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Telepharmacy helps remote hospitals keep their chemo satellites open

BY SAMMU DHALIWALL

For patients diagnosed with cancer in small rural towns, accessing chemotherapy close to home can be a challenge. Many must travel long distances – sometimes in difficult driving conditions – to consult with their oncologist at a regional cancer centre.

Given the physically taxing nature of chemotherapy, receiving treatment close to home is crucial. However, a shortage of pharmacy personnel to verify and prepare chemotherapy poses a significant barrier.

In Ontario, current legislation requires that only registered pharmacists or pharmacy technicians prepare chemotherapy. However, an exception allows a regulated pharmacist to delegate this responsibility to non-regulated pharmacy healthcare workers.

A new model: To address this issue, Rahim Pradhan, a registered pharmacist, and Rebecca Lynch, a registered pharmacy technician, developed a delegation program through North West Telepharmacy Solutions (NTS). This initiative allows trained nurses and pharmacy assistants to prepare chemotherapy, ensuring that patients can continue receiving treatment close to home.

“I was working for NTS in late 2022 when a site in Northern Ontario needed a pharmacist with chemotherapy preparation experience,” recalls Pradhan. “The hospital had no regulated pharmacy staff – only pharmacy nurses completing product preparation and distribution activities, including restocking automated dispens-



Maintaining high quality standards: Rebecca Lynch trains Tasfir Ndiaye on proper chemotherapy preparation, while Rahim Pradhan observes with an iPad and checklist for quality assurance.

ing units (ADUs), re-packaging medications into unit doses, and compounding sterile preparations.

“Since these nurses were already trained and proficient in sterile compounding, the logical next step was to delegate chemotherapy preparation under pharmacist supervision.”

Pradhan emphasizes that many small hospitals lack pharmacy personnel, forcing hospital administrators to develop creative solutions to ensure patients receive their medications, including chemotherapy. Such is the case at St. Joseph’s General Hospital in Elliot Lake, where a trained chemotherapy nurse prepares the chemotherapy in the morning, and then administers the regimen in the afternoon.

Fortunately, Pradhan is one of few hospital pharmacists who has been involved

in chemotherapy for over 20 years and kept up his knowledge and skill in preparing chemotherapy.

“I came from an era of pharmacy where pharmacists were much more hands-on in sterile product preparation, including IV admixtures, parenteral nutrition, and chemotherapy,” he explains. “As the profession evolved, and rightfully so, registered pharmacy technicians took on chemotherapy preparation and verification. However, I made a conscious effort to keep up my skills, often acting as the second checker for chemotherapy and occasionally even preparing it myself, while having a pharmacy technician to observe me.”

While confident in his sterile compounding skills, Pradhan sought expertise in the regulatory framework governing

hazardous sterile compounding – the National Association of Pharmacy Regulatory Authorities (NAPRA) Model Standards for Pharmacy Compounding of Hazardous Sterile Preparations.

These standards were developed following Dr. Jake Thiessen's independent review of cancer drug preparation, commissioned after 990 patients in four Ontario hospitals received lower-than-intended doses of chemotherapy drugs in what became known as the diluted chemotherapy scandal. The majority of pharmacy regulators now use the NAPRA compounding standards to assess hospital pharmacy compliance during annual accreditations.

Expertise in sterile compounding compliance: This is where Rebecca Lynch's expertise became crucial. As the sterile compounding expert at NTS, Lynch brings a deep understanding of the NAPRA Model Standards for Compounding, ensuring the highest level of safety and compliance in chemotherapy preparation. Her commitment to best practices extends beyond regulatory requirements, integrating United States Pharmacopeia (USP) guidelines – the foundation of NAPRA's compounding standards – to enhance safety measures for those handling hazardous drugs.

Lynch's 20+ year career spans community pharmacy, long-term care, hospitals, and academia. "There were no NAPRA compounding standards when I first started sterile compounding, and USP standards weren't widely understood in Canada," she recalls. "Over time, I witnessed significant advancements in practice standards, ensuring higher quality and safety in sterile compounding."

After working in a NAPRA compliant pilot facility, Lynch decided to dedicate her career to mastering and implementing

these standards. Since joining NTS in 2020, she has focused on sterile supervision, conducting gap analyses, providing training, optimizing workflows, and enhancing quality assurance programs. She is particularly passionate about educating nurses and pharmacy assistants in northern communities to ensure they provide the same high-quality care as larger urban centers.

Keeping chemotherapy services local: Over the past two and a half years, the delegation program has expanded to five Northern Ontario hospitals. Lynch serves as the sterile compounding supervisor for three of them. For hospitals with an existing sterile supervisor, Lynch accompanies

Last year, Notre-Dame Hospital in Hearst, Ontario faced a chemotherapy crisis due to pharmacy staff shortages.

Pradhan for the initial assessments to provide additional sterile expertise and ensure compliance with NAPRA compounding standards.

Together, they conduct on-site visits, observe workflow, and provide support to ensure safety and compliance.

The collaborative approach between hospital staff and the North West Telepharmacy Solutions team has been instrumental in maintaining high-quality patient care. Joan Mallyon, vice president and chief nursing executive of Dryden Regional Health Centre, praises Lynch's contributions: "Rebecca's depth of knowledge, accountability, and integrity are great assets to our team. Although she is not on-site daily, she is highly involved in our pharmacy operations and is a pleasure to work with."

Last year, Notre-Dame Hospital in Hearst, Ontario, faced a potential chemotherapy program shutdown due to a pharmacy staff shortage. Chief nursing officer Dominic Morin explains, "One of our pharmacy technicians was going on an extended leave, leaving us with only one technician. Without a solution, our chemotherapy program would have had to shut down. Thankfully, we were able to train a pharmacy assistant in sterile preparation."

Lynch facilitated the theoretical training remotely, while lead pharmacy technician Luce Lamontagne provided hands-on training. After passing competency assessments, Pradhan and Lynch traveled to Hearst for an on-site assessment and delegation.

Morin emphasizes the program's importance: "North West Telepharmacy Solutions' support was invaluable in keeping our chemotherapy services local. Without this program, patients would have had to travel to Thunder Bay or Sudbury – regional cancer centres that are already struggling with patient volumes."

Likewise, a patient at Notre-Dame Hospital shared her relief at receiving treatment close to home. Her chemotherapy regimen requires a five-hour infusion followed by a continuous 46-hour infusion every two weeks.

She couldn't imagine making the long drive down Highway 17 to Thunder Bay Regional Health Sciences Centre twice a month – an exhausting round-trip that would rely on her husband to drive.

She is deeply grateful to the team at Notre-Dame for their dedication in ensuring proper staffing, safe preparation, and seamless care, allowing her to receive treatment without the burden of long-distance travel.