## Why operating room workload is not routinely predicted or monitored on a short-term basis?

Short-term prediction or monitoring of the total hours of cases including turnovers (i.e., "OR workload") seems of little value, based on the decisions that can be made with the information.

One decision is the allocation of additional OR time tactically (i.e., "blocks"). The decision should be based on financial data, intangible/ indirect costs from patients' perspectives, availability of intensive care unit beds, etc., not based on unusual OR workloads. <u>Click here</u> for the abstract of a review and <u>click here</u> for the corresponding paper. For solutions, <u>click here</u> for abstract, <u>click here</u> for the corresponding paper, <u>click here</u> for the lecture, and <u>click here</u> for details on how I perform the analyses when done for hospitals.

Another decision is service-specific staffing, which refers to the maximum hours of cases to be scheduled into each OR. Service-specific staffing should be calculated using statistical methods that are insensitive to the effect of days with unusually large or small OR workloads. <u>Click here</u> for a review article, <u>click here</u> for the lecture, and <u>click here</u> and go to "1<sup>st</sup> shift staffing" for the example report used in my <u>intensive course</u> and some of my <u>briefer courses</u>.

A third decision is the choice of afternoon staffing. At least three categories of workers with each skill set (e.g., cardiac, liver, and everything else) should be scheduled: brief (e.g., 8 hour) workday, long (e.g., 12 hour) workday, or work late if necessary. Each is calculated with statistical methods that are insensitive to outlier days. <u>Click here</u> for the abstract, <u>click here</u> for the lecture, and <u>click here</u> and go to "2<sup>nd</sup> shift staffing" for example report.

Fourth, afternoon staffing could be adjusted 1 workday before surgery, based on a short-term reforecast of OR workload. <u>Click</u> <u>here</u> [PDF] and <u>click here</u> [PDF] for measurement and discussion of this timing. However, to do this, the number of categories of scheduled staff would be increased by at least one (e.g., adding 'scheduled to work late if necessary unless told otherwise the working day ahead'). I have no experience with so many categories being used. Instead, decisions are made based on comparing planned staffing (allocation) for each OR and the expected end of the workday for the OR. <u>Click here</u> and <u>click here</u> for abstracts on releasing allocated OR time or <u>click here</u> and <u>click here</u> for the full papers. Equivalently, when a service has filled its allocated time, additional case(s) could be scheduled into overflow (extended) time not in a new OR, but at the end of the day in preselected ORs.

Fifth, the expected OR workload could be forecasted when the schedule is published, to decide whether to use an OR to reduce surgeons' seen turnover times or for add-on cases. However, such a decision should be based on the hours of cases scheduled into each OR, not the total OR workload. <u>Click here</u> for the abstract of an article reviewing how to make this decision, <u>click here</u> for the full paper, or <u>click here</u> for a lecture.

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