

The Power of Data: Aurora Health Care's Novel Approach to Strategically Cutting Expenses, Planning for the Future

Aurora Health Care

Like many hospitals and health systems across the country, Aurora Health Care has been growing as the result of mergers and acquisitions. However, as many have experienced, this kind of growth can result in waste, inefficiency and redundancy if processes and spending are not evaluated on a regular basis. In late 2011, the corporate finance team at the Milwaukee-based health system determined that the system's dollars spent maintaining and acquiring diagnostic imaging equipment could be allocated more strategically and efficiently.

At the time, common practice was for each individual hospital and clinic to submit annual capital requests for equipment upgrades and replacements and

Aurora Health Care is an integrated health system with 15 hospitals, 1,500 employed physicians, 159 clinics, 70 retail pharmacies and the largest homecare service in Wisconsin. It has achieved \$12.5 million in capital avoidance costs and saved \$4.4 million in operating and equipment service costs through analyzing diagnostic imaging equipment utilization, maintenance and condition – resulting in a sustainable plan for equipment replacement and new technology purchases.

new emerging technologies to Aurora's executive leadership. Decisions often were made without sufficient background information on the state of existing equipment throughout the system and whether device utilization rates or market needs warranted total replacement at a specific site.



This resulted in a lack of assurance that Aurora was being strategic in how it spent roughly \$30 million each year on replacing, repairing and upgrading diagnostic imaging equipment.

To maximize equipment investments system-wide, Aurora enlisted the assistance of GE Healthcare Services professionals. In order to ensure Aurora was investing in the right equipment in the right places, the health system set out to develop greater insight on how medical staff at each facility was utilizing imaging equipment. The goal was to establish a methodology to determine which diagnostic imaging assets needed optimization, upgrading or total replacement as part of annual and five-year capital planning.

Examining Equipment Utilization Trends

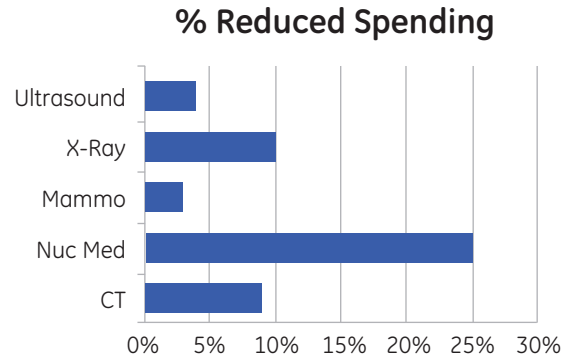
Aurora assembled a team of clinicians who worked with GE Healthcare's asset management and healthcare finance consultants to examine each imaging modality including CT, nuclear medicine, mammography, X-ray, and ultrasound, and logging the age, repair history, and utilization of each piece of equipment by department. Aurora then shared that data with a team of physicians and department heads to align clinical indications and practice implications of optimization and to jumpstart discussions about equipment priorities for the following year, including replacements, upgrades, and, when applicable, re-deployments of underutilized equipment to different departments and clinics.

"Having a trustworthy third party ask Aurora the difficult questions about assets and help design and implement solutions has introduced a higher level of rigor, discipline, and informed decision-making into the system's day-to-day asset management and longer-term capital allocation process. By learning to look at equipment needs through a deeper lens, the system has undergone a cultural transformation and gained a higher level of confidence that it is spending money where it matters most."

— Brad Hahn,
executive vice president of finance, Aurora Health Care

By working with GE Healthcare, Aurora discovered and remedied numerous cases where departments could be managing diagnostic imaging equipment more strategically and effectively. Since

the start of the project in early 2012, the system has reduced spending on CT scanners by nine percent, nuclear medicine by 25 percent, mammography by 3 percent, X-ray by 10 percent, and ultrasound by 4 percent. The system has saved a total of \$16.9 million in both capital avoidance and reduced equipment and service costs to date.



This chart shows the % of Reduced Spending based on GE Healthcare Asset Management Professional Services recommendations.

One example of a discovery and key process change that resulted from this approach involves CT scanners. Upon studying activity for its 56 CT systems, Aurora found that utilization was different at each site. As a result, the system chose to concentrate machines in the most high-demand, high-volume locations to better align use with patient needs and to eliminate duplicate services offered at sites in close proximity to each other.

The technology planning process also led to productive discussions about aligning technology investments to fit each clinical department's unique need. For example, Aurora found that although its radiology departments relied most heavily on ultrasound equipment for the largest variety of patient cases, other departments with limited ultrasound use had the same volume and level of technology investment.

That knowledge led Aurora to make targeted investments in the newest ultrasound technology for radiology during the capital planning process. Conversely, after analyzing the ultrasound equipment in Aurora's OB-GYN departments and speaking directly to the OB-GYNs, Aurora was able to reduce equipment expenditures for this department. The process revealed that this department was using multiple systems including handheld ultrasound equipment and more costly, advanced ultrasound systems. As the OB-GYN

physicians evaluated how they used this equipment, they concluded that the handheld systems met clinical quality thresholds for their patients. By standardizing their ultrasound use to this modality they were able to give patients the care they needed, while limiting the need to invest additional dollars in advanced ultrasound equipment.

A New Service Strategy

Once Aurora identified its true equipment needs, the team also looked at how that equipment could be more efficiently serviced. The system had an established internal team of clinical engineering specialists whose job it was to be the first line of service. The internal team would send equipment back to manufacturers for support that they could not provide onsite. This talented team was well-respected internally and valued by Aurora leadership. Yet, they were being done a disservice by way of antiquated and inefficient processes that were impeding their ability to offer fast and effective service solutions.

When Aurora initiated conversations with GE Healthcare about its service needs, leadership's first priority was to keep its internal clinical staff, transitioning the staff to become GE Healthcare employees, and making slight tweaks to the processes they were using to execute their work. For example, GE instituted a new 800 number for service calls eliminating the need for employees to call multiple direct lines each time they needed support.

"One of my key priorities in working with GE Healthcare was that we maintain the strong culture and reputation that our clinical engineering team has built internally. Right away, the GE consultants made it clear they were not interested in making sweeping changes, just that they were committed to becoming part of the Aurora family. For that reason among others, the GE relationship has been very enjoyable. They have never let us down to date."

— Doug Koch, vice president of operations,
Aurora BayCare Medical Center

Another example of a quicker, more efficient process GE put into place was around coordination of new equipment arriving at the health system's various locations. A new equipment entry program

Aurora designed with GE helped to guarantee that staff had the right equipment, at the right location, at the right time.

"Aurora has really grown over the years – new markets have come in, new physician groups are engaged, and so on. One unanticipated benefit of working with GE Healthcare is to help develop an overall design for the organization on how we use and service technology. It has been a great opportunity for us to look at how we view technology and develop standards and approaches that will help position us for success over the next 10 years."

— David Graebner, chief administrative officer, Aurora Health Care/Aurora Sheboygan Memorial Medical Center.

"We used to just cut a PO to a vendor and then it went into a black hole," Koch noted. "We assumed the vendor shipped the item to us, but we could never track it down efficiently. Was it on the loading dock? With engineers being tested and checked in? Or, in our building for weeks to months at a time, but no one knew about it? That was a huge problem we identified right away with GE's help."

Working closely together, GE and Aurora have significantly improved service across the health system. There are approximately 85 GE clinical engineering professionals that support Aurora, and several performance metrics that GE is currently meeting and exceeding in most cases, including:

- 15-minute phone response and 1-hour on-site response by qualified technicians for mission-critical biomedical and imaging equipment technologies.
- 100% planned maintenance completion rate on life-support biomedical equipment technologies.



imagination at work

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services helps our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

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