The design of the exam room has come under increasing scrutiny as the healthcare industry shifts focus from inpatient to outpatient care. Technological developments, new care models, and shrinking budgets are all impacting the decisions health organizations make regarding their exam room prototypes and standards. Neither research nor anecdotal experience has resulted in one ideal standard for the layout and configuration of exam rooms. Instead, these decisions are influenced by the priority an individual organization places on many different factors, including but not limited to: safety, cleanliness, efficiency, accessibility, flexibility and adaptability, and cost control. In recent years, several organizations have adopted a dual-entry exam room model – with separate entrances for patients and care providers – citing benefits that include flexibility and adaptability, accessibility, and efficiency. This report discusses the drivers, opportunities, and limitations associated with this layout and associated space configurations.

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- Drivers of the dual-entry exam rooms.
- Opportunities and limitations of the dual-entry exam rooms.
- Related exam room layout and configuration trends.
What is a Dual-Entry Exam Room?

Newer models of ambulatory clinic design focus on segregating different flows and functions in an effort to create an on-stage / off-stage model. In this approach, areas dedicated to the patient experience are optimized to patient centricity, while staff areas are designed to support staff convenience and productivity. Dual-entry exam rooms support this concept by including separate entries for patients and care providers, with the intention of separating work-flows to create a more peaceful patient experience and a more efficient care provider experience. Patients enter through a direct route from the reception or waiting area and care providers enter from their work area, adjacent to the exam room (FIGURE 1). This model allows multiple care providers to come in and out of the patient’s room, allowing the patient to stay stationary instead of having to move to multiple locations throughout the clinic. This layout also allows a physician to access the exam room within a step or two, rather than locating a team work space across the corridor from a single entry exam room, which is at least 5 feet further away. In the example in FIGURE 2, a small waiting area spans the front of the clinic while care provider teaming areas are placed in the back. Rows of exam rooms flank both sides of the physicians’ work areas in the center of the plan, creating separate, distinct pathways for patients and caregivers — each leading to doors on opposite walls of the exam room.

This model has been emerging in other healthcare settings as well, like the emergency department. In the “inner-core” model for emergency departments, a linear configuration organizes care provider workstations in the center of the floor plate surrounded by dual-entry treatment rooms on both sides. Patients access treatment rooms from the perimeter corridors, while care providers access the rooms from their work area. This model allows for more fluid ED expansion.¹

Dual-Entry Exam Room Examples

Dual-entry exam rooms have recently been designed for numerous projects across the country and are growing in popularity. Case and point, CannonDesign recently worked with the Department of Veterans’ Affairs (VA) on developing the Patient Aligned Care Team Model (PACT) Clinic — featuring dual-entry exam rooms, which have become a prototype for VA clinics throughout the country. Examples of other facilities that utilize dual-entry exam rooms include:

- Yale New Haven Hospital, North Haven Ambulatory Center
  North Haven, CT
- Seattle Children’s Bellevue Clinic and Surgery Center
  Bellevue, WA
- Swedish American Hospital Women & Children’s
  Rockford, IL
- Truman Medical Center’s UH2 Medical Office Building
  Kansas City, MO
- Rush Oak Brook Orthopaedic Center
  Oak Brook, IL
FIGURE 1 This exam room prototype utilizes sliding doors for the patient and caregiver entries on opposite sides of the room.

FIGURE 2 This diagram highlights the separate patient and caregiver travel paths associated with this dual-entry exam room configuration, where caregivers enter the exam room from their work area and patients enter via corridors directly adjacent to the waiting area.
Drivers of Dual-Entry Exam Rooms

Many of the considerations that lead to the development of the dual-entry exam room are also considerations that are driving other innovations around ambulatory care models and facility design.

Lean Processes

Lean processing is at the root of many decisions to adopt a dual-entry exam room prototype. In the examples cited previously, most organizations utilized a 3P process to determine both existing performance and the steps needed to make improvements through both facility design and operations. This process brings stakeholders together to determine why current processes are the way they are and to identify steps that can be taken to make them more efficient and effective. Research supports this model as a lean strategy, too; distance and time has shown to decrease significantly with the use of dual-entry exam rooms. One comparative study between dual-entry and linear clinic modules noted that dual-entry reduced travel time of clinical staff by around 5% and reduced distance traveled by nearly three quarters of a mile; another study noted an 83% reduction in staff footsteps when using dual-entry exam layouts.2,3

Interdisciplinary Care Models

Spaces that accommodate and promote interdisciplinary interaction and collaboration can help integrate clinical, didactic and research functions. At CannonDesign, we have seen a rising number of collaborative spaces incorporated into ambulatory care clinics over the past decade and fewer private offices for physicians, especially in academic and teaching facilities (e.g., AMCs). Similarly, taking cues from the corporate world, there is a gradual transition underway in healthcare from providing primarily private administrative space in ambulatory clinics to providing a variety of private and open workspaces. Creating easy access between these spaces and exam rooms has resulted in the types of segregated collaborative hubs for “off-stage” tasks between professionals from different disciplines that connect directly to a separate entrance into exam rooms (FIGURE 3).

Patient Experience

In response to the increased accountability as a result of incentives and penalties tied to the Affordable Care Act and other related legislation, creating a satisfactory patient experience is a core goal of most healthcare organizations today. Organizations that segregate patient and staff travel paths by utilizing dual-entry exam rooms assume that this will lead to a more desirable patient experience due to the reduced noise and traffic associated with being segregated from staff work. Recent studies have indicated increased patient satisfaction with the dual-entry model, noting improved satisfaction in perceived wait time, in wayfinding, environment and overall satisfaction.2,3

FIGURE 3 These block diagrams show how dual-entry exam room layouts can more effectively support an interdisciplinary care model, creating opportunities for more open teaming spaces and less private.
Considerations for Dual-Entry Exam Rooms

Smaller Waiting Area/ Reduced Wait Time
Reducing wait time through technological and facility-level innovations is a goal of many healthcare organizations that are attempting to improve both throughput and patient experience. Dual-entry exam rooms create opportunities to implement processes that support reduced wait times such as self-rooming. Fewer people waiting also results in reduced space needs for waiting areas.

Space Considerations
Dual-entry exam rooms have been designed with sliding doors, standard doors or a combination. Specifying standard doors adds additional square footage (up to 25 square feet) to the exam room and corridors, but is often required by AHJ (authorities having jurisdiction) for infection control and life safety/egress reasons (Figure 4). However, this additional space can create a more spacious environment that is more conducive to creating comfortable consultation areas within the exam room. A recent study published in Environment and Behavior found that a larger room size and more interpersonal space during personal conversations were associated with a greater perceived ease of disclosure among subjects sharing sensitive or intimate information. A post-occupancy study on a dual-entry access facility noted increased patient satisfaction related specifically to the environment. In addition, the increased throughput of patients — one study noting patients waited nearly 17 minutes less in dual-entry vs. linear models — can aid in recouping the capital cost of additional square feet required for the model.2

Acoustic Considerations
The Health Insurance Portability & Accountability Act (HIPAA) requires key patient areas to provide a confidential level of speech privacy to adequately protect conversations regarding sensitive health information. This becomes especially important when exam rooms are placed directly adjacent to clinical workrooms — common with many dual-entry models. In these instances, the acoustical rating of the wall and doors leading to the exam rooms should be increased to support the appropriate levels of privacy.

Related Exam Room Trends

Self-Rooming
Self-rooming — the ability to walk to and enter your exam room without the escort of a nurse or another care provider — is an operational process that has been implemented in several healthcare organizations across the country. Dual-entry exam rooms create optimal conditions for this type of innovation since they can help facilitate a direct patient path from registration to an exam room, with little disruption from off-stage activity along the way. Research is limited and somewhat contradictory on patient satisfaction with self-rooming, which justifiably makes some organizations cautious about implementing it. A 2015 study that studied two family medicine clinics with self-rooming found that upwards of 95% of patients preferred rooming themselves and patient satisfaction stayed high. That being said, CannonDesign recently conducted a survey with patients as part of pre-design activities for a new ambulatory clinic. One of the significant findings from that survey was that patients generally preferred waiting rooms to exam rooms. Exam rooms tended to make patients anxious – a finding that may make self-rooming a less appealing option.

Exam + Consultation Room
The relationship between the exam room and consultation space was studied in-depth by researchers at Mayo Clinic between 2009 and 2011. As a result of their research, they developed the “Jack and Jill” model which connected a small exam room with solely exam room functions (i.e., no table for consultation) with a separate consultation space. A curtain is used in the doorway to separate the rooms so that consultations can be conducted in a non-clinical environment. In the prototype developed by Mayo, there is only one door into the consultation room which leads into the exam room. However, other models have included a door from the staff corridor into the exam room and a door from the patient corridor into the consultation room — making it a very similar concept to the dual-entry exam room.
Conclusion

There can be significant benefits from utilizing dual-entry exam rooms – especially related to cutting down on travel distances and helping to streamline separate staff and patient flows in ambulatory care settings. However, they can also increase space requirements and in turn, capital costs. There is a growing body of research and investigation into how and if these spaces impact the patient and staff experience. Current research, though limited, indicates a positive trend in patient satisfaction, a reduction in staff travel distances, a growth in staff collaboration and increase in patient throughput. Like any other design solution, the decision to use dual-entry exam rooms should be guided by a thoughtful analysis of the impact of the increased upfront costs on the overall business model, knowledge of the patient population’s needs and desires, and an understanding of the organization’s priorities for patient care.

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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