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Cancer treatment data is no longer isolated in the London region

BY DIANNE DANIEL

LONDON, ONT. – Every day, more than 400 cancer patients receive treatment through the London Regional Cancer Program (LRCP) and its partners throughout southwestern Ontario. Up until recently, they were an isolated group – not literally, but because the system used to manage, track and adjudicate their comprehensive cancer care plans was standalone.

Following the successful implementation and rollout of Cerner PowerChart Oncology, that's no longer the case. Cancer patients are now integrated with London Health Sciences Centre's hospital information system, meaning their complex medication record and information related to their cancer journey is available for any treating clinician to see in one comprehensive health record.

"Our paradigm was that the cancer program had to be part of the overall hospital information system," says Neil Johnson, vice-president, Cancer Care and Corporate Strategy, LHSC. "We're plugging into that and making it work from a cancer perspective, as opposed to using a cancer system and hoping the hospital can connect."

The decision to move to Cerner PowerChart Oncology was driven by a steering

committee made up primarily of clinicians, and including a cancer patient and the parent of a child with cancer.

After evaluating the software extensively, they decided it provided several benefits over Cancer Care Ontario's (CCO's) Oncology Patient Information System (OPIS). Though 'tested, tried and true,' and used in the LRCP's adult oncology program for more than a decade, OPIS is a

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siloes system, forcing clinicians to rely on two systems when treating cancer patients.

"When an adult patient came into our chemotherapy suite, their chemo was entered in one system (OPIS) but if they needed other medications associated with their chemo, those were entered into the hospital information system," explains Glen Kearns, LHSC CIO and integrated vice-president, Diagnostic Services. "We were entering drug information into two different systems in order to serve the patient, so we didn't have cross-checking

to ensure a drug ordered in one system wasn't in conflict with the dose or volume of another drug." Lack of an integrated approach often created delays in workflow, he added.

LHSC, along with St. Joseph's Health Care London, is a long-time user of the Cerner PowerChart electronic medical record, as well as computerized physician order entry (CPOE) and barcode medication administration at bedside.

The ability to integrate its adult and pediatric cancer programs into that environment, which encompasses 11 hospitals, is a huge benefit, says Kearns.

For example, if a cancer patient undergoes surgery at an ancillary hospital site and receives follow-up care there as opposed to LHSC, the treating surgeon will have access to the integrated care plan, including a complete medication profile. Similarly, if a cancer patient shows up at their local emergency department, doctors will know exactly where they are in their treatment plan without having to wait for information to be faxed.

As part of its PowerChart Oncology implementation, the LRCP built approximately 800 highly detailed electronic oncology order sets, aligned with best evidence. An important feature is the electronic claims link which automatically

submits treatment plan information to CCO, which in turn authorizes payment.

“All of our funding for operations in our chemotherapy suites is predicated on that, so if we don’t have good information going to the funder, the program doesn’t get paid,” says Johnson.

Bob Knust, Cerner’s oncology solution results manager, calls the order sets “very complex, multi-phase power plans” that integrate pharmacy, imaging, laboratory and scheduling information so that everything from prescribed drugs to blood test results to follow-up appointments is available in one integrated view.

“They don’t have to build it from ground zero. They can say this is the disease, this is the treatment for it,” says Knust.

Some of the biggest benefits following implementation of an integrated system are showing up in the pediatric oncology program, which was largely paper-based.

By automating the flow of information between pediatric oncologists, the laboratory and pharmacy – so that information passes seamlessly to each stakeholder in real-time – LRCP has shaved as much as 25 percent off of the amount of time a child and his or her family has to spend at hospital to receive chemotherapy.

“Now, because we’re capturing all of this information, the system is visually tracking the workflow of the different orders so that as a patient is at LHSC for their outpatient visit to receive their chemo ... we can start to see bottlenecks and gaps,” says Kearns. “It is absolutely improving overall patient care because the

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information is now comprehensively available at the point of care.”

In addition to operational benefits in the clinic setting, where patients are seen more quickly, the system also provides enhanced safety.

Quality assurances are built into PowerChart Oncology to not only ensure order sets are executed correctly, but that they are accurate to start with. Similarly, if a patient’s bloodwork indicates a change in blood count and their chemotherapy is delayed by a day, the system automatical-

ly adjusts the treatment plan and workflow, reducing the likelihood of errors or further delays. As an added benefit, because cancer data is now comprehensively available in a single system, LHSC academic researchers are starting to aggregate information across different patient types, gleaning valuable insights from pre-determined reports produced by the Cerner system. “They’re able to get a different picture of both individual patients, but even more importantly, some of the outcomes and results from groups of patients,” says Kearns.

Moving forward, the LRCP is meeting with each of its cancer disease teams to identify opportunities for “tweaking and tinkering” the integrated system to further optimize patient care. Appointment scheduling on the adult oncology side is one area that requires improvement; the program is also investigating how to mine data in the system to better identify potential candidates for clinical trials.

“How can we get at that data to find out the kinds of patients we have coming in our door who might qualify for a clinical trial that we’re doing?” says Johnson. “That’s good for them. It’s good for science. It’s good for the whole organization.”