

## 2018 Report to the Community





# WELCOME

Messages from our Executive



## Message from Ramona Robinson Chair, Board of Directors

Looking back on my first year as Board Chair, I am pleased to reflect on the progress made to position London Health Sciences Centre (LHSC) as a leader in the journey to help shape the future of health in London and in our region. The Board of Directors recognizes the increased need for collaboration at all levels of health care to enact the necessary shift to a more cohesive and streamlined model of care.

As the region's major academic health organization, LHSC can play a key role in helping to advance positive system change that improves access to services, quality of care, and patient and provider experiences. Achieving this goal requires strong and visionary leadership, which is

why we were excited to welcome Dr. Paul Woods as LHSC's new President and CEO in January 2018. It is clear that Dr. Woods' vision emphasizes the importance of LHSC working collaboratively as a system partner to ensure the growing population health needs across our region can be met with safe, efficient, and high-quality care. Supported by the Board, this vision will be reinforced by a renewed strategic plan which will guide LHSC's work in the coming years.

As always, patients will remain at the heart of our purpose, and the Board recognizes the importance of having the patient voice represented in our decision-making. Accordingly, we have taken a more active role in engaging LHSC's Patient and Family Advisors for advice and guidance at the Board level. Additionally, the Board has strengthened its collaborative approach to our governance work and has been engaged more closely over the past year with key external stakeholders within the region and the province to encourage and support system-wide change.

Ensuring safe, effective, and high-quality care for all patients at LHSC remains a top priority for the Board and has been a key area of focus as the organization prepares for the upcoming accreditation review process, which is an independent

third party assessment of our organization against standards of excellence. For this reason we strongly support LHSC's ongoing work to be an organization that is "accreditation ready every day" and have participated in accreditation readiness activities throughout the past year.

On behalf of the Board, I would like to thank Dr. Woods and all staff, physicians, students, researchers and volunteers for their contributions in providing safe and compassionate care. I would also like to extend my appreciation to all members of the Board who contribute their skills, values, voices and time in this voluntary role. The Board provides an important representation of our community and collectively, we are confident in and excited about the future direction of LHSC.





## Message from Dr. Paul Woods President and CEO

Since joining London Health Sciences Centre (LHSC) as President and CEO in January, I have been privileged to witness the commitment to excellence and evident passion of all LHSC staff, physicians, researchers, students, and volunteers in supporting and delivering high-quality and compassionate patient care. I am confident that these qualities, along with a renewed mission, vision, values, and strategic plan, will enable LHSC to build on its long legacy of excellence while improving the experiences of patients and providers alike.

Health care today is at a crossroads; it needs to become more focused on patients and families while consistently delivering at the highest standard of quality and safety possible. At the same time, we can expect funding constraints to continue, so we need to develop a more efficient and sustainable model of care that ensures we can deliver services that will meet growing health-care demands and significantly improve access at all points of need.

I believe there is only one way forward, and that is to look at our region as a health ecosystem. By examining how we collectively operate within a network of hospitals, community health providers, social service agencies, and public health organizations, we can identify new ways to provide more seamless care and supports all along the patient's journey, rather than function as a series of care episodes provided in isolation as we tend to today. Ultimately, our collective aim should be keeping people healthy and better supported before and after they need hospitalization, which will lead to better patient outcomes and experiences at a lower system-level cost.

LHSC is dedicated to helping achieve this vision through our strategic plan, which will focus on supporting and empowering our people and aligning our resources to optimize our care, teaching and research mission. As we ready for Accreditation later this year, we are building a culture that positions us to consistently and sustainably deliver at the highest levels of quality and safety possible—every day—and we are actively strengthening the patient voice in our planning as part of that work. Emphasis will also be placed on extending that capacity to directly support regional collaboration, leading to new and more effective care pathways within a stronger system of health.

Despite the ongoing challenges of the fiscally constrained health-care environment, LHSC was able to maintain a positive financial position for 2017/18, as you will see in the audited financial statements. This was achieved by LHSC's ongoing work to find more effective and efficient ways to deliver care and I believe that, together with system partners, we can continue developing solutions to ensure sustainable, high-quality outcomes for the patients we collectively serve.



## Message from Dr. Andrea Lum Chair, Medical Advisory Committee

I am pleased to provide an update on the work being done by the Medical Advisory Committee (MAC). The MAC is the primary liaison between medical practitioners and the Board of Directors at London Health Sciences Centre (LHSC) as required by the *Public Hospitals Act*. We credential the professional staff (physicians, dentists, midwives and fellows) with privileges at the hospital and provide oversight of the medical quality of care and patient safety provided at the hospital.

Physicians are key members of the health-care team when it comes to influencing quality improvement in

hospitals. Accordingly, the MAC has focused on providing increased rigour and structure to the way LHSC measures physician performance as it relates to patient safety and quality. While LHSC has tracked its quality data against a set target in a performance monitoring tool (known as a balanced scorecard) for some time, there was an opportunity to integrate more meaningful metrics for physicians into organizational performance tracking. Over the past year, the MAC selected five quality indicators for which physicians own a large accountability and these are now being tracked across all departments, enabling more meaningful engagement of physicians in quality and safety performance tracking. This data reflects the ways in which physicians directly contribute to quality at the hospitals, and by highlighting these medical indicators, physicians can more easily identify the areas in which they need to improve. LHSC is among the first hospitals in Ontario to measure this type of physician performance data and through this important work, we are making what was once invisible, more visible, to improve patient safety and quality of care.

It is important to acknowledge the work of the MAC in helping to ensure LHSC is prepared for Accreditation, a voluntary process undertaken by health-care

organizations with the goal of improving patient outcomes and health system performance. Recognizing that physicians play an essential role in ensuring high-quality patient care, the MAC continues our dedication to this process as part of LHSC's ongoing focus on delivering care at the highest standard possible.

With a focus this past year on data and quality indicators, I want to acknowledge that at the heart of their work, physicians care for people first. Our physicians deliver quality care through skill and knowledge with compassion and dedication, and in turn we must ensure we care for ourselves and each other with those same attributes. The MAC remains committed to ensuring physicians have access to emotional and wellness supports to help enable their success in a challenging environment.

I would like to thank LHSC's quality improvement team whose data analysis and documentation has enabled much of our success, as well as my MAC colleagues and all LHSC physicians for their efforts toward improving quality care. I look forward to continuing this work in the coming year.





## OUR STRATEGIC PRIORITIES

In 2017/18, London Health Sciences Centre (LHSC) continued its two-year transitional plan which provides a roadmap to ensure delivery of a focused, relentless and standardized approach to improving the quality, safety, consistency of care, and the patient experience across LHSC. The Transitional Plan created a foundation of continuous quality improvement, stewardship and system leadership upon which a new strategic plan was developed in 2018/19.



### Continuous Improvement

LHSC implemented a standardized approach to quality improvement with medical leaders, operational leaders and staff across the organization working towards common quality indicators that are measured across all hospital departments. Measuring common safety indicators sets a baseline of performance and enables everyone to find solutions in areas that require improvement. Enhanced operational communications and engagement, and strengthened operational management planning and quarterly performance monitoring processes further enable LHSC to improve on the delivery of high-quality care.

LHSC remains committed to continuing to improve the patient experience. In partnership with patient and family advisors, a Patient and Family Framework, including a Patient Declaration of Values, has been created. LHSC has also begun the recruitment of a large and diverse group of patient and family advisors to supplement the more than 150 current advisors who volunteer their time and perspectives to help inform decision-making across the hospital, including care delivery and strategic planning.





## Stewardship

Experiencing heightened patient access challenges similar to hospitals across the province, LHSC continues to implement improvement strategies for patient access and flow. Included in these strategies are a Code Gridlock policy and a Hallway Transfer Protocol created to standardize and empower caregivers to deliver safe and high-quality care during peak times and in challenging circumstances. These protocols provide patients safe and timely access to care as LHSC works to further implement in-hospital and regional strategies to alleviate patient access issues.

LHSC is participating in Choosing Wisely Canada, a national campaign to help clinicians and patients engage in conversations about unnecessary tests and treatments, and make evidence-based and effective care choices. LHSC is implementing recommendations for over 15 clinical specialties, including customizing care to the patient based on communication with the patient and family. One example includes radiology where ultrasound will be used in place of computed tomography (CT) for the evaluation of suspected appendicitis in children. Ultrasound reduces radiation exposure, is cost-effective and has excellent accuracy. If the results of the ultrasound are unclear, it may be followed by CT.



## System Leadership

LHSC is partnering with the South West Local Health Integration Network (LHIN), Home & Community Care, St. Joseph's Health Care London and the Thames Valley Family Health Team to provide Connecting Care to Home (CC2H), an integrated, multi-disciplinary team approach across care settings, including hospital, community and primary care, developed to support patients with chronic diseases to improve safety, quality and enhance the patient and family experience. The program began for patients with Chronic Obstructive Pulmonary Disease (COPD), and has expanded for patients experiencing congestive heart failure with further plans to expand into other chronic diseases. Outcomes of the program include decreasing hospital length of stay and Emergency Department visits, decreased readmission rates, and much higher patient satisfaction with their care and ability to manage their disease.

LHSC is also actively partnering with the South West LHIN's Medical Imaging Integrated Care project to establish a better flow for patients requiring a Magnetic Resonance Image (MRI) in the region. The protocol set will ensure MRI scanning standardization to allow patients to receive a consistent scan wherever they are in the region.





## Moving Forward

The two-year Transitional Plan has well positioned LHSC to finalize a new strategic plan and vision, which was informed by over 1,000 stakeholders, including patient and family advisors. The new strategic plan will reinforce the direction we are taking as the region's major academic health organization in continuously improving quality, performance, and safety, as well as our commitment to patients and families, staff, physicians, and our community, and will emphasize collaborative work with system partners to build new, high-quality and sustainable regional care models to better serve patients.



## FINANCIAL STATEMENTS

LHSC is committed to prudent stewardship of funding dollars and transparent management practices. As our financial results show, we ended the 2017/18 fiscal year in a positive position, despite ongoing funding pressures. Moving forward into the next fiscal year, we will continue to invest in quality-focused initiatives, finding more effective and efficient ways to deliver care to ensure sustainable, high-quality outcomes for the patients we serve.



### Message from Brenda Bird Treasurer, Board of Directors

I am pleased to report on the financial results of London Health Sciences Centre (LHSC) for the fiscal year ended March 31, 2018.

LHSC's reported revenue over expenses is \$8.2 million or a margin (surplus as a per cent of total revenues) of 0.7%. This is the 12th straight year of generating small

surpluses and this has allowed LHSC to build a strong balance sheet and invest in key areas of the hospital. The Ontario Hospital Association has recommended that hospitals need to generate at least 2% of total margins for reinvestment in capital.

Our focus on fiscal discipline, financial flexibility and liquidity has served the hospital well. As we enter 2018/19, there is a need to further invest in infrastructure, medical capital equipment and information technology. Our financial position allows us to strategically invest in these focused areas for the benefit of our patients. We do however, recognize the need to reduce our current level of occupancy and address volume pressures in many of our clinical areas.

In this regard, we will continue to invest in quality-focused initiatives that reduce inefficiencies, increase patient access and explore regional opportunities with our other community and hospital partners.

Our new President and CEO, Dr. Paul Woods has stated that he wishes to actively partner in building a strengthened and regionally integrated health system. LHSC is well positioned to help lead these changes which align with our strategic objectives to improve health outcomes and enhance the patient experience.

I would like to sincerely thank the volunteer members of the Finance and Audit Committee for their dedication to our committee, our patients and our hospital during the past year. On behalf of the Finance and Audit Committee, I would like to thank our staff, physicians and management for their commitment to ensuring we place our patients first.

*Brenda Bird*  
Treasurer, Board of Directors  
London Health Sciences Centre



## Independent Auditors' Report on the Summary Financial Statements

To the Board of Directors of  
London Health Sciences Centre

### Report on the summary financial statements

The accompanying summary financial statements, which comprise the summary statement of financial position as at March 31, 2018, and the summary statements of operations and cash flows for the year then ended, and related basis of presentation note, are derived from the audited financial statements of **London Health Sciences Centre** for the year ended March 31, 2018. We expressed an unmodified audit opinion on those financial statements in our auditors' report dated May 30, 2018.

The summary financial statements do not contain all the disclosures required by Canadian public sector accounting standards. Reading the summary financial statements and the auditors' report thereon, therefore, is not a substitute for reading the audited financial statements and the auditors' report thereon of **London Health Sciences Centre**.

### Management's responsibility for the summary financial statements

Management is responsible for the preparation of a summary of the audited financial statements on the basis described in the basis of presentation note.

### Auditors' Responsibility

Our responsibility is to express an opinion on whether the summary financial statements are a fair summary of the audited financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standard 810, "Engagements to Report on Summary Financial Statements."

### Opinion

In our opinion, the accompanying summary financial statements derived from the audited financial statements of **London Health Sciences Centre** for the year ended March 31, 2018 are a fair summary of those financial statements on the basis described in the basis of presentation note.

London, Canada  
May 30, 2018

(signed) Ernst & Young LLP  
Chartered Professional Accountants  
Licensed Public Accountants

## Management's Summary Financial Results – March 31, 2018

### Summary Statement of Financial Position

London Health Sciences Centre (LHSC) continued its strong financial performance during the past fiscal year. Liquidity remained above minimum thresholds despite a challenging funding environment. LHSC's current ratio of 2.15 is the result of 12 consecutive surpluses and reflects a deliberate financial strategy of financial sustainability, flexibility and cost containment. Current and long-term obligations under various debt agreements are adequately covered.

### Summary Statement of Operations

LHSC ended the year with a surplus of \$8.2 million. This position is mainly the result of revenue related to a capital project settlement from the MOHLTC/LHIN, combined with the under spending of our capital budget. This is the sixth straight year that revenues have not kept pace with inflationary costs on labour, medical/surgical costs, drugs and other supplies. In addition, continued patient demands in most of our clinical programs created unbudgeted cost pressures that had an impact on our bottom line.

### Summary Statement of Cash Flows

LHSC invested \$29.9 million in clinical capital, building service equipment, information systems and buildings during the year. In addition, LHSC spent \$15.2 million in externally funded or recoverable capital projects.

Capital spending is financed through a combination of operations and deferred contributions from both levels of government, the London Health Sciences Foundation and Children's Health Foundation.

Current assets include cash and cash equivalents of \$231.3 million, consisting of restricted cash and portfolio investments of \$8.3 million in order to discharge certain future obligations and \$223 million in unrestricted cash and cash equivalents.

### Basis of Presentation

The information contained in the summary financial statements is in agreement with the related information in the complete audited financial statements. The summary financial statements contain major subtotals and totals from the complete audited financial statements. The complete audited financial statements can be obtained on the [LHSC website](http://www.lhsc.on.ca/annualreport).



## SUMMARY STATEMENT OF FINANCIAL POSITION

As at	March 31, 2018	March 31, 2017
	(000's)	(000's)
<b>ASSETS</b>		
Current assets	\$ 310,726	\$ 291,362
Restricted cash and investments	\$ 17,942	\$ 14,434
Capital assets, net	\$ 922,914	\$ 934,910
	\$ 1,251,582	\$ 1,240,706
<b>LIABILITIES, DEFERRED CONTRIBUTIONS, UNRESTRICTED NET ASSETS AND REMEASUREMENT LOSSES</b>		
Current liabilities	\$ 144,467	\$ 129,537
Long-term liabilities and deferred contributions	\$ 783,121	\$ 800,308
Unrestricted net assets	\$ 335,362	\$ 327,134
Accumulated remeasurement losses	\$ (11,368)	\$ (16,273)
	\$ 1,251,582	\$ 1,240,706

## SUMMARY STATEMENT OF OPERATIONS

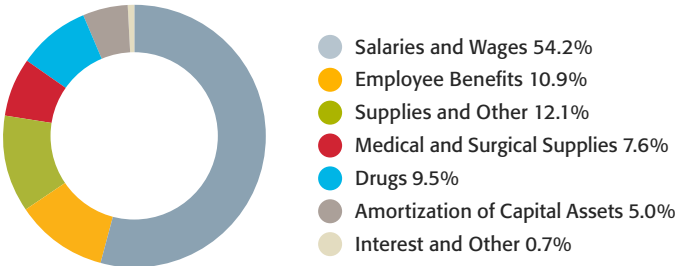
Year ended	March 31, 2018	March 31, 2017
	(000's)	(000's)
<b>REVENUE</b>		
Ministry of Health and Long-Term Care, South West Local Health Integration Network and Cancer Care Ontario	\$ 1,003,462	\$ 980,022
Other	\$ 220,042	\$ 203,356
	\$ 1,223,504	\$ 1,183,378
<b>EXPENSES</b>		
Salaries and benefits	\$ 791,192	\$ 775,306
Other	\$ 424,084	\$ 405,111
	\$ 1,215,276	\$ 1,180,417
<b>Excess of Revenue over Expenses</b>	\$ 8,228	\$ 2,961

## SUMMARY STATEMENT OF CASH FLOWS

Year ended	March 31, 2018	March 31, 2017
	(000's)	(000's)
<b>CASH PROVIDED BY (USED IN):</b>		
Operating Activities	\$ 46,967	\$ 63,140
Financing Activities	\$ 12,431	\$ 17,659
Investing Activities	\$ 2,275	\$ 1,222
Capital Activities	\$ (45,099)	\$ (43,351)
<b>Net increase in cash and cash equivalents</b>	\$ 16,574	\$ 38,670
<b>Cash and cash equivalents, beginning of year</b>	\$ 206,474	\$ 167,804
<b>Cash and cash equivalents, end of year</b>	\$ 223,048	\$ 206,474

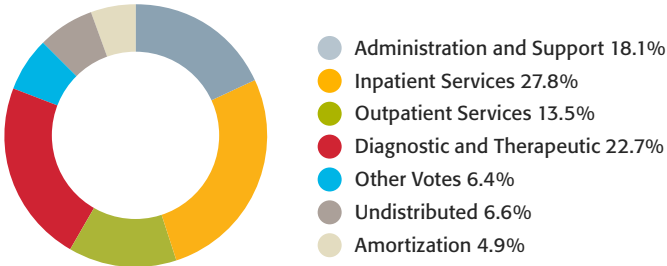
## Total Expenses (%) by Cost Component

(\$1,215 Million)



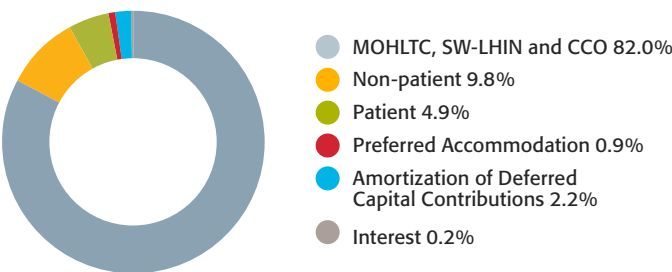
## Total Expenses (%) by Type

(\$1,215 Million)



## Total Revenue (%) by Type

(\$1,224 Million)





## FACTS & STATS

London Health Sciences Centre (LHSC) is one of Canada's largest acute care teaching hospitals, affiliated with Western University and other educational institutes. Located in London, Ontario, Canada, LHSC is a multi-site facility that encompasses University Hospital, Victoria Hospital and Children's Hospital, the Kidney Care Centre, Byron and Victoria Family Medical Centres, 54 Riverview Avenue Site, and is the home of Lawson Health Research Institute and Children's Health Research Institute, CSTAR (Canadian Surgical Technologies & Advanced Robotics), the Fowler Kennedy Sport Medicine Clinic, as well as Children's Health Foundation and London Health Sciences Foundation.

### Patient Care 2017/18



Emergency visits  
**165,239**



Ambulatory visits  
**790,720**



Admissions  
**52,803**



Patient days  
**370,310**



Average length  
of stay (days)  
**6.6**



Births  
**5,648**



Operating room cases:  
Inpatient  
**17,777**



Operating room cases:  
Day surgery  
**9,865**



Operating room cases:  
Endoscopy  
**15,731**



Beds:  
University Hospital  
**415**



Beds:  
Victoria Hospital  
**565**



Beds:  
Children's Hospital  
**107**



Bassinets  
**36**

Statistics based upon data for the period  
April 1, 2017 to March 31, 2018





## Working at LHSC

2017/18

Physicians, dentists and midwives	957
Nurses	3,744
Residents, fellows and visiting electives	1,170
Medical students*	727
Research personnel	924
Technicians and technologists	929
Administrative and corporate professional (note: includes clerical, administrative & non-union professional)	1,998
Service	1,279
Management	299
Allied health	592
Volunteers	900
Non-medical students	724
Student nurses	1,023

\*Senior medical students (3rd and 4th year) who receive training at LHSC throughout the year





## LHSC YEAR IN REVIEW 2017/18

Building on our proud legacy of care, teaching and innovation, this past year LHSC celebrated a number of medical firsts, award-winning initiatives, and program anniversaries. Through these achievements, LHSC is improving patient care and the patient and family experience, and helping to ensure a strong system of health that will be able to support population health-care needs.

To read more on each of these stories, visit [www.lhsc.on.ca/annualreport](http://www.lhsc.on.ca/annualreport)



### Mental Health Geriatric Behavioural Care Unit opens

A 12-bed mental health geriatric behavioural care unit (GBCU) opened at Victoria Hospital on April 5, 2017. The GBCU provides a different model of care, with staff who specialize in supporting elderly patients and in optimizing transitions from hospital to long-term care homes.



### LHSC epilepsy patients first in Ontario to benefit from robot-assisted neurosurgery

LHSC's Epilepsy Program became the first in Ontario to perform a robotic-assisted stereoelectroencephalography (SEEG) procedure, in which electrodes are placed into the brain to map epileptic seizure activity. Once the seizure onset is localized, neurosurgeons can determine whether a good seizure outcome may be possible through brain surgery.







## Connecting Care to Home program wins national Quality Award

LHSC's Connecting Care to Home (CC2H) program was named a recipient of the 3M Health Care Quality Team Awards for *Quality Improvement Initiative(s) Across a Health System* by the Canadian College of Health Leaders. CC2H is an integrated, multi-disciplinary team approach across care settings—including hospital, community and primary care—developed to support patients with chronic diseases that may experience higher rates of emergency department visits and readmission following a hospital stay.



## Women's Continence Clinic opened at LHSC

Through the support of donors, LHSC opened a new nurse-led Continence Clinic in the Women's Ambulatory Care space at Victoria Hospital this past November. The clinic significantly decreases wait times for women to receive a urogynecology initial assessment, and in turn facilitates quicker access to a urogynecologist for those patients requiring more involved interventions.

## YEAR OF ANNIVERSARIES



### Westmount Kidney Care Centre celebrates fifth anniversary

The Kidney Care Centre at Westmount Shopping Centre marked its fifth anniversary with patients, families, team members and former staff. The Kidney Care Centre is home to more than 100 staff and physicians, and 1,200 patients.



### Celebrating 10 years of critical care outreach

Established across the province in 2008 by the Ministry of Health and Long-Term Care, Critical Care Outreach Teams (CCOTs) bring critical care support to high-risk patients located in units outside of an intensive care unit. LHSC is home to three CCOTs, including the Paediatric CCOT permanently established in 2011 at LHSC's Children's Hospital.



### Celebrating 30 years of Impact

Thirty years ago, a program was started to help reduce injury and loss of life in teens caused by preventable injuries. Today, that program continues to have a resounding impact on thousands of teens across the region.



### Transplant program holds celebration to mark special milestones

For the Multi-Organ Transplant Program, last year marked the 30th anniversary of the opening of the transplant unit—the first of its kind in Canada—and the 40th anniversary of the first liver transplant at LHSC. The latter has become especially meaningful today as some of our earliest liver recipients are the longest surviving in Canada and among the longest surviving in the world.





## OUR PARTNERS

London Health Sciences Centre (LHSC) depends on the support of its foundation and research partners, whose dedication allows our staff and physicians to continue providing our patients and their families with high-quality, compassionate and innovative care.

London Health Sciences Foundation | Children's Health Foundation | Lawson Health Research Institute



Seven years ago, London Health Sciences Foundation (LHSF) set an ambitious and unprecedented goal to raise \$200 million for LHSC. The response from communities throughout southwestern Ontario was overwhelming.

Supporters gave thousands of volunteer hours, bought Dream Lottery tickets, organized community events, and attended the Country Classic Auction and Tastings. Over 110,000 donors made 350,000 donations ranging from a single dollar to \$5.25 million. In the end, that outpouring of generosity helped LHSF surpass its campaign goal and raise a total of \$215 million for LHSC, including \$24.3 million in gross revenue from our 2017/2018 fiscal year.

This amazing generosity is already making an impact at LHSC.

A new cardiac electrophysiology lab that provides higher-quality diagnostic images

to improve patient care has opened. Researchers and clinicians have started leading-edge translational cancer research that they can apply directly to patient care. A self-referred, peer-supported program to improve mental health and addictions care for young people was opened. The team at Fowler Kennedy Sport Medicine Clinic has started to shift the culture around concussion in sport and is conducting a wide range of research initiatives to help people of all ages stay active. A state-of-the-art women's and children's care simulation centre where trainees can master their skills in a risk-free virtual environment was opened. And Canada's first hospital-wide implementation of personalized medicine – which uses the genetic differences between patients to provide the right dose of the right drug at the right time – began.

On behalf of everyone at LHSF, thank you for knowing that each and every gift matters and that together, we could accomplish something so incredible for patients and families at LHSC.

Continue the journey at [lhsf.ca](http://lhsf.ca)



Supporters of the 2017 London Run for Ovarian Cancer



The Country Classic Auction



Every child is capable of great things – if they have the chance for a healthy life.

At Children's Health Foundation, we are passionate about helping children achieve their potential. Hand-in-hand with our donors and partner organizations, Children's Health Foundation provides support that is strengthening and transforming paediatric health care and rehabilitation for the benefit of all children and youth in our region, like Keanna.

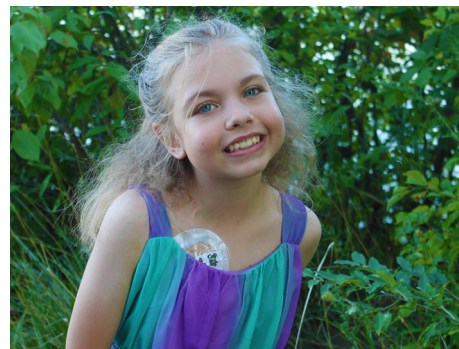
At six years old, Keanna was diagnosed with a rare kidney disease – Focal Segmental Glomerulosclerosis (FSGS). Keanna underwent a kidney transplant, but it was unsuccessful and she required dialysis. When home dialysis was no longer an option after a rare complication, Keanna required hemodialysis provided at the hospital.

For eight long months, Keanna attended Children's Hospital, London Health Sciences Centre six days a week for treatment.

During her dialysis, patient-centred programs that are funded by donors, helped keep Keanna positive and entertained. Her Child Life Specialist, Christine, would bring toys and craft supplies to distract her during difficult procedures and keep her occupied. Her Music Therapist, Karina, helped her express herself by making up stories and using instruments as sound effects—she even wrote a song with Keanna and they recorded it as a keepsake. And Ollie the Clown – a familiar face for many paediatric patients – would stop by to make her laugh.

Today, Keanna is back on home dialysis treatment, so she only has to visit the hospital every few weeks for check-ups and bloodwork.

Donor support has a lasting impact on children's health care in our region. Learn more about the miracles happening every day at [www.childhealth.ca](http://www.childhealth.ca).



Keanna was diagnosed with Focal Segmental Glomerulosclerosis (FSGS) when she was six.



Keanna enjoys playing Wii with her Child Life Specialist Amy in the Teen Room.





The Research Institute of  
London Health Sciences Centre and  
St. Joseph's Health Care London.

At London Health Sciences Centre (LHSC), research and patient care go hand in hand. As an academic research hospital, our researchers, staff and trainees work tirelessly to develop new knowledge that can be applied directly to patient care.

Lawson Health Research Institute (Lawson) is the research institute of LHSC and St. Joseph's Health Care London, and works in partnership with Western University and its constituent faculties. This research community is fully integrated within the hospitals and includes many successful health research programs including the Children's Health Research Institute.

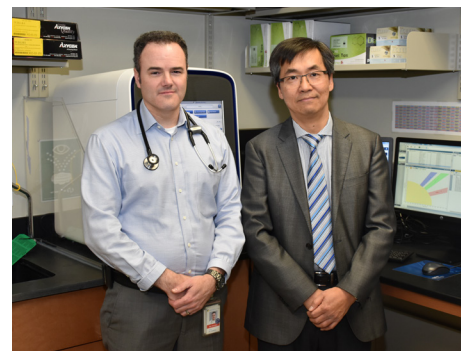
Research conducted by Lawson scientists at LHSC bridges the gap between discovery and the next generation of innovative health delivery.

Lawson scientist Dr. Richard Kim leads the personalized medicine program at LHSC, which analyzes patients' DNA to predict how they will respond to medications. For every drug there are patients whose bodies cannot metabolize or process it properly; the drug may not work and can

even be toxic. Personalized medicine uses pharmacogenomics – the study of genetic changes that alter the way a person responds to individual drugs. This innovative program now offers testing for cancer patients prescribed 5-fluorouracil chemotherapy, which is associated with high toxicity but is important in treating bowel, stomach and head and neck cancers. Oncologists at LHSC's London Regional Cancer Program can now refer patients for testing before their first dose of 5-fluorouracil.

Dr. Mandar Jog, Lawson scientist and neurologist at LHSC, and his team have developed a technology called TremorTek that is giving new hope to patients with tremors caused by Parkinson's disease or essential tremor. Neurotoxin therapy has been identified as a possible treatment for tremors, however it is necessary to know which specific muscles are causing the tremor. If the injection of neurotoxin is given in the wrong muscle or the patient is not given the correct dose, it could cause negative side effects. Using a combination of wearable sensors and complex algorithms, TremorTek helps to determine which muscles and what biomechanics are at play for each unique patient's tremor symptoms. Using this information, clinicians can precisely place injections to reduce tremor at the exact source.

To learn more about the many other innovations developed at Lawson and how our research impacts the care you receive, visit [www.lawsonresearch.ca](http://www.lawsonresearch.ca).



Dr. John Lenehan (left), oncologist at LRCP, and Dr. Richard Kim. Dr. Lenehan's patients benefit from the personalized medicine program and the testing of 5-fluorouracil.



Dr. Mandar Jog (right) and his team use sensors to isolate independent muscle movements in patients with tremors. The data is then run through a computer program that matches the muscle activity with the correct dosage of neurotoxin.