Our OR information system records the date at which the case was scheduled. What experience do you have in using this information for OR allocation and case scheduling?

Multiple scientific studies have relied on the complete transactional logs of OR information systems (i.e., every click). These studies have explained the lack of value at hospitals for planning staff assignment before the day before surgery, because of the large numbers of add-on cases and cancellations among patients who are inpatient preoperatively: click here, click here, click here, and for the final study with numbers of decisions per hour click here. The transactional logs are needed also for studies with anesthesia information management systems: click here and click here.

To evaluate a surgical suite's practice of declaring cases as Urgent versus Elective, we routinely calculate the difference between the dates at which each case was scheduled versus performed. This data also can be used to evaluate a surgical suite's practice of releasing allocated OR time (e.g., see Impact of service-specific staffing, case scheduling, turnovers, and first-case starts on anesthesia group and operating room productivity: tutorial using data from an Australian hospital).

Otherwise, this date information has been challenging to use. The date that a case is scheduled in an information system may not be the date that the patient requested to be scheduled for surgery (e.g., see Monitoring trends in waiting periods in Canada for elective surgery: validation of a method using administrative data).

For many OR management decisions, the waiting time of interest is that of each subspecialty at a facility. Patient-centered decision-making includes consideration when surgery is scheduled of having another surgeon at the same hospital perform a case if the patient wants to have surgery sooner (click here). There are substantial statistical problems in measuring waiting times accurately for small numbers of surgeons. The patients' waiting times are not independent random samples, since one patient's wait affects another patient's wait. The first article on the topic was: An operating room scheduling strategy to maximize the use of operating room block time - Computer simulation of patient scheduling and survey of patients' preferences for surgical waiting time.

Generally, valid statistical estimation of mean days waiting cannot be done by measuring days and taking the average, but by measuring days between patients' requests to be scheduled for surgery and case durations, and then inferring the average waiting time. Click here to download the article describing more of the science.

If the management objective is to determine an appropriate OR capacity for patients to undergo surgery in a reasonable number of weeks, then the current waiting time need not be measured (e.g., see Changing allocations of operating room time from a system based on historical utilization to one where the aim is to schedule as many surgical cases as possible). Click here and click here for analysis of long-term workload; to see a sample report, click here and go to "Long-Term Workload".

Finally, the management objective may be to monitor patients' waiting times daily to focus surgical clinic scheduling toward surgeons who have open OR time. This practice can cause oscillations in OR workload (see Enterprise-wide patient scheduling information systems to coordinate surgical clinic and operating room scheduling can impair operating room efficiency).

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