

# Design Considerations for Collaborative Care

The Physical Environment of a **Patient-Centered Medical Home**

BOULDER  
ASSOCIATES

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Boulder Associates, Inc.

1426 Pearl Street | Suite 300 | Boulder, CO 80302 | 303.499.7795

1331 21st Street | Sacramento, CA 95811 | 916.492.8796

8001 Irvine Center Drive, Suite 730 | Irvine, CA 92618 | 949.727.9000

5 Third Street | Suite 1200 | San Francisco, CA 94103 | 415.796.6720

5646 Milton Street | Suite 641 | Dallas, TX 75206 | 214.420.5700

[www.boulderassociates.com](http://www.boulderassociates.com)

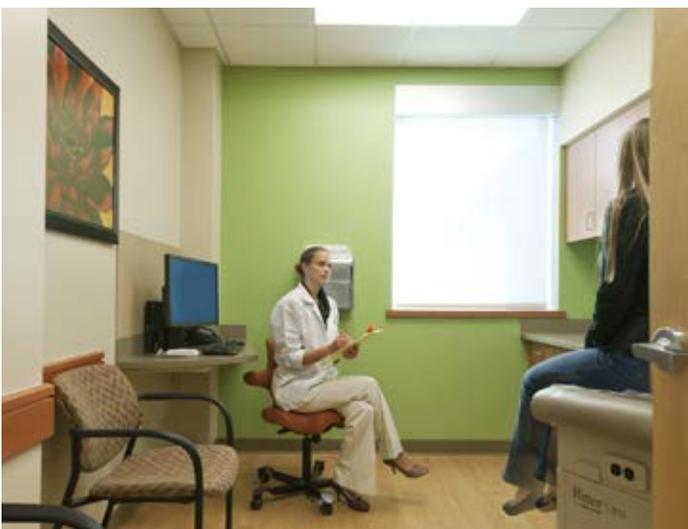
## Design Considerations for Collaborative Care

### The Physical Environment of a **Patient-Centered Medical Home**



The **patient-centered medical home** is a model of care that seeks to strengthen the physician-patient relationship by replacing episodic care based on illnesses and the lack of coordinated care with a long-term relationship with a primary care physician that emphasizes access, continuity of care, and patient activation. A care provider team is created that incorporates both the physician 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.

What does this medical home look like? This new model of care calls for new ways of looking at the space needs of a practice, from both the provider and patient perspective. 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. There is thus a need to look at how the design of a practice can best support these requirements.



**PATIENT ACTIVATION/  
ACCESS/  
CONTINUITY OF CARE/**



Boulder Associates has lengthy experience in designing traditional spaces for primary care. Helping forward-thinking clients such as Clinica Family Health Services, Denver Health, and other institutions innovate into the patient-centered medical home model of care has given us insight into the key operational and design features that differ from the traditional model.

#### Top Ten Design Goals for a Patient-Centered Medical Home

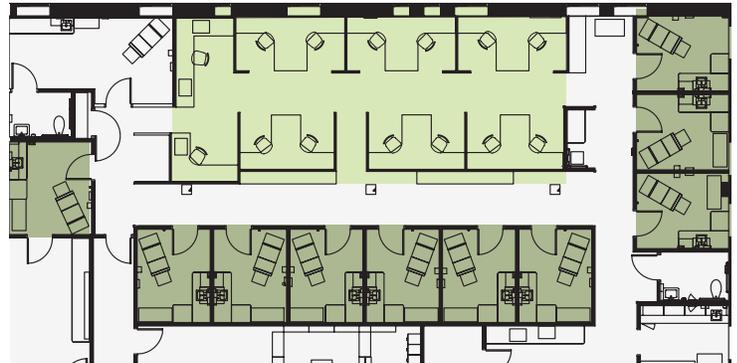
1. **Encourage and enable team-based care collaboration**
2. **Engage the patient as part of the care team by making work and collaboration visible**
3. **Leverage peer empathy and support for chronic disease management through group exchange**
4. **Accommodate fluctuations in patient visit types through flexible design**
5. **Engage and empower by creating sense of place with inclusive wayfinding and graphics**
6. **Create a physically and emotionally safe environment**
7. **Make it comfortable and inviting**
8. **Plan for a flow that engenders a reliable and complete clinical experience**
9. **Provide integrated and seamless process for continuing and follow-up care**
10. **Provide care coordination and bridge to other services to allow for one-stop service**



The following pages will seek to illustrate these points using examples from actual facilities we have designed for clients. These clients have already adapted to the Patient-Centered Medical Home model, or are adopting components of the model to better serve their patients and transition into the future of healthcare delivery in this country.

## 1. Encourage and enable team-based care collaboration

Team-based care is the fundamental tenet of the patient-centered medical home model. This type of care calls for the practice team to be in constant communication to share information and ideas on the needs of a patient, patient group, or family. Open work spaces that promote direct face-to-face discussions among the provider teams are key. In this model, the physician moves into the role of a “team coordinator,” evolving beyond the idea of being the “sole expert.”



- Exam rooms
- Clinician collaboration workspace

*Open provider work spaces facilitate communication and collaboration among care teams and allow patients to see their provider team's work.*

## 2. Engage the patient as part of the care team by making work visible

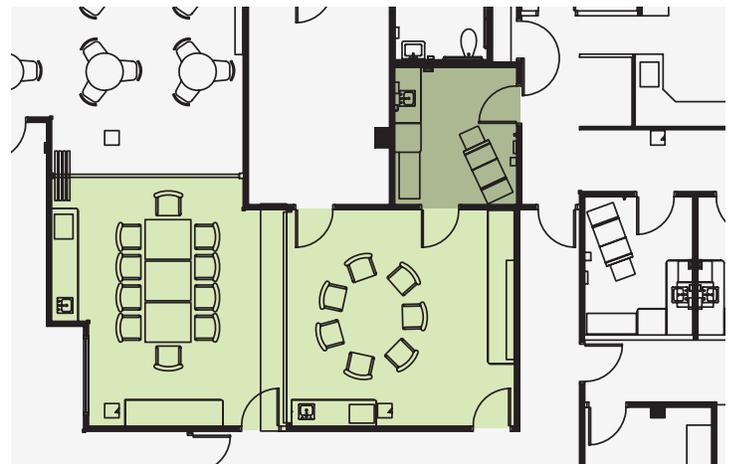
In a Patient-Centered Medical Home concept, the patient is expected to share responsibility for their care. To encourage their inclusion into the care team, it is important for the patient to see the work their care provider group puts in that go towards their health. Designing a connected space where the workings of the care team are made visible to the patient allows for this visual connection. This demystifies the work that goes into making and keeping the patient well and creates a sense of involvement in the patient.

### 3. Leverage peer empathy and support for chronic disease management through group exchange

Chronic conditions account for 75% of healthcare costs. The patient-centered medical home can address this effectively by engaging patients in group visits and sessions. These directed peer group sessions provide emotional and informational support that help patients take responsibility for ongoing care of their similar conditions. This methodology has proven effective in helping patient manage chronic conditions, as well as situational ones, such as pregnancy. Spaces to accommodate these visits need to be made available, with added requirement of an adjacent private space for exams or one-on-one conversations.



Group visit space with modular furniture and room divider to accommodate varying group sizes.



■ Exam room  
■ Dividable group visit spaces

### 4. Accommodate fluctuations in patient visit types through flexible design

Being a patient's one-stop shop for health services is a key part of the Patient-Centered Medical Home concept. The practice may provide mental health care, or social services as well as primary care services. Designing exam rooms to accommodate these varying services gives the practice flexibility to provide these expanded services without the need for separate dedicated rooms. An additional benefit to flexible room design is that it allows more functions to take place in each room, such as in-room checkout, blood draws, dental screening and patient education. This supports some of the other patient-oriented goals of design for a Patient-Centered Medical Home.

## 5. Engage and empower by creating sense of place with inclusive wayfinding and graphics

Effective wayfinding goes beyond merely directing people. Wayfinding, signage and graphics tailored to accommodate the needs of the overall patient population not only address ease of access, they can actively promote inclusion and foster a feeling of supportive community. This encourages patient engagement and activation, key to engaging a patient to participate in their care community.



*Sutter Children's Center Sacramento Pediatric Outpatient Clinics empowers patients by using graphically oriented wayfinding for self-rooming. It was really exciting to see this way finding program in use, and even more exciting to see it actually work the very first time. Joseph (above), who was extremely excited and empowered by the ability to find his very own room, exclaimed "I'm 6 ½, I'm in second grade, and I'm good at following directions."*

## 6. Create a physically and emotionally safe environment

The considerations here are of both physical safety and emotional safety. The fundamental nature of a healthcare facility means consideration for the infirm is an absolute must. Long corridors, poor adjacencies and awkward travel are a risk to the infirm, and may be part of a chronic condition that may deter future visits, compromising continuity of care. It is essential for a patient-centered medical home provider to have a full understanding of the patient's situation to manage their care effectively. This can happen only if the patient feels that they are able to share their concerns in a safe environment. Patient privacy in the form of good acoustical control is therefore key to a patient's sense of emotional safety.

## 7. Make it comfortable and inviting

This is where the metaphorical home meets the physical home. The practice should offer patients an environment that alleviates stress instead of increasing it. This means providing places for families and children, such as an area for children in the waiting area or bench seating in exam rooms for family members. Maximizing use of natural lighting, and de-institutionalizing the facility to be more inviting will also encourage continuing visits.



## 8. Plan for a flow that engenders a reliable and complete clinical experience

Diagnostic testing is a critical component of primary care, but one that can often be passed over by the patient if they feel it to be inconvenient or unnecessary when in a non-acute situation. However, a patient-centered medical home provider requires diagnostic testing to gain an accurate overall health picture thereby enabling them to effectively manage the patient's care. To ensure that routine testing is reliably completed, practices need to accommodate convenient on-site, team-based diagnostic testing that is located near where the exam is taking place.

**9. Provide integrated and seamless process for continuing and follow-up care**

Designing for in-room checkout allows the provider team to ensure that the patient is informed of post-visit services and resources, as well as reliably schedule the patient's follow-up visit. This last step can often be missed with a separate checkout and can compromise continuing care.



*Dedicated care coordinator areas at Red Rocks Medical Center and Tebo Family Pavilion.*

**10. Provide care coordination and bridge to other services to allow for one-stop service**

Coordination of care extends to services outside the practice. The ideal patient-centered medical home provides patient navigators/care coordinators that help patients connect to services such as routine testing and examinations, transportation, after care, and financial support. An area within the practice dedicated to this function provides patients with a resource that will help maintain their state of health and well-being

# CLINICA FAMILY HEALTH SERVICES / PEOPLE'S CLINIC

Boulder, Colorado



## Project Type

Community Health Clinic

## Scope

21,120 s.f.  
Tenant Improvement

Clinica Health is a certified Level 3 NCQA Patient-Centered Medical Home provider and a long-time Boulder Associates client. With each new facility, the team works to improve the design to enhance operational efficiencies, patient experience and care collaboration. This project was a renovation of an existing healthcare clinic space. The new program for the facility called for a pod-based clinical practice concept. This resulted in three color-coded practice team office pods surrounded by exam rooms. This arrangement allows for improved staff communication and easy visual coordination of patients, providers and rooms. Other features of the project include a group visit room, a roof-mounted photo-voltaic system, and reuse of the existing facilities' doors as stair rails and divider structures.

CLINICA FAMILY HEALTH SERVICES / PEOPLE'S CLINIC



FLOOR PLAN

# DENVER HEALTH MONTBELLO CLINIC

Denver, Colorado



## Project Type

Community Health Clinic

## Scope

18,145 s.f.

New construction

This 18,145 s.f. clinic includes a lab, dental facilities, a pharmacy, and a Women, Infants and Children's center. The expansive lobby showcase a vaulted ceiling with exposed timber, creating an inviting space for patients and their families. Sun shades were incorporated to limit excessive direct sunlight into the lobby area.

The design features two clinical pods, each with nine exam rooms. The pod arrangement facilitates staff communication, allowing teams to share information quickly in an open office environment. The clinical space was designed so that a direct line of sight could be maintained out to registration and the waiting room, allowing staff to easily monitor patient flow. The Boulder Associates project team utilized a comprehensive LEAN process and maximized efficiency on this project.

DENVER HEALTH MONTBELLO CLINIC



- Key
- Lobby/Reception
  - Pod support
  - Clinical pods
  - Pharmacy
  - Group visit
  - WIC
  - Lab
  - Dental
  - Staff support
  - Building support

# COMMUNITY HEALTH CENTER OF CENTRAL WYOMING

Casper, Wyoming



## Project Type

Freestanding clinic

This clinic combines services for the Community Health Center of Central Wyoming previously located in three separate locations. These services include family practice, women's care, senior care, behavioral health, and dental services.

## Scope

50,000 s.f.

New construction

Improving the patient experience and optimize staff workflow was a key design consideration. A series of charrettes were held to discuss how the space plan could have a direct impact on staffing ratios, operational costs and the level of care for patients. The resulting open-concept pod layout wraps the exam rooms around physician and nurse workstations. These open workstations provide better sight-lines to exam rooms, encourage communication between nurses and physicians and reduce travel distances for staff.

The planning and design also took into consideration accommodations for future expansion. The pod design, stacked floor plates, regular structural grid, continuous service corridor and repetitive elements all contribute to facilitating future expansion without disrupting operations. The holistic approach to the design of the building contributed to the facility coming in under budget.

COMMUNITY HEALTH CENTER OF CENTRAL WYOMING



# METRO COMMUNITY PROVIDER NETWORK JEFFCO FAMILY HEALTH SERVICES CLINIC

Wheat Ridge, Colorado



## Project Type

Community Health Clinic

## Scope

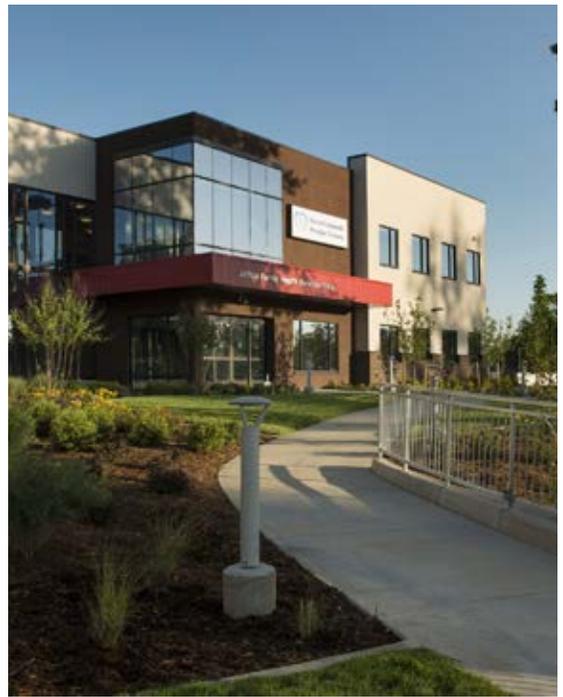
38,500 s.f.

New construction

This 38,500 s.f. community health clinic houses 50 exam rooms divided across five clinical pods: extended hours care, family practice, senior and disability care, pediatrics, and obstetrics/gyn. The project also includes dental, lab services, x-ray, and community support services. Through a collaborative agreement with the Jefferson Center for Mental Health, 5,000 s.f. of space is occupied by mental health providers, to support all patients and honor the connection between physical and mental health.

The entrance to this LEED-NC Gold certified facility is designed to be welcoming and warm, sited to shield users from a busy adjacent street. Bright, open waiting areas center the building's form, and the distinct pods are clearly identified on the building's exterior. The internal organization provides excellent back-of-house connection, which supports staff members collaborating between pods.

METRO COMMUNITY PROVIDER NETWORK  
JEFFCO FAMILY HEALTH SERVICES CLINIC



# HOAG 510 SUPERIOR CLINIC

Newport Beach, California



## Project Type

Medical Office Building

## Scope

33,500 s.f.  
Tenant improvement

This project represents the first phase of Hoag's foundation model ambulatory services master plan. The second phase involves a larger, 60,000 s.f. medical office building. Specific goals for this 33,500 s.f. facility included expanding the services Hoag offers the local community, improving the patient experience, enhancing economic performance and functionality of the existing medical campus, strengthening the network brand, and further developing sustainable operations for the region.

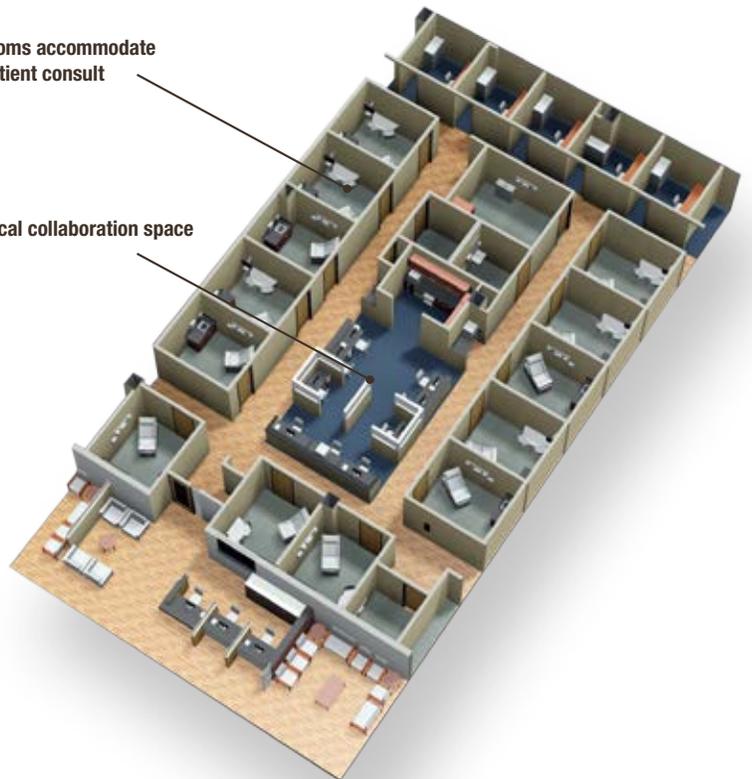
Boulder Associates worked with Hoag to develop this project's six-pod layout with a 35-physician capacity to introduce the collaborative, team-based approach to care. The clinical pod design with a central bullpen provides for greater provider collaboration, and the universally-designed exam rooms are in line of sight of care team. Shared support areas optimize use of the space, and emphasis was placed on improving efficiency by reducing travel distances.

HOAG 510 SUPERIOR CLINIC



Exam rooms accommodate patient consult

Clinical collaboration space



# SUTTER CHILDREN'S CENTER SACRAMENTO

Sacramento, California



## Project type

Clinic  
Medical Office Building

## Scope

19,550 s.f.  
Tenant improvement

The design of this 19,550 s.f. pediatric clinic began with a specific goal from the project's directors that "children would recognize this is their place." The facility allows for the SMCS staff to provide the best care possible within a dynamic and captivating space for their young patients. It includes large exam rooms for accommodating families, furniture and toilets sized specifically for children, a waiting room with a "cave" play area and aquarium, and a unique wayfinding system that enables children to navigate the facility themselves using sea creature-themed cards and directional signs.

The center contains sustainable elements and includes five exam room pods, including one PENS pod (Pediatrics Endocrinology/Diabetes and Pediatric Endocrinology/Nutrition), a developmental testing clinic, a cleft palate and craniofacial anomalies clinic, an education center and teaching kitchen, and business offices. Extra space was also created to accommodate a future audiology suite.

SUTTER CHILDREN'S CENTER SACRAMENTO



# DENVER HEALTH WELLINGTON E. WEBB CENTER FOR PRIMARY CARE

Denver, Colorado



## Project Type

Medical Office Building

## Scope

73,600 g.s.f.

New construction

The DHHA Webb Center for Primary Care offers extensive clinical services to a vulnerable population. The program includes family dental, wellness and preventative care, and diagnostic imaging. Both the Denver Health Plan Clinic and the La Mariposa Community Health Center are located within this building. The center blends with existing Denver Health buildings, and incorporates a number of sustainable design features and locally manufactured materials. Boulder Associates helped develop the initial open practice pod concept for the project and participated in a physical mock-up program for the typical rooms used.

DENVER HEALTH  
WELLINGTON E. WEBB CENTER FOR PRIMARY CARE



Key

- Waiting/Reception
- Admin/Staff
- Lab
- Pharmacy
- Exam/Procedure
- Behavioral Medicine
- Mech./Support

FIRST FLOOR PLAN

# CLINICA FAMILY HEALTH SERVICES THORNTON MEDICAL CLINIC

Thornton, Colorado



## Project type

Clinic

## Scope

12,745 s.f. addition  
7,920 s.f. renovation  
28,680 s.f. total

Since 2001, Boulder Associates has worked with Clinica Family Health Services on developing this site, which began as a strip mall. Through several renovation and addition projects to this nationally recognized Patient-Centered Medical Home, Clinica has focused on responding to a growing need for healthcare services in the surrounding community. The most recent project added the following:

### Addition

- Pharmacy
- Three additional dental operatories
- Space for four additional dental operatories
- Four group visit exam rooms
- Waiting room and staff lounge area

### Renovation

- Expansion of three existing pods
- Two new pods, including dental

CLINICA FAMILY HEALTH SERVICES  
THORNTON MEDICAL CLINIC





“Of course they’re better. They’re specialists. I know I’m not getting someone who was designing a bank last week and a strip mall tomorrow.”

Pete Leibig  
Clinica Campesina

“They are committed to  
understanding new trends and  
best practices in healthcare  
operations and delivery.”

Dan Conwell  
Sutter Health





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. We truly have a healing environment for our patients."*

*MAUREEN STROHM, MD  
EISENHOWER GEORGE AND  
JULIA ARGYROS HEALTH CENTER*

**BOULDER  
ASSOCIATES**

**ARCHITECTS**

## Design Leaders for Health & Aging

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