



Medical device maintenance:

A comprehensive approach to service management

By Tayla Holman

A comprehensive healthcare technology management (HTM) program can help health systems better manage their supply chain and keep up with medical equipment maintenance, thus enabling clinicians to better serve their patients. Implementing an HTM program ensures a facility receives proactive, regular **equipment service** and repairs as needed. Healthcare facilities may also be able to rent or upgrade equipment through their partnership.

Some healthcare organizations, especially smaller facilities, may not be aware of the benefits of a comprehensive HTM program,

or they may not know how to go about implementing one. Other institutions may believe an HTM program would be nice to have but isn't a priority. The truth is, however, that healthcare organizations of all sizes can benefit from a non-traditional HTM program.

A comprehensive HTM program goes beyond a traditional clinical engineering relationship that only repairs broken equipment. A programmatic approach is designed to not only provide routine maintenance but also partner with healthcare organizations to maximize their investment in equipment.

Why is an HTM program important for medical equipment maintenance?

An HTM program helps healthcare organizations improve the performance of their medical equipment fleet and mitigate risk. It is designed to guarantee that the equipment is not just available when needed, but it operates properly to deliver quality patient care.

When a comprehensive HTM program is not in place, understanding the full scope of equipment inventory becomes very difficult. As a result, health systems may find themselves scrambling when a piece of equipment breaks down or needs an upgrade. For patients, few things are as frustrating as being told your appointment has been canceled because the necessary equipment is unavailable.

"The intended purpose of an HTM program is to ensure healthcare organizations get the maximum value out of their investment and clinical equipment assets," says John Wright, chief operating officer for Advantus Health Partners. "The approach should be modular in design to purposefully meet health systems where they are to address their needs."

Medical equipment can be a significant investment for healthcare institutions. HTM programs ensure they can make the most of that investment by selecting reliable assets that can last longer, operate more efficiently, and integrate seamlessly into an organization's existing technology landscape. It's also equally important that the relationship

between an institution and its HTM partner simplifies their equipment needs instead of causing additional administrative labor.

Morgan Kendrick, GE HealthCare's general manager of national accounts for Bon Secours Mercy Health and Advantus Health Partners, adds, "Historically, these types of relationships are very administratively burdensome. A robust HTM program is simple, standard, and scalable. It allows health systems to remove the ambiguity and administrative burden from a classic clinical engineering or HTM relationship."

Common misperceptions health systems have about HTM programs

Some health institutions may believe an HTM program is not worth the investment or that they can operate effectively without one. However, it's a worthwhile investment because of the value it can deliver, especially in terms of thorough and thoughtful equipment management. Investing in equipment that frequently requires replacement or maintenance can be costly. Partnering with a group purchasing organization (GPO) to help implement and manage an HTM program could potentially help an institution reduce resource allocation and expenses.

Health systems should also look beyond thinking of HTM programs as nothing more than tools to repair broken equipment and instead realize the ways a successful HTM program can help clinicians deliver efficient patient care.

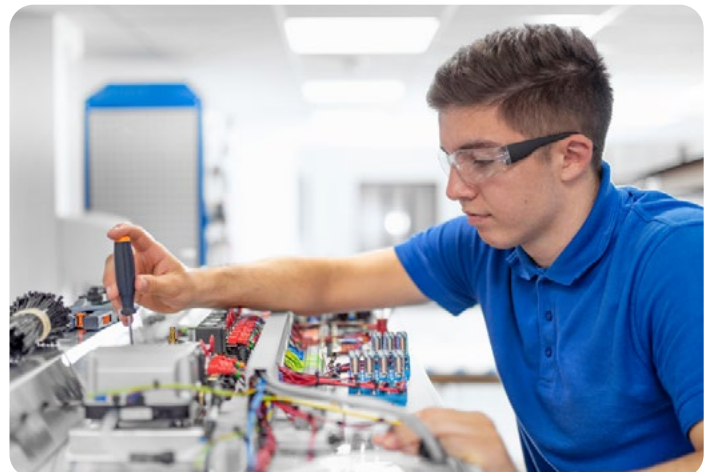
Developing a comprehensive HTM program

It is critical for all healthcare facilities that do not have an HTM program in place—especially those that would like to implement one—to know the outcomes. A comprehensive HTM program brings value to six key areas.

1. Optimizing performance and efficiency

In the wake of the COVID-19 pandemic and provider shortages,¹ healthcare staff are stretched thin and patient backlogs are high. Clinicians don't have the time to wonder if they have the right equipment available to deliver care. Building uptime guarantees into an HTM agreement can help facilities ensure they always have the necessary equipment on hand for patients. Furthermore, while tracking every piece of equipment can be a significant administrative burden, it is crucial to secure that knowledge to ensure available redundancies are built into an institution's setup.

"Even if you're a very small site, there's still an administrative burden and time investment, not to mention the team you have for supporting equipment management is even smaller," says Angie Baltz, clinical engineering system director for Advantus Health Partners and Bon Secours Mercy Health. "Having a large-scale HTM partner really does benefit both smaller and larger facilities when looking to optimize performance and uptime."



2. Improved care delivery

Well-maintained equipment allows you to deliver quality care. An example of this is disinfection and distribution, generally considered clinical tasks, which put the onus on caregivers to disinfect equipment before reintegrating it into care circulation. As a service aspect of a comprehensive HTM program, disinfection and distribution should align to ensure medical equipment is safe and maintained, so caregivers know what they need is in the right place at the right time. Healthcare providers do not want to spend all their time disinfecting equipment, so adding this service as a component of an HTM program allows them to spend more time with patients and operate at the top of their license.

“It's a different model from the standard of what is normally seen in the healthcare industry,” says John Laskowski, GE HealthCare's senior director of the HTM program at Bon Secours Mercy Health. “It creates a capacity for clinicians to be able to spend more time with patients versus spending time on the tasks of cleaning or disinfecting equipment.”

3. Comprehensive asset management

The main goal of asset management is optimizing inventory for caregivers to ensure they have the right number of assets to perform the care they need for their patient population. For example, asset management can provide clinicians with analytics on whether or not they have enough ventilators to deliver respiratory care based on their census and care data. It can offer a benchmark for comparison based on like-sized facilities. Asset management can also complement the capital planning process and the development of short- and long-term strategic plans.

As part of their comprehensive HTM program, Bon Secours Mercy Health employs strategic asset management across their health system footprint. One of their Virginia hospitals rents 100 beds at any given time but, with a focus on asset management, the facility was able to decrease their rental capacity by reallocating 75 beds from a facility in northern Ohio.

“Asset management can be both broad and really targeted and precise,” says Baltz. “If the site is having huge rental spin in a category like beds, they're able to go deep into the data and have a line of sight into what's happening within specific locations or departments. There is also precision in terms of risk, specifically referring to items that could fail or are in a precarious position.”

4. Controlled costs and better-managed risk

An HTM program can give healthcare systems more predictability in terms of budget and operating costs, which is crucial for institutions looking to plan their budgets in advance. Equipment failure may occur unpredictably and medical device maintenance may not always be easily budgeted when organizations are more reactive. Adding this upfront predictability can help institutions control their systems more proactively and plan their maintenance budget.

“An HTM program removes unpredictable spend. Outside of a few niche areas, a health system or CFO of a health system can very accurately predict their spend in the HTM space month over month, year over year, and as grow as a health system,” says Kendrick.” It becomes easy for them to see and forecast what their spend is going to be.”

As part of its partnership with Bon Secours Mercy Health, GE HealthCare has an uptime guarantee for mission-critical equipment and takes a penalty for missed periodic maintenance. An HTM program can also help with risk mitigation from a cybersecurity perspective, which is a significant concern in the modern healthcare landscape, by staying updated on current cybersecurity risks and new software releases.

5. Created value

Healthcare organizations that implement an HTM program can leverage a simple, scalable pricing model that removes ambiguity. The main value of the pricing model is that it is mostly all-inclusive.

A capitated pricing model also lends itself to predictability. This system is an agreed-upon payment arrangement that is calculated in advance, with monthly payments remaining fixed no matter how often the health system needs maintenance services.

6. Provided governance

An HTM program can provide healthcare organizations with quarterly management reviews to cover KPIs, trends, and any changes to medical device maintenance.

“For an HTM program to be successful, it is really important for the partner to understand the value, effort, and work that needs to go into the program,” says Mohamed El-Demerdash, president of healthcare

services for the United States and Canada at GE HealthCare. “It’s not just a cost thing. Both sides must have a vested interest and shared goal.”

Such was the case recently when Bon Secours Mercy Health launched GE HealthCare’s HTM programs holistically across all their sites through an agreement between Advantus Health Partners and GE HealthCare that expanded the services provided.

“We felt like this was a strategically important program to have in our portfolio because we recognize the value a comprehensive healthcare technology management program can deliver to hospital systems,” Wright says. “Utilizing advanced analytics to service equipment and deploying a labor force with extensive multivendor and multi-OEM equipment training is necessary in today’s landscape. A strong governance process that allows for constant monitoring and agility also ensures resiliency.”

Setting long-term goals

Once an HTM program is in place, the long-term goal is optimization. It takes time to materialize value and establish a true strategic relationship with large-scale programs like these. Identifying a service provider for long-term commitments creates the opportunity for optimization. An extended agreement also provides stability for whatever is coming in the healthcare industry.

“We think this is a very powerful service in the marketplace for hospitals big and small,” Baltz says. “Patients everywhere would benefit from having this kind of program powering the medical equipment used to deliver care.”

“If you solve for this big bucket of not only risk and expense, but variability in the clinical services that you offer, it acts as a buffer for at least one portion of what is a very unpredictable healthcare landscape,” she adds. “So implementing this partnership to provide stability in pricing and processes is going to add value to your other strategic planning initiatives. It becomes cumulative.”

A comprehensive HTM program is critical for medical device maintenance in both large and small healthcare organizations. The right partnerships will allow the program to scale with the organization as it grows, and they should be flexible and dynamic enough to adjust to any challenges the healthcare organization faces.



Resources:

1. Robert Glatter, Peter Papadakos, and Yash Shah. "American Health Care Faces a Staffing Crisis." Time, June 30, 2023. <https://time.com/6291392/american-health-care-staffing-crisis/>.

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