# Cost savings achieved through sharing equipment

It's been said we live in a sharing economy: We share our homes through companies like Airbnb, and we share our cars through companies like Uber and Lyft. So it's not surprising that organizations are now sharing equipment, including OR equipment, with positive results. For example, Kaiser Permanente Southern California (KP-SC) saved the purchase price of a lithotripsy machine in 1 year by sharing it with other facilities, says Ronald Loo, MD, physician co-lead for the health innovation team at KP-SC.

Dr Loo initiated the sharing program in 2010, with his organization's purchase of a lithotripsy machine that was then shared among five hospitals. The pilot program has since expanded to include more than 100 types of equipment used by 10 service lines in 27 facilities throughout KP-SC.

"The nice thing is that we aren't asking any of our stakeholders, including doctors and nurses, to sacrifice to save money," says Dr Loo. "And at the same time, we're offering better technology to our patients."

Here is how equipment sharing can benefit healthcare organizations, which continue to face financial pressures.

## Costs of ownership

"There's essentially an arms race for the latest technology," says Todd Rothenhaus, MD, chief executive officer of Cohealo, Inc, based in Boston. Cohealo manages equipment-sharing programs for health systems, including KP-SC. As OR leaders know well, when surgeons return from conferences with requests for new equipment at the capital purchase level, many health systems try to accommodate these requests by investing significant sums of money. In addition, systems often end up purchasing multiple pieces of equipment so multiple sites can provide a needed service. Financial outlay doesn't end with the purchase. Other expenses include upgrades, training, maintenance, repairs, and service contracts.

**New technology can be trialed with limited investment.**

Unfortunately, these costs make it difficult for health systems to maintain their razor-thin margins, particularly when equipment is underutilized.

## Benefits of sharing

Sharing can reduce the costs of ownership through financial savings, better patient care, and enhanced market share.

Financial savings are achieved by reducing equipment rentals and total fleet size, and improving utilization of existing assets. Rentals may be needed because of damaged equipment or because a hospital doesn't have enough volume to justify a purchase. Dr Loo says that KP-SC was able to reduce laser rentals by more than half by sharing equipment.

Underutilization equals lost money because capital dollars are invested in equipment that is not providing revenue, yet still requires significant operational expenses, like maintenance and storage. Sharing a device at multiple sites can decrease the overall inventory of equipment needed to address the same case volume, and at the same time, improve utilization of existing assets.

A related problem is equipment hoarding. Dr Loo cites the example of colonoscopes. "Historically, every site keeps a couple of extras in the closet in case one breaks. Multiply that by 20 sites, and it adds up," he says. "When people know they will receive a replacement scope right away if they need it, they don't have to stockpile and the organization doesn't have to buy extra scopes that sit idle."

Sharing provides that reassurance, leading to financial savings that can be reinvested in the organization. "Every penny we save means more money we can invest in our members [patients] and our people," Dr Loo says.

Better patient care is achieved by avoiding equipment-related case delays and cancellations. Sharing also enables surgeons and organizations to trial new technology with limited investment, making it available sooner to patients and protecting the financial health of the organization.

"Many times a new technology sounds really good, and you project you will use it a lot, but in a couple of years it doesn't pan out," Dr Loo says. "Sharing allows surgeon pioneers to evaluate technology early on, so we aren't shortchanging our members."

An organization can either defer a capital purchase entirely, or purchase fewer devices that can be shared. For example, one of Cohealo's clients initially had a request to purchase six devices for different sites, but sharing cut the number to three, making the purchase feasible. "The organization could then say 'yes' to a surgeon instead of having to say 'no,'" Dr Rothenhaus says.

## Should I share?

Not all equipment should be shared. These questions help determine how easy it would be to move a piece of equipment.

- What is the size and weight of the equipment?
- Does the equipment have wheels?
- How susceptible is the equipment to damage from movement and/or vibration?
- Does the equipment require calibration when moved?
- Does equipment contain personal healthcare information on the device?
- Does the equipment contain any hazardous or volatile substances (eg, nuclear material that can't be moved without additional paperwork)?

*Source: Cohealo, Inc, Boston. The ultimate guide to sharing equipment.*

Dr Loo says sharing allows the organization to fulfill its responsibility to its patients. "Our members deserve access to the best care, no matter where they are being treated," he says. "They have faith in our healthcare system and our healthcare team, and we are going to provide the best technology to get the best possible outcomes."

Enhanced market share can be obtained through hospitals within a health system sharing a piece of equipment that is needed to provide a service but is too expensive for any single hospital to purchase based on volume. The ability to offer those services makes it less likely the health system will lose patients to competitors and helps retain surgeons by improving satisfaction.

### Getting started

Sharing typically occurs between hospitals, ambulatory surgery centers, and medical office buildings that are within 200 miles of one another, according to a white paper from Cohealo. The best service lines for beginning to implement sharing are urology, orthopedics, and head and neck surgery. Dr Loo says sharing within a single hospital system makes the process easier, but sharing among multiple systems may also be possible.

Several types of equipment can be shared, including lasers, specialty OR beds, and imaging machines. Thomas Health, a two-hospital system in Charleston, West Virginia, that has been working with Cohealo since September 2019, shares one holmium laser between the two ORs. "Because of sharing, we didn't have to purchase a laser at our hospital," says Julie Herdman, BSN, RN, CNOR, director of surgical services at Thomas Memorial Hospital. Thomas Memorial and Saint Francis Hospital also share a gamma probe and a nerve integrity monitoring system.

Sharing starts with an evaluation of current equipment utilization, so opportunities can be identified. Dr Rothenhaus recommends determining how often a piece of equipment is not used, as opposed to tracking number of cases, to make better sharing decisions. For example, equipment that will be shared needs to have an open day to accommodate moving time, so if a piece of equipment is used once on each weekday, the facility can never share it. But if the equipment is used five times on one day, it can be shared on each of the other days, making it easier to schedule usage.

Dr Rothenhaus recommends 75% to 80% utilization, which Dr Loo agrees is a good target. "There's a sweet spot for the right amount," Dr Loo says. "You have to have some capacity built in for when something happens like a machine goes down or equipment is needed on short notice."

To determine whether sharing can improve utilization, organizations also need to analyze how easy it will be to move the equipment (sidebar, p 16) and the type of sharing that would work best (sidebar at right).

Organizations will need to decide which facility "owns" the equipment, especially from the perspective of repair and maintenance. Typically, the owner is the facility that uses the equipment most often. "The actual sharing time of equipment life is about 2% to 5%, so most organizations say, 'I'm going to keep that asset on my books even though I'm loaning it out from time to time,'" Dr Rothenhaus says. The facility can then claim the depreciation of the equipment. Cohealo can also provide utilization data for organizations that wish to spread depreciation among all the facilities using the equipment.

As with any project, buy-in is key. Dr Loo points out that obtaining buy-in should be based on participants' varying perspectives. For example, surgeons want to have the best available equipment for the task, and the equipment needs to be functional. OR managers want to know the equipment will be in the OR on time and in good working order, and that staff can operate it correctly. Financial and purchasing staff want to ensure money is used wisely. Keeping these perspectives in mind when designing the program is key for success.

## Types of sharing arrangements

Here are a few examples of how equipment can be shared:

- Milk run—A piece of equipment travels on a fixed schedule for each day of the week. This type of sharing is helpful when surgeons have a regular block time with high utilization.
- Dynamic—In this case, the equipment is moved based on the changing needs of the OR schedule, so that the number of idle days is reduced. This is also referred to as a "just-in-time" arrangement.
- Single round trip—This applies to movement of equipment when an emergency occurs, such as breakage of a device belonging to the borrowing facility. The equipment is returned shortly after use.

*Source: Cohealo, Inc, Boston. The ultimate guide to sharing equipment.*

### Sharing steps

Organizations may choose to use a company such as Cohealo, which anticipates needs, coordinates equipment moves, and assists with analyzing utilization and equipment needs to manage the sharing process. Cohealo charges a monthly subscription fee for its software and management services; the company passes through transportation costs and maintains insurance in case the equipment is damaged during transport. Custom-

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ers are responsible for maintaining the equipment and non-transportation-related repairs; however, these costs are often lower as the total number of items in the equipment fleet is reduced by sharing.

Dr Rothenhaus says the company has a 99.9% completion rate without a major incident, such as case cancellation or equipment that arrives broken, and Dr Loo says there have not been any significant issues at KP-SC.

The goal is to share equipment safely and efficiently, Dr Rothenhaus notes.

**Equipment such as lasers, specialty OR beds, and imaging machines can be shared.**

**Safety.** Safety refers to both patients and equipment, and Dr Rothenhaus divides the components into preparation, logistics, and quality assurance. Preparation includes inventory. Rebekah Ketchem, BSN, RN, nurse manager of surgical services for Saint Francis, says Cohealo completed a comprehensive equipment inventory, which included tagging the equipment and determining the best way to move items. Equipment may be delivered directly to the OR, or it may arrive in the biomedical department, with that staff completing the delivery.

Logistics include the actual move and staff alerts about the status of the move. "Each piece of equipment needs an owner at both ends," Dr Rothenhaus says. The Cohealo software tracks several details related to equipment use, including provider equipment preferences, accessories (such as goggles for lasers), power needs (some equipment requires 220 volt power, which a hospital might not have), staff training, and surgeon credentialing. This robust information promotes safety.

Ketchem notes that equipment moves are seamless and typically happen outside normal OR operating hours. Dr Rothenhaus adds that it's important to adhere to original equipment manufacturer (OEM) standards when moving devices. "We make sure we meet OEM standards and the hospital's standards," he says.

Quality assurance includes ensuring a "chain of custody" as the equipment is transported through the system, obtaining feedback from borrowers, and conducting periodic audits of the transport process.

**Efficiency.** Efficiency requires lenders such as Cohealo to track inventory, utilization, and distance. "Borrowers want to have the right equipment at the right location at the right time," Dr Rothenhaus says. Herdman notes that Cohealo is connected electronically to the surgery schedule so the company can anticipate equipment needs, automatically reserving equipment based on the schedule. "If a medical center doesn't have that device, [Cohealo] will find it at the next closest medical center and reserve it," Dr Loo says. This type of dynamic sharing maximizes results compared to a "milk run" approach, where equipment is rotated on a set schedule.

Dr Loo points out that there are a finite number of surgeons and operations, so the system can learn needs and preferences. "It's a way to keep track of everything without needing an army of human beings to coordinate," he says, adding that staff at Cohealo are available by phone and email to address last-minute needs. In addition, significant time buffers are built in to account for cases that are longer than expected.

Dr Rothenhaus recommends that organizations track outcomes such as reduced rental volume and purchases made with money saved through sharing. He suggests starting with a few pieces of equipment, and building from there. Dr Loo says Cohealo provides utilization reports to facilitate decisions about capital purchases. "You can look at your entire fleet of equipment and know if you need to replace something or make a purchase," he says.

### A winning combination

Dr Loo points out that the healthcare industry can be averse to change, so he appreciates how receptive different stakeholders have been to the idea of sharing. "It's been a win for the stakeholders using the equipment, a win for finance, and a win for patients, who are getting the best possible technology."

"I was a little skeptical in the beginning, but it's worked out well," Herdman says. "Equipment is moved smoothly, and our last-minute needs are taken care of, too." She and Ketchem agree that sharing is a way to ensure optimal utilization—a goal of every OR manager. ✣

*Cynthia Saver, MS, RN, is president of CLS Development, Inc, Columbia, Maryland, which provides editorial services to healthcare publications.*

### Reference

Rothenhaus T. The art of sharing: Maximizing perioperative equipment utilization. OR Business Manager Conference. 2020.