EXAM ROOM UNDERUTILIZATION: MAXIMIZING THE USE OF AMBULATORY PATIENT CARE SPACES

Many forces are propelling the transition of patient care to the ambulatory setting including innovations in chronic disease management, progress in preventative care, advances in technology, reduced cost of care, and market forces. Not all healthcare organizations are positioned to fluidly transition to this new environment. However, there are operational improvements that can be made that can result in significant capital savings for organizations. This report highlights one such improvement: maximizing the use of existing ambulatory patient care spaces while minimizing the expenditure of resources.

The Benefit of Optimizing Exam Room Utilization

Outpatient clinic volumes will increase as patient services continue the progression to the ambulatory care setting. For many healthcare organizations, the natural solution will be to build additional ambulatory clinical space to absorb this growing patient demand. However, building additional capacity before maximizing the use of existing space could result in overbuilding and unnecessary spending (FIGURE 1) that could be diverted to other pressing matters. Most organizations have un-tapped additional capacity within their existing facilities. Recently, after being presented with FIGURE 2, showing existing outpatient capacity, a community hospital client of CannonDesign completely rethought their facilities growth strategy. Eventually, the organization increased utilization through operational improvements, resulting in the prevention of unnecessary capital expenditures and significant cost savings.

IN THIS REPORT

• The costs associated with exam room underutilization
• Best practices for setting exam room utilization benchmarks
• Examples of how organizations can make patient care space more operationally efficient

FIGURE 1
Cost of Medical Office Building Clinic Space ($/sf/year)

Source: Bach & Moor, 2006; Bukey, C., 2013; CannonDesign
Putting aside the scarcity and difficulty of funding capital projects, the underutilization of patient treatment spaces is associated with significant operating and opportunity costs. Convenient access, including the ability to obtain appointment times which are convenient for patients, is a primary driver of why patients will select a provider, either hospital or physicians. In fact, 87% of patients indicate that wait time is a primary factor that affects their patient experience and satisfaction with their providers, and losing just one patient can account for the loss of over $1,600 a year in revenue in a conventional primary care clinic. In addition, it is estimated that one hour of unfilled clinic time can cost over $10,000 a year in missed revenue and operational expenses, and running 30 minutes late per day can cost upwards of $3,000 a year in unproductive and inefficient staffing. These factors combined can cost a conventional primary clinic well over $14,600 a year in revenue loss. 1

While the cost impact of operational inefficiencies may seem insignificant at first, the cumulative effect can strain organizations. These inefficiencies also distract from the most important hospital imperative: providing high quality care to patients. In all ambulatory care settings, the actual provision of direct patient care is the most valuable, albeit most costly, step of the patient care process (figure 3). All other steps add little to no value to the patient or the organization. The streamlining of unnecessary ancillary steps offers the most significant opportunity to eliminate non-value added costs and improve the efficiency of the care delivery.

In fact, the utilization of patient treatment spaces can serve as a key measure of the efficiency and value of an outpatient program. Setting and meeting productivity goals for patient rooms ensures that the organization is getting the most out of one of their greatest critical assets.

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Setting customized utilization benchmarks for patient treatment spaces can serve as a self-assessment of whether a healthcare organization is getting the most out of their ambulatory facilities. This process must begin with a clear understanding of historic performance and a sense of the organization’s appetite for operational improvements. Key questions to consider are:

- How much time do patients spend with a provider versus undertaking administrative or non-value added steps?
- How effectively are you utilizing current patient treatment areas?
- What is the average historic utilization for patient treatment areas, i.e., exam rooms, patient encounter areas?
- How does your operational efficiency compare with peer institutions?
- What operational improvements can the organization realistically accomplish?
- What inefficiencies are inherently incorporated in the program and will be unchangeable?

It is important to understand how the answers to these questions will ultimately impact room need. A sensitivity analysis studying the impact of volume growth or decline against lowering or raising clinic room utilization benchmarks can establish a range of possible scenarios. The impact of shifting a utilization benchmark can be significant. For example, a community hospital Client of CannonDesign realized that increasing the utilization of their Cardiology Clinic exam rooms from 1,400 visits per year to 2,000 visits per year could result in a virtual savings of three rooms, assuming there is no volume growth or decline (FIGURE 4).

Non-Value Adding Cost: $29.20/visit
Assuming 10,000 annual clinic visits, $290,000 of costs would be attributable to non-value adding processes every year.

### FIGURE 4
Number of Cardiology Clinic Exam Rooms Required for Example Community Hospital

<table>
<thead>
<tr>
<th>Anticipated Cardiology Clinical Volume Growth: 0%</th>
<th>Current Volume: 12,353</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,400 visits/year/exam room</td>
<td>1,600 visits/year/exam room</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Applegate, 2008 & CannonDesign
Mitigating the Forces Behind Exam Room Underutilization

The causes of exam room underutilization occur at three different states: before the visit event takes place, during the actual visit, and after the visit. At each state, there are low-cost tactics that have the potential to immediately open capacity.

Pre-visit: Scheduling
Tactic 1 - Address Call Center Access Issues:
Access issues frequently begin at the call center. Difficulty in making timely appointments commonly results in inadequate or delayed care. The Commonwealth Fund reported that more than 70% of adults have issues accessing timely appointments, and one-third of patients report challenges in accessing care during illness. Additionally, there is a positive correlation between the greater length of time between scheduling an appointment and the appointment itself with higher cancellation rates. Addressing appointment access issues is an easy strategy for increasing utilization. Using a systematic approach to determine the appropriate number of operators and assess how tasks should be assigned for different time periods (based on variable service demand) has been proposed as an effective approach to derive the low operating costs and high service quality (e.g., lower abandonment rates, higher percentage of customers served) that results in successful healthcare call center operations.

In addition to simply handling scheduling, many other responsibilities can be transferred to the call center, freeing up unnecessary steps at the clinic site, including medication refills and responses to clinical questions. In an Advisory Board case study, St. John’s Clinic relocated the majority of its registration functions to an off-site call center. The call center nurses manage scheduling, answer clinical questions, and refill prescriptions. By relocating the administrative activities onsite, and the addition of a kiosk at reception to complete registration upon patient arrival, additional space was made available, and patient flow was improved.

Tactic 2 - Level Schedule
CannonDesign’s research and analysis has shown a high variability in the utilization of exam rooms across days of the week and hours within the day (FIGURE 5). The ability to level a schedule will increase the overall utilization of ambulatory spaces by up to 40% without requiring additional space or capital renovations. Aurora Health Care’s experience in leveling a schedule for their internal medicine practice equated to a 39% decrease in patient wait times, an average increase of 111 visits per month, a monthly NMR increase of $18,879 and an increase in patient satisfaction. These successes are not limited to internal medicine, but are also reflected in Aurora’s orthopedic and family physician service lines.
Post-Visit: Patient Follow-up and Continuing Care

Tactic 1 – Virtual Portals
Building virtual access points in between visits is increasingly necessary to off-load non-patient facing time away from clinic facilities. Virtual follow-ups, communicating results of lab tests, appointment scheduling, and support with ongoing care management can occur through online portals, and can enhance the efficiency of clinic visits. Patients are increasingly seeking opportunities to access and manage their care, which is increasingly being managed through online portals.

Tactic 3 – Customize Appointment Lengths
Often, investigating an organization’s approach to appointments and clinic scheduling will reveal significant opportunities for customizing the length of each appointment. Not all appointments are created equal, but rather should be tailored to specific specialties, type of visit, and to particular providers. Scheduling for the appropriate appointment length will prevent delays and bottlenecks during the time of service (figure 4).

During Visit: Patient Throughput

Tactic 1 - Automate
Establishing processes to facilitate smooth patient flow is essential to meeting utilization goals. All organizations, even ones that do not have enough demand to warrant a call center, can leverage technology to automate non-value adding tasks. For example, check-in kiosks can help alleviate bottlenecks and minimize wait times. Kiosks are now designed to integrate with EMR, which can be automatically pulled up for review by a care provider during the appointment.

Tactic 2 - Group visits
Group visits are novel and effective ways of increasing clinic productivity for many primary care services and several specialties. In addition to increasing utilization, group visits have been proven to provide the social and behavioral support needed to manage chronic conditions, well-child care, and prenatal care. Components of group visits include:

- Quarterly two-hour visits on pre-determined topics
- 8 to 10 participants
- Facilitated by case managers or medical assistants
- Individual consultations by patients’ main provider
- Clear protocols and patient responsibilities for each visit.

Tactic 3 – E-Visits
E-visits, also known as virtual visits, are appointments conducted via web-camera for a direct fee. The popularity of virtual visits for low-acuity primary care cases is growing, partially due to patient demand for convenient healthcare access points and as a way for providers to manage capacity constraints in existing facilities.

E-Visits are projected to experience high growth over the next several years due to their convenience, addition to contribution margin as a result of direct referrals (ranging from $14 to $26 depending on setting), ability to increase provider productivity, open up capacity for facility-based clinics, and its function as a forward-thinking growth strategy.

E-Visit Statistics
- $88 reduction in average cost per case
- 2.5 hour reduction in average time patients spend accessing care
- 90% of cases resolved

Virtual Portal Statistics
- $90% of patients want to self-manage personal medical data online
- 72% want option of online appointment scheduling
- 88% want email appointment reminders

Source: Advisory Board, 2013
Conclusion

Enhancing operational efficiency, increasing clinic utilization by eliminating non-value adding steps, and enhancing patient access to care will ultimately position organizations to successfully adapt to the new healthcare environment while improving overall patient experience. The focus on making the most of existing space provides ample opportunity to accommodate additional demand for outpatient services in a cost-effective manner.

References


Figure References


About CannonDesign

CannonDesign is an integrated, global design firm that unites a dynamic team of strategists, futurists, researchers, architects, engineers and industry specialists, driven by a singular goal — to help solve our client’s and society’s greatest challenges.

Contact Information

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