

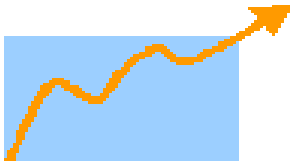
# SpaceMed Trendline

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## Assessing the Capacity of Clinical Services

### Background

Healthcare organizations vary in the number of expensive procedure rooms and equipment units that they use to accommodate similar numbers of annual procedures. This is why it is important to look at the current capacity of specific clinical services prior to deciding to expand the number of procedure rooms and related support space, particularly those services that use expensive equipment and uniquely-designed procedure rooms.



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### Current Trend

Prior to committing significant dollars to expand or upgrade an existing clinical department, healthcare organizations are routinely asking key questions such as the following:

- Is the current equipment state-of-the-art? Would newer, upgraded equipment improve throughput and thus eliminate the need for additional procedure rooms? Can the current procedure rooms accommodate new, upgraded equipment considering room size and dimensions, ceiling height, floor loading capacity, and power and telecommunications requirements?
- Could the daily and weekly hours of operation be extended to allow more procedures to be performed per week with the existing or upgraded equipment, such as staffing the department during evenings or weekend hours?
- Even if the current number of procedure rooms is sufficient, is there adequate support space to allow the department to function efficiently and meet customer service needs including staff work areas; supply storage; and patient waiting, reception, prep, and recovery space?
- Would relocating the department to an alternate location facilitate the sharing of staff, enhance customer convenience, or allow procedure rooms or support space to be shared with another department or service?
- Would a newly configured or relocated department reduce staffing costs, increase utilization and corresponding revenue, or provide other quantitative benefits that would balance the initial capital cost of renovation or construction?

### Determining Capacity

An analysis of facility capacity for clinical services involves identification of the current workload volumes and major treatment spaces and then applying industry benchmarks and rules-of-thumb. The annual capacity can also be built up by first identifying the number of procedures or visits that can optimally be scheduled in an hour, the number of hours per day that the department will be staffed, and then assuming 50 weeks per year of operation (allowing for about 10 holidays).

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Continued

Some examples of factors that influence procedure room turnaround time include:

- **Technology.** With a traditional single-slice computed tomography (CT) scanner, patients were scheduled every 30 minutes such that each procedure room could accommodate 16 patient studies/procedures per day based on an eight-hour day. The newer 16-slice scanners can acquire 32 images per second resulting in an average procedure time of less than 10 minutes. This allows four patients to be scheduled per hour or twice the number as with the older unit.
- **Patient mix and scheduling patterns.** Physician offices and clinics will have varying utilization of their exam rooms depending on the type of patients being seen (for example, dermatology, general surgery, oncology, pediatrics), teaching obligations, and scheduling patterns such as night and weekend hours.
- **Responsiveness of support services.** The time required to prepare a surgical operating room for the next case (OR turnover time) has a significant impact on the daily number of cases that can be accommodated in a single operating room.
- **Responsiveness of other hospital departments.** The turnaround of emergency department exam and treatment cubicles is greatly influenced by the responsiveness of the central laboratory and imaging departments if point-of-care services are not available; the responsiveness of consulting physicians also impacts patient throughput in the emergency department.

### Conclusion

It should be noted that even with adequate facility capacity, many healthcare organizations are limited in their weekly hours of operation due to the availability of physician, technical, and support staff (e.g., scheduling difficulties, recruiting in a tight job market, and regulatory or union issues with cross-training staff).

*Cynthia Hayward*  
Principal  
Hayward & Associates LLC  
[chayward@hayward-assoc.com](mailto:chayward@hayward-assoc.com)

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