of the Avera network. The committee's goal was two fold:

- To establish guidelines and standards of practice at all rural sites outside of the Avera Cancer Institute in an effort to validate patient safety when receiving chemotherapy
- To create a checklist and maintain accountability of all chemotherapy administration sites annually.

Teams from multiple service lines and disciplines came together to develop the checklist and a plan that addressed safety, education, practice, compliance, and supervision when administering chemotherapy (see Figure 1, page 32). The checklist addresses facility requirements, for example:

- Is there a properly ventilated and certified chemotherapy hood or biologic safety cabinet?
- Is there proper personal protective equipment (PPE) for those working with chemotherapy drugs?
- Is a chemotherapy spill kit readily available?

*(continued on page 33)*

## Figure 1. Chemotherapy Preparation and Administration Checklist

*(Check each box that is met)*

☐ A properly ventilated and certified chemo hood or biologic safety cabinet must be utilized for chemotherapy preparation.

☐ Non-pharmacy personnel must complete the Chemochek™ Training and Certification Program prior to preparing chemotherapy.

☐ Appropriate personal protective equipment for mixing, administering, and clean-up must be available in sufficient quantities prior to implementation of program. Appropriate polices must be in place.

☐ A chemotherapy spill kit must be readily available where chemotherapy is mixed and where chemotherapy is administered.

☐ Where the potential for chemotherapy exposure is greatest, eye-wash station must be available within 10 seconds along an un-obstructed pathway.

☐ A hazardous waste handling policy must be in place prior to mixing or administering any chemotherapy agents.

☐ Nurses must obtain chemotherapy and biotherapy certification through the Oncology Nursing Society's (ONS) core curriculum and maintain certification with renewal every two years.

☐ First doses of the following chemotherapy infusions are preferred to be given in Sioux Falls due to the high rate of reactions to the drugs.

- Rituxan
- Herceptin
- Taxol
- Erbitux
- Avastin
- Bleomycin

☐ All of the following medications need to have appropriate first responder staff available on site to respond to reactions.

- Rituxan
- Cisplatin
- Taxotere
- Taxol
- Bleomycin
- Vectibix
- Carboplatin
- Oxaliplatin

☐ Sites must have a co-signing physician in the facility. This is a billing and payment requirement by the payers, as well as a requirement by CMS (Centers for Medicare & Medicaid Services) to have a supervising physician available in the local facility.

**OR**

☐ The bylaws created by medical staff at our facility addresses who can order chemotherapy at our setting and who is responsible for the supervision while the chemotherapy is taking place in our facility.

**We have read, understand, and meet all the elements listed above.**

**Facility Name:** .....

**Signature of Director of Nursing, Manager, or Other Designee:** .....

**Contact Email:** .....

**Contact Phone:** .....

*(continued from page 31)*

- Are there eye-wash stations that can be accessed within 10 seconds?
- Is a hazardous waste handling process in place?

Pharmacy staff offered valuable input into the process, reviewing national standards for safety of the patient and the staff preparing the chemotherapy. At Avera Cancer Institute, staff must demonstrate competency in mixing or preparing chemotherapy, and the Rural Chemotherapy Committee felt very strongly that staff in rural settings should complete a similar competency. So, the checklist also addresses staff training.

Regardless of location, all non-pharmacy personnel are required to complete the Chemochek™ Training and Certification Program prior to preparing chemotherapy. Registered nurses must obtain chemotherapy and biotherapy certification with renewal every two years. The Chemochek Training and Certification Program:

- Offers performance-based testing to help users master the skills needed to prepare chemotherapy drugs
- Informs preparers of the risk associated with handling hazardous drugs and precautions that should be taken to reduce exposure
- Provides a system to evaluate knowledge in safe preparation, administration, handling, and disposal of chemotherapy drugs.

The Rural Chemotherapy Project checklist spells out that patients will receive their first doses of certain medications at the Avera Cancer Institute in Sioux Falls, due to the high rate of reactions. The list stipulates medications that cannot be given unless first-responder staff is available.

The checklist also specifies that sites must have a supervising physician, or bylaws created by medical staff stating who is responsible for supervision of chemotherapy at a given site.

To complement its checklist and plan, the Rural Chemotherapy Committee developed and presented webinars to provide additional education and answer questions.

## Roll Out

Next, the Rural Chemotherapy Committee needed to identify the sites that should receive the checklist and webinar information. (The Avera Health network is comprised of more than 300 locations in 100 communities throughout a five-state region.) Chemotherapy was taking place not only at rural hospitals, but also at community clinics in and outside of the Avera network. With the help of front-line staff, the Rural Chemotherapy Committee identified 45 sites that administer chemotherapy from direction and orders issued by Avera Cancer Institute oncologists.

Pictured, from left, are Rhonda Roesler, Executive Director of Compliance and Medical Support Services at Avera McKennan; Kris Gaster, Assistant Vice President for Outpatient Cancer Clinics at the Avera Cancer Institute; Emily Laible, Avera McKennan Pharmacy Supervisor; Crystal Enstad, Infusion Center Manager at the Avera Cancer Institute; Kathy Jacobs, Safety Director at Avera McKennan; and Ann Heiman, Director of Cancer Services at Avera McKennan.

As a first step, letters were mailed to the 45 identified sites in October 2011. Then, members of the Rural Chemotherapy Committee presented the checklist and plan to various groups, including Avera regional managers, directors of nursing, and clinic managers.

Three mandatory educational webinars were scheduled in December 2011 and early January 2012; personnel from all 45 participating sites attended.

These sites were required to complete and return the Rural Chemotherapy Project checklist to the Avera Cancer Institute by March 1, 2012. For facilities that could not comply with the requirements and facilities that needed help with an action plan, the Rural Chemotherapy Committee provided a contact person to help address non-compliance issues and/or barriers.

When the Rural Chemotherapy Project checklists were returned, the committee determined that 10 of the 45 sites were not administering chemotherapy at that time. A total of 30 facilities were in full compliance, or had an action plan that was approved by the Rural Chemotherapy Committee.

## The Tool & Plan at Work

Deb Baumann, RN, has been a nurse at Avera Marshall Regional Medical Center since she graduated from nursing school 37 years ago. Fifteen years ago, she was instrumental in helping the hospital set up its oncology program, which serves a community of approximately 14,000 people.

Avera Marshall cares for local cancer patients who are referred from numerous locations, including Sioux Falls. Mark Huber, MD, a medical oncologist at Avera Cancer Institute sees patients at this rural location twice a month.

Baumann consulted with experts in Sioux Falls when helping to set up the cancer program at Avera Marshall Regional Medical Center. Today Avera Marshall plans to build its own local cancer center. While Avera Marshall had most of the items on the Rural Chemotherapy Project checklist in place, one item that needed to be addressed was designation of a supervising physician, as Marshall does not as yet have a local oncologist. The solution: appointing 24-hour hospitalists at Avera Marshall to fill the supervisory role. When Avera Marshall opens its cancer center, a nurse practitioner director will assist Dr. Huber with patient care.

## Lessons Learned

For cancer programs looking to implement a similar program, the Rural Chemotherapy Committee offers several key takeaway messages. For example, recognize that there is always room to improve, learn, and grow.

Ensure that patient perception is a key focus of the initiative. Imagine if a patient was receiving chemotherapy at a site that did not have the competency to provide certain treatments and had to call the Avera Cancer Institute for direction. That patient might feel insecure and unsafe about the treatment. The Rural Chemotherapy Project provided assurance to patients who were receiving treatment via orders from Avera oncologists that they were receiving care from a facility and staff that were competent, safe, and efficient in chemotherapy administration.

As part of this collaborative effort, physicians, staff, and administrators from rural sites should assist in developing the processes and policies for their own unique facilities, thereby ensuring shared ownership of the project.

Use a central location, such as the Avera Cancer Institute, to develop and implement the policies and tools as it ensures that all participants are on the "same page" and allows rural locations to focus on direct patient care because they do not have to reinvent the wheel.

Avoid blame or finger pointing. Rather, look at this opportunity as collaboration—a way to educate, share, and support a better understanding of expected competencies and regulations with regards to chemotherapy administration. As part of this collaborative effort, physicians, staff, and administrators from rural sites should assist in developing the processes and policies for their own unique facilities, thereby ensuring shared ownership of the project.

The Rural Chemotherapy Committee worked with participating sites in various ways:

- Avera Cancer Institute safety personnel assisted with identifying where the potential for chemo spills was the greatest, and assessing if eye-wash stations were compliant with current regulations.
- Avera Cancer Institute nursing management provided information about when the Oncology Nursing Society offered core curriculum classes and how to get scheduled and renewed every two years.
- Avera pharmacy staff assisted with recommendations on certification and training for anyone mixing chemotherapy. They explained regulations and assisted with supplier information and best pricing.
- Avera Cancer Institute nursing staff assisted with policy recommendations related to nursing.
- The Avera McKennan Safety Department assisted with

The Avera Health network is comprised of 300 locations in 100 communities across a five-state region.

education about and implementation of an OSHA hazardous waste handling policy.
- The Avera Compliance Department assisted with recommendations of language in the bylaws of the rural sites to address the supervision requirements.
- Avera Cancer Institute nursing staff addressed appropriate personal protective equipment and supplied regulations and vendor information.

### Where We Are Today?

Post the March 2012 deadline, five facilities continued to work with the Rural Chemotherapy Committee with action plans and policy and procedure reform and became compliant with the Rural Chemotherapy Project checklist by June 2012. Also in June, a new site—McHale Institute—joined Avera, and three additional sites were identified as participants in the Rural Chemotherapy Project. The committee provided education at these four sites, all of which completed the checklist by August 2012.

The Rural Chemotherapy Committee shared project outcomes with cancer leaders and front-line staff, who continue to identify any new sites or areas of concern. The Rural Chemotherapy Committee meets quarterly and continues to hold all participating sites accountable to the initiatives in the checklist.

Certainly, improved patient care was a major outcome of the project. Yet participating organizations benefitted as well. The Rural Chemotherapy Project allowed these sites to continue to deliver quality service in their community and strengthened the relationship between referring rural sites and specialists at the Avera Cancer Institute. Most important, the Rural Chemotherapy Project allows patients to feel safe under the Avera Cancer Institute's standards of administration, giving them the same quality of care and allowing them to be supported by their loved ones in their home community. OI

*Rhonda Roesler, RNC, BSN, MS, is executive director of Compliance and Medical Support Services at Avera McKennan; Kris Gaster, RN, MSN, CNP, CNS, is assistant vice president for Outpatient Cancer Clinics at the Avera Cancer Institute; Emily Laible, Pharm D, is Avera McKennan pharmacy supervisor; Crystal Enstad, RN, BSN, OCN, is infusion center manager at the Avera Cancer Institute and a leader of the Rural Chemotherapy Project; Kathy Jacobs, RN, CHSP, CHEP, is safety director at Avera McKennan; and Ann Heiman, MPT, MBA, is director of Cancer Services at Avera McKennan, Sioux Falls, S.D.*

## OUR PROGRAM AT-A-GLANCE

The Avera Cancer Institute is a community cancer center situated in South Dakota's largest city of Sioux Falls. It is part of an integrated delivery network that includes Avera McKennan Hospital & University Health Center in Sioux Falls, as well as 115 locations in more than 50 communities in four states. Avera carries on the healthcare legacy of its sponsors, the Benedictine and Presentation Sisters. The Presentation Sisters founded McKennan Hospital more than 100 years ago, and the Benedictine Sisters founded other South Dakota hospitals, which are part of the Avera system. Avera's mission is to deliver care in an environment guided by the Christian values of compassion, hospitality, and stewardship. Avera has an organizational goal to ensure continuity of care across systems and services.

Avera Cancer Institute physicians serve patients in a four-state radius. The service area reaches over 71,000 square miles and includes South Dakota and portions of Iowa, Nebraska, and Minnesota. Avera physicians provide these services through the Avera Cancer Institute clinic services, outreach clinics, and telemedicine services. Many patients live in rural communities up to hundreds of miles from the Sioux Falls facility. To save patients thousands of miles of travel, Avera Cancer Institute oncologists order chemotherapy treatments in the patient's home town, when possible.

"An important aspect of Avera McKennan's care philosophy is providing care close to home, so patients do not have to drive long distances to receive a high level of care. We want to ensure Avera patients are receiving the highest quality of care, regardless of if it takes place at the Avera Cancer Institute or in their local community," said Kris Gaster, Assistant Vice President for Outpatient Cancer Clinics at the Avera Cancer Institute.

The Avera Cancer Institute is home to 52 infusion bays and delivers approximately 250 chemotherapy infusions weekly. In its Sioux Falls infusion centers, the Avera Cancer Institute adheres to standards for chemotherapy developed from standards of the Occupational Safety and Health Administration, Oncology Nursing Society, Centers for Medicare and Medicaid Services, and U.S. Pharmacopoeia (USP-797).