



NIAGARA HEALTH SYSTEM

ONE MILLION SQUARE
FEET OF CARE



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As part of an on-going upgrade of health services in the area, the Niagara Health System is on the verge of completing a state-of-the-art new hospital for the St Catharines area. Jane McCallion talks to chief planning and development officer Gloria Kain to discover how you turn one million square feet of building into one million square feet of care



Members of the NHS Project Management and Operational Readiness teams

There is a strange Catch-22 facing health care providers. Year after year, better treatments are found for all kinds of diseases and some that would once have been deadly are now treatable. Additionally, life expectancy is increasing and a child born now can expect to live until he or she is nearly 100. This is all fantastic news, but for health services the challenge is how to continue to deliver quality care to all these people.

This has certainly been the situation in Niagara, where aging facilities in St Catharines have begun to struggle to keep up with technological and clinical advances. Indeed, some treatments for illnesses such as cancer simply do not exist at all in the local hospitals. However, all this is about to change, with the construction of a new, state-of-the-art healthcare complex, which is due to be completed in November this year.

The new hospital, valued at \$759 million and covering almost one million square feet, will bring together all the existing health services offered at the current St Catharines General and Ontario Street sites of the Niagara Health System, as well as new facilities such as radiation oncology, long-term mental health care and heart catheterisation. All of this will be located in a building that places the patient experience right at the heart of its ethos.

The idea for a new health complex was first mooted in April 2003, when Gloria

Kain, chief planning and development officer on the new hospital, and her team made a concept presentation to the local health and hospital boards. However, she says that the project really took root in 2006, when it was identified as a design, build, finance and maintain project. “In my opinion, under the procurement process, it has moved very quickly,” she says. “There are projects in the province that have been on the books for 20 years, but this one has gone from start to finish within a six year period.”

The key concept that has led the project from paper to production is what Kain describes as ‘clinical functionality’. “We defined that as making sure that operationally we’re taking into account efficiencies, the patient experience, the staff experience, accessibility, security and sustainability.

“On top of that, the number one issue that popped up very early in this definition and has carried through is a heightened awareness of infection control and the impact that building design, combined with best practice can have on reducing the spread of infection.”

It is easy to question how much of an impact a building can have on these outcomes, but as Kain explains, the design of a hospital can make a significant difference. “The space we’re working in right now [St Catharines] is quite antiquated and things like the availability of sinks for patients, staff and visitors can have a huge impact.”



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PLAN GROUP - Building tomorrow's healthcare facilities, today



Providing cost effective and efficient technology solutions for the healthcare facilities of tomorrow, Plan Group is proud to be part of Canada's leading healthcare facility, Niagara Health System!

In Canada, millions of dollars are wasted each year on administrative inefficiencies, redundant treatments, and medical errors, not to mention the growing costs associated with healthcare. Forward thinking healthcare organizations, like the Niagara Health System (NHS) are focusing on quality and efficiency improvements, putting the patient first.

Taking advantage of the connectivity, efficiency and technological capabilities of the digital age means that the healthcare industry can provide better patient care—making sure the right people receive the right information, at the right time. Tomorrow's healthcare facilities are being built today by skilled technology experts who have a deep understanding of inter-connectivity and the complexities of the supporting infrastructure. Through Plan Group's partnership with NHS, Infrastructure Ontario, Plenary Group, and PCL Constructors Canada Limited, the new, 1 million sq/ft state-of-the-art health care complex was designed and built to respond to changes in future healthcare delivery, ensuring patients and families receive first-rate care for generations to come. Headquartered in Toronto, Canada, Plan Group is a leader in building Canada's most technologically advanced healthcare complexes, like NHS. With the ability for a rapid design and build process, Plan Group builds healthcare facilities with leading edge technology implemented—maximizing operational efficiency by optimizing how technology is used, and how information is

disseminated and processed. When completed, NHS New Health Complex in St. Catharines will be home to one of the most modern healthcare facilities in the province.

"We are seeing a new model of healthcare emerging, driven by healthcare facilities which are taking advantage of new technological advancements," says Glen Landry, Technology Division, Plan Group. "We are using digital technology as a tool to achieve the balanced goal of operational efficiency and outstanding patient care."

Plan Group understands the pressures healthcare organizations face, and provides innovative, custom tailored solutions to serve these specific needs. By enhancing the safety, quality and efficiency of each facility, Plan Group can build efficient systems where the right people have access to real time patient data, allowing care givers the ability to make effective and appropriate healthcare decisions, quickly and accurately. With skills and expertise to develop and serve the needs of the healthcare industry, including structured cabling, technology, electrical, mechanical and maintenance, Plan Group helps healthcare facilities prepare for the challenges to come.

"With such a deep understanding of complex construction projects, working with Plan Group means that you have access to infrastructure architects who have a profound understanding of healthcare technology, and all the new advancements, not to mention, they can translate them very easily into how the system can best be built, on the ground," says Jeff Wilson, Regional Manager, ICT Technical Support, NHS. "Together, with Plan Group, we are a team, building a modern healthcare complex."

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The addition of radiation therapy will enable oncology patients in Niagara to receive treatments as close to home as possible

Very early in the project, a statement had just come out from the World Health Organisation on the impact of private rooms for patients. At the time, the NHS had planned for about 37 percent private rooms. "We put together a business case and identified the risks of not moving in this direction, knowing that it would take another five to six years before the hospital would open and recognising that it was a trend that was not likely to stop. So we moved from 37 percent private rooms to over 80 percent private rooms. And we're one of the first to have achieved that in the province."

While the construction

of the new hospital is clearly based on clinical need, it has also enjoyed a wide level of support from the local community, which is reflected in its funding model. While 90 percent of the project is financed by the Ontario government, at least 10 percent of construction costs and a large majority of the clinical equipment costs had to come from the local community under what is known as the Local Share Plan.

"The part that is left to the community to fundraise for is the equipment that would go into a new health complex. So everything other than the specific radiation equipment for oncology

**\$40
MILLION**
.....
Local community funding

Delivering healthcare construction excellence



PCL Constructors Canada Inc. (Toronto)
 Proud Design Builder of the new Niagara Health System Health-Care Complex and Walker Family Cancer Centre



Several members of the onsite project management team taken in 2010 including representation from NHS, PCL, Plenary and Johnson Controls

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has to be fund raised locally,” says Kain.

“Recognizing that, we went out with a \$40 million campaign, which is a considerable amount of money for an area of our size and complement. It was led completely by a volunteer board and volunteer task groups that went out to each of these communities. The community rose to the challenge and we’re coming very close to announcing that we have reached our target. There was a tremendous amount of support and it’s a

real success story, especially as it was done in the middle of an economic meltdown and really tough financial times.”

Community funding has come from a broad range of initiatives, including events, corporate sponsorship and naming opportunities. One such naming opportunity was for the cancer centre, which with the addition of radiation therapy will build on more than 25 years of excellence in the delivery of cancer care in Niagara.

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“The Walker Family Cancer Centre was named on the basis of a \$5 million donation by the Walker family and Walker Industries, who are members of the local community,” explains Kain. The cancer centre will contain all the pre-existing treatment facilities and options that were present in the old hospital, as well as the much needed radiation therapy unit. Currently, a patient would have to travel for up to an hour in each direction in order to receive this type of treatment.

Niagarans were not just asked to donate money to the project, though, they were also asked for ideas. “We needed our community to be aware of what we were going to be undertaking, we needed the support of the community behind us. So very early in the process we went out to town halls and open houses to speak with people to identify the definition of a successful hospital,” explains Kain.

When the answers came back, the team was delighted to find that what the community thought most important was in line with clinical guidelines and principles. “Regardless of which group you went to in that early process, the top priority was enhancing the patient experience, whether you were a physician or a front-line staff



Supply storage for gowns, gloves and masks were built into the walls outside of inpatient rooms to avoid clutter being created in hallways



Each of the radiation treatment rooms include lit vision panels on the ceiling to make treatment as comfortable as possible

member like a nurse, or a member of the public. They all wanted to make sure we were developing a welcoming and inviting environment for families and for patients. So it was really heartwarming to know that there was no conflict.”

Various design points have therefore been put into place to ensure that this priority is met. Every private patient room has an exterior window, bringing in natural

light. There is a family zone in every patient room, so that families have a place where they belong and never feel like they are in the way. Special attention has also been given to accommodate mobility aids.

“We are the second most popular retirement destination in Canada, so we have very high numbers of elderly patients, and that’s on the rise. So we have walkers, scooters and wheelchairs coming in and it’s not even always just one person, it can be the patient and their caregiver, so being able to accommodate that in an open and friendly environment was very important,” says Kain.

The building is on target to be completed by 26 November 2012, with predominantly only interior finishes remaining. However,

screwing in the last light bulb is not the end for the team.

“We have the date of November 26th as the substantial completion date, but the work will then begin with our frontline staff translating this building into a hospital. We have coined the phrase here that it’s about 1 million square feet of care; it’s not about a building, it’s about the care that goes into that building. So it’s all hands on deck to make sure that the patient experience flows and all the best practice is inserted into the new healthcare complex.” **BE**

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For more information about Niagara Health System visit: www.niagarahealth.on.ca



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