

CASE STUDY:

INNOVATIVE MEDICAL EQUIPMENT SERVICE SOLUTIONS



HOSPITAL EXPERIENCES WITH THE
CANADIAN MEDICAL EQUIPMENT
PROTECTION PLAN (CMEPP)

MARCH, 2019

CMEPP
Trust.Flexibility.Savings

Innovative Medical Equipment Service Solutions

Executive Summary

Partnering with the Canadian Medical Equipment Protection Plan (CMEPP), hospitals across Canada have garnered over \$40 million in savings from smarter healthcare equipment servicing and repairs, which they have reinvested in patient care. With CMEPP managing medical equipment service requirements on behalf of its member hospitals, these organizations have minimized the time and labor spent on this task, while ensuring critical medical equipment is available when clinicians and patients need it.

This case study documents the challenges facing hospitals when managing medical equipment service contracts, how CMEPP has brought value to its members and the benefits they have derived from CMEPP membership, including commentary and examples from four CMEPP member healthcare organizations:

- Chatham-Kent Health Alliance (CKHA)
- North York General Hospital
- Prairie Mountain Health/Santé Prairie Mountain (PMH)
- Southlake Regional Health Centre

Situation

Medical equipment is critical to providing patients with effective and safe care, but it is also a significant area of spend for hospitals. While hospitals work to procure equipment in a cost-effective manner, the purchase price is only the tip of the iceberg when it comes to total cost of ownership (TCO). A significant area of expense for healthcare organizations is the maintenance and repair of medical equipment in their facilities.

Cost and risk

Medical equipment maintenance can be costly, but failing to maintain equipment can take an even greater toll on a hospital's bottom line. For example, every hour that a magnetic resonance imaging (MRI) system is down results in \$10,000 of revenue loss for the healthcare organization¹, as well as negative impacts on patient care and clinical workflow. And even with preventative maintenance in place, unexpected equipment breakdowns do occur, resulting in costly repairs, downtime and care disruptions.

“For hospital operations our diagnostic equipment is mission critical,” said Jerome Quenneville, CFO and VP for Chatham-Kent Health Alliance (CKHA), a 200-bed community hospital in Southwestern Ontario. “Preventative maintenance is like changing the oil in your car. Without taking those standard interventions we put at risk the whole lifespan of the equipment. It's not worth the risk given the high cost of replacing it.”

¹ <https://healthyliving.azcentral.com/how-much-do-mri-machines-cost-12154160.html>

“Most folks don't appreciate how much the healthcare industry relies on equipment,” said Greg Chow, CPA, CMA, MBA, Director of Finance for Southlake Regional Health Centre, a 400-bed, full service hospital in Newmarket, Ontario. “It's not effective care if we have to reschedule a patient who had an appointment in place for months because a piece of equipment goes down. That impacts the quality of care that we provide and creates consternation with patients as well.”

Resource burden

With thousands of pieces of medical equipment within their facilities, it is a tremendous challenge for hospital staff to manage service contracts from each original equipment manufacturer (OEM), and ensure value is generated from these agreements. Staff members spend considerable time and effort negotiating OEM contracts, planning maintenance around clinical care, securing quotes for repairs, scheduling the work, and renegotiating contracts when they come up for renewal.

“In our world it has typically been our managers who are tasked with this work,” said Leanne Treloar, Director of Diagnostic Services for Prairie Mountain Health/Santé Prairie Mountain (PMH), one of five regional Health Authorities in Manitoba. “They are the ones working on getting service contracts set up, monitoring preventative maintenance schedules and repairs, and reviewing service reports, which is very time consuming.”

“Historically we've done our best but I don't think we've always done a great job,” Treloar added. “In some cases the managers with clinical backgrounds don't have the necessary expertise from a clinical engineering perspective to understand the details presented in a contract. When we get those contracts in place it's so easy to just automatically renew them without taking the time to evaluate the costs versus benefits.”

“One of the biggest challenges is consolidating all of the information around maintenance service contracts, including the cost of the service that falls outside of a contract,” said Andrew Hickey, manager of Medical Imaging for North York General Hospital, one of Canada's leading community academic hospitals in affiliation with the University of Toronto. “We need that information to make informed decisions on whether a piece of equipment is at the end of its lifespan, or if it's worth the investment to keep it operational.”

Solution

In 1996, two biomedical engineers who realized they were paying too much for their hospital's equipment management services founded the Canadian Medical Equipment Protection Plan (CMEPP) with a goal of lowering risk and delivering reliable and cost-effective maintenance management. Since that time CMEPP membership has grown to over 47 healthcare organizations with more than 100 sites across Canada, and partnerships with more than 100 suppliers. To date, CMEPP has returned over \$40 million in savings to its provider members through its innovative services.

How it works

CMEPP serves as a single point of contact for hospitals and suppliers. When a hospital joins CMEPP, the organization uses its extensive equipment knowledge and experience to provide a tailored solution to meet the hospital's medical equipment service needs using the hospital's preferred service suppliers. CMEPP manages and coordinates service on behalf of the hospital with the suppliers, saving the hospital time and resources typically spent on these operational, non-value added activities. This results in qualified, reliable and affordable solutions that maximize value for hospital's budgets.

CMEPP takes a consultative approach for every piece of equipment. By understanding the frequency of use and the redundancy in the hospital, CMEPP helps the hospital understand where time and materials, service contract, biomedical engineering, or a combination of services is the most appropriate solution.

The hospital pays a capped contribution amount for these services, which represents a significant upfront savings and protects it from the risks associated with unexpected and expensive equipment repair costs. Within the parameters of the not-for-profit model, CMEPP creates an aggregate shared pool of funds for all member hospital service repairs. The result is hard dollar savings in annual repair costs, and at the end of the service term, excess savings are returned to member hospitals.

Although CMEPP reduces risk by providing information about who is best qualified to service their equipment, the organization leaves the final decision to the hospital. The CMEPP member hospital has the flexibility to add or remove equipment from the program at any time and can choose which supplier services its equipment, whether it is an OEM or alternative service supplier.

In order to support its member hospitals, CMEPP has begun working more closely with shared service organizations (SSO) and group purchasing organizations (GPO). Having similar goals and objectives, the more these organizations can work together, the more savings can be achieved and passed onto hospitals.

Benefits

Healthcare organizations are facing increased pressure to deliver higher quality patient care at a lower cost, while improving their financial outcomes at the same time. Because medical equipment maintenance impacts clinical and financial operations, hospitals working with CMEPP have the opportunity to effectively address costs, quality and outcomes all at once.

Hard dollar savings reinvested in patient care

Each year CMEPP returns to its member hospitals any surplus from what they contributed to the program for reinvestment in patient care and services. The 2017-2018 fiscal year marked the third year in a row that CMEPP returned over \$2 million consecutively to its members.

Quenneville says CKHA has been a CMEPP member for many years and during that time has seen significant savings. In 2018, the hospital made a major withdrawal from CMEPP, which it reinvested along with community donation dollars in the renewal of diagnostic equipment, including five new ultrasound units, SPECT-CT and CT units, and a bone mineral density (BMD) machine.

“CMEPP savings allowed us to make a major investment in updating our technology and assuring our future in providing quality care to our community,” said Quenneville. “These big technology investments are hard to achieve without having some assurance that we will be able to afford them, and certainly that would be hard to do without the benefits of CMEPP.”

PMH has used its savings to purchase an equipment upgrade, and invest in training for biomedical engineering staff members who service equipment at remote sites across the health system’s service area.

“Without CMEPP we would have needed to go through our capital equipment processes and prioritization in order to secure approval for the upgrade, and sometimes those upgrades don’t make it to the top of the list,” said Treloar.

In March 2015, North York General, which has been a CMEPP member for over a decade, expanded its equipment covered under the CMEPP program, which has driven significant financial savings for the hospital, and reduced pressures on its staff, according to Hickey.

“Those savings allow us to deal with inflationary pressures across the operation of our program, said Hickey. “Each year on medical supplies we typically see anywhere from a 1-3 percent inflationary increase. Savings from other areas, such as being with CMEPP, allow us to absorb those pressures and deal with them without having to cut patient services.”

Chow points out how most new equipment typically falls under an OEM’s warranty program; therefore, the greatest benefit that CMEPP has provided Southlake Regional Health Centre is on off-warranty equipment. He states:

“Every hospital has equipment that is off warranty that it doesn't want to replace so it’s trying to find a cost effective way to maintain it. That’s where an organization like CMEPP really helps. CMEPP is flexible and provides a cost-effective solution to maintaining and servicing this component of assets under management in a hospital.”

Reduced risk to hospitals and their patients

Effective, efficient and affordable preventative maintenance helps hospitals ensure critical medical equipment is available to patients when they need it. Quenneville points to this benefit of CMEPP membership, stating:

“I’m the Chief Financial Officer and the financials are of real importance because they are significant to providing quality patient care to our community. That is what we are here to do. Diagnostic equipment is a core part of the service to the community and reliable

equipment that is up to date and well maintained is necessary to clinicians to get their jobs done. We always make an effort to look for opportunities where we might be able to risk share or gain and certainly that is one of the key benefits of the CMEPP program.”

Chow points to the benefit of pooled risk that comes with CMEPP membership, where multiple hospitals come together to invest in preventative equipment maintenance and benefit from a pool of resources available in the event of an unexpected costly repair. He adds that this model also promotes discipline in preventative maintenance, stating:

“Austerity in healthcare is ever present – the business unit or department manager is constantly looking for ways to trim costs and do more with less. One might be tempted to give up maintenance or repair budgets. Participating in a program like CMEPP takes that temptation away. It instills a discipline to maintain our equipment that I as a finance manager can buy into because it has a longer-term benefit of reducing the risk of equipment failures and the resulting disruption to business continuity.”

Time and labor savings

CMEPP takes on all of the heavy lifting required for medical equipment maintenance, leaving hospitals to focus on what matters most, their patients.

Treloar explains how CMEPP’s one point of contact model has taken the burden off PMH’s managers. Before CMEPP she estimates they were spending 40 percent of their time managing service agreements, including quotes, contracts, approvals and service reports, but today with equipment under the CMEPP program that time and labor burden has been reduced to approximately 10 percent.

“We have saved a lot of our management resources by joining CMEPP,” said Treloar. “We do work with multiple vendors, some vendors then subcontract parts to someone else, but we know that if a piece of equipment is on the CMEPP program we have one point of contact. It has taken pressure off the managers because the CMEPP team is doing some of that negotiating, follow up and reconciliation work for our service agreements with multiple parties.”

According to Hickey, North York General has achieved administrative cost savings from its CMEPP membership in addition to its hard dollar cost savings, stating:

“From a financial management point of view there is an administrative savings in managing multiple contracts through CMEPP. The organization can put multiple units under the program, which I view as one large blanket contract. That saves time and energy on our side because we don't have to go out and deal with multiple vendors for multiple pieces of equipment. CMEPP takes care of that.”

All of the organizations emphasize the ease of their CMEPP relationships, with Quenneville stating:

“It’s fairly seamless to work with CMEPP and it really does form part of our normal course of business where we do not have to spend additional time managing contracts.”

Unbiased expertise

“When I first learned about CMEPP I was skeptical but our partnership with the organization has turned out to be a great success, so much so that we’ve added the remainder of our ultrasound units, MRIs and other imaging equipment to our CMEPP agreement,” said Treloar.

Treloar says one of the best parts of working with CMEPP is she knows she will get truthful, unbiased opinions on PMH’s service contract proposals.

“The CMEPP team is very open and honest with us. They don’t push us to do something that really isn’t going to provide any benefit, which we really appreciate. There have been times when we’ve gone to CMEPP with an equipment maintenance need asking if we should add a piece of equipment to their program and they’ve told us that it really wouldn’t provide a lot of savings at that particular time.”

According to Treloar, the CMEPP team has also leveraged its knowledge and expertise to help resolve issues with equipment suppliers. For example, PMH was having problems with a piece of medical equipment, which the OEM claimed was the fault of the health system. CMEPP researched the service history of this particular product across Canada, including updates and upgrades, and was able to justify that the fault lie with the equipment and not the health system. As a result, PMH was able to have the equipment fixed by the vendor at little or no cost.

Broad-based comparisons

CMEPP member hospitals have the benefit of utilizing extensive CMEPP knowledge. The aggregation of national equipment performance across member hospitals allows CMEPP to see trends and assess risk that is applicable from small rural to large urban teaching hospitals. In essence, this is big data brought to the service world. By using analytics, CMEPP has a good understanding of equipment performance and average repair costs based on the size of the hospital. CMEPP works with its service suppliers as partners to increase value for all stakeholders. In the end, by working together, the value is emphasized on the bottom line. For some, value is seen as savings, for others it could be achieving quarterly revenue targets.

“CMEPP has at its disposal a larger inventory of equipment than any one organization can have itself,” said Hickey. “If I only have two identical pieces of equipment internally then I can only match the proposed service cost for one unit off the other. But CMEPP may have 50 units of those covered in the program nationally that they can use as comparators.”

Choice and flexibility

One of the key benefits of CMEPP membership for North York General Hospital has been choice, explains Hickey, who says before the organization joined CMEPP 12 years ago their only choice was to procure maintenance services from OEMs.

“One of the bigger challenges we had was the ongoing cost and the cost escalations each year,” said Hickey. “When you only have one option, then you are at the mercy from a cost perspective of what could be charged. The other challenge with a direct service contract is that you are locked into their service. If there is an item that they tell you is broken and it falls outside of the purview of the service contract then you have no way of validating whether it is really the problem or not. But when you are in a CMEPP arrangement, you can have another third party come in and give a second opinion.”

Supplier relationships

Being a member of CMEPP doesn't mean a hospital weakens its supplier relationships, rather, it provides the opportunity for the healthcare organization to broaden its reach and perform comparisons among service suppliers. As a neutral party, CMEPP works to provide value for service suppliers as well. CMEPP acts as a point of contact for service suppliers' issues and provides assurance to hospitals that service suppliers have been qualified and are capable to address their needs through a vendor of record (VOR) process. This allows service suppliers to access equipment opportunities across all member hospitals resulting in maximized business outcomes and efficiencies.

“I feel really good about how we've still maintained vendor contracts and support through CMEPP,” said Treloar. “In the beginning there was pushback from vendors saying they wouldn't be as responsive with us working through CMEPP but that proved not to be the case at all. When we put a service contract out for a quote the vendors understand that we are considering CMEPP as an option, and they accept it and are willing to work with us.”

CMEPP members report no significant change in equipment downtime by working through CMEPP versus contracting directly with the OEMs for service contracts. On the contrary, downtime has been reduced for some organizations because the CMEPP members have the option to contact other service suppliers for assistance if their primary supplier is busy.

“Going directly with the OEM you could never really be sure that you were getting good value for the money because there was little analysis done on the frequency of uptime or downtime,” said Hickey. “Each OEM uses a pretty different formula to validate their uptime agreements. For example, if I have a piece of ultrasound equipment that is used between the hours of 8 a.m. and 4 p.m., and it is down for six hours, then I would calculate that as 75 percent of downtime for that equipment. But the OEM would look at that from a 24-hour clock period and say we were only down six hours out of 24.”

“Medical equipment is paramount to operational performance and patient safety, particularly in medical imaging where all of our workflow is dependent on the equipment that we use,” Hickey added. “So the maintenance and uptime on that equipment is of the utmost importance.”

Results

Partnering with CMEPP hospitals across Canada have:

- Garnered over \$40 million in savings to reinvest back in patient care

- Helped ensure medical equipment is available when clinicians and patients need it, avoiding revenue loss from equipment downtime
- Reduced the time and labor required for medical equipment maintenance activities
- Secured cost-competitive quality medical equipment services
- Mitigated the risk of unexpected costly repairs
- Obtained an unbiased, expert opinion on medical equipment service contract value and issues related to maintenance and repairs

About the CMEPP Members in This Case Study

About North York General Hospital

North York General Hospital, affiliated with the University of Toronto, is one of Canada's leading community academic hospitals. We offer our culturally diverse community a wide range of acute care, ambulatory and long-term care services across multiple sites. Through partnerships, collaboration and academic endeavours, we seek to set new standards for patient- and family-centred care. Working together with our patients and their families, we are making a world of difference.

About Prairie Mountain Health

Prairie Mountain Health/Santé Prairie Mountain (PMH) is one of five regional Health Authorities in the province of Manitoba. It was officially formed in June 2012, following the Manitoba government amalgamation of the former regional health authorities of Assiniboine, Brandon and Parkland. In the Prairie Mountain Health region, there are 20 acute care sites, 42 long-term care sites, nine (9) transitional care sites, five Primary Health Care Centres and 39 Emergency Medical Service (ambulance) facilities. There are also seven Community Cancer Programs, with Regional Cancer Care Hubs in Brandon and Dauphin, and support programs in Deloraine, Hamiota, Neepawa, Russell and Swan River.

About Southlake Regional Health Centre

Southlake Regional Health Centre is a full-service hospital with a regional, clinically advanced focus. Southlake offers over 400 patient beds and accommodates more than 110,000 visits to the Emergency Department, 30,000 in-patient admissions, and 530,000 out-patient visits each year. As a regionally designated site, Southlake is responsible for developing and providing advanced levels of care to the more than 1 million people who reside in York Region, Simcoe County, and in some cases, as far north as Muskoka.

About Chatham-Kent Health Alliance (CKHA)

Chatham-Kent Health Alliance (CKHA) is a 200-bed community hospital, equipped with state-of-the-art facilities and technologies. CKHA is committed to core service excellence, top-flight operational performance and to becoming a facility of choice in Southwestern Ontario. With sites in Chatham and Wallaceburg, CKHA is comprised of approximately 1,360 compassionate staff, 178 physicians and 300 volunteers who serve the medical needs of 102,000 residents in Chatham and Rural Kent.

About CMEPP

CMEPP is a hospital member shared service organization dedicated to driving hard dollar savings for healthcare organizations related to medical equipment service contracts. As a not-for-profit organization, CMEPP is owned and governed by its hospital members, all profits are returned back to the hospitals at the end of the financial year. CMEPP's flexible approach solves clients' most challenging issues and delivers hard dollar savings that can be reinvested in patient care. CMEPP is located in Toronto, Ontario. For more information, please visit: <https://www.cmepp.com>.

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