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Block schedule best practices: Calculate, allocate, and regulate
By: Cynthia Saver, MS, RN

A common strategy for managing OR utilization is block scheduling: Assigning surgical time to individual surgeons or surgeon groups based on their volume. But what sounds like a simple process is often complicated by the potential for dissatisfaction and reduced utilization. Yet done effectively, block scheduling can significantly boost the financial health of an organization. "Each 1% of room utilization equates to $100,000 of net revenue," says Steve Hess, chief information officer for UCHealth in Colorado, which recently implemented an app to facilitate block scheduling. "We were able to increase overall block utilization by 4%." That increase resulted in an additional $15 million in revenue annually. UCHealth has 10 hospitals and more than 80 ORs.

Managing block scheduling starts with determining block time and continues with policies for release of time not used and making adjustments based on utilization. The processes that have helped Hess and other leaders to structure case allocations are described in this article. A related article ("Room utilization rises with dynamic block scheduling," p 15) serves as a case study for the efficiency gains that can be achieved through better management of the block schedule.

Determining the block
At Bassett Healthcare in Cooperstown, New York, the entire schedule is blocked, says Michele Edick, physician practice analyst for the department of surgery. To calculate block time, Edick takes the total time for the surgeon (wheels in to wheels out) and divides it by a set number of weeks, usually 12. Time away, such as for vacation, is factored into the equation.

Bassett, which has 50 surgeons, 11 ORs, and 10 service lines, has been using block scheduling for more than 3 years. "It runs a lot more smoothly for physicians," Edick says. One room is kept available for urgent cases and can be scheduled 48 hours in advance.

At Henderson Hospital in Henderson, Nevada, 75% of time is blocked. "We find that gives us the flexibility we need to accommodate urgent cases and gives us room to grow," says Rachel LeMahieu, MSN, RNFA, CNOR, director of surgical services, outpatient surgery center, cath lab, and specials. Surgeons submit block requests to her and the physician relations manager. The surgical steering committee, which is responsible for block utilization, approves requests.

Release time
The timing for block release can be a sensitive issue. That's why, Edick says, "[surgeons] don't get penalized when they release a block." Blocks are to be released at least 48 hours in advance to allow time for scheduling other cases.

At Henderson Hospital, blocks must be released 30 days before planned vacations. LeMahieu took a creative approach to address other release times by creating a tiered system, which gives shorter release times to surgeons with higher block utilization (sidebar below).


Steve Hess

“It gives us the ability to backfill business,” LeMahieu says, adding that when openings occur, schedulers call physicians who don’t have block time and ask if they would like to schedule cases. “It helps us be more proactive.” It also provides more time for patients to obtain any preoperative tests that are needed.

The impetus for this approach was that physicians in the Las Vegas area tend to take call at several hospitals and have varied clinic schedules based on the practice setting. After LeMahieu implemented the tiered system at the hospital where she previously worked, utilization increased by 28% in 1 year.

Tiered block utilization

Henderson Hospital in Henderson, Nevada, uses a tiered system for block utilization. Block time utilization percentage has to be maintained for 3 months to qualify for a tier change.

Tier	Block time utilization	When block needs to be released before scheduled start
I	80%	24 hours
II	70%-79%	72 hours
III	Below 70%	7 days

Making adjustments

If releasing block time is a sensitive issue, adjusting block time is even more of a minefield. Changes need to be based on data that are accessible to physicians.

At Bassett Healthcare, block times are audited on a quarterly basis. Physicians not fully utilizing their block receive a notice and are then monitored for another quarter before any adjustments are made.

“Just because you are below one quarter, the next quarter, you might be at or above,” Edick says. “We go through at least two audits before making a decision whether to increase or decrease block time.”

She meets with the chief of surgery, who receives the audit reports, to provide adjustment suggestions. The chief then sends the information to the chiefs of each division so they can have a conversation with the surgeon.

LeMahieu says Henderson Hospital uses the following formula to calculate block time utilization:

- Physicians are not penalized if a block is bumped by an emergency case.
- The surgical steering committee, which consists of the director of business development, manager of physician relations, chief nursing officer, chief executive officer, scheduler, and the OR management team, meets monthly.
- Physicians receive quarterly utilization reports that include the percentage for first case on-time starts and day-of-surgery cancellation rates.

Henderson uses three levels of corrective action if physicians fall below the required 80% block utilization rate:

- Move the physician's release time to the tier that matches the current block utilization rate.
- Reduce the physician's block to achieve 80% utilization. For example, if a physician's utilization is at 55%, a 25% reduction of block time will be implemented to result in 80% utilization.
- Cancel the physician's block time.

The surgical steering committee must approve a physician's request for reinstatement of block time.

Rachel LeMahieu, MSN, RNFA, CNOR

LeMahieu says that because the surgery chiefs aren't employed by the hospital, she works with the surgical steering committee when changes are needed. "We tend to make changes on a quarterly basis, which helps us determine if it's a consistent pattern," she says. In some cases, such as noting that a physician who regularly finishes early on 2 days probably only needs 1 day, changes are made more quickly.

The key, LeMahieu says, is to work directly with physicians to help them increase utilization. Discussions related to underutilization are held either by phone or in person, so that the letter can be discussed and not simply show up in the mail.

She and/or the physician relations manager meet with the physician or office manager to determine factors affecting utilization and assist as needed. For example, if a surgeon who recently moved to the Las Vegas area doesn't have enough referrals, the physician relations manager will introduce him or her to other physicians to build a stronger network.

LeMahieu says it's important to recognize the positive, too. "If they are using 89% of their block, give them kudos by sharing the [block utilization] letter in person."

Tips and tools

Hess of UCHealth says that successful block scheduling takes people, processes, and tools. People and processes can be illustrated by a few tactics used at Henderson. LeMahieu says they encourage physicians to be realistic about start and end times based on their life situation. "If they need to drop children off at school, they need a later start time," she says. And schedulers base time allotted for surgery on historical data, rather than relying only on what the physician or office scheduler requests.

Emergent cases are scheduled for the end of day, unless the patient's condition requires surgery to be sooner. At LeMahieu's previous facility, there was one designated urgent/emergent room, and one is planned for Henderson in the future.

Hess gives an example of just how important the right tools can be. At UCHealth, administrators struggled to boost utilization above 70% with block scheduling. "We used lots of dashboards to help them optimize decisions, but didn't get the results we wanted," Hess says.

What helped turn the corner was a browser-based solution (iQueue for Operating Rooms, a product of LeanTaaS, Santa Clara, California) that allows surgeons to schedule cases and release block time via cell phone, without having to call schedulers. In fact, the median number of blocks released by surgeon per month increased 47% (October 2015 to March 2016, compared to October 2016 to March 2017). Schedules are updated in real time.

But the app isn't just for releasing and scheduling. It also leverages data from the electronic health record to determine utilization patterns and applies predictive algorithms to suggest changes in block allocation based on data. In addition to looking at daily data, OR committees can use reports to make more informed decisions.

There is an annual fee for the app, based on the number of ORs. "From an ROI [return on investment] perspective, many [organizations] will see that it will pay for itself," Hess says. Utilization is running 75%, and the organization hopes to soon achieve 80%. "The mobile app is a home run," he adds.

Block satisfaction

Block scheduling can help ensure optimal OR utilization, a vital goal for any OR leader. "It's a more streamlined process for surgeons and their schedulers, and makes for better use of your OR," Edick says.