DOES MY CLINIC SPACE HAVE TO CHANGE TO MAKE THE PATIENT CENTERED MEDICAL HOME WORK?

BOULDER ASSOCIATES

ARCHITECTS

YES.

The **Patient-Centered Medical Home** seeks to strengthen the provider-patient relationship by replacing illness-based episodic care with a long-term relationship with a primary care team emphasizing continuity of care, collaborative care, and patient activation. The concept incorporates providers and patient into a team that takes collective responsibility for the patient's well-being. All of the patient's needs are addressed, including arranging for appropriate care with other qualified physicians as needed. This one-stop health care home also emphasizes enhanced care through increased availability, alternative portals to services, education, and a trusting relationship with the care team.

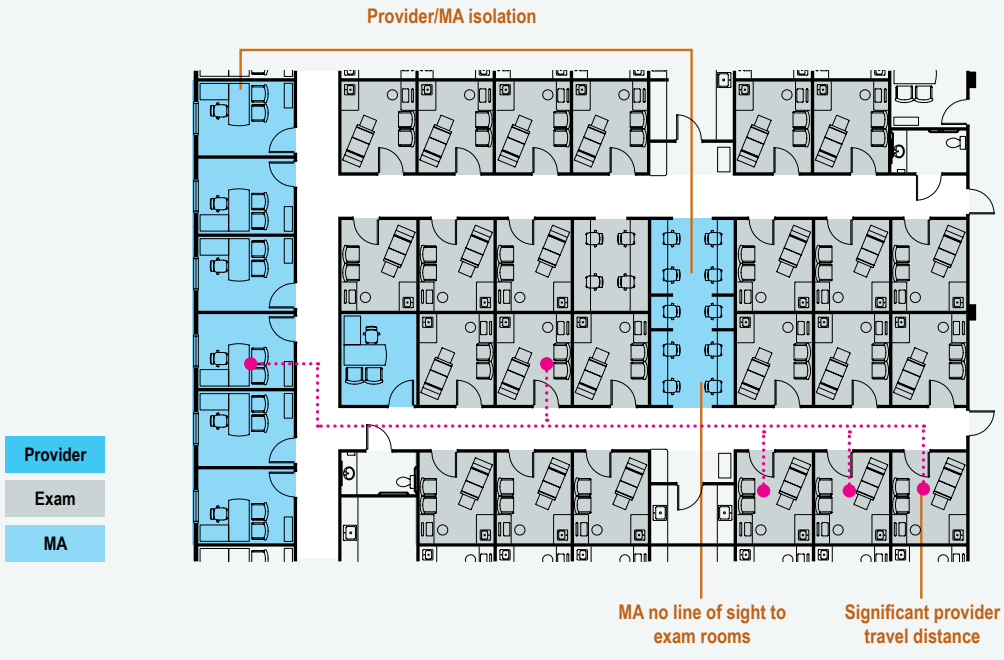
TRADITIONAL CARE	TEAM-BASED CARE
Autonomous Physician Practices	Team based multi-disciplinary approach
Physician as Expert	Physician as team leader with patient participation
Single Point of Care Platform- One on One, Face to Face	Multiple points of Care Platform- E-Visit, Group Visits, Email
Quantity/Fee for service	Quality/Outcome-based
Episodic Care	Longitudinal Care

This new model of care calls for new ways of looking at the space needs of a practice. The silo model of care that gave rise to warrens of individual physician offices, dedicated procedure areas and separate nurse stations runs counter to the requirements of collaboration and involvement of the care team. Team-based care calls for spaces that facilitate greater interaction and communication among providers, MAs, and other related care providers.

THE TRADITIONAL CLINIC

Barriers to Care

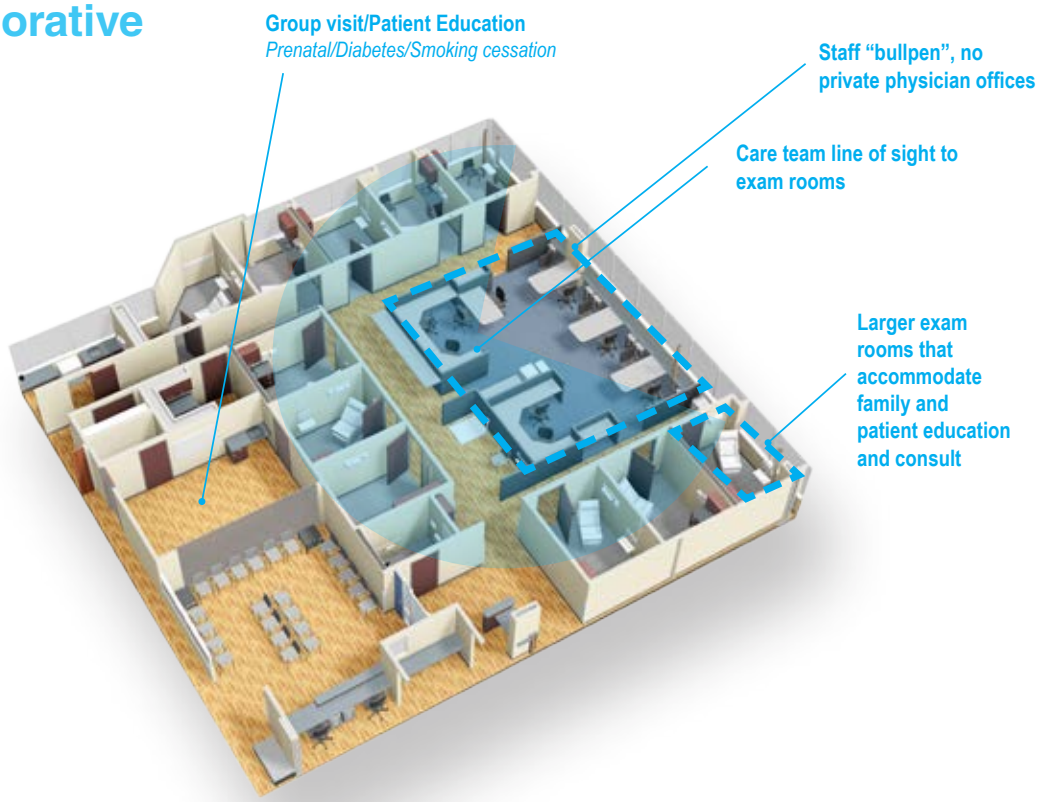
This diagram illustrates the shortcomings of a traditional "racetrack" clinic layout. Most apparent is the significant physical separation of the provider from the support staff team. This isolation is representative of the silo-based practice model, and is not conducive to care collaboration and communication. Also note the significant travel distances for the providers, and the lack of line of sight from the MA station to the exam rooms.

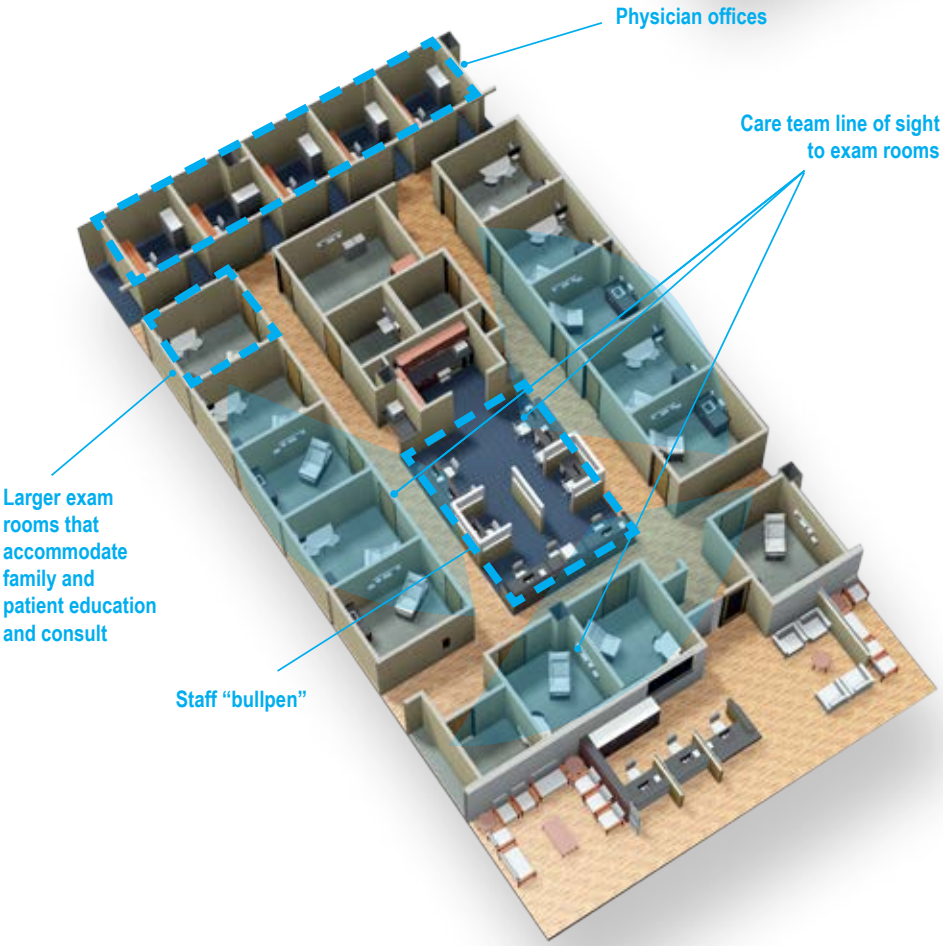


Here's how.

The fully open collaborative clinic model

This clinic model is the most open of all models, and represents the most significant departure from the traditional. The fully open bullpen has the physician sitting across from the MA, with no private offices. The other pod spaces are occupied by case manager (health Coach), behavioral health professional, RN, and electronic records staff. There are no partitions within the bullpen.





The transitional / hybrid collaborative clinic model

This model retains the central staff bullpen, where the clinical staff collaborate and share. It differs from the fully open model in that it maintains offices for the physicians.

Physicians who are "in clinic" work out of the bullpen. The private offices are used for non-clinic activities, patient consults, dictation, and follow-up calls. This transitional model allows practices to move towards the advantages of a bullpen concept without the complete culture change required to fully adopt an open working environment.

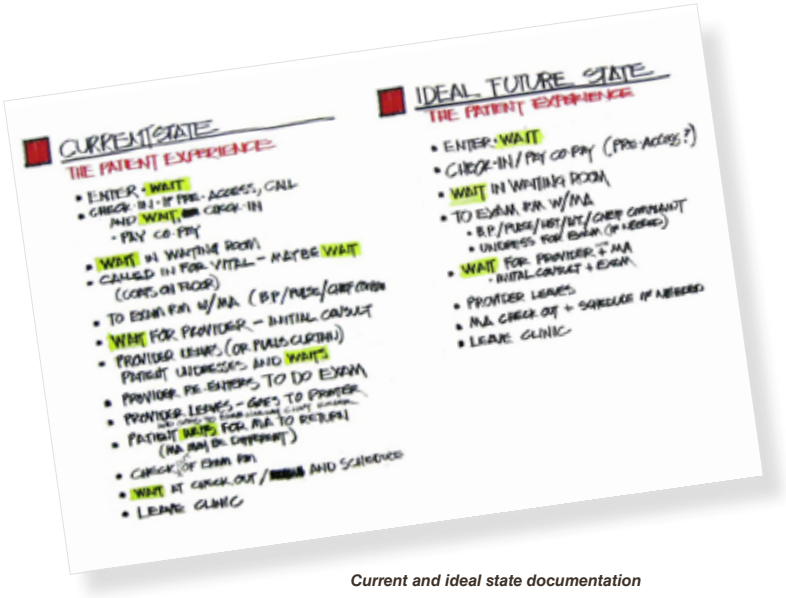
A hands-on design process

3P refers to “People Preparation Process”, and is an adaptation of the Toyota Production Systems “Production Preparation Process”. It is very effective design tool for healthcare because of the emphasis on efficient operating processes. The 3P approach develops the ideal process first, followed by the design of the layout that best supports that process. The design team will be working alongside the people who will work in the space and know their processes best.

This approach calls for a 3P event, typically an intensive week-long hands-on workshop conducted with representatives from all of the key stakeholder groups. This will include everyone in the trenches, from providers and administrators to receptionists and materials managers. During this event, the users work with the design team to develop an ideal work process that suits how they work while eliminating waste and inefficiencies. The users and the architects build full scale mockups out of cardboard to test, simulate and finalize design ideas. This allows for:

- Turning ideas into physical models that people can visualize and relate to
- Concentration on flow and process improvement
- Simulations to test what works and modify what doesn’t
- Provides for an affordable and highly visible way to do a “Plan, Do, Check, Act” (PDCA) process that will result in a product that truly meets the users needs

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Establish objectives	Build mockups to simulate flow	Simulate	Simulate	Finalize mockups
Document and explore current processes (Go to Gemba)	Simulate the process	Kaizen	Kaizen	Finalize schematic design
Review current metrics	Evaluate alternatives, choose best 3	Simulate	Simulate 3D process	Report out
Document current state		Reflect and repeat	Lay out material flow	
Create alternatives			Simulation review	
Start mockups				



Current and ideal state documentation

X-Ray mockup with door swings and clearances indicated

Team simulating patient visit in exam room

Team simulating a reception design concept

Design concepts developed and modified on site

"The 3P event was by far the most valuable exercise that I have every participated in, and I believe the efforts of the 3P will save us months of design time. We modeled the clinic based entirely on the patient experience, and made significant improvements in this process. It was also a wonderful team-building experience."

Sharon Booker | University of Iowa Health Center

Spaghetti diagrams measuring travel distances by users

Current exam room:
- *Not zoned – provider has to cross exam room and squeeze by*
- *No accommodation for family or bariatric patients*
- *Computer setup does not promote eye contact with patients*
- *Design was never tested – equipment does not reach*

Future Exam Room:
- *Zoned with a Patient Side and a Provider Side*
- *Design accommodation for family or bariatric patients*
- *Computer setup for patient engagament*
- *Mockup tests for equipment accessibility*

A case study in culture change

Clinica Health Services | Colorado

The following is a story taken directly from Clinica Health, one of the pioneers of the pod clinic concept. From this story's beginning, Boulder Associates continued to work with them to refine the concept from facility to facility. Clinica's model is now one of the leading examples of a high-functioning collaborative care environment

When Clinica began looking for ways to maximize efficiency, one of the first things we put under the microscope was the physical layout of our clinics. Where were the exam rooms in relationship to the clinicians' offices? How long did it take a nurse to walk from her desk to the fax machine? If a doctor needed her medical assistant, how many steps did she take before finding him?

In 2000, we started the planning phase for our new Thornton clinic. This presented us with the opportunity to throw away all the commonly held rules of medical facility design and create a floor plan that would help our staff work more efficiency and, therefore, care for more patients each day. We wanted to achieve a number of goals with the new floor plan. We wanted to:

1) Make it easy for staff to find each other.
2) Make it easy for clinicians to see their work.
3) Make the clinic feel as small and personal as possible for each patient.

We were fortunate to have a nationally-known architectural firm that specialized in medical facilities located just 20 miles from the site of the new clinic. One of Boulder Associates' principal architects, Nick Rehnberg, worked closely with Clinica's vice president of clinical affairs to create an innovate floor plan that helped us achieve the feel and efficiency we were hoping for.

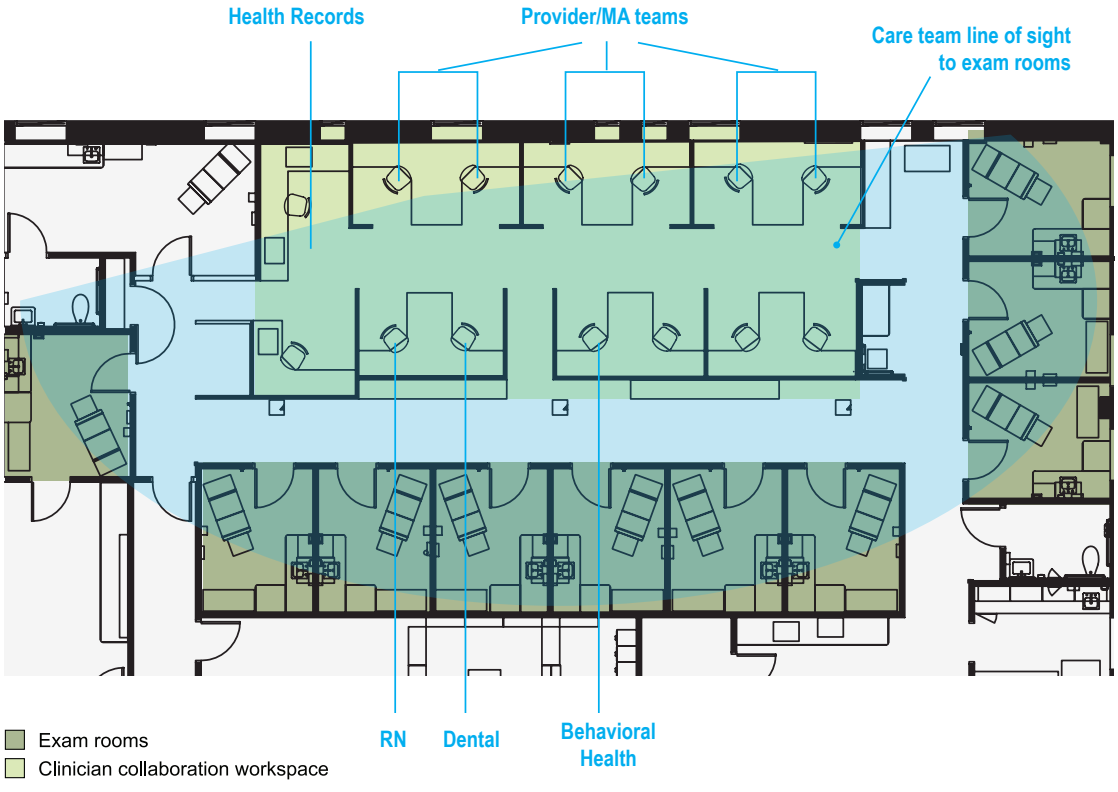
They began by putting pedometers on our clinicians to see how much time they spent walking around the clinic. We found that staff was taking thousands of steps each day looking for each other, walking to photocopiers and making their way to and from desks between patients. To solve this, we have co-located all providers and clinical support staff in a central "pod" or group of cubicles. A pod is a wholly contained clinic within a clinic. A pod is staffed with three FTE clinicians, three medical assistants, two office technicians, a case manager, a nurse team manager, a medical records technician and a behavioral health professional. Patients come to the same pod for each visit. By consistently seeing the same group of Clinica staff, the clinic feels smaller, more manageable, more personal. Depending on its size, each of our facilities contains between two and four pods

Since all of the pod staff sit within 20 feet of each other, people can all easily see each other just by swiveling around in their chairs. We surrounded the cubicles with a five-foot high exterior wall and topped that with 18-inch glass windows. This lets in light, allows people in the cubicles to see out, but also blocks sound and keeps patient traffic on the perimeter of the pod. Each pod is equipped with its own photocopier and fax so that staff don't have to walk far to get to the equipment they need. Desks in each cubicle have a rolling table at the end. This allows providers and other staff to load charts on the end-tables and bring them together for patient consultations or meetings.

In order to allow clinicians to more easily see their work (e.g., which exam room they need to walk into next), exam rooms are located on the perimeter of the pod. Each clinician has three exam rooms: a medical assistant can be bringing a patient into one, while the clinician is seeing a patient in the second, and a dietician or behavior health professional can be meeting with a patient in the third. Each clinician has a clear line of vision to each of his/her exam rooms. We utilize a low-tech system of colored flags to let staff know what needs to happen in each exam room. The flags are attached to the wall beside each exam room door. They are flipped out when a service is needed; they are laid flat against the door when the provider is in the room; they are laid flat against the wall when the room is empty.

We have also color coded each pod to help newer patients remember their pod. In our purple pod, for instance, the primary wall is purple, the appointment cards are purple, even the linoleum on the counter of the check-in desk is purple. The same is true for the red pod, the orange pod and the blue pod.

We built all of these changes into our Thornton clinic. We expected some resistance or dissatisfaction from clinicians when we moved to the pod model. We expected complaints about noise, lack of privacy, lack of space for clinician/patient consults. None of that has been an issue. Clinicians have been particularly pleased with the new floor plan. They no longer have to walk from exam room to medical records to laboratory to find their medical assistants. In fact the changes have worked so well that we have remodeled all of clinics with the same floor plan. While not the sole factor, these layout changes have been the primary contributor in helping our clinicians increase productivity from seeing 15 patients per day on average to seeing an average of 17 patients per day.



Boulder Associates' goal is to be a trusted advisor to our clients.

BOULDER ASSOCIATES has specialized exclusively in healthcare and senior living design since our founding in 1983. We understand the core issues that concern our clients, from broad economic and regulatory pressures to day-to-day operational challenges. We take these challenges on as our own, and we meet them by combining beautiful, innovative design with high-quality, efficient, and cost-effective solutions.

Our clients include some of the most progressive healthcare and senior living organizations in the United States. We help them set new standards for healing environments by aligning their facility investments with business strategies and goals. We achieve this by emphasizing innovation, design and technical excellence, and a collaborative approach that forms lasting partnerships. Our hands-on approach focuses on one goal: to become a leader in design for health and aging by establishing ourselves as trusted advisors to our clients.

With offices in Colorado, California, and Texas, Boulder Associates maintains a staff of architects, interior designers, and graphic designers who all share a belief in the power of design to enrich lives. We believe that good design directly serves the needs of our clients, their patients and residents, and the surrounding communities.

'It was a true delight to work with the team from Boulder Associates through the process of planning and building our Center for Family Medicine and our plans for a Patient-Centered Medical Home."

Maureen Strohm, MD
George and Julia Argyros Eisenhower Health Center

BOULDER ASSOCIATES

ARCHITECTS

Design Leaders for Health & Aging

boulderassociates.com | 800.499.7796

BOULDER • SACRAMENTO • ORANGE COUNTY • SAN FRANCISCO • DALLAS