

Creating Productive Specialty Medical Care Facilities Designs: Top Ten Principles of a Productive Design and Practical Lessons Learned

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Just as community health systems have modified their strategies over the last few decades, the delivery of specialty medical services is transforming as well. Independent medical and surgical specialists are consolidating to create independent integrated clinical service line strategies focused on well-defined constellations of related acute and chronic conditions; many of which can be effectively treated in specialty ambulatory care centers. Focused specialty strategies can be found across the U.S. Examples include centers for comprehensive eye care, orthopedic and sports medicine, cancer centers, centers for the treatment of digestive disease, rehabilitative care, lifestyle medicine centers, and surgical care, to name a few. Success with such large, focused clinical service line strategies is facilitated and enhanced by innovative facilities design, development, construction, and financing strategies.



Cornerstone Specialty Care Centre – Woodbury, MN

The case vignette that follows is provided to illustrate the opportunities for specialty medical facility designs that are responsive to expansive, ambulatory, clinical service line strategies. The fundamental and central message is the best specialty facility designs facilitate clinical service performance; quality of care, the patient experience, clinical model innovation, capital asset economic productivity, and operational efficiencies.

The development of free-standing, comprehensive eye centers provides the backdrop for a set of principles that frame the design and development of high-performing, ambulatory specialty medical facilities.

Case Vignette: Facilities Planning and Design for Comprehensive Eye Care Centers

Compared with other medical specialties, comprehensive eye care facilities designs present unique challenges and opportunities. “Getting it right” affects patient care and experience, as well as the productivity of the asset (the facility), and the operating and financial productivity of both the clinical and business models of the practice.

The obvious question here is why does the delivery of comprehensive eye care services call for specialized facilities design and development understandings and methods that may differ from medical facilities, generally? To start, larger, comprehensive eye centers will often aggregate three major service line components under one roof; a clinic, a surgery and laser procedures center, as well as the sale of retail products such as eyewear. Essentially, three related, but different business must be effectively integrated within a single facility design.

Moreover, effective delivery of comprehensive eye care services, provided under one roof, requires effective applications of “accepted manufacturing methods and processes engineering”. Why? Because the clinical care model requires multiple, well-coordinated patient “touches” to affect an efficient and clinically effective encounter from beginning to end. Productivity and efficiency performance is determined by effective operations and patient flow management, which is greatly influenced by facilities design. Comprehensive eye care facilities design should be responsive to high-performing clinical care model designs. Facilities design should effectively “wrap around” the right care model designs. Care model design should not be “shoe-horned” into off-the-shelf medical office space. This maxim is especially apt when a facility must effectively integrate medical services, surgical services, complex diagnostics, and eye wear sales and service within a single, unified specialty services facility.

The principles that govern comprehensive eye care facilities design, development and construction:

1. Buildings should facilitate the vision and strategy of the practice, including strategies to differentiate the patient experience, while facilitating efficiency and productivity. The focus of the design should address the expected patient experience first. In highly competitive markets, the patient experience affects patient choice; especially for specialties where patient self-referral constitutes a significant percentage of new patients for a practice. The appeal and functionality of facilities affects the patient experience.
2. Financial productivity, per useable square foot is a key performance metric for facility design. Understandings of how provider productivities variations, and preferred work schedules bears upon fixed asset productivity are important during the design process. While it seems obvious, many practices don’t consider how to effectively optimize the economic productivity on an expensive fixed asset, “per square foot”. Likewise, macro healthcare economic policy changes on the horizon will differentially affect clinical specialties, especially as the governmental payers, CMS for example, seek to redistribute available funding by reallocating dollars among medical services. Effective specialty facilities designs need to consider how such health care economics policy decisions are likely to implicate facility asset productivity requirements, over time. Remember, the operating cost per square foot of space is the same for waiting room chairs and waste baskets, as it is for operating room equipment (see Figure A).

Figure A.
Comprehensive Eye Care Facility Design: Operating Revenue Productivity Estimates
Usable Square Footage = 20,000 sq. ft.

Area of Revenue Productivity	Expected Performance
Clinic: 12,000 sq. ft. allocation	\$850, per sq. ft.
Surgery Center: 5,000 sq. ft. allocation	\$1,172, per sq. ft.
Retail Optical: 3,000 sq. ft. allocation	\$1,209, per sq. ft.
Total Facility Productivity Annualized	\$982, weighted avg. per sq. ft.

3. The facility design takes into account performance as a stand-alone site and/or as a location component of a multi-site strategy; if multi-site, all facilities must work together to integrate and facilitate the organization's strategy and financial and operating economics productivities requirements.
4. When clinic, surgical and optical services programming are integrated within a single facility, they are not "separate businesses under one roof". At least not as far as patients are concerned. Practical evidence demonstrates significant variation in the realized productivities of optical, clinic and surgical services performance in eye care centers, based upon facilities design and function. Provider and staff interactions across and between the services housed are affected by facility design, as well
5. Future care model innovations are to be considered in the initial facility design. Buildings have a 30 year life, at least. Clinical care innovations come fast. Examples are seen across clinical specialties; e.g., total joint replacement are now done in ambulatory surgery centers, procedures once done in ASCs are moving to "office-based" status, and the traditional exam room space will likely need redesign, over time. Innovations in building designs, construction materials, engineering methods make future space use redesign opportunities feasible and affordable.



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6. Planning for growth is always a challenge. As a general rule, most ambulatory space is "under-sized" the day it comes on-line, due to a lack of forethought on clinical programming future growth potential, and aversions to related financial risk. It is important to remember that it's not always feasible to expand a facility later, and

if you can, the cost is always much higher when compared with sizing for growth upfront. Occupancy cost, as a percentage of revenue productivity potential in medical facilities, is one of the lesser categories of operating expense performance. “Under-building” is a typical mistake in medical facilities development.

7. Assumptions regarding care delivery economic, and services reimbursements factor into facilities design; e.g., downward pressures on price, utilization and total costs of care for medical and surgical eye care, especially pressures from the top-payers for the practice. A major commercial insurer in Minnesota reduced reimbursement 30% over three years for eye surgery facility fees. Medicare reports payment reductions for eye care in 2022. Provider’s responses to changing practice economics will cause changes in clinical programming and practice style. Facilities design and function will be implicated.
8. The mix of new vs established patient requirements of a practice’s strategic plan affects the facilities design, staffing, clinical equipment positioning, and patient flows and throughput. The best facility designers and architects will discuss practice strategy with providers and management before the first cad renderings are produced.
9. Assumptions regarding space for staff breaks, productive workstation configurations, personal effects storage, and the need to remain on-site during breaks, and work shift turnover are often under-appreciated design considerations, as are needs for efficient configurations for essential, non-revenue producing staff.
10. Medical facilities present unique property management challenges, especially those that provide surgical services and sophisticated diagnostics; vibrations control, temperature and humidity control, sound dampening, patient privacy, ADA regulations, hazardous waste management, and emergency management requirements, to name a few. Cost effective property management requires forethought and expert pre-design and construction considerations. Management of complex medical facilities is a professional specialty onto itself.



Twin Cities Orthopedics – Edina, MN

Reaching provider and management consensus on the expectations that derive from the principles framework above provides the foundation for a detailed and disciplined approach to facility planning, design and construction. Experience clearly demonstrates that failure to dedicate the time, effort and expertise to medical care facilities planning, design and construction upfront, results in years of impaired clinical and business model productivity, clinical care innovations performance problems and an under-performing capital asset, overall.

Experience also demonstrates that with the right facilities design, coupled with effective strategic provider productivity planning, the costs of facilities become one the lesser expense categories of practice financial performance.

Lastly, and to repeat, many new ambulatory facilities designs are under-sized from the outset. Why? The answer often lies in the psychology of confusing conservative thinking with sound business judgement. Facilities development is a decision of at least one generation. While it can be the case that future facility expansion is possible, the total cost is always more expensive, especially when new construction disrupts ongoing revenue productivity and the patient experience.

Zisner, D.K., "Clinical Service Line Medicine Center"; Creating a Lifestyle Medicine Center, by Mechanick and Kushner, Springer Nature Switzerland, AG, 2021