How can we determine the appropriate number of operating rooms for our cases?

Operating room capacity cannot be determined accurately using a ratio of cases per operating room or hours of cases per operating room. The reason is that surgical suite capacity is exquisitely sensitive to how block time is planned, staffing is adjusted to match the workload, and how the cases are scheduled. Click here for a review article.

The planning of block time is the allocation of operating room time tactically (e.g., once a year). This choice of the number of first case of the day starts affects the ability of surgical practices to grow. The choice appropriately affects the surgeons' flexibility in growing their practices. How to allocate operating room tactically (i.e., how many operating rooms to plan) is well understood. Click here to download a lecture. Click here for the abstract of a paper or click here for the full article. Click here for the abstract of a paper combining with estimation of market growth or click here for the full paper.

The planning of the number of staffed hours for each operating room of each service (specialty) is the allocation of operating room time operationally. This decision also influences the appropriate number of operating rooms. If staffing can be planned for some operating rooms for 12 hours or 13 hours, fewer operating rooms would be needed than if staffing were planned for 8 hours. Click here to download a lecture. Click here for a review article.

The appropriate number of operating rooms cannot be chosen reasonably by taking the total hours of cases and dividing by 8 hr, or some similar value, because the day to day variability in operating room workload can be large, as can the absolute differences between scheduled and actual operating room times. Click here for the abstract of an article or click here to download its full text. An upper prediction bound can be used (click here, click here, and click here for papers and then click here and scroll to the 'Long-Term Workload' report).

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