

ALGONQUIN NEWS



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Applied research for innovative, real-time health solutions

A sustainable health-care system must be patient-centric and prevention-focused. It must incorporate leading-edge research and tools to provide the best possible services—efficiently and effectively. And it must emphasize ongoing learning. Innovation and education are central to the vision for Algonquin College's Healthy Living Education (HLE) initiative. This new facility will include an integrated cluster of talent, labs, services and businesses, all working together to enhance students' learning through work experiences—including applied research projects.

“ [With HLE], we're trying to cross-pollinate people from one field of study to another.

Kevin Holmes, Health and Wellness Research Centre Algonquin College

Applied research brings to bear the latest knowledge and technologies in creating useful products, services and processes. By uniting students, their professors, and real-world business clients, these projects will take advantage of the most recent healthcare discoveries to help the community lead a healthier life.

The HLE initiative builds on the work of Algonquin's Health and Wellness Research Centre, according to the centre's Manager
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Helping Canadians live healthier lives



A building can become an icon thanks to its structure and design, size, state-of-the-art features, or what it represents.

With Ontario's healthcare system changing to meet the demands of an aging population and retiring healthcare workforce, Algonquin College has an opportunity to bring forward an initiative that is truly iconic.

Algonquin College's Healthy Living Education (HLE) initiative is a community-integrated learning and innovation hub with a mission to help Canadians live healthier lives.

By 2017, for the first time, more Ontarians will be over the age of 65 than under age 15. Canadians are also living longer, and the fact that 50% of our healthcare costs are typically incurred after the age of 65, points to a dramatic impact on our healthcare system. Ontarians need to live healthier lives, and need the right care and support in order to do so.

As the largest English-language college serving Eastern Ontario's

1.8 million people, Algonquin College is well positioned to address this challenge.

A healthy learning environment
The HLE initiative will be a new building made up of on-campus learning enterprises, businesses, and organizations that provide services that promote healthy living. Aligning existing curriculum and new programs will meet capacity gaps in the workforce, while preparing graduates with inter-professional learning experiences and a flexible skillset.

“We're going to start empowering individuals to manage their own health, not just through what they eat or their activity level, but enabling them with the technology to monitor their own health and health issues,” says Algonquin College President Cheryl Jensen.

This means HLE will help Algonquin to train students in new areas. New programs being considered include food science, naturopathy, and osteopathy. Each discipline would reflect the shift in health and wellness delivery from a focus

on acute care to community-based, patient-centred care.

“What we're trying to do is respond to both our community needs and also government imperatives to change the delivery of healthcare and wellness services,” says Claude Brulé, Algonquin College's Senior Vice President, Academic.

Many existing health sciences and wellness programs will be moved to the HLE building at its proposed location at the intersection of Woodroffe Avenue and Navaho Street. Moving these programs under the same roof opens up possibilities for student and faculty from a variety of disciplines to work together, and to create a “living lab” for learning and applied research.

For example, Food and Nutrition students will be able to learn alongside Nursing and Personal Support Worker (PSW) students, as they consider the role of food and nutrition as an essential contribution to a person's health and wellbeing. Paramedic, Respiratory
(continued on page 2)



Helping Canadians (continued from page 1)

Therapy, Nursing and PSW students could also work together to provide a continuum of care to seniors and patients with chronic conditions.

“It’s about creating a more preventative healthcare system and that’s what this iconic building is going to be representing for us,” says Jensen.

The new HLE building would also represent a change in the college’s range of healthcare services offered to employees, students and, in the future, the community.

**Healthy Partnerships**

For-profit businesses will be able to lease space in the facility through a competitive tendering process as long as they commit to providing work placement opportunities for students on campus and across the city. These on-campus storefronts would present an opportunity for the college to build upon the learning opportunities available for Algonquin students.

“The classroom, online, the learning enterprises could all lead to employment here at the college in a physiotherapy clinic, a dental clinic, a pharmacy. It becomes part of that continuum of learning,” says Dr. Barb Foulds, Dean, Health, Public Safety and Community Studies, and Chair of the HLE steering committee.

According to City of Ottawa 2011 Census data, the largest number of seniors over the age of 65 live in College and Bay Wards, presenting an opportunity for programming and services specific to their needs. Students in Nursing, Fitness & Health Promotion, PSW, Recreation & Leisure Services, and other programs, would be able to find work on campus, while engaging with seniors and providing care.

While creating stronger experiential learning opportunities are the priority according to Brent Brownlee, Director, Ancillary Services, the benefits of this initiative will be felt by the entire college community.

“The services we want to bring will make working and learning a better experience so you don’t have to leave campus for a doctor or physiotherapist appointment,” he says.

**Healthy Lifestyle**

Students in Algonquin’s culinary programs will also be integrated into this new HLE building as part of the facility’s food service offering. In the classroom, students will learn not only about food nutrition, but how to properly prepare healthy (and delicious) food for customers.

“People are so much more aware of what’s healthy, but they also want food that tastes good,” says Michael Bakogorge, Chair, Culinary Studies. “I can see culinary students having a food outlet that concentrates on healthy food.”

The Algonquin Students’ Association is also undertaking a parallel project that will increase recreational opportunities for students by expanding existing fitness facilities, providing a range of exercise and healthy living activities and resources, including an indoor running track.

“Students and staff can take complete ownership of their overall health and well-being,” says Jack Doyle, General Manager, Algonquin Students’ Association. “Over time, this becomes instilled in Algonquin’s culture. The college will become known as a community that supports a lifestyle of health and wellness for its students and employees.”

A transformation of health

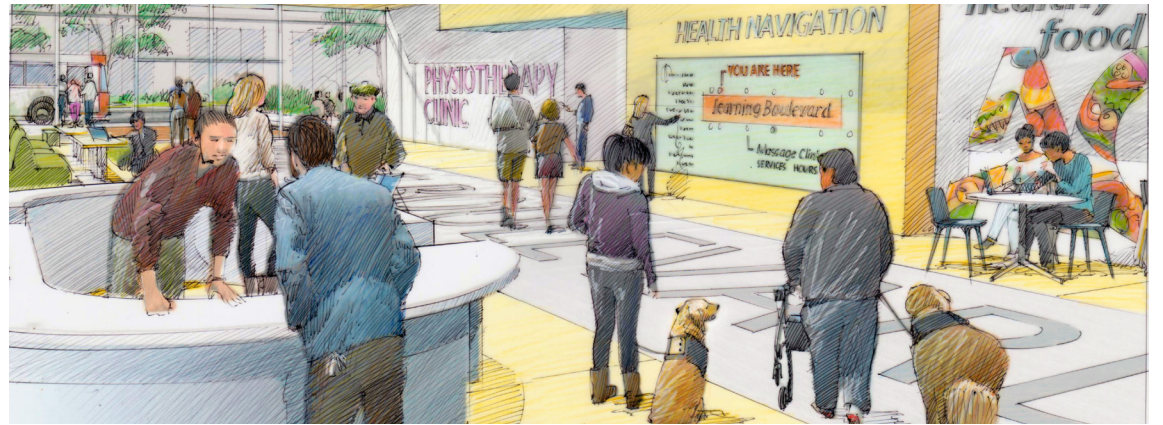
Eastern Ontario’s employment growth in health and wellness services is expected to exceed 12% by 2022. The demand for a stable supply of skilled professionals, managers, technicians, and support workers continues to grow.

“We have a perfect ecosystem here in Ottawa that will meet the needs of our community and the country,” says Jensen.

The HLE initiative will be a place where students, faculty, community members, and professionals can learn from one another and work together in an integrated learning and highly innovative environment. Algonquin College can play an important role in transforming Canada’s healthcare industry by helping Ontarians to live healthier lives.

“There’s a real sense of the stars aligning,” says Dr. Foulds. “We’ve talked about the delivery of care, the shift away from acute care, and how we can better care of our seniors. It’s happening. To be a part of that is really exciting.” **AN**

Your one-stop shop to a healthier life



The Healthy Living Education (HLE) facility will be a vibrant and dynamic hub of innovation and learning; a living lab; certified (at minimum) LEED Gold, and will occupy prominent space at the intersection of Woodroffe Avenue and Navaho Street.

A ‘boulevard’ of storefront health-care services

Entering the building will be an experience in and of itself. As a community-integrated learning and innovation hub, the building will feature simulation-based learning facilities, interactive digital technologies, and a host of services available to community members and members of the College all along “the boulevard.”

The learning boulevard concept comes from the idea of creating a space where services that support and encourage healthy living, healthy lifestyles, and making healthy choices can exist in one place.

Together, College-owned, student-led learning enterprises and business partnerships will create a boulevard of storefront health-care services. These services will support learning as a first priority, while operating as either clinics or public businesses operated by third party for-profit businesses. Students will have access to real work placement opportunities and be able to provide healthcare services that benefit the college and the Ottawa community.

On either side of the boulevard, you could have access to dental and physiotherapy offices; chiropractor, massage or sports injury clinics; and healthy food bistros, coffee shops, and nutritional counselling—just to name a few.

“You could almost envision a retail-like experience,” says Steve Dulmage, Manager at BuildGreen

Solutions and consultant on the Healthy Living Education project. “You can be in the [same] building for more than one appointment.”

Services along the boulevard will include existing College services, some of which will be relocated to the HLE building. Additional spaces will be made available to external healthcare service providers through a competitive tendering process. In each case, the company must commit to providing a significant number of employment opportunities for students both on campus and at other sites they operate throughout the community.

Modeled on a “living lab” concept

The building will be modeled on a “living lab”—a concept that is not new to the Algonquin College community. Indeed, there are already a couple of existing College-run and student-led learning enterprises on campus where students interact with real clients in an environment that is similar to a workplace, such as Restaurant International, and the student dental and massage clinics.

In addition, the College is also home to the Health Sciences Simulation Lab, a facility that simulates a clinical environment using mannequins and technologies that replicate what could happen in a real life clinical setting.

The HLE facility would open the doors to even more living lab possibilities through the new physiotherapy and occupational therapy programs, says Dr. Barb Foulds, Dean of Health, Public Safety and Community Studies. The College is also prepared to partner with third party organizations to create new learning enterprises.

“There’s a need to have a seniors adult day program in the West end,” says Dr. Foulds. “What a better opportunity to collaborate with experts in this area to launch a day

program where we bring seniors [to Algonquin] to do activities...and have a meal that’s prepared by our students.”

The HLE initiative represents a new model for developing [educational] facilities, says Rouble.

“It’s not just about looking at what [Algonquin] needs immediately, but look at what the Ottawa community needs.”

A healthier planet

Redeveloping and expanding A-Building is a decision that Phillip Rouble, the Associate Director of Facilities Planning and Sustainability, says will transform the Navaho Street façade, creating an inviting and welcoming campus for students and community members alike.

“We want to welcome the community on campus to work with us in terms of helping us support education, and also looking for new ways that we can deliver education and provide services to the community,” says Rouble.

LEED® (Leadership in Energy and Environmental Design) Gold standard certification will be the minimum requirement for the design and the building’s features, but certainly not the maximum.

For the HLE initiative, this means the design of the building and its features will be focused on minimizing the building’s environmental footprint, while focusing on energy efficiency and conservation.

Unlike some of the ACCE building’s more overt features, such as the living wall and rooftop green space, the HLE will emphasize more of the social aspects of sustainability, around promoting health and well being.

“It’s not saying there won’t be some [overt features],” says Rouble. “HLE is really about looking at the holistic, social, environmental, and economic side of sustainability.” **AN**



Evolving healthcare system requires evolved healthcare professionals

Embracing the shift toward community-based, patient-centred care



Leading a healthy life is about much more than simply healthcare. Traditionally, our society has emphasized a reactive healthcare model that treats acute conditions, often at the expense of prevention. But that model has finally begun to change.

Ontario's population is aging, and by 2017—for the first time—more Ontarians will be over 65 years old than under age 15. People are also living longer. Given that 50% of current healthcare costs are typically incurred after age 65, Ontario can expect a dramatic impact on its healthcare system. With this in mind, the province has realized it must shift its focus to community-based care.

That shift fits perfectly with what Algonquin College's leadership sees as the future of healthcare.

"As a major trainer of the health and wellness workforce in the Ottawa Valley, we have been watching the province's increased emphasis on home care and healthier living," says Dr. Barb Foulds, Dean, Health, Public Safety and Community Studies. "Ensuring our graduates are successful in the future requires us to prepare them for work outside of hospitals."

The healthcare system is changing to respond to the needs of Ontarians. And Algonquin College's Healthy Living Education (HLE) initiative stands ready to be part of that evolution.

HLE is a collaborative, com-

munity-integrated initiative that brings all health sciences and wellness disciplines together in a prominent location at the college's Ottawa campus. The building will be something of a "living lab," where students have the opportunity to learn about a variety of disciplines.

Upon entering the building, visitors will be treated to a "boulevard" of healthcare services—storefronts operated by the college and partners, and staffed by students as part of their learning. The community will be invited in to access innovative healthcare solutions that focus on education, prevention and treatment.

Because of its wide variety of programs, and its significant role

in training and retraining the health and wellness workforce of Ontario, Algonquin is uniquely poised to educate both the college community and neighbouring communities about how to live a healthier life.

"One of the major focuses [in healthcare] is the prevention of diabetes," says George Langill, former CEO of the Royal Ottawa Health Care Group. "There's a direct relationship between obesity and diabetes. So how do we get young people to think about healthy choices that, over time, help prevent diabetes? By educating them about better eating habits. [In this way], the College's Food and Nutrition Management program can contribute to Healthy Living Education."

Langill points out other opportunities for interdisciplinary collaboration. For example, the College's construction programs can teach students to design and build homes that will better accommodate an aging population. The School of Business could instruct on how to promote a "determinants of health" strategy, to healthcare professionals as well as to the public.

The College's technology programs are already contributing towards online and digital health resources and projects; students conducting a recent applied research project helped make a number of improvements to a sensor that detects when a senior has fallen, and sends out an automatic call for assistance.

"Research and learning have a



HLE presents the opportunity to effectively integrate health and wellness services with education and research.

George Langill, former CEO Royal Ottawa Health Care Group

significant role to play in disease prevention," says Langill. "HLE presents the opportunity to effectively integrate health and wellness services with education and research."

By increasing awareness of the various health determinants, HLE will support a shift toward an integrated system that reflects the public's needs—now and in the future. **AN**

Change required for traditional healthcare approach

In the face of changing demographics and rising healthcare costs, one thing is certain: Ontario needs to make a fundamental shift in how healthcare is delivered.

With increasing healthcare costs and an aging population, hospital care in the future will be primarily for those with the most serious illnesses. There will be more emphasis on home care, and a greater appreciation for the fact that leading a healthier life is a shared responsibility—between the health professional, the health system and the patient.

Ontario's Ministry of Health and Long-Term Care made it clear, in its February 2015 healthcare action plan, *Patients First*, that their emphasis is on integrated care centred around patient needs: "Ontarians will have better and faster access to quality health services." Patients will also see greater transparency within the system so they can make informed decisions, and will be able to take advantage of more options for care closer to home.

This shift should be a welcome one for all Ontarians. At some point in our lives, each of us will rely on the healthcare community for some aspect of our overall

wellbeing and the wellbeing of those around us. With a growing number of elderly Ontarians, this means more of our friends, family and loved ones will need care in the near future.

But if we, and those close to us, are going to be able to benefit from the province's proposed level of higher service, we must all lead healthier lives. And we will require support from professionals trained in this new approach to care.

"[To date], we've focused on acute care hospitals to manage chronic disease," says George Langill, former CEO of the Royal Ottawa Health Care Group. "That's been a dreadful failure... What we've got to do is transform the way we deliver our services."

Langill sees the ministry's new action plan as a solid step toward making that much-needed transformation "to a truly integrated, continuous system that reflects the needs of [people living with] chronic diseases."

This responsive, coordinated model of healthcare is at the heart of Algonquin College's Healthy Living Education (HLE) initiative. By taking a patient-centred and community-centred approach, this "living lab" facility will address



the skills and capacity needs of eastern Ontario's health and wellness sectors. It will also open the door for Ontarians to benefit from enhanced, community-based care that better reflects their individual needs.

"Ontario's colleges train more than half of the local healthcare workforce—from nurses to respiratory therapists, and more—while making an increasingly large contribution to the wellness workforce through programs like Fitness and Health Promotion, and our culinary programs, to name

a few," says Claude Brulé, Senior Vice-President, Academic. "Given the significant role we play in training healthcare professionals, we know we must be ready to train and reskill the new healthcare workforce needed for this next evolution in care."

In his *Patients First* message, Dr. Eric Hoskins, Minister of Health and Long-Term care, acknowledged that Ontario's healthcare system faces obstacles—an aging population and finite financial resources. "But these are not insurmountable challenges," he writes. "It is simply

a matter of choices. Our choices must be rooted in evidence and patient experience. Our choices must put patients first. Because doing a better job in healthcare means understanding and predicting the needs of Ontarians, and supporting models that best serve them."

With this new facility, Algonquin will do exactly that: deliver the healthcare professionals of the future who will meet the needs of Ontario's public, and ultimately help Canadians live healthier lives. **AN**

Skills for tomorrow's health and wellness workforce



With the right support from the broader community and the province of Ontario, many Algonquin College health and wellness programs could be relocated under one roof, supporting inter-professional collaboration among students, faculty, and the community.

"It's bringing together every program under one roof and creating a synergy that is unparalleled, that brings together not just people in healthcare, but also from the wellness side," says Claude Brulé, Senior Vice President Academic.

He gives an operating room as an example. The operating room unites many different professionals, each with their own expertise and each contributing to a successful outcome for the patient.

This, Brulé says, is a patient-centred experience that can be replicated through living labs in a new building. Through the Healthy Living Education expansion, Algonquin would have the facilities to educate new health and wellness professionals looking to join tomorrow's workforce, while upgrading the skills of those in industry who are looking to adapt to the new community-based approach to healthcare in Ontario.

The demands of an aging population and declining government funding are prompting a change in the way the Ontario government administers healthcare. The shift means moving away from hospital-based care and into the community, says Dr. Jim Robblee, Board Member, Algonquin College Board of Governors and Chief of the Division of Cardiac Anesthesiology at the University of Ottawa Heart Institute. He says he believes Algonquin is uniquely positioned to address this need.

"The purpose of putting college programs into one building would have the same complementary effect that we're seeing in construction

Programs you might see in this new building

- 1 Medical Device Reprocessing
- 2 Spa Management
- 3 Bachelor of Technology - Digital Health
- 4 Recreation & Leisure Studies
- 5 Developmental Service Worker

and trades," says Dr. Robblee. "People are working in slightly different areas, but with a common purpose."

Nutrition, wellness, mental health and physical activity are all important aspects of healthy living that contribute to better health outcomes, but as occupations they can sometimes operate in silos, independent of each other. Bringing all of these programs together will not only lead to better health outcomes, but those who work in these separate occupations will now have a greater awareness of each other's role, and, ultimately, work together to enhance the patient's outcome.

"If we do this well collectively, we'll help improve wellness and minimize complications that occur when [healthcare] problems go unattended," says Brulé. **AN**

Algonquin committed to serving as an example of healthy community

Picture this—you enter a beautiful, brand new building and are immediately greeted by a boulevard of storefront health and wellness services. You hear the sounds of a busy workout facility, you smell the wonderful aromas of healthy food wafting in the air, and you see people ranging from children to seniors taking in all the services there are on offer.

That's a small piece of Algonquin College's Healthy Living Education vision—an integrated facility uniting the programming and services on campus that help our College community, and the community as a whole, lead a healthier life. Think of it like the Student Commons for health.

While that vision is a few years away, in the short-term the College remains committed to serving as an example of a healthy community through its existing programs for students and employees

"[We'll offer] expanded service for the Algonquin College community, with the potential of serving the greater surrounding community in the future," says Shelley Styles, Director of Student Support Services. She notes that, within the next year, Health Services hopes to offer extended weeknight and weekend hours.

Brent Brownlee, Director of Ancillary Services, says that the food services and retail areas on campus are also doing their part to promote healthy living as well.

"Hospitality students are looking at the nutritional aspects of food...and are already looking at ways to promote healthy eating on campus," he offers as one example.

During exam season Food Services ran a "Keep Calm and Eat Healthy" campaign, where nutritional food items were at the forefront. Within retail sales, Brownlee notes that selling active wear and fitness technology, like Fitbit, help to promote awareness about healthy living across the campus.

Highlighting the importance of mental health on campus has also been a priority, bringing many partners and new initiatives on campus in the past year. Whether you took a moment out to pet a cat or dog during a PAWS 4 Stress event, grabbed a seat on the Purple Couch, or took a dive in the AC Hub's ball pit, the College has organized many wellness programs targeted at reducing stress on campus for all members of the college community. PAWS 4 Stress in particular started off as an initiative for residence students around exam time, but since then it has been expanded—

now the dogs (and sometimes cats) will stay in the Student Commons building or even come to you via an escort bringing them to offices around the College for a short visit.

"We've had feedback that [PAWS 4 Stress] really brightens their day. It really turns their stressful feelings around," says Connie Powers, Manager, Pensions and Benefits.

Jennifer Swinwood, Disability Management Coordinator, says her team is working on creating a more strategic wellness initiative in collaboration with third party providers, such as Ottawa Public Health, in order to create more wholesome programs and services that address the specific needs of college staff.

"It's not just about counselling. It's about nutrition, financial matters, and legal matters," she says. "And understanding where are employees are looking for the most help and creating a strategic plan around that."

Both Swinwood and Powers agree that, in the future, College Human Resources will be looking at not only starting new programs or expanding existing programs, but also integrating student-focused wellness programs with employees programs in collaboration with the Algonquin Students' Association.

"In the past, we would bring in a speaker on health promotion or mental health and it would be very specifically geared to students or geared to staff," says Swinwood. "But now we're doing more integration with students." **AN**

Applied research (continued from page 1)
Kevin Holmes. "On every project we undertake, we create teams of students from various faculties within the College, and those teams work with a client to help them solve whatever challenge they may face...We're trying to promote healthy living and healthy education."

Through applied research and innovation in this new HLE building, Algonquin College students and faculty will develop practical solutions to everyday issues, such as the growing need for home care solutions to manage chronic disease. It will offer a rich array of opportunities to create and test prototypes, new products and services.

"We're looking to develop multi-use facilities, where the facilities are used for research, but also for education and to deliver health-care," says Holmes. "This new model [of health and wellness] is beginning to emerge because you can't just send everyone to the hospital—it costs too much money. There's a need for more localized service, and there's no reason why it can't be provided at a college or university."

Providing these services at a postsecondary institution actually introduces a significant advantage—the ability to combine disciplines and use living labs that cross-train students for multiple disciplines. This readies tomorrow's graduates with a more diverse skillset, which will be critical to their success in the future health and wellness industry.

"[With HLE], we're trying to cross-pollinate people from one field of study to another," says Holmes. "We're becoming interdisciplinary in how we address our projects."

Take HLE's smart apartment simulation lab, for example. The flexible, technology-enabled lab will provide a realistic home setting where students can learn and practice the delivery of primary healthcare services in a community setting.

The smart apartment would enable students in interior design or construction programs to learn hands-on the skills they will need to build new homes with Ontario's aging population in mind.

Students in Health & Community Studies programs can partner with local technology companies to test devices that monitor seniors' movement patterns and alert caregivers of worrisome changes in habits.

And those studying occupational therapy or physiotherapy can work together with construction trades faculty and students to test safe and convenient home environments for persons with dementia or disabilities.

By continually testing new products and technologies—with real patients—faculty, students, and professionals from a variety of fields will be able to see real-time results, streamlining devices and approaches as they go.

In this way, HLE will be a true living lab for learning and innovation.

"It's just a matter of getting the public onto our campus so they can make use of the services we offer," says Holmes. HLE will provide an opportunity to do that. It's not just for people coming to learn; it's for people coming for treatment who can benefit from our [facilities]." **AN**