The Ottawa Hospital | L'Hôpital d'Ottawa

Inspired by research. Driven by compassion. Inspiré par la recherche. Guidé par la compassion.

Affiliated with uOttawa

The Ottawa Hospital
Annual Report 2016–2017

Message from The Ottawa Hospital Board Chair and CEO

Jamie McCracken
Chair, Board of Governors

Dr. Jack Kitts
President and CEO

"Inspired by research. Driven by compassion."

A hospital is many things to patients and their families. It's a place where they can face adversity while supported by compassionate caregivers. It can also be a place where they find healing, hope and optimism. In health care, each day brings something new. Patients can live full, comfortable lives with diseases that were once considered terminal. They can go home days or even hours after minimally invasive surgery that would have required a long stay a decade ago.

Day after day, we are inspired by the compassion, ingenuity and hard work of our hospital team.

Last summer, some staff members organized an impromptu outdoor wedding at the General Campus so a terminally ill patient and her fiancé could marry and celebrate their love. Going above the call of duty, the team organized everything from the dress to the venue to help make the family's wish come true. That was one story that made news headlines, but there are of thousands of other times when our teams go out of their way to help patients.

A pillar of our vision is research. We have globally-recognized researchers from Ottawa, Canada and the world. When their work reaches the stage that it can potentially help patients, the residents of National Capital Region and Nunavut are the first to benefit. This year, our world-class researchers provided new hope for patients with aggressive, early-onset multiple sclerosis (MS). The groundbreaking trial was the first to show the complete, long-term suppression of all inflammatory activity in people with this type of MS. This, too, made headlines.

We continue to make discoveries that enhance the patient experience and use our scarce resources wisely. A new study by our researchers found that almost one-third of patients admitted to our Emergency Departments (ED) for chest pain can be taken off heart monitors. This study could lead to improvements across the health-care system, freeing up those monitored beds for sicker patients and ultimately reducing overall ED wait times.

This was a watershed year for The Ottawa Hospital: our new campus will be built on the site of the former Sir John Carling building. The state-of-the-art care, research and teaching facility will support patient and family-centred care and innovative research for the next century. As we move towards designing and building the new hospital, we'll work closely with our community to realize our vision of 21st-century care for The National Capital Region.

To our staff members, thank you for everything you do. To our community, thank you for your support and generosity. This is an exciting time for our hospital, for health care, and for our region.

Message from the Board Chair and CEO of The Ottawa Hospital's Research Institute

Patricia Kosseim
Chair, Board of Directors

Dr. Duncan Stewart
Executive Vice-President, Research, The Ottawa Hospital
CEO and Scientific Director, Ottawa Hospital Research Institute
Professor of Medicine, University of Ottawa

"The impact of our discoveries is felt around the world"

The Ottawa Hospital is one of Canada's top learning and research hospitals, where excellent care is inspired by research and driven by compassion.

Our researchers are making important discoveries every day, unlocking the mysteries about how the body works, why we get sick and which treatments are best. But what makes us stand out even more is that we are leading the way in translating these discoveries into new therapies and approaches for improving health. Patients at The Ottawa Hospital may be the first to benefit, but the impact of our discoveries is felt around the world.

For example, we are one of the first hospitals in the world to offer stem cell transplantation as a clinical treatment for aggressive multiple sclerosis, based on the ground-breaking research of our own Dr. Harold Atkins and Dr. Mark Freedman. Dr. Atkins and his colleagues have also applied this research to other devastating autoimmune diseases, such as myasthenia gravis (MG). Our annual report tells the story of Anne Scott, the first MG patient in the world to receive this treatment. Not only did she achieve her goal of seeing her daughter get married, she has also been free of all MG symptoms for 16 years.

In the last year, we've also discovered how exercise may be able to help heal the brain, how asthma diagnosis could be improved, how chest pain can be managed more efficiently and how an individual's cancer cells might be used to create a personalized anti-cancer vaccine, just to mention a few of our exciting breakthroughs.

So it may not be surprising to learn that this year we've exceeded all our research goals, with an overall score of 96 percent for research in The Ottawa Hospital's corporate performance scorecard

We are very pleased with the considerable progress that we have made to imbed research into all aspects of The Ottawa Hospital, from providing the best clinical care to improving the quality and delivery of health services. We also continue to align closely with the University of Ottawa and its Faculty of Medicine, and we're excited about a new partnership with Algonquin College.

We continue to receive outstanding support from our community through The Ottawa Hospital Foundation. Every dollar donated to research allows our scientists to attract up to 10 more dollars from external sources, for a total research budget of over $100 million. This funding not only improves care for our patients and advances science, but also creates high quality jobs and training opportunities that attract some of the best researchers to Ottawa.

In the coming year, we look forward to expanding on this success and planning for a new world-class health and research centre at site of the former Sir John Carling building. This is a once-in-a-lifetime opportunity to build an innovative 21st century hospital from the ground up, where care is indeed inspired by research and driven by compassion.

In the spotlight

Woman's life transformed by stem cell procedure:
Anne Scott was on life support a dozen times because of a severe autoimmune disease. Now, the retired nurse is in remission thanks to a world-first stem cell procedure.

Anne Scott had one wish: to live long enough to see her daughter get married. Her odds didn't look good. She had been on life support 12 times in the year leading up to the wedding.

"If I caught a cold or any respiratory infection, it could send me into a crisis,' said Scott.

The former nurse has a condition called myasthenia gravis, in which the immune system attacks the communication channels between the muscles and nerves, making breathing or swallowing difficult.

Usually myasthenia gravis is quite treatable. But five years after she was first diagnosed, the usual methods had stopped working. So Scott's neurologist, Dr. Elizabeth Pringle, referred her to Dr. Harold Atkins, a pioneer in using stem cells to restart the immune systems of patients with multiple sclerosis and other autoimmune diseases.

"As far as we know, Anne is the first person in the world to have this procedure for myasthenia gravis,' said Dr. Pringle, a neurologist at The Ottawa Hospital and associate professor at the University of Ottawa. "It was done to save her life.'

"We've learned that when we restart the immune system, it grows back in better shape and doesn't attack the body anymore,' said Dr. Atkins, a stem-cell transplant specialist at The Ottawa Hospital and an associate professor at the University of Ottawa. "We had the idea that this would work for patients like Anne.'

In June 2001, Scott's diseased immune system was wiped out with strong chemotherapy, followed by a transplant of her own stem cells. She made it to her daughter's wedding in September that year, even though she was back in hospital a week later.

"Things just fell into place for a reason, but I know I'm one of the lucky ones. I just hope that stem cells can go on to help others with incurable diseases."

– Anne Scott

"That period after the transplant was the worst I'd ever felt," said Scott. "Things didn't change overnight.'

She started to notice a change six months after the transplant. Today, her myasthenia gravis is in remission.

This year, Dr. Atkins and Dr. Pringle published a study showing that Scott and six other myasthenia gravis patients who received the treatment no longer have symptoms.

"Their lives are not disrupted by seeing doctors all the time, or by dealing with possibly life-threatening muscle weakness," said Dr. Atkins. He noted that there are dangerous risks associated with the transplant procedure, and this treatment is only for patients with severe and untreatable forms of the disease.

Dr. Atkins' work has helped The Ottawa Hospital become a leading stem-cell transplant centre for patients with challenging autoimmune diseases.

Nineteen years ago, many were skeptical when he and neurologist Dr. Mark Freedman first proposed using stem cells to reprogram the immune system of patients with aggressive multiple sclerosis (MS).

However, years of careful follow-up of 24 patients with severe MS revealed that the procedure completely stopped the immune system's attack on the brain. Their paper published in The Lancet showed that most of the patients' disabilities stabilized, and nearly half even recovered lost abilities.

"It's wonderful," said Dr. Atkins, who was awarded the hospital's 2016 Chrétien Researcher of the Year Award for his work in stem-cell procedures for autoimmune diseases. "I've kept in touch with many of these patients, and I even work with one of them. It's amazing to see how well they are doing, compared to how sick they were when I first met them."

His next project is to find out whether using a version of this procedure can help keep liver transplant recipients from needing lifelong immune-suppressing medication.

These days, 59-year-old Scott enjoys spending time with her family and volunteering at the Kemptville District Hospital.

"Things just fell into place for a reason, but you know I'm one of the lucky ones," she said. "I just hope that stem cells can go on to help others with incurable diseases."

"We're treating immune system diseases in ways we never thought possible. It's a game-changer for some patients who have exhausted all other options."

– Dr. Harold Atkins

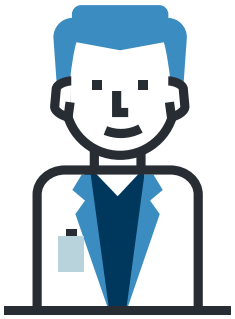
Fast facts

Our people. Our facilities.
Our patients. Our research.

4,362
Nursing professionals

11,809
Employees

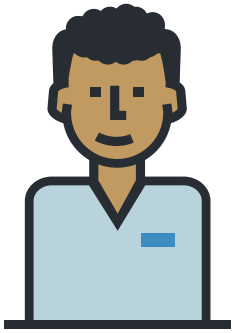
1,432
Physicians



1,152
Residents and fellows

61
Paramedic student placements

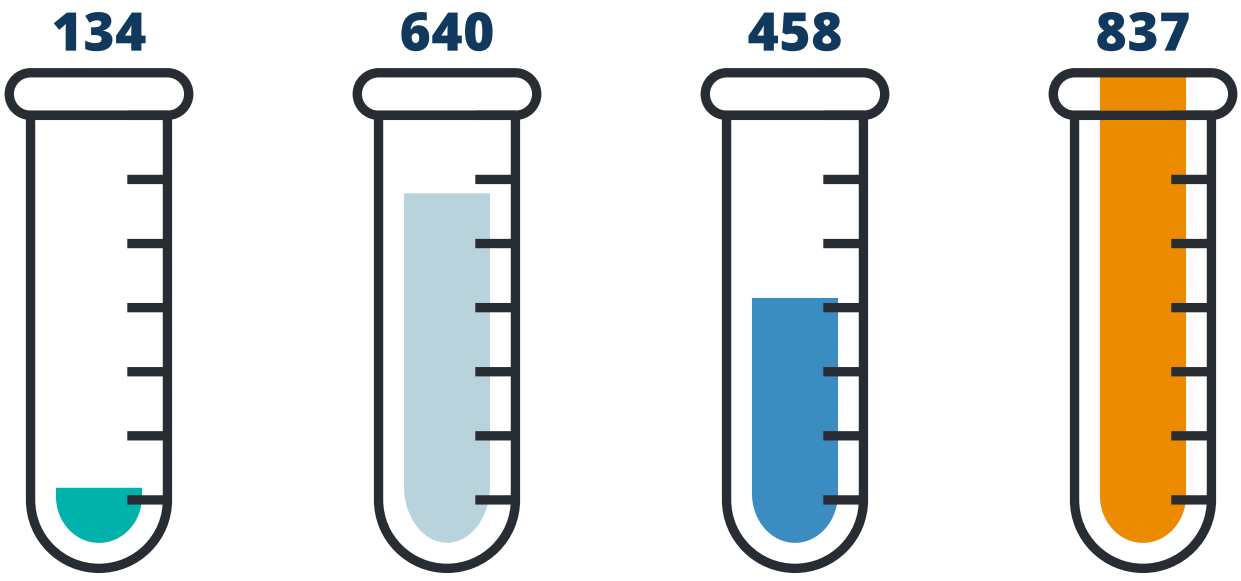
658
Medical students



1,632
Nursing placements

1,200
Volunteers

2,069 Total researchers



Basic and clinical scientists

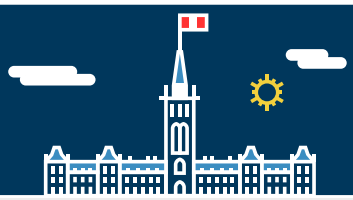
Clinical researchers/ investigators

Trainee researchers

Research support staff

4th Hospital
in Canada for peer-reviewed funding from the *Canadian Institutes of Health Research*

5th Hospital
in Canada for overall research funding



$1.4B
Impact on Ottawa economy due to our research (since 2001)

1,356
Scientific papers published in 2015

47
Active patent families

7
Spin-off companies

1,118
Beds

11
State-of-the-art core research facilities

65
Scientific research labs

7
National research networks

562
Active clinical trials

11,583
Patients enrolled in clinical trials

7.7
Average length of stay (days)

58,191
Patient admissions

177,679
Emergency visits

1,168,528
Ambulatory care visits

50,360
Surgical cases

6,178
Babies delivered

Corporate Performance Scorecard

At The Ottawa Hospital, excellence in patient care is our priority.

By improving on wait times, patients' rating of care and other key measures of a high-performing hospital, our goal is to rank among the top 10 percent of North American hospitals in providing safe, high-quality care to our patients.

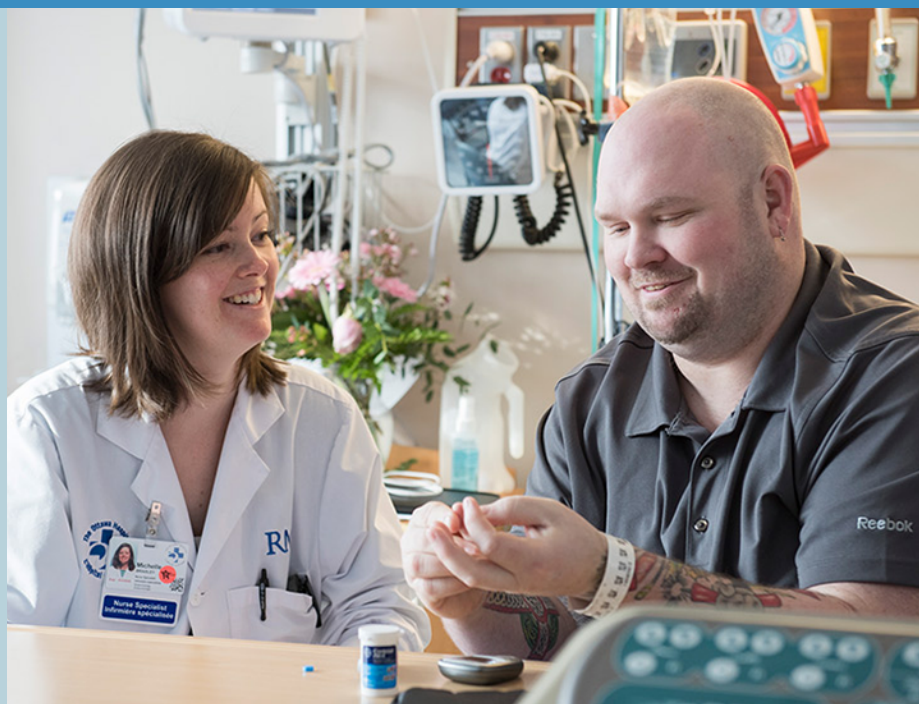
Strategic direction	Category	Indicator	2016–2017 result
Quality	Satisfaction/ experience	Overall rating of experience – inpatients Percent of admitted patients who rated their experience as 9 or 10 out of 10.	68.9%*
	Safety	Hospital standardized mortality ratio (HSMR) Ratio of actual deaths to the number of expected deaths. A ratio greater than 100 means more deaths occurred than expected; a ratio less than 100 means fewer deaths occurred than expected.	85.5
	Efficiency	Cost per weighted case – acute and day surgery patients Average cost of a standard hospital stay for an acute or day-surgery patient.	$6,281
	Access	Percentage of patients admitted through the Emergency Department who waited 24 hours or less before admission.	74.7%
People	Safety	Staff incidents – reportable (avg. per 30 days)	43.3%*
	Engagement	Absenteeism – annualized (sick days per full-time employee)	14.7%
Academics: research and education	Innovation	Research success composite score Calculated from the: • number of research studies published • number of times published research is cited • number of patients participating in clinical trials • number of patients consenting to be contacted for research purposes • amount of external funding received	4.8**
	Leading Education	Postgraduate training programs receiving full accreditation by Accreditation Canada	87.9%
Our community	System integration	30-day unplanned readmissions Percent of patients readmitted within 30 days of hospital discharge.	9.9%**
Finance	Sustainability	Total margin Percent by which consolidated revenues vary from consolidated expenses. Negative variance indicates revenues are lower than expenses; positive variance indicates revenues are higher than expenses.	0.22%**

*Measurable improvement during fiscal year

**Fiscal year target achieved

Top news

Compassion, community, research and technology



Innovative treatments and technologies changing lives today

Stem cells stop MS in its tracks
A clinical trial shows for the first time that an intensive procedure involving stem cells and chemotherapy can stop the damage that leads to MS, and even allow repair in some cases. Some patients in the trial now have no signs of the disease.

3D printing our way to better healthcare: a Canadian first
After losing his hand in a motorcycle accident, David Chasse picked up a water bottle with a moveable hand created by a 3D printer from Canada's first Medical 3D Printing Program.

Innovative computer tablet could help stroke patients recover
Stroke patients at The Ottawa Hospital are using a mobile computer tablet for recovery in between treatments and tests.

Personalized medicine leads to lung cancer breakthrough
An international clinical trial led by researchers at The Ottawa Hospital shows that 70 percent of lung cancer patients with a specific mutation responded to a new therapy. The therapy has now been approved for general use.

Stopping Parkinson's tremors
Deep brain stimulation is helping improve quality of life for patients with more advanced cases of Parkinson's disease.

Compassion at work

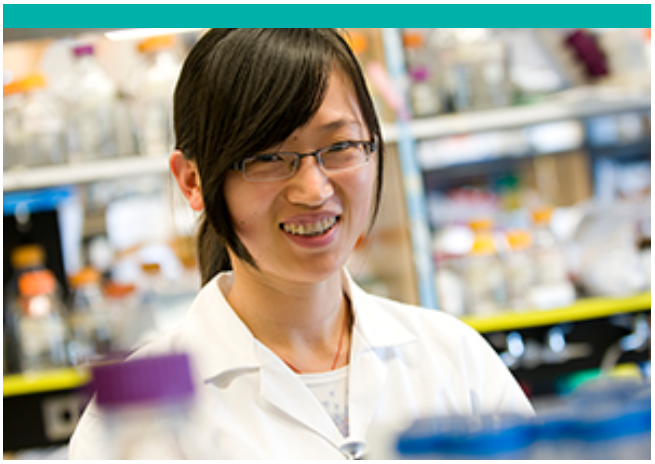
Helping dementia patients communicate
When some patients with dementia lose their second language ability, they revert to their mother tongue. This makes communication difficult, but the team at 4West went the extra mile to find a creative solution.

Staff planned patient's memorable wedding
Planning a wedding in a day might seem daunting, but for a number of staff members at the General Campus, it was a challenge worth pursuing.

Unusual patient inspired huge team of staff
This patient inspired the Intensive Care Unit staff to plan a steak barbecue for him, bring in fresh strawberries, make wheelchair accessories rather than take vacation time, and know all his children and grandchildren by name.

Honouring organ donor's real-life name 'an enormous blessing'
A young man died over a year ago, and his story is a tapestry of interwoven threads: transitioning from woman to man, heart recipient who found the donor family, and hospital staff whose compassion was "an enormous blessing" to the family.

Two married patients in TOH at same time
As difficult as it is to be a patient at a hospital, it's even more difficult when you're admitted at the same time as a spouse. Many compassionate hospital staff members take extra steps to bring married patients together.



Discoveries for a healthier tomorrow

Running could help heal the brain
We all know that running is good for the heart. New research reveals how it may also help the brain repair itself.

Could umbilical cord blood help repair the kidney?
Umbilical cord blood contains tiny cell fragments that can fuse with injured kidney cells and release genetic material to prevent cell death and improve kidney function.

Mystery solved: puzzling protein erases memory in muscle stem cells
Researchers discovered that a protein called UTX plays an important role in muscle repair and regeneration by helping reformat muscle stem cells into new muscle fibers.

Harnessing the immune system to attack cancer
A vaccine made with an individual's cancer cells combined with a cancer-fighting virus can cure abdominal cancer in laboratory models.

New target for research into deadly brain cancer
Researchers find that blocking a certain protein on brain cancer stem cells can prevent them from forming tumours in laboratory models.

Building Healthier Communities

Telemedecine saves costly trips for patients
Rather than having to book a flight from Thunder Bay to see a specialist in Ottawa, this telemedicine patient was referred to a doctor only 15 minutes from her home.

Helping a First Nations community heal after suicide crisis
Staff from The Ottawa Hospital travelled to Attawapiskat as part of Ontario's **Emergency Medical Assistance Team (EMAT)** to help the First Nations community deal with a crisis of suicide attempts by young people.

Think you have asthma? Think again.
Study finds 33 percent of adults recently diagnosed with asthma do not have it. And only half of doctors are ordering the right diagnostic tests.

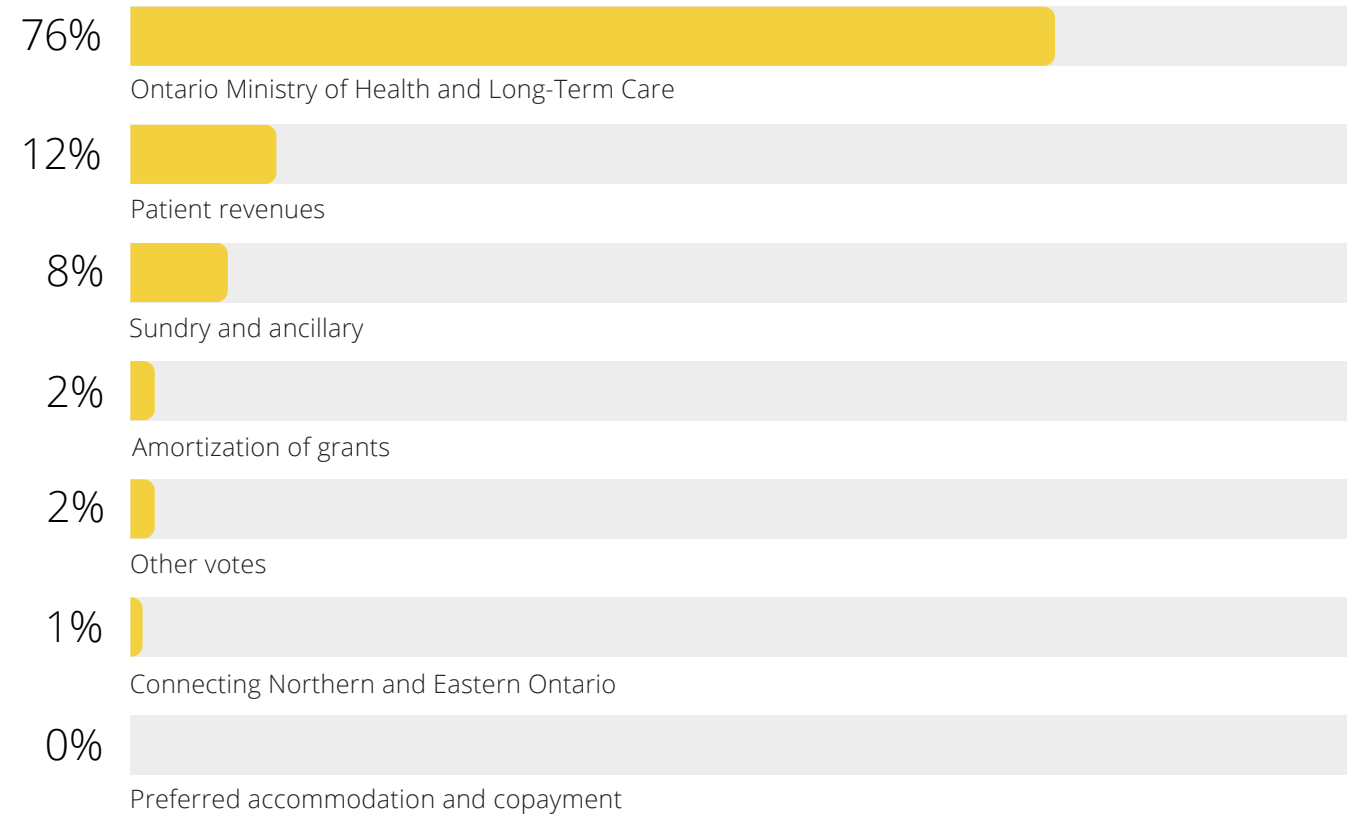
Healthier habits could add six years to your life
The average Canadian could live six years longer by adopting healthier habits, such as not smoking, eater better, exercising, and drinking less alcohol. An online calculator makes it personal.

New digital comic using alien invasion to educate kids about immune system
Alien invaders descend on a world while defensive forces mobilize to battle the intruders... while this may seem like a scene from a new blockbuster movie, it's actually a new online comic, created to educate kids about the immune system and the role of immunization in defending against illness.

Financials: The Ottawa Hospital

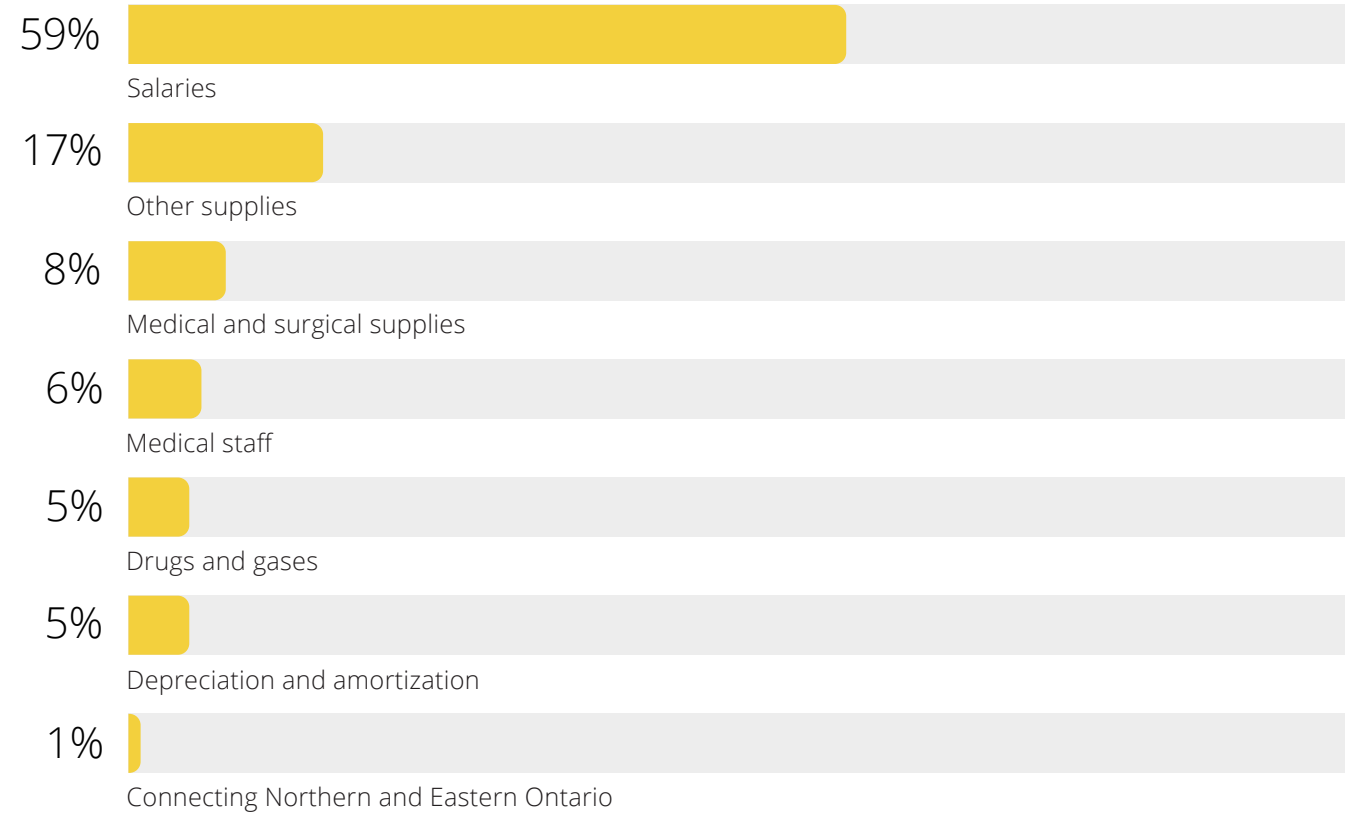
Our 2016–2017 financial report

Revenue distribution 2016–2017



$1,309M

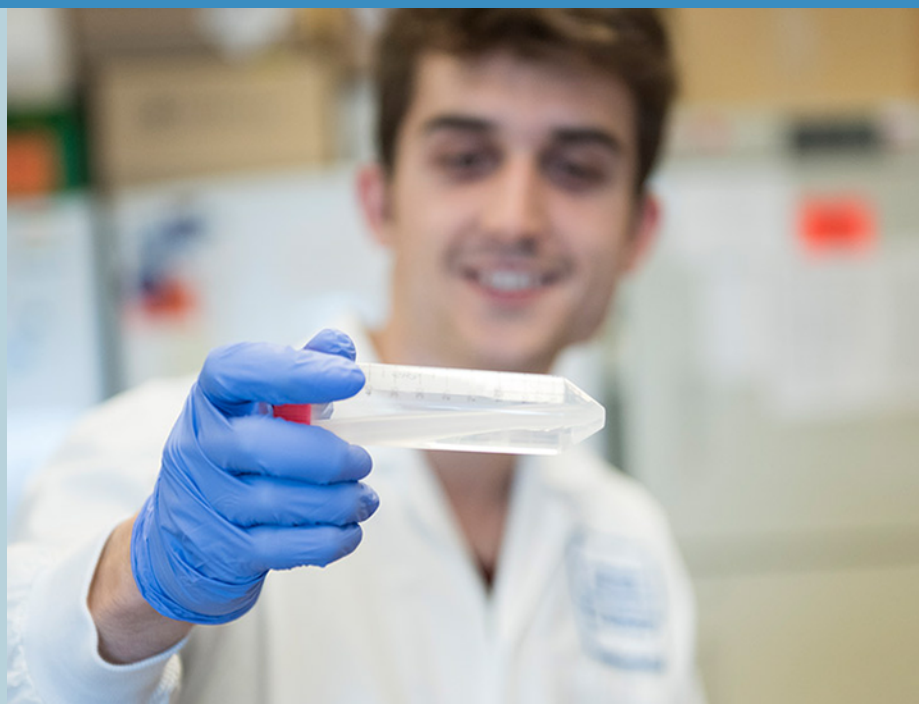
Expenditure distribution 2016–2017



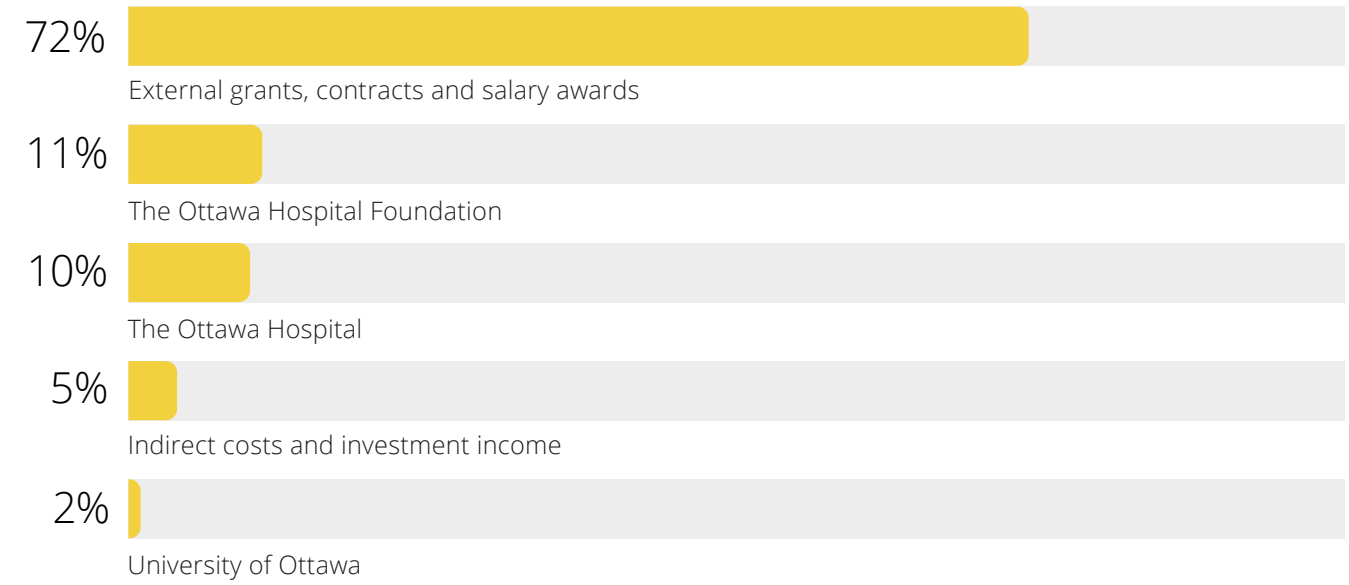
$1,310M

Financials: the Ottawa Hospital Research Institute

Our financial report and top 10 peer-reviewed funding sources



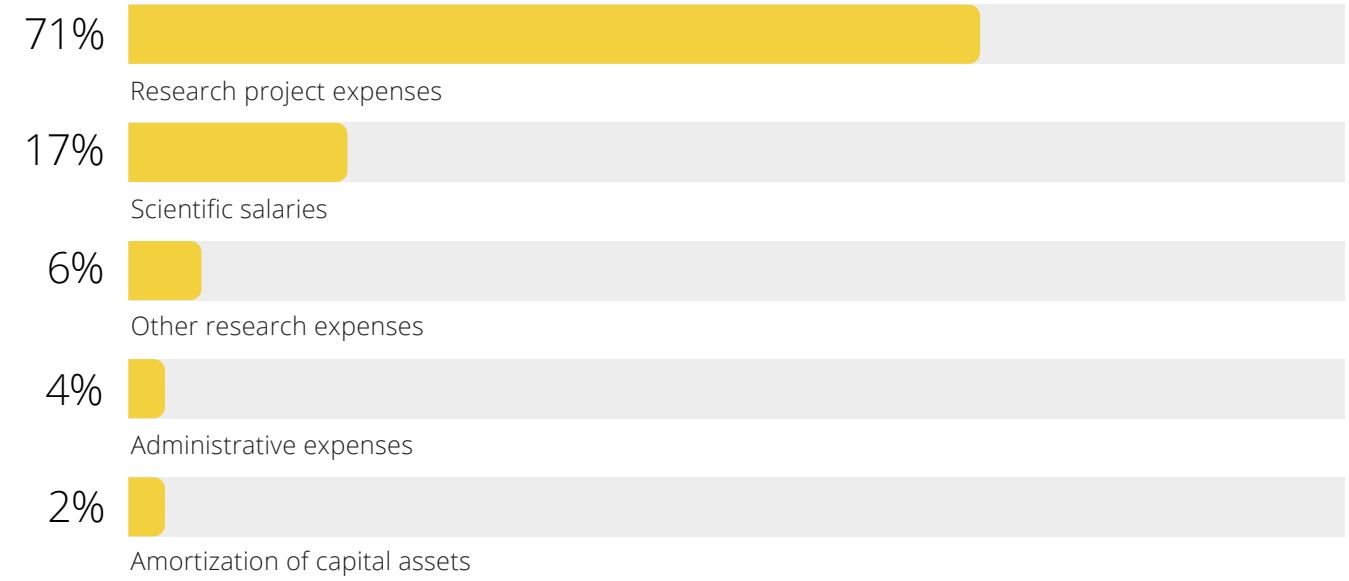
Revenue distribution 2016–2017*



$112.6M

*Pending ratification at the Ottawa Hospital Research Institute Annual General Meeting on June 29, 2017.

Expenditure distribution 2016–2017*



$109.5M

*Pending ratification at the Ottawa Hospital Research Institute Annual General Meeting on June 29, 2017.

Top 10 sources of peer-reviewed funding