A researcher responds to block FAQs

Dr Dexter: OR allocation is a two-stage process.

- The first stage is tactical. For example, your OR has a group of cardiac surgeons with 91% utilization of their block time. They’re recruiting a new cardiac surgeon and need more OR time. Should the OR committee plan a new OR for cardiac surgery?

- The second stage is operational. For example, the neuro service currently has a block allocation on Mondays of 3 ORs from 7:15 am to 3:30 pm. They have little underutilized time and often have overutilized time (ie, run late). How should the hours of their block time be adjusted (eg, should one or more ORs have staffing planned for 10 hours or 13 hours)?

Tactical stage

The tactical stage occurs a year or so before the day of surgery and involves allocation of surgeons’ blocks. These decisions can be based on strategic and financial issues and are made during annual budget meetings.

For example, a group of surgeons is fully using its block time but it also is not scheduling additional cases that cause the release of other services’ allocated OR time. The expectation is that they would grow their practice if they were provided additional OR time. In this stage, consider decisions such as whether increasing the group’s block allocation will benefit the hospital financially. Consider the contribution margin for the procedures these surgeons will perform (ie, revenue minus variable costs for the outpatient visit or entire hospitalization).

Some hospitals may express concern that they have a community mission and do not make OR block decisions based on financial criteria. Yet, they would not plan an additional OR for cardiac surgery if the hospital does not have ICU beds. That lack of expansion is a financial decision that affects appropriate block time planned for cardiac surgery. If every purchase request by every surgeon and every request for salary support for new surgeons is not satisfied, then the hospital is making tactical decisions based in part on financial criteria.

OR time is allocated tactically either by surgeon or by small groups of surgeons who are all of the same subspecialty. There are some statistical challenges that arise because some surgeons perform few cases. These issues must be addressed to get accurate answers. The issues are described in the tactical (financial) PowerPoint presentation at www.franklindexter.net/education.htm.

Operational stage

The second stage of OR allocation aims to match staffing to the existing workload and occurs a few months before the day of surgery before staff schedules are produced. The purpose of this stage is fine-tuning staffing to match the OR workload. Almost all changes to OR allocations occur at this stage. This stage determines how many anesthesia providers and OR nursing personnel to schedule on each day of the week, working each shift, with different skill sets. This is the information that should be loaded into the OR scheduling system. This stage does not involve decisions that
should affect whether surgeons choose to do more cases or fewer cases in your surgical suite, because that is a tactical decision.

For the second stage, I like to use the phrase “service-specific staffing.” The surgical service simply refers to a unit of OR allocation (ie, a group of surgeons who share allocated OR time). The unit may be an individual surgeon, a group, a specialty, or a department. OR allocations made a few months ahead of time are always of an OR for the entire workday, maybe 8 hours, maybe 13 hours, but not less than 8 hours. References are in the service-specific staffing PowerPoint presentation at www.franklindexter.net/education.htm.

Example. Last year, a hospital made a strategic decision to expand its trauma care program. Next year, there are more urgent surgical cases waiting and sometimes disrupting the elective schedule. The decision to allocate more OR time for add-on cases would be an operational decision, because it is based on matching staffing and resources to care for the existing workload as efficiently as possible. “Efficiency” in this context means the smallest possible combination of underutilized and overutilized OR time. Whether it is good or bad economically to be doing more of these cases is irrelevant, because they are being done. Whether planning an OR for these cases would improve or disrupt relations with surgeons is also irrelevant, because the cases are there and need to be done safely and without resulting in OR staff working unexpectedly late.

Summary

If your facility is struggling with allocating OR time, focus on what I consider to be the 2 principal relevant scientific advances in the past decade:

• First, there are at least 2 stages of OR allocation, not one. If your facility is trying to make these decisions in one stage, you will (not may) fail.

• Second, unless all allocations are for 1 OR, and all ORs have less than 8 hours of cases, consider both the underutilized hours of OR time and the overutilized hours of OR time.

How should utilization of block time be calculated? Is turnover time included in block time utilization?

Dr Dexter: The calculation depends on how the information will be used.

The OR workload for a service is its total hours of cases including turnover times. This would exclude the urgent cases if separate OR time is allocated for urgent cases. The basic calculations are in the box on this page.

Tactical decisions

For tactical decisions when selectively increasing OR allocations a year in advance, I recommend using raw utilization (excluding turnovers) if the alternative
would be using adjusted utilization. Calculating adjusted utilization can be arbitrary, because who do you attribute the turnover time to? In addition, during turnover, no value is provided to patients, and no revenue is achieved.

But the primary issue is that utilization is not a good basis for tactical decision making about OR allocation! Contribution margin per OR hour should be used instead. There are multiple reasons why, which are described in the lecture on tactical decision-making at www.franklindexter.net/education.htm.

Operational decisions

For operational decisions (ie, matching each service’s staffing to its existing workload a few months before the day of surgery) allocations should be made based on the OR workload, which includes turnovers. That is because the staff work during turnovers. In planning for staffing, the objective is to achieve a balance between underutilized and overutilized OR time.

Consider a service with total hours of elective cases including turnover times averaging 5 hours every Monday. The service was allocated a single OR for 8 hours. Then its adjusted utilization is 62%. There are 3 underutilized hours and 0 overutilized hours. Because there are no overutilized hours, planning service-specific staffing based on underutilized and overutilized OR time is identical to planning staffing based on adjusted OR utilization. Thus, using adjusted utilization to make allocations is fine for surgical suites where all allocations are for 1 (not 2) OR for the entire day, cases are scheduled sequentially, and ORs finish within 8 hours on more than half of days.

Suppose the same surgical suite has 3 of its 8 ORs as unblocked, open, first-come, first-served time. The surgical suite staffs in 8-hour, 10-hour, and 13-hour shifts. Then, there are 10 different potential staffing combinations (eg, 8/8/8 and 8/10/13). Only by calculations considering both expected underutilized and overutilized hours of OR time can a good staffing decision be made.

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What should be the requirement for maintaining block time?

Dr Dexter: Keep in mind, there are 2 stages of OR allocation, tactical and operational.

Tactical decisions

I am not yet aware of any facility that has reduced appropriate OR allocations tactically based on financial criteria. Rather, the tactical issue is which surgeon(s) and/or groups should be allocated additional block time.

Block allocations should be increased tactically for a subspecialty when all of these criteria are satisfied for that subspecialty: (1) relatively high contribution margin per OR hour, (2) no limit on patient unit and/or intensive care unit beds, (3) surgeon(s) aim to grow their practice, (4) available capacity is medically appropriate, (5) the allocation increase can be at least half a day a week, and (6) there are additional patients in the community not currently having surgery at the facility. Contribution margin per OR hour can include not just hospital reimbursement but reimbursement of surgeons and/or anesthesia providers.

Facilities sometimes make tactical changes based on nonfinancial criteria. For example, all of the thoracic surgeons are operating on Mondays and Tuesdays, causing cancellations on Tuesdays because the ICU is full. Changing the days of the week will change the hours of cases on each day of the week. Surgeons’ clinic hours may need to be changed, causing some to operate at different hospitals. Intensive care, nursing units, and other departments will be affected. Capacity and equipment needs may be changed, requiring capital investment. Because the OR workload will change, these are tactical decisions.

Operational decisions

For service-specific staffing, decisions made a few months before the day of sur-
gery, allocations can either be increased or reduced based on the current underuti-
lized and overutilized OR time.

Consider a service that is allocated 1 OR for the entire day, schedules its cases
sequentially, and has overutilized OR time on fewer than half of days. Then I would
use a cut-off point of 5 hours of workload for an allocation (ie, 62%, where 62% = 5
hr/8 hr). However, I am not aware of any argument why the value could not be 60%,
70%, etc. I find this to be a minor issue because the next point is far more important:
Rarely do the stated conditions apply. That is why OR time usually needs to be
planned based on both underutilized and overutilized OR time. The optimal alloca-
tion provides the best possible balance between overutilized and underutilized time.
There is a precise mathematical definition of “best”—this is not a judgment call.
Details are in the service-specific staffing lecture at www.franklindexter.net/educa-
tion.htm.

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