### 2.0 Project Narrative

#### Introduction

A large part of VA healthcare facilities are the Community Based Outpatient Clinics (CBOC). VA has identified a potential cost and schedule savings through the use of standardized planning and design elements and potentially utilizing off-site construction. These clinic templates incorporate the PACT Space Module developed to support VA's transition to PACT based on the Patient Centered Medical Home (PCMH) model of care.

This study developed standard modules to support a variety of clinic sizes, services, staffing and operational needs that are flexible and allow for future adaptability to changing needs. The goal is to develop highly functional and efficient outpatient clinics at the best dollar value to reduce cost and overall project schedule.

The objectives as defined in the Statement of Work are as follows:

- Develop standard design for various functional areas within outpatient clinics, referred to herein as "design modules"
- Develop standard designs for three outpatient clinics of graduating size using the design modules. Projects representing multiple VISNs will be identified by VA prior to award of this task. Building areas will be approximately 20,000 NUSF, 50,000 NUSF, and 80,000 NUSF
- Insure that standard designs enable and promote off-site construction methods such as volumetric "modular" construction, panelized construction, etc.

The three VISNs participating in this study are VISN 21, VISN 8, and VISN 23 and each represents respectively One, Two, or Three-PACT CBOC. Each VISN has provided a Program for Design (PFD) which will be utilized to test and fit the design modules and develop schematic design floor plans. The designs are based on the existing VA space criteria, standards, and design guides applicable to outpatient clinics; as well as, the PACT Space Planning Criteria Chapter 262-A, recently completed and PACT Space Module Design Guide currently under development. The guidelines in the PACT Space Module Design Guide shall be the guiding principles.

Refer to Section 9 - Appendix for a list of references used throughout this study.

#### Design Charrettes

The Project Team is comprised of VA subject matter experts, VA program officials, VA Medical Center staff from the three VISNs and the design consultant team. Multiple charrettes, or collaborative working sessions led to the success of the outcomes in this study where all participants worked through design solutions over a period of days at any given time. The purpose of a charrette is to serve as a way of quickly generating a design solution while integrating the aptitudes and interests of the diverse group of participants. The study is unique in the sense that the charrettes included representatives from three VISNs weighing in on each clinic type, not just their own.

This Project Team has been integral in developing the three prototypical PFDs that will be utilized as the basis of design for the design modules, conceptual diagrams and clinic layouts for the One, Two and Three-PACT CBOCs. Towards the end of each charrette, time was dedicated to test and fit each VISNs Programs for Design to validated the flexibility and modularity of the layouts.

Refer to Section 7 - VA Test and Fit Programs for Design for additional information on the Maui, Brooksville and Rapid City Community Based Outpatient Clinics.



### 2.1 Patient Aligned Care Team (PACT)

Patient Aligned Care Team (PACT)

The Office of Patient Care Services, Primary Care Program Office, has implemented a VA version of the patient-centered medical home (PCMH) model at all VHA Primary Care sites, called Patient Aligned Care Teams (PACT). This initiative supports VHA's Universal Health Care Services Plan to redesign VHA healthcare delivery through increasing access, coordination, communication, and continuity of care. PACT provides accessible, coordinated, comprehensive, patient-centered care, and is managed by PACT teamlets with the active involvement of other clinical and non-clinical staff.

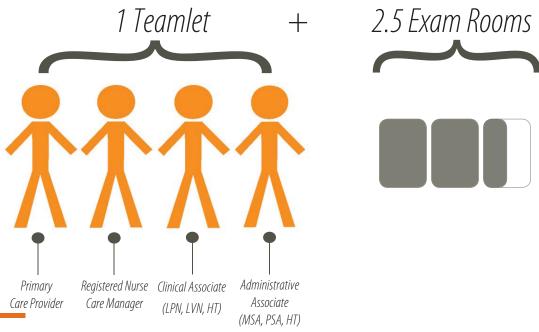
PACT allows patients to have a more active role in their health care and is associated with increased quality improvement, patient satisfaction, and a decrease in hospital costs due to fewer Emergency Department hospital visits and readmissions. The Primary Care Program Office has developed a variety of operational tools to assist Primary Care staff with the transformation to The Patient Aligned Care Team.

Although the concept of Patient Centered Medical Home has been around since the 1960's starting with pediatric care, it had not been translated into primary care until fairly recently. The primary care team consists of the Veteran patient along with all the staff, clinical and administrative, necessary to promote the well-being of the Veteran patient.

The team can be described as two parts: the teamlet and the extended care team. The teamlet consists of a primary care provider, RN-care manager, Clerical Associate and Administrative Associate; together, they form a partnership with the Veteran.

To coordinate seamless care, all members of the teamlet and extended care team will collaborate with an extended group of medical and support staff, including non-VA health care providers, to meet the needs of the Veteran patient. Extended team members and other consultants work in a coordinated manner with the PACT teamlets and the veterans. The teamlet will manage these consultations in order to provide coordinated care and foster smooth transitions between the many facets of the health care system.

For the purposes of this study, a PACT Teamlet is illustrated in Figure 2.1 below.



**Figure 2.1**Defining Characteristics PACT

Key Principles for PACT include:

Patient-Driven: The PACT teamlet is focused on the whole person. Patient-preferences guide the care provided to the patient.

*Team-Based:* Primary care is delivered by an interdisciplinary team lead by a primary care provider using facilitative leadership skills

Efficient: Veterans receive the care they need at the time they need it from a licensed team functioning at the highest level of their competency

Comprehensive: Primary care serves as a point of first contact for a broad range of medical, behavioral and psychosocial needs that are fully integrated with other VHA health services and community resources.

*Continuous:* Every patient has an established and continuous relationship with a PACT teamlet.

*Communication:* The communication between the Veteran patient and other team members is honest, respectful, reliable and culturally sensitive.

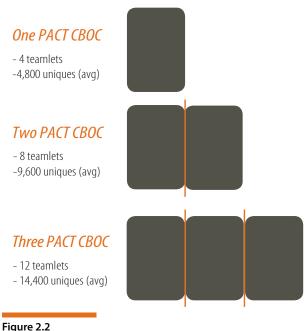
*Coordinated:* The team coordinates care for the patient across and between the health care systems including the private sector. The teamlet consists of a primary care provider, RN-care manager, Clerical Associate and Administrative Associate; together, they form a partnership with the veteran.

Space Planning Module Overview

The three CBOC Prototype Programs for Design have been developed to include PACT modules for Primary Care. For the purpose of this study, the One-PACT CBOC will include a 1 PACT module; the Two-PACT CBOC will include 2 PACT modules; and the Three-PACT CBOC will include 3 PACT modules. Refer to Figure 2.2 below.

Each PACT Space Module consists of 8 exam rooms, 4 consult rooms, 2 women's health rooms and 1 procedure room. Group Rooms and Shared Medical Appointment Rooms are also a key spaces included in the PACT footprint. Refer to Section 3 - Prototype Programs for Design for specific information pertaining to the PACT Space Modules.

During the working sessions, the Project Team determined that the number of PACT modules did not define the size of the Two and Three-PACT CBOCs, but rather, the size was driven by the multi-specialty care services provided within that prototype. CBOC clincis provide a wide ranging and variable set of services and these overall array of services drives the space planning and space allocation.



PACT Space Module Overview

### 2.2 CBOC Prototype Planning Assumptions

#### Introduction

This study incorporates planning assumptions from several sources, to include reference documents provided by VA, interviews with VA subject matter experts at the participating VISNs and VACO, input from core steering group members, and data available from VISN 17 VA Service Delivery Planning and Master Planning efforts. These assumptions establish the foundation for the One, Two, and Three-PACT CBOC Prototype PFDs.

#### Population

- Each PACT teamlet empanels approximately 1,200 unique users.
- Each PACT Space module as illustrated accommodates up to four teamlets (PACT - Primary Care Space Planning Criteria Chapter 262-A, dated July 24, 2013).
- The One-PACT CBOC supports approximately 4,800 primary care unique users (4 teamlets).
- The Two-PACT CBOC supports approximately 9,600 unique primary care users (8 teamlets). Additionally, it supports approximately 19,200 unique users with specialty care services. The specialty care population is comprised of its own primary care patients, plus unique users from two additional One-PACT CBOCs (or equivalents) in the geographical area (9,600 + (4,800 x 2) = 19,200).
- The Three-PACT CBOC supports approximately 14,400 unique primary care users (12 teamlets). Additionally, it supports approximately 28,800 unique users in the geographical area with specialty care services, similar to the Two-PACT CBOC. The specialty care population is comprised of its own primary care patients, plus unique users from three additional One-PACT CBOCs (or equivalents) in the geographical area (14,200 + (4,800 x 3) = 28,800).

#### Scope of Services

Services included in each CBOC prototype were selected by first reviewing their frequency of occurrence in the previously published Feasibility Study for the Development of Standardized Designs for Outpatient Clinics (National Institute of Building Sciences, 2013), then refining the service mix through the planning charrette process.

- The One-PACT CBOC includes the following clinical and administrative services:
  - PACT Primary Care
  - Mental Health
  - Pharmacy
  - Laboratory
  - Logistics
  - Canteen
  - Audiology
  - Police + Security
- The Two-PACT CBOC includes the following clinical and administrative services (services not included in the One-PACT CBOC are bolded):
  - PACT Primary Care
  - Mental Health
  - Audiology
  - Eye Clinic
  - Physical Medicine and Rehabilitation (PM & R)
  - Home Based Primary Care
  - Prosthetics and Sensory Aids
  - Pharmacy
  - Laboratory
  - Radiology
  - Logistics
  - Canteen
  - Engineering
  - Police & Security
  - Clinic Management
  - Ancillary Diagnostic Services
  - Business Services

- The Three-PACT CBOC includes the following clinical and administrative services (services not included in the Two-PACT CBOC are bolded):
  - PACT Primary Care
  - Mental Health
  - Audiology
  - Eye Clinic
  - PM & R
  - Multi-Specialty Care/Ancillary Diagnostic

#### Services

- Dental
- Home Based Primary Care
- Prosthetics and Sensory Aids
- Pharmacy
- Laboratory
- Radiology
- Logistics
- Canteen
- Engineering
- Police & Security
- Clinic Management
- Business Services

Multi-specialty care is intended to be flexible in the types of specialties accommodated. Data from other VISN Service Delivery Planning studies suggest that the Three-PACT CBOC specialty care population supports either full time or part time cardiology, pulmonary medicine, podiatry, orthopedics, urology, and tele-dermatology. Tele-health is included as part of the PACT Space Module in all CBOC sizes. It may become a principle route for which specialty care is delivered in a CBOC setting.

Refer to Section 4 - Planning Components + Modules for specific information pertaining to the layout and equipment layouts by service.

Key assumptions and space requirements are summarized by service and CBOC Prototypes on the following pages.

#### PACT Primary Care

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
9,454 DGSF	18,718 DGSF	27,982 DGSF

#### Programming Assumptions:

• One-PACT CBOC: 4 teamlets

• Two-PACT CBOC: 8 teamlets

• Three-PACT CBOC: 12 teamlets

#### Mental Health

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
692 DGSF	4,302 DGSF	5,624 DGSF

#### Programming Assumptions:

- One-PACT CBOC:
  - 1 provider/coordinator in addition to embedded PACT
  - 1 group therapy room
- Two-PACT CBOC:
  - 8 providers/coordinators
  - 2 group therapy rooms
- Three-PACT CBOC:
  - 12 providers/coordinators
  - 3 group therapy rooms

#### Audiology and Speech Pathology

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
190 DGSF	2,409 DGSF	4,058 DGSF

#### Programming Assumptions:

- One-PACT CBOC:
  - Hearing Aid Programming/Fitting
- Two-PACT CBOC:
  - 2 providers,
  - 1 technician
- Three-PACT CBOC:
  - 3 providers, 2 technicians
  - vestibulography
  - electrophysiology

#### Eye Clinic

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	2,903 DGSF	5.411 DGSF

#### Programming Assumptions:

- Two-PACT CBOC:
  - Fitting and Dispensing Room
  - Photography/Imaging Room
  - Pre-Testing Room
  - 2 providers, possibly 1 trainee
  - 2 techs
- Three-PACT CBOC:
  - Fitting and Dispensing Room
  - Photography/Imaging Room
  - Pre-Testing Room
  - Blind Rehabilitation (VIST)
  - 4 providers, possibly 2 trainees
  - 4 techs

### Physical Medicine and Rehabilitation

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	1,839 DGSF	2,614 DGSF

#### **Programming Assumptions**

- Two-PACT CBOC:
  - 1 provider
- Three-PACT CBOC:
  - 2 providers

#### Dentistry

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	0 DGSF	3,709 DGSF

#### Programming Assumptions:

- Three-PACT CBOC:
  - 6 operatories
  - panoramic/cephalometric room
  - prosthetics laboratory
  - 2 Dentists
  - 2 Hygienists

#### Multi-Specialty Care/ Ancillary Diagnostic Services

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	2,356 DGSF	4,689 DGSF

#### Programming Assumptions:

- Two-PACT CBOC:

   support and teaming space for Ancillary
   Diagnostic Services based on PACT model
- Three-PACT CBOC:
  - 6 exam rooms (1 is podiatry)
  - cardio/pulmonary exercise area
  - cast room
  - tele-health room

#### Home Based Primary Care

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	730 DGSF	912 DGSF

#### Programming Assumptions:

- Two-PACT CBOC:
  - 1 team room
  - 1 storage room
- Three-PACT CBOC:
  - 2 team rooms
  - 1 storage room

#### Prosthetics & Sensory Aids

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	631 DGSF	631 DGSF

#### Programming Assumptions:

- Two-PACT CBOC:
  - Storage
  - Mailing Room
  - Prosthetics Clerk Office
- Three-PACT CBOC:
  - Storage
  - Mailing Room
  - Prosthetics Clerk Office

#### Radiology

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	1,170 DGSF	3,450 DGSF

#### Programming Assumptions:

- Two-PACT CBOC:
  - 1 general radiology room
- Three-PACT CBOC:
  - 1 general radiology room
  - 1 bone densitometry
  - 1 mammography
  - 1 ultrasound
  - 1 radiography / fluoroscopy room

#### Pharmacy

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
152 DGSF	1,740 DGSF	2,864 DGSF

#### Programming Assumptions:

- One-PACT CBOC:
  - Automated Drug Dispensing System (ADDS) Room
- Two-PACT CBOC:
  - 1 Dispensing
  - 2 Prescription drop-off windows
  - Filling + Assembly
  - Storage
  - Consult Room
- Three-PACT CBOC:
  - 2 Dispensing
  - 2 Prescription drop-off windows
  - Filling + Assembly
  - Storage
  - Consult Room

#### Pathology and Laboratory Medicine

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
745 DGSF	1,307 DGSF	2,113 DGSF

#### Programming Assumptions:

- One-PACT CBOC:
  - 2 phlebotomy stations
  - point of care testing
  - specimen collection toilet
- Two-PACT CBOC:
  - 4 phlebotomy stations
  - point of care testing
  - specimen collection toilet
  - small shipping and receiving area
- Three-PACT CBOC:
  - 5 phlebotomy stations
  - point collection of care testing
  - specimen collection toilet
  - small shipping and receiving area
  - chemistry section

#### Logistics

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
502 DGSF	1,322 DGSF	1,322 DGSF

#### Programming Assumptions:

- Space requirements dependent upon proximity to parent VA facility and number of outpatient visits
- One-PACT, Two-PACT, and Three-PACT requirements estimated

#### Engineering

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	304 DGSF	304 DGSF

#### Programming Assumptions:

- Two-PACT CBOC:
  - Biomedical engineering repair shop
- Three-PACT CBOC:
  - Biomedical engineering repair shop

#### Canteen

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
593 DGSF	1,406 DGSF	3,093 DGSF

#### Programming Assumptions:

- One-PACT CBOC:
  - Beverage, Snack, and Food Machines
  - Limited Seating
- Two-PACT CBOC:
  - Café Shop
  - Customer Area
  - Office/Storage
  - Seating Area
- Three-PACT CBOC:
  - Café Shop
  - Retail Space
  - Customer Area
  - Office/Storage/Food Prep
  - Seating Area

#### Police and Security

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
190 DGSF	524 DGSF	524 DGSF

#### Programming Assumptions

- One-PACT CBOC:
  - operations room
- Two-PACT CBOC:
  - Holding room
  - operations room
  - safe
- Three-PACT CBOC:
  - Holding room
  - operations room
  - safe

#### Clinic Management

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	380 DGSF	380 DGSF

#### Programming Assumptions

- Two-PACT CBOC:
  - CMO and Nurse Manager Offices
- Three-PACT CBOC:
  - CMO and Nurse Manager Offices

#### **Business Services**

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
0 DGSF	547 DGSF	669 DGSF

#### **Programming Assumptions**

- Two-PACT CBOC:
  - 4 workstations
- Three-PACT CBOC:
  - 4 workstations

### Lobby/Common Areas

One PACT CBOC	Two PACT CBOC	Three PACT CBOC
1,034 DGSF	2,326 DGSF	3,435 DGSF

#### **Programming Assumptions**

- One-PACT CBOC:
  - volunteer alcove
  - wheelchair storage
  - vestibule
- Two-PACT CBOC:
  - volunteer alcove
  - wheelchair storage
  - vestibule
  - male/female public toilets
- Three-PACT CBOC:
  - volunteer alcove
  - wheelchair storage
  - vestibule
  - male/female public toilets



### 2.3 Structural Bay Overview

#### Structural Bay Overview

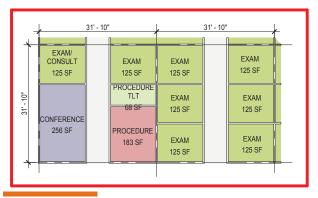
Regardless of the clinic size, shape, or desired flow, all spaces are to work within the modules and are configured with a standard column grid to allow for flexibility as spaces respond to future needs and growth. By utilizing an optimal column grid, in response to the program for design, one is able to place the walls in such a way that the columns do not impact the clinical layout. Structural columns placement are critical to consider early in the design process to avoid columns in odd places within a room. Lack of doing so, may impact patient/ staff flow within a room, the equipment layout and required clearances. After multiple studies, the optimum column grid selected as the preferred course of action is 31'-10" x 31'-10", illustrated below. This grid allows for standard 125 square foot universal rooms with a six foot clinic corridor.

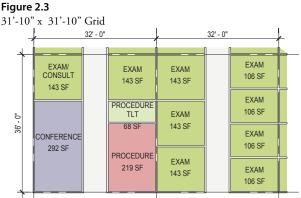
#### Universal Room

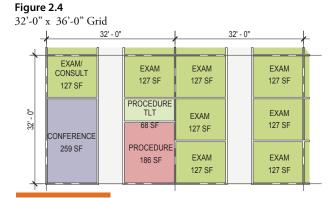
The universal room concept is simply to state that the 125 SF space can readily change from exam rooms, consult rooms, offices, etc. The universal room accommodates multiple clinical modalities; primary care, specialty care, women's health, mental health, eye clinic, podiatry, etc. The primary goal is to support flexible use in clinical areas. The secondary goal is to support general ease of space planning and systemetizing. The following is a list of spaces that may fit within the criteria for a universal room:

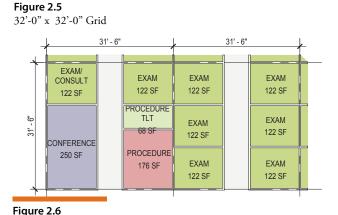
- Exam Room
- Specialty Exam Room
- Consult Room
- Flex Offices
- Mental Health Consult Room
- Clinic Management Office
- Tele-health Room
- Clean Room
- Equipment Room

Refer to Section 8.2 Adaptation Diagrams to understand the trade-offs when considering off-site construction versus traditional construction methods.









31'-6" x 31'-6" Grid



### 2.4 Conceptual Diagrams – Overview

Conceptual diagrams are the first set of diagrams that an architect will create in the planning process. They are also be used to understand the impacts as the design changes and develops. Such diagrams were utilized in the development of the planning modules, components and the three prototype clinics. The typical conceptual diagrams utilized for this project included process flow diagrams, block & stack diagrams and computer modeling.

Process flow is illustrated in bubble form, identifying typical steps a patient may take within a clinic. In this type of diagram, potential bottleneck locations can be identified, efficiencies can be improved and patient travel distances are better understood. Block and Stack diagrams is an exercise that studies the massing spaces as they relate to one another and offers opportunities for identifying desireable departmental adjacencies. After utilizing process flow and block and stack diagrams, assumptions can be validated once diagrams are created with computer modeling. Computer modeling allows view the spaces in a three-dimensional format. These types of diagrams inform one another and enable the design process.

These diagrams are utilized in the planning process to:

- Understand the typical clinic flow (patient/staff/service/ supply)
- Improve clinic efficiencies
- Identify potential bottle necks
- Improve patient experience
- Smooth patient flows
- Improve staff work flow
- Improve travel distances
- Identify proper clinical adjacencies
- Improve overall clinical layout

The following pages utilize different forms of diagrams such as flow diagrams, axonometric diagrams, Three-Dimensional renderings and linear diagrams to illustrate the planning processes used throughout the course of this study.



#### Typical Patient/Staff Flow

The following patient flow diagrams represent's a patients experience and movement. During the multiple design charrettes and user interviews, patient flow was explored to understand where choke points may occur, ways to minimize a patients travel distances as well as understanding patient interactions with various staff members.

Refer to Figure 2.7 which illustrates a process flow diagram in a linear form.

The typical clinic flow diagrams illustrate some of the most common flow for a patient as one enters the clinic until one exits, such as:

#### One-PACT CBOC:

- Patient with Appointment/Walk-in
- Patient with a Lab Visit Only
- Patient with a Group Visit or Shared Medical Appointment
- Patient/ Family Member or Volunteer

#### Two-PACT CBOC:

- Patient with Appointment/Walk-in
- Patient with Appointment + Pharmacy Visit
- Patient with Specialty Appointment

#### Three-PACT (BOC:

The Three-PACT CBOC builds off the Two-PACT CBOC with similar patient and staff flows. Although these clinics are scalable, the design of the clinic creates a sense of familiarity for the patient and flows are intended to be the same despite the larger size.

Refer to Figures 2.8 - 2.15 for common patient flow scenarios.



### Flow Mapping - Optimal

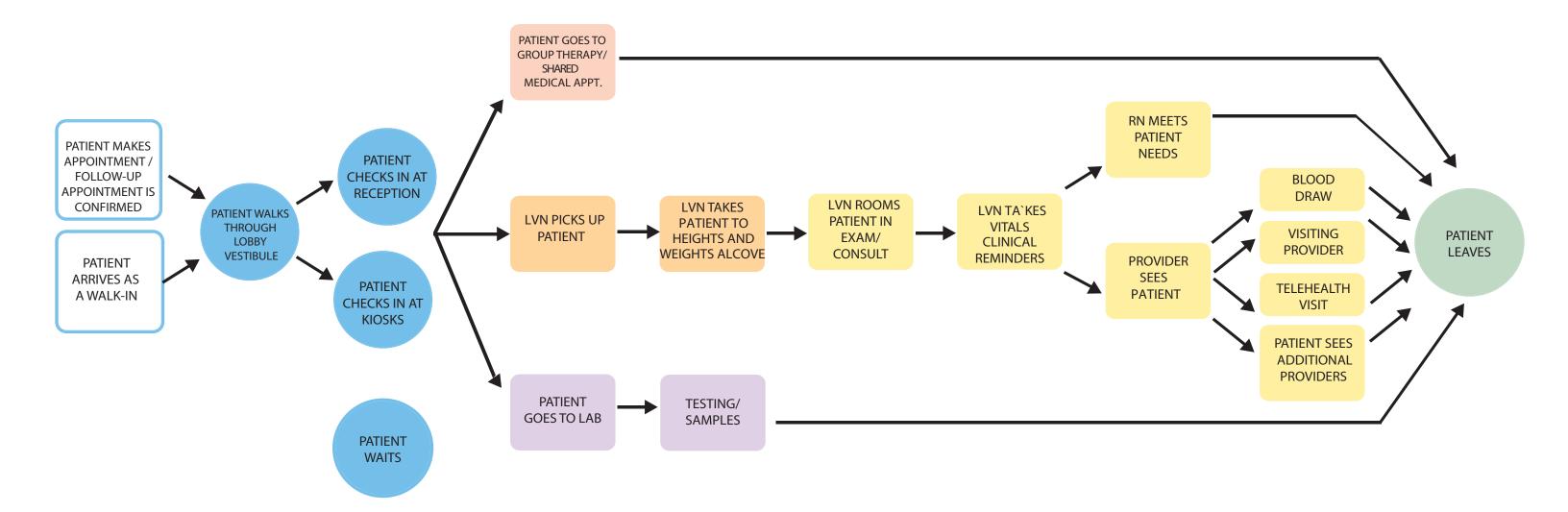
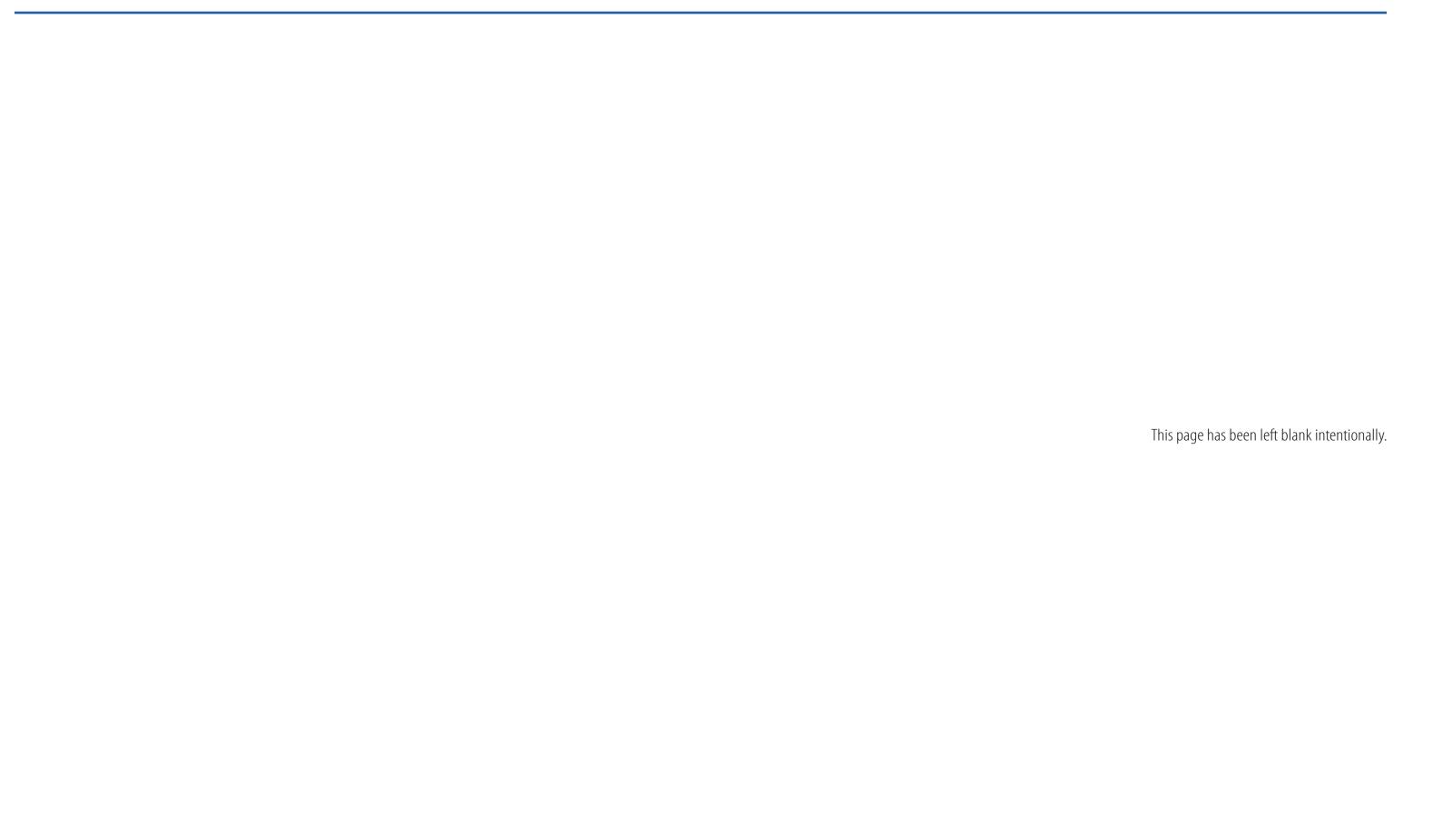


Figure 2.7 Optimal Patient /Staff Flow Mapping



# Patient with Appointment + Walk-in One-PACT CBOC

- Patient arrives at clinic through vestibule into lobby
- Patient with appointment checks-in at reception or check-in kiosk; Patient without appointment walks in and checks-in at reception. Information Sheet is completed and patient waits to be called
- 2a If Patient is not roomed right away, they remain in the waiting area until an LVN rooms them
- 3 Patient is taken to Heights + Weights (H+W)
- Patient is roomed in an exam room or consult depending on nature of the visit
- Patient is cared for, follow-up appointments are scheduled in the same room and needs are met
- 6 Patient leaves the clinic





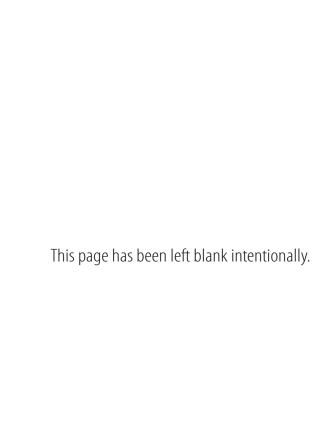
# Staff with Patient One-PACT CBOC

- Clerk notifies RN of patient arrival
- 2 LVN is notified of patient arrival through patient kiosk system
- LVN picks up patient in waiting room and taken to height and weight alcove
- Patient is roomed in an exam room or consult depending on nature of the visit
- LVN takes vitals and gives patient clinical reminders, cares for patient, follow-up appointments are scheduled and needs are met
- 6 If patient's needs cannot be met by the RN, the RN consults the provider for additional treatment options
- After briefing with the RN, Provider sees patient for additional treatment



## Patient with Laboratory Appointment One-PACT CBOC

- 1 Patient arrives at clinic through vestibule into lobby
- 2 Patient checks-in at reception or patient kiosk
- Patient waits, if necessary in the Lobby/ Commons Area
- Patient gets blood drawn or additional testing samples
- Patient need is met and patient leaves the clinic



# Patient with Group/Shared Medical Appointment One-PACT CBOC

- 1 Patient arrives at clinic through vestibule into lobby
- Patient checks-in at reception or patient kiosk
- Patient attends shared medical appointment or patient education courses
- 4 Patient need is met and patient leaves the clinic



Figure 2.11
Flow Mapping





### Patient/Family Member or Volunteer One-PACT CBOC

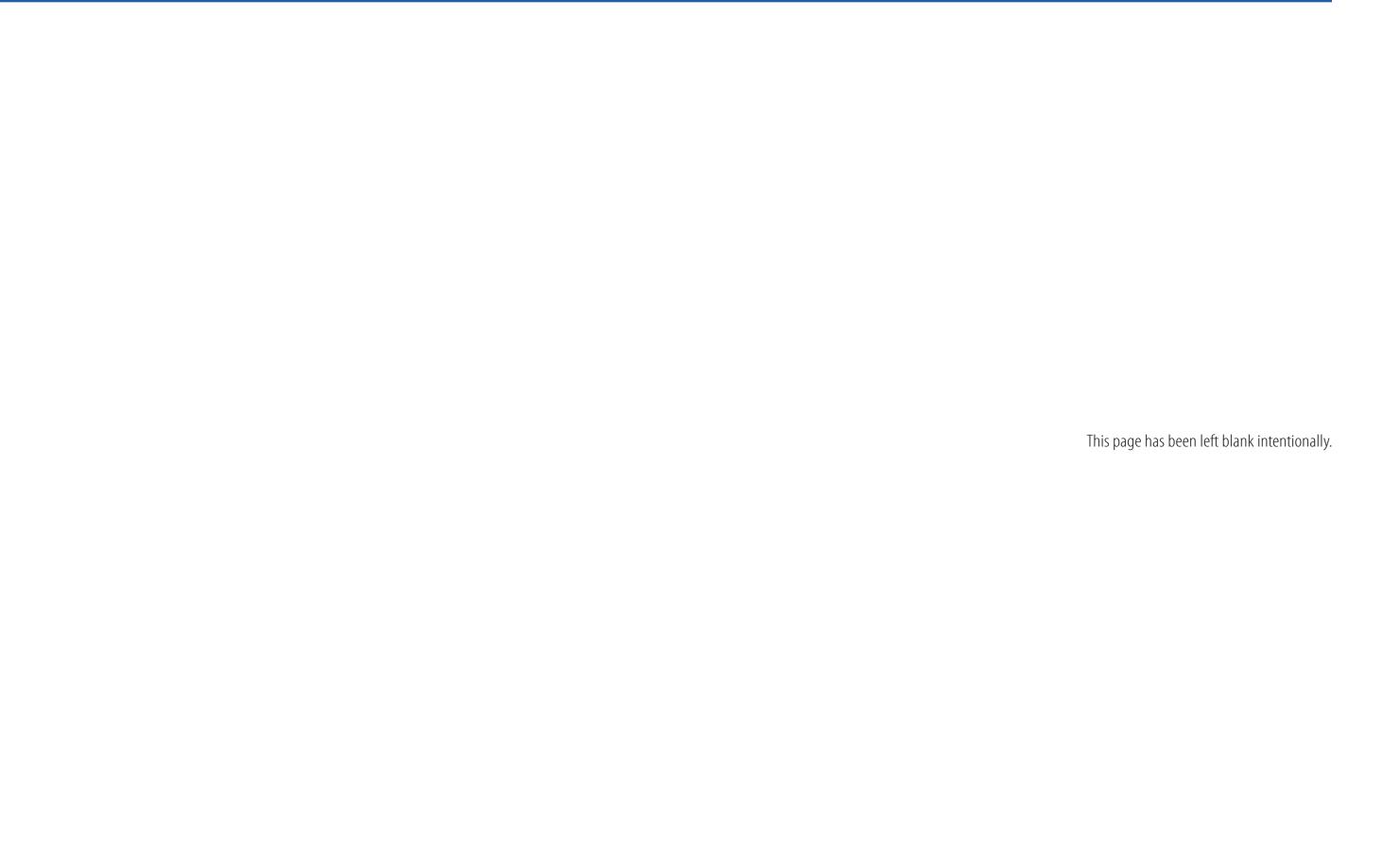
- Family member arrives with Patient to the clinic and pulls up to the patient-drop off area.
- 2 Family member enters the clinic through the vestibule.
- Family member or volunteer retrieves a wheelchairs to assist the patient and returns to the patient drop-off area.
- Family member or volunteer assist patient into the wheelchair and enters through the vestibule into the clinic
- Patient checks-in at the kiosks or reception desk
- Family member returns to vehicle to park the car in the adjacent parking lot
- After check-in, patient is either roomed right away or waits in the Lobby/Commons Area if necessary
  - \* This scenario assumes valet parking is not available at this CBOC



### Patient with Primary Care Appointment Two-PACT CBOC

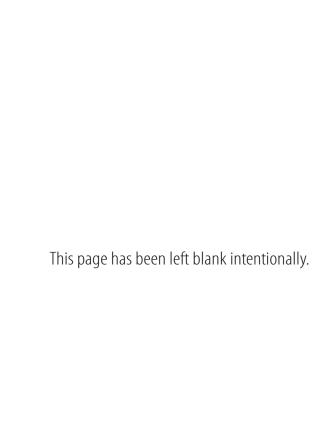


Figure 2.13
Flow Mapping



# Patient with Primary Care Appointment + Pharmacy Visit Two-PACT CBOC



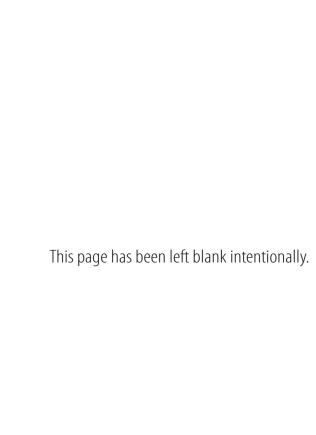


### Patient with Specialty Care Appointment Two-PACT CBOC



- Patient arrives at clinic through vestibule into lobby
- Patient is early for their appointment they use the public restroom
- Patient checks in at the kiosks or checks in at the ASDM Reception.
- Patient is picked up from the waiting room and taken to the Audio/Exam for a hearing test
- Patient is cared for, follow-up appointments are scheduled in the same room.
- Patient leaves exam room through the lobby following their appointment
- 7 Patient needs are met and patient leaves the clinic.

Figure 2.15
Flow Mapping



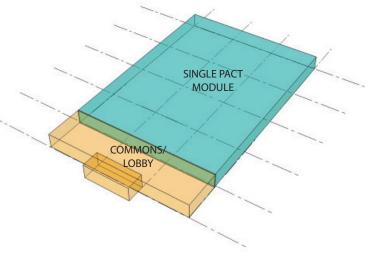
### 2.6 Clinic Growth – Block and Stack

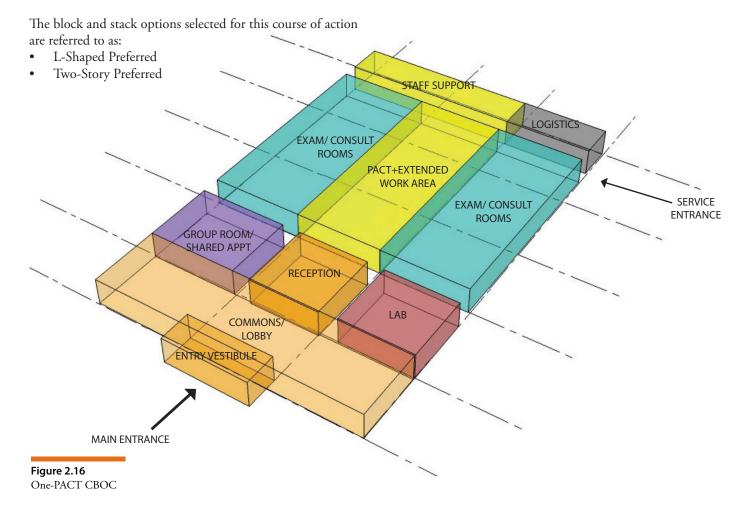
#### One-PACT CBOC Prototype

The One-PACT CBOC is a single PACT Module as illustrated to the right. It breaks down into simple components as illustrated below. This includes the front Commons area that serves as the public greeting and waiting space. From this area patients enter into the single PACT module. Adjacent to the Commons area, is the main reception area, group rooms/ shared medical appointment roomsand the lab. Beyond this zone, is the primary care clinical and support functions.

This single PACT Module becomes the starting point for developing the Two-PACT and Three-PACT CBOCs. The following pages illustrate different options explored referred to as:

- Linear
- L-Shaped
- Flare
- Two-Story





#### Linear

#### Two-PACT CBOC Prototype

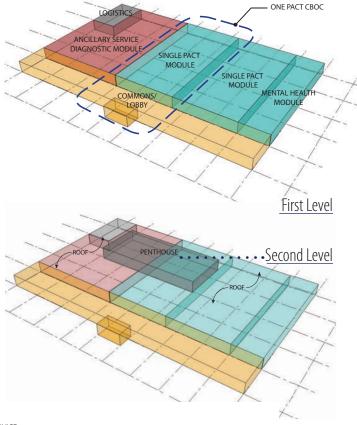
The One-PACT CBOC Prototype is the single building block of the PACT module that when duplicated/multiplied becomes the basis of the Two-PACT CBOC. The image to the right illustrates the single PACT module expanding into the Linear Two-PACT CBOC option with a second PACT module added. Adjacent to the second PACT Module is the Mental Health Component.

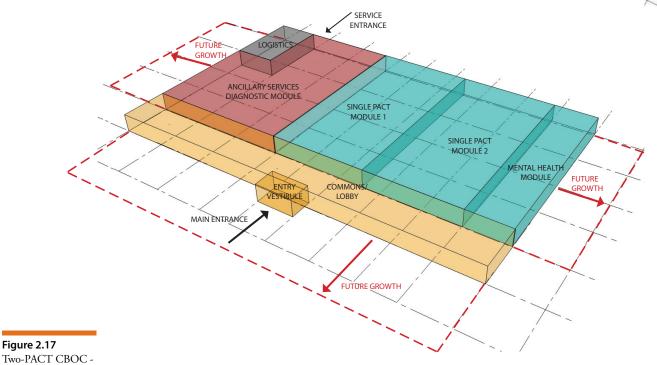
This component is in addition to the embedded mental health that is already integrated in each PACT Module. The Ancillary Services Diagnostic Module is added adjacent to the first PACT module. The Commons area is the long, front bar across the entire clinic tieing the modules together and developing an identity for the CBOC.

The second level is the mechanical penthouse.

The arrows illustrate areas of opportunity for growth.

Refer to Section 5 - Proposed Prototype Layouts for additional information.





2.38

Linear

Figure 2.17

#### Linear Growth

Two-PACT CBOC Prototype to Three-PACT CBOC Prototype:

Expansion of the Two-PACT CBOC into the Three-PACT CBOC Prototype occurs by adding an additional PACT Module. The block plan illustrates additional bays added to the Ancillary Services Diagnostic Module for the growth of those services and the addition of a Dental Component at this scale. This flexibility also enables modular expansion of other services such as Pharmacy, Laboratory, etc.

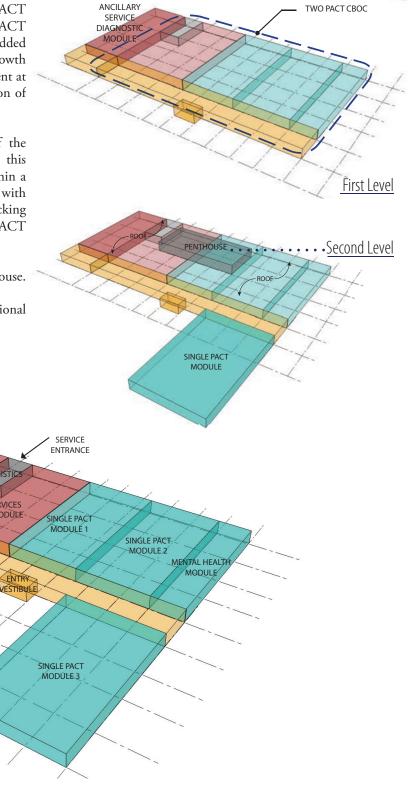
The third PACT Module is placed to the front of the Commons. Placing this additional PACT Module in this position decreases patient and staff travel distances within a clinic versus placing this module in a linear arrangement with the first two modules. With this configuration, the blocking begins to wrap and create the "L" shaped for the Three-PACT Prototype.

The second level is the expansion of the mechanical penthouse.

Refer to Section 5 - Proposed Prototype Layouts for additional information.

ANCILLARY SERVICES

MAIN ENTRANCE



Three-PACT CBOC -Linear Growth

Figure 2.18

#### L-Shaped

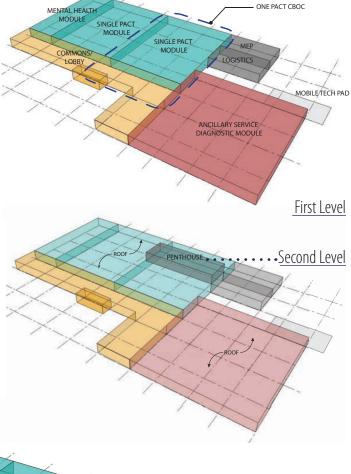
#### Two-PACT CBOC Prototype:

The L-shaped option also expands from the One-PACT CBOC and grows into the Two-PACT CBOC. In the diagram illustrated to the right, the Mental Health Component is placed along the exterior edge of the building. By locating the component here, the patients benefit from natural daylight as well as views to the exterior. The Lobby/Commons Area remains a consistent front bar tieing the modules together and form an identity for the CBOC.

The Ancillary Services Diagnostic Module is added to create an L-shape and shorten the travel illustrated in the Linear option.

Logistics and some of the mechanical, electrical and plumbing (MEP) requirements are located in the corner of the L-shape away from the clinical functions. Similar to the Linear option, a penthouse is utilized for the majority of the mechanical system.

The location of Logistics and MEP functions allows the L-shaped option to grow the clinical functions, adjacent to the Mental Health Component, as illustrated with the arrow on the diagram below.



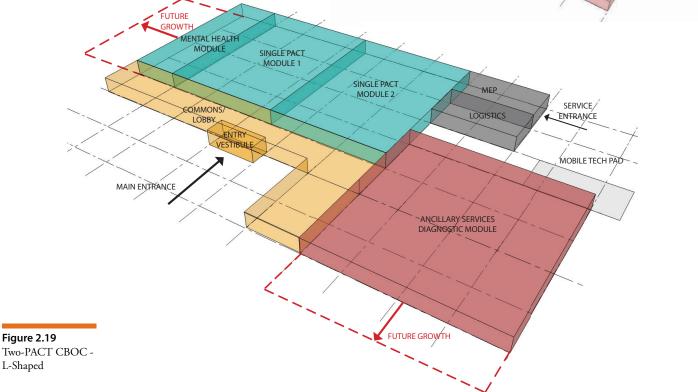


Figure 2.19

L-Shaped

SINGLE PACT

TWO PACT CBOC

#### L-Shaped Growth

Two-PACT CBOC Prototype to Three-PACT CBOC Prototype: The Two-PACT CBOC Prototype expands into the Three-PACT CBOC Prototype. The block plan on the right illustrates the additional PACT Module added to the end of the primary care clinic with an expansion to the Commons Area.

Logistics and some of the mechanical, electrical and plumbing (MEP) requirements remain located in the corner of the L-shape away from the clinical functions. The penthouse would expand to accommodate the demand of the additional program.

The block plan illustrates additional bays added to the Ancillary Services Diagnostic Module for the growth of those services and the addition of a Dental Component at this scale. This flexibility also enables modular expansion of other services such as Pharmacy, Laboratory, Radiology etc.

> SINGLE PACT MODULE 3

MAIN ENTRANCE

MENTAL HEALTH MODULE

COMMONS

LOBBY

ENTRY VESTIBULE

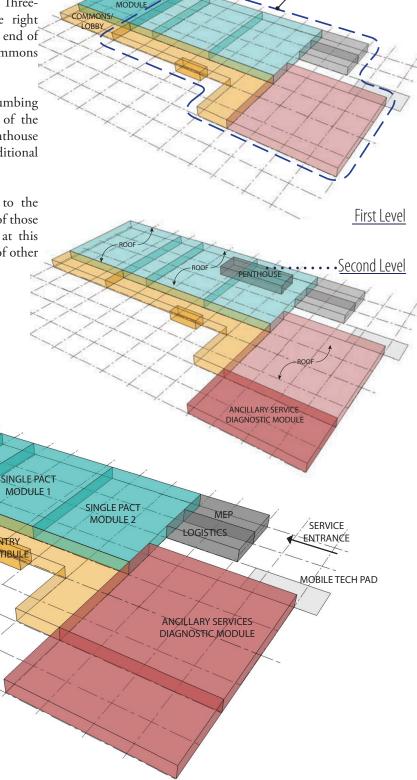


Figure 2.20 Three-PACT CBOC -L-Shaped Growth

#### Preferred L-Shaped Three-PACT CBOC Prototype

The Preferred L-shaped option also expands from the One-PACT CBOC and grows into the Three-PACT CBOC. In the diagram illustrated to the right, the Mental Health Component is placed along the exterior edge of the building. By locating the component here, the patients benefit from natural daylight as well as views of a potential healing garden.

The Lobby/Commons Area remains a consistent front bar tieing the modules together and form an identity for the CBOC. The main differentiator over the L-Shaped option described previously is the intersection of the PACT Module and the Ancillary Services Diagnostic Module. By merging this knuckle, the most efficiency is achieved in terms of Building Gross Square Feet and Net Usable Square Feet.

The Ancillary Services Diagnostic Module is added to create an L-shape and shorten the travel distances illustrated in the Linear option.

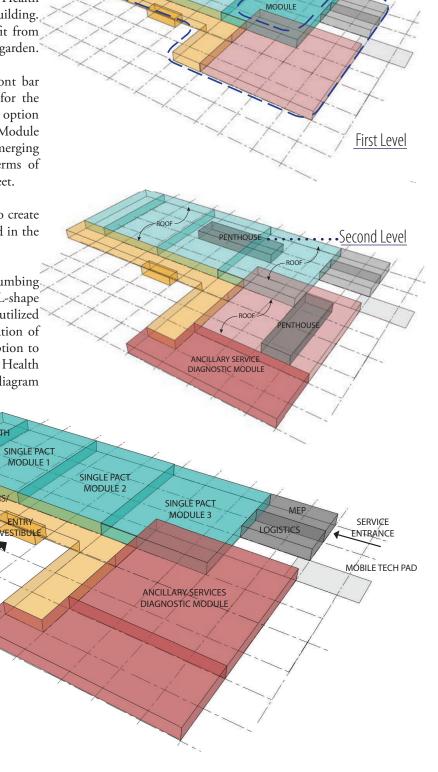
Logistics and some of the mechanical, electrical and plumbing (MEP) requirements are located in the corner of the L-shape away from the clinical functions. The penthouse is utilized for the majority of the mechanical system. The location of Logistics and MEP functions allows the L-shaped option to grow the clinical functions, adjacent to the Mental Health Component, as illustrated with the arrow on the diagram below.

> MENTAL HEALTH MODULE

> > COMMONS

MAIN ENTRANCE

ENTRY



COMMONS/

TWO PACT CBOC

Figure 2.21 Three-PACT CBOC -Preferred L-Shaped

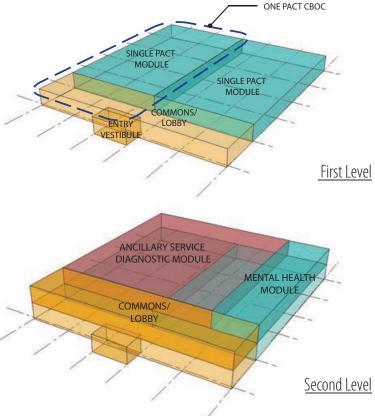
### Two – Story Two-PACT CBOC Prototype:

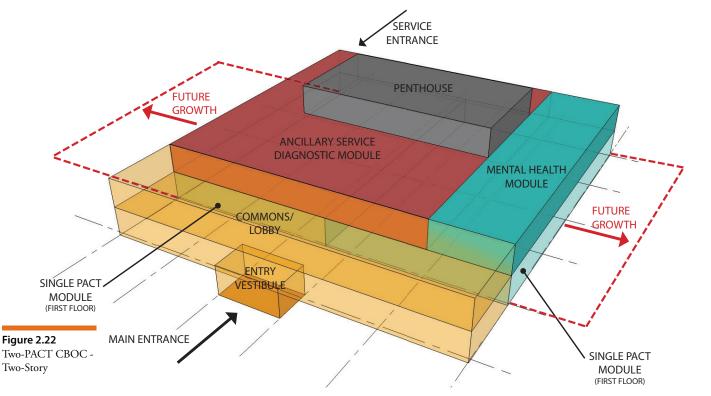
The Two-PACT Two-Story option illustrated on this page splits the Program for Design equally between the two floors. In addition to the Two-PACT Modules on the first floor, the Lobby/Commons Area remains a consistent front bar tieing the modules together and form an identity for the CBOC.

The second level includes all of the Ancillary Services Diagnostic Module as well as the Mental Health Component. A penthouse would be included on the third level.

Many of the programs located on the second floor, such as Radiology, Laboratory and Pharmacy needed to be moved to the first floor to have the proper adjacency to the PACT Modules. These moves left very little program on the second floor. It was determined that a two story option for the Two-PACT CBOC was not optimal and therefore not viable.

However, it was acknowledged that the two story option could be viable depending on the program growth. In some cases, depending on the remoteness of a particular clinic and the workload, a more robust ancillary service may determine a larger than usual footprint, such as, Multi-Specialty Care, to justify the expansion.





#### Two - Story Growth

Two-PACT CBOC Prototype to Three-PACT CBOC Prototype:

The Two-PACT CBOC Two-Story Prototype easily expands into the Three-PACT CBOC Prototype. The diagram to the right illustrates a single PACT Module added to the first floor of the Two-PACT option. However, due to the prioritization of program functions that are required to be located on the first level, although not optimal, the additional PACT module might be on the second floor with the Mental Health

The additional ancillary and diagnostic services are added at

SINGLE PACT MODULE Component. COMMONS LOBBY the second floor. First Level The penthouse expands to accommodate additional the utility demand of the added program space. ANCILLARY SERVICE DIAGNOSTIC **MODULE** COMMONS LOBBY SERVICE Second Level ENTRANCE **PENTHOUSE** ANCILLARY SERVICES MENTAL HEALTH MODULE **ANCILLARY SERVICES DIAGNOSTIC MODULE** SINGLE PACT MODULE (FIRST FLOOR) COMMONS SINGLE PACT MODULE LOBBY MAIN ENTRANCE (FIRST FLOOR) SINGLE PACT MODULE (FIRST FLOOR) Figure 2.23 Three-PACT CBOC -Two Story Growth

TWO PACT CBOC

(2 Stories)

#### Preferred Two - Story Three-PACT CBOC Prototype

The Two-PACT Two-Story option illustrated on this page splits the Program for Design equally between the two floors. In addition to the Two-PACT Modules on the first floor, the Lobby/Commons Area remains a consistent front bar tieing the modules together and form an identity for the CBOC.

The second level includes all of the Ancillary Services Diagnostic Module as well as the Metal Health Component. A penthouse would be included on the third level.

Many of the programs located on the second floor, such as Radiology, Laboratory and Pharmacy needed to be moved to the first floor to have the proper adjacency to the PACT Modules. These moves left very little program on the second floor. It was determined that a two story option for the Two-PACT CBOC was not optimal and therefore not viable.

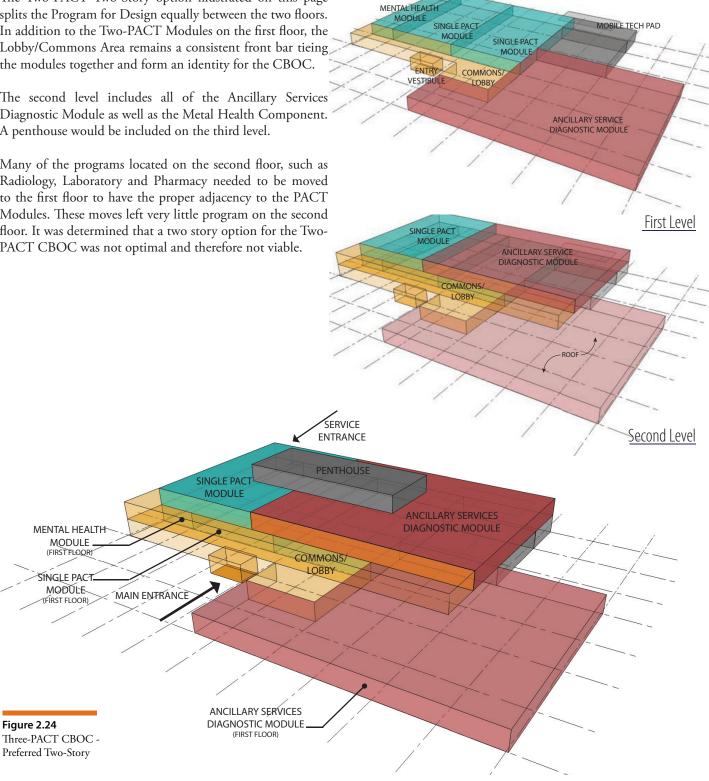


Figure 2.24

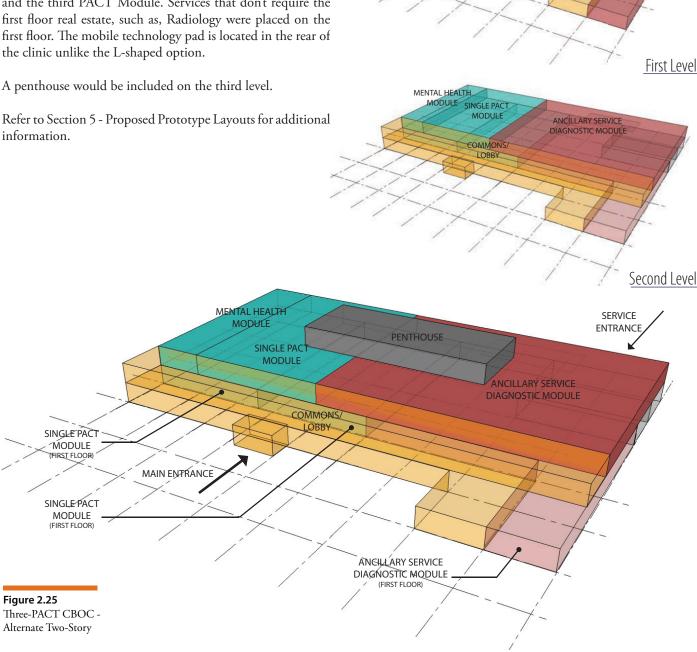
Three-PACT CBOC Prototype: Modified Two - Story

The Three-PACT Modified Two-Story option illustrated on this page splits the Program for Design unequally between the two floors. In addition to the Two-PACT Modules on the first floor, the Lobby/Commons Area remains a consistent front bar tieing the modules together and form an identity for the CBOC.

The second level includes all of the Ancillary Services Diagnostic Module as well as the Mental Health Component and the third PACT Module. Services that don't require the first floor real estate, such as, Radiology were placed on the first floor. The mobile technology pad is located in the rear of the clinic unlike the L-shaped option.

A penthouse would be included on the third level.

Refer to Section 5 - Proposed Prototype Layouts for additional



INGLE PACT

MODULE

SINGLE PACT

MODULE

COMMONS/ LOBBY

MOBILE TECH PAD

ANCILLARY SERVICE
DIAGNOSTIC MODULE

#### Flare

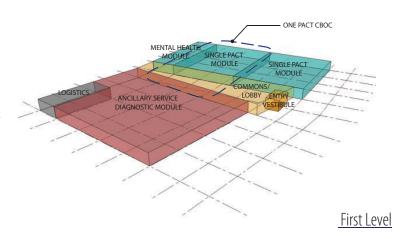
#### Two-PACT CBOC Prototype

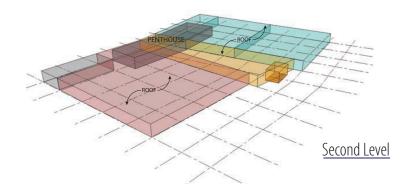
The Flare option also expands from the Two-PACT CBOC and grows into the Three-PACT CBOC. In the diagram illustrated to the right, the Mental Health Component is placed along the exterior edge of the building. By locating the component here, the patients benefit from natural daylight as well as views of a potential healing garden. The Lobby/ Commons Area remains a consistent front bar tieing the modules together and form an identity for the CBOC.

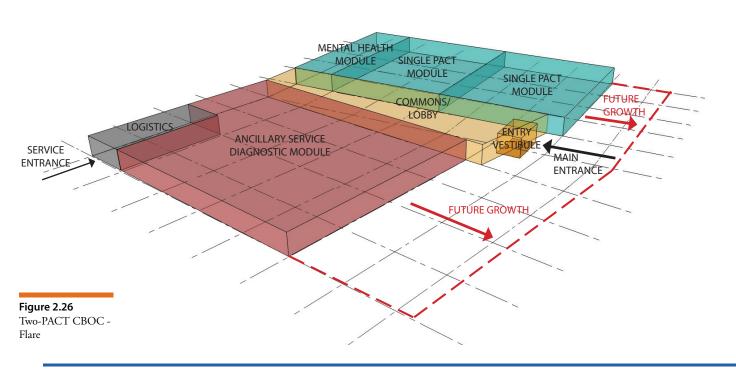
The Ancillary Services Diagnostic Module is across from the Commons/Lobby areas creating a wedge between the PACT Modules and ASDM Module. This option eliminates a significant portion of circulation space, however, some drawbacks are flow issues with primary care and specialist provider communication.

Logistics and some of the mechanical, electrical and plumbing (MEP) requirements are located on the back side of the Flare, away from the Flare, adjacent to clinical functions. Similar to the Linear and L-Shaped options, a penthouse is utilized for the majority of the mechanical system.

Refer to Section 5 - Proposed Prototype Layouts for additional information.







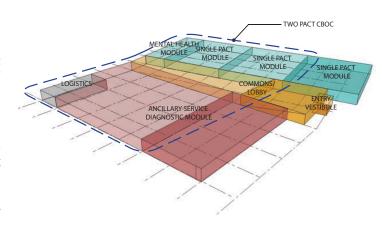
#### Flare Growth

Two-PACT CBOC Prototype to Three-PACT CBOC Prototype:

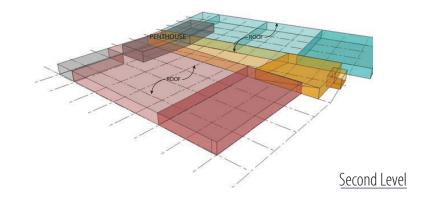
The Two-PACT CBOC Flare Prototype expands into the Three-PACT CBOC Prototype. The diagram to the right illustrates a single PACT Module added to the Two-PACT option and the Lobby/Commons lengths to support the module addition.

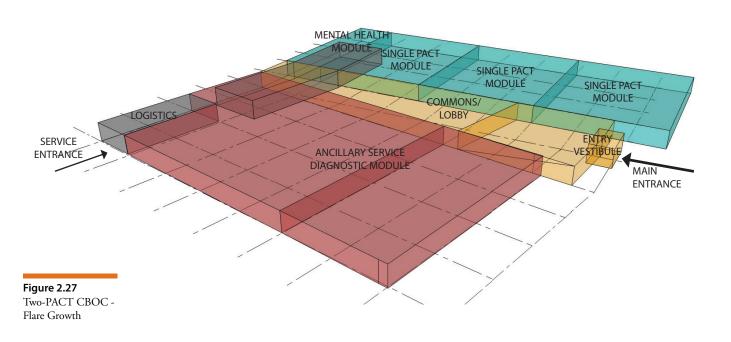
The additional ancillary and diagnostic services are added on the other side of the commons, adjacent to the existing ASDM.

The penthouse expands to accommodate additional the utility demand of the added program space.



First Level





### 2.7 Lobby/Commons Area

#### Lobby/Commons Area

Throughout the course of this project, the Lobby was one of the most questioned areas of the CBOC prototype design. Typically, a lobby is defined by a vestibule/entry way and a small waiting space. The design of the prototypes presented an opportunity to redefine what a lobby is and what benefits there are to the Veterans by doing so. The traditional lobby became redefined as the Lobby/Commons Area to foster the idea of 'active waiting', bringing value added services and interactions to veterans.

It was discovered the Lobby/Commons Area was more than just an entry way, or a transition space adjacent to the vestibule. Instead, in a CBOC setting, it is a place for Veterans to feel a sense of community and give them opportunities for socialization. In some areas, Veterans go to CBOCs to seek shelter, or for company of others. In all prototypes, the Lobby/Commons are very similar to give the Veteran a sense

of familiarity and offer VA branding opportunities.

The following spaces define the functions that occur in the Lobby/Commons Area:

- Canteen
- Outdoor waiting
- Healing Garden
- Family Waiting
- Patient Kiosks
- Patient Education
- Waiting Areas
- Wheelchair Alcove
- Vestibule



Figure 2.28 One-PACT CBOC -Typical Lobby/Commons

#### Waiting Areas

The waiting areas make up a large part of the Lobby/ Commons. The table below explains how the quantity of seating was derived. Each CBOC type requires different quantities of seating.

#### Evidence-Based Design

A mix of seating is advisable, using comfortable and not airport style layouts as much as possible. Some wider seats or loveseats in clear seating zones with efficient circulation; some bariatric friendly seating without being stigmatizing; clear sight lines for staff.

Other considerations include:

- Loose seating
- Different types of seating furniture
- Maximize opportunities for daylight use
- •

Criteria allows for 25sf per person for a typical waiting chair. Different types of seating arrangements are proposed in the Lobby/Commons area. Refer to the following pages for images of furniture and seating.

	VA CBOC WAITING AREA SEAT COUNTS								
	Program Area	Square Footage	Total SF	Standard	Accessible	Bariatric	Child	Total	Commons
				Seats	Seats	Seats	Seats	Seating	Total Seating
One PACT CBOC	PACT Waiting	360	570	16	4	4	0	24	30
	Family Waiting	60		0	0	0	4	4	
	Canteen/Vending Area	150		2	0	0	0	2	
	Dilation	60	(+60 optional)	3	0	1	0	4	
Two PACT CBOC	PACT Waiting	360	1680	16	4	4	0	24	86
	PACT Waiting	360		16	4	4	0	24	
	Family Waiting	60		0	0	0	4	4	
	Family Waiting	60		0	0	0	4	4	
	Audiology Waiting	200		8	2	2	0	12	
	Canteen/ Vending Area	250		2	1	1	0	2	
	Radiology Waiting	120		6	1	1	0	8	
	Pharmacy Waiting	150		6	1	1	0	8	
	Mental Health	0		0	0	0	0	0	
	Dilation	60	(+60)	3	0	1	0	4 (sub wtg)	
	Prosthetics Waiting	60	(+60)	0	0	0	0	0 (sub wtg)	
Three PACT CBOC	PACT Waiting	360	3105	16	4	4	0	24	170
	PACT Waiting	360		16	4	4	0	24	
	PACT Waiting	360		16	4	4	0	24	
	Family Waiting	60		0	0	0	4	4	
	Family Waiting	60		0	0	0	4	4	
	Family Waiting	60		0	0	0	4	4	
	Audiology Waiting	200		8	2	2	0	12	
	Canteen/Vending Area	650		4	2	2	0	8	
	Dental Waiting	335		14	4	4	0	22	
	Pharmacy Waiting	150		2	1	1	0	4	
	Multispecialty Clinic	270		16	4	4	0	24	
	Radiology Waiting	240		12	2	2	0	16	
	Mental Health	0		0	0	0	0	0	
	Dilation	120	(+60)	6	0	2	0	8 (sub wtg)	
	Prosthetics Waiting	60	(+60)	0	0	0	0	0 (sub wtg)	

#### Assumptions:

Each PACT Module is to Accommodate 4 Teamlets
Each Teamlet has 4 Standard, 1 Bariatric and 1 Accesible Chair
25 SF per Standard Seat
35 SF per Bariatric Seat
35 SF per Accessible Seat

Figure 2.29 Waiting Areas Matrix

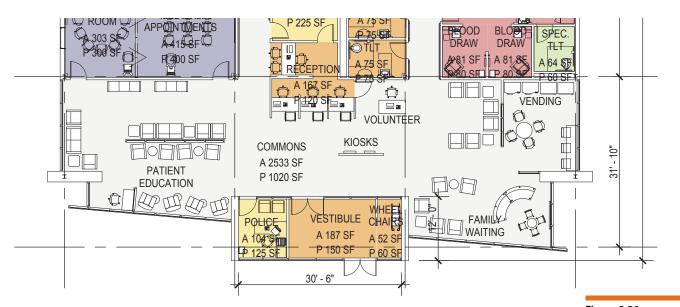


Figure 2.30 One-PACT CBOC



Figure 2.31
Waiting Room Furniture



**Department of Veterans Affairs** 



Figure 2.33 Lobby Seating



Figure 2.34 Lobby Seating



Figure 2.35 Two-PACT Module Lobby/Commons Layout



Figure 2.36 One-PACT Module Aerial View of Vestibule/ Entry



Figure 2.37 Two-PACT Module Aerial View of Reception



Figure 2.38 One-PACT Module Reception Approach



Figure 2.39 One-PACT CBOC Aerial View of Reception



Figure 2.40 Patient Kiosks Ambulatory Care Clinic Tripler Army Medical Center

#### Reception

This centralized node of the Reception is immediately adjacent, but not too close to the clinic waiting areas. This distance provides patients visual and auditory privacy while talking to staff at the desk by adding privacy panels at each check-in location. Each check-in counter is approximately 5'-0" to provide space for the patient and an accompanying family member if needed.

#### Patient Kiosks

Patient kiosks are located offset of the reception immediately after entering the clinic. Patients are encouraged to use this check-in system. Some patients may prefer to use the Reception and speak to a person instead. In either case, the clerks at the Reception desk are close by to help the patient should they encounter any difficulties.

#### Family Waiting

In all CBOC Prototypes, the Family Waiting Area is located adjacent to the vestibule immediately after entering the clinic. This area has a privacy screen to separate this space from the main waiting areas. The screen also serves as an additional layer of privacy for women nursing. The proposed furniture is kid-friendly and the space also has a television.

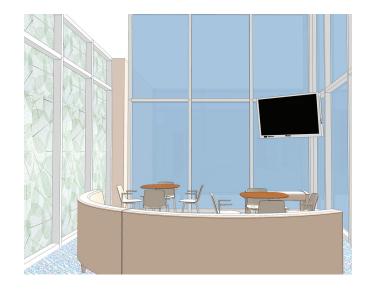


Figure 2.41
Family Waiting



**Figure 2.42** Aerial View of Family Waiting Area

#### Patient Education

Patient education alcoves are provided within the Lobby/ Commons area. The proposed space has tablet chair seating as well as a counter workstation for Veterans to use. The space has a bookcase that can be supplied with the latest Patient Education materials such as Disease Management, Support Groups, etc.



Figure 2.43
Aerial View of Patient
Education

#### Canteen + Outdoor Seating

The Canteen is located immediately off the vestibule in the Lobby/Commons area. In addition to the canteen shop, there is ample seating and bar top style seating along the glassy edge of the building. Doors off the canteen lead patients and visitors to the outdoor seating area. Vending areas are also located in an alcove adjacent to the canteen.

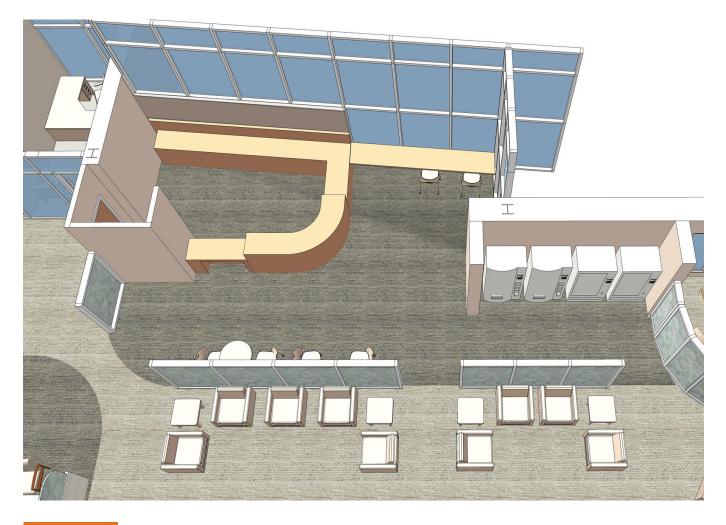


Figure 2.44 View looking into Canteen



Figure 2.45 View of Outdoor Seating Patio



Figure 2.46
Exterior Vignette



Figure 2.47 View of Healing Garden



### 2.8 Reception Areas

The Reception is centrally located, providing two distinct entrances into the PACT area. Its location provides a clear check-in point for patients entering the facility through the vestibule while affording staff visibility over the activity in the Commons. Kiosks are located in the patients' path from the Entry to Reception, encouraging patient use within visibility of both the Reception desk and Volunteer area, should a patient require assistance.

This centralized node of the Reception is immediately adjacent, but not too close to the clinic waiting areas. This distance provides patients visual and auditory privacy while talking to staff at the desk by adding privacy panels at each check-in location. Each check-in counter is approximately 5'-0" to provide space for the patient and an accompanying family member if needed.

Refer to Figure 2.36 for a rendering of the One-PACT CBOC Reception Area.

In a One-PACT CBOC, three check-in locations are provided with an additional counseling alcove off the corridor for surge hours or patients requesting additional privacy for conversations. A single entry way leads to the large, open Admin Work Room for office equipment and can be secured after hours.

In the Two + Three-PACT CBOC Prototypes the reception component reflects the same adjacencies and flow of the One-PACT CBOC. In this scenario, there are a total of six, 5'-0" check-in counters immediately off the Commons. Two entry ways lead to the Admin Work Room or counseling alcoves located off the two distinct corridors into the PACT area. Similar to the One-PACT Reception, these counseling alcoves also serve to support the reception during surge hours, typically in the mornings or for increased patient privacy.

In the CBOC Prototypes, Reception areas are shared with the PACT Modules with an additional Reception located in the Ancillary Services Diagnostic Module. Depending on clinic preferences, these Reception areas may be combined to serve all Primary Care and Specialty Appointments at one location. The scalable integration of the Reception Area is defined as a Three, Four or Six Person Reception. In all cases, a counseling alcove serves as overflow check-in counters as necessary.

Refer to Figure 2.37 for a rendering of the Two-PACT CBOC Reception Area.

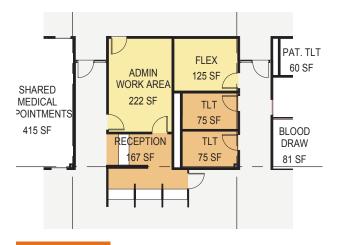
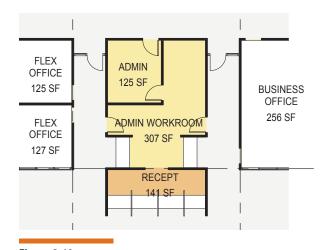
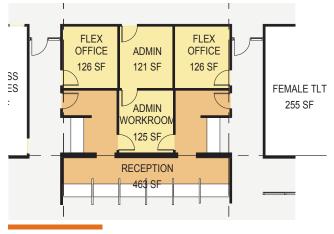


Figure 2.48
Three Person Reception Area



**Figure 2.49** Four Person Reception Area



**Figure 2.50**Six Person Reception Area



## 2.9 PACT + Extended Care Team Work Areas - Overview

PACT + Extended Care Team Work Area

The PACT Work Area has been combined with the Extended Team Work Area to foster the active communication and coordination providing integrative healthcare services, a key element in the PACT model of care. The PACT + Extended Team Work Area is designed to accommodate 4 Teamlets and 4-5 Extended team members. The Program for Design (PFD) allows 60 NSF per staff member for these workstations. The universal grid concept proposed over an ABA pattern for future flexibility was carefully considered to fully integrate the extended care team with the PACT Teamlets to optimize coordinated care. By utilizing the optimum column bay of 31'-10" as described Section 2.3 - Structural Bay Overview, the team work area also accommodates equipment alcoves, medication alcove, crash cart and support space. The support space includes areas for supplies, and printer/fax/copy.

Multiple scenarios were explored regarding the width of the teaming spaces for PACT. The pros and cons were discussed at all the charrettes that ultimately lead to the concensus of maintaining the regular 31'-10" column grid throughout. It was found that the wider column grid allows for more flexibility for providing collaborative spaces as a whole,illustrated on the following pages. The additional width allows for more natural light to carry through from the rear of the teaming area, but also provides more programmed space at the front of the teaming area.

Further, by maintaining the 31'-10" column grid for the team work area and throughout the clinic, it allows for future flexibility as departments change over time. This enables multiple configurations including insertion of other clinical components. It also allows for infilling the bay with universal rooms whether complete or partial as seen in the multi-specialty component. Refer to Figure 4.62. Additional information about the selection of the 31'-10" column grid is included in Section 2.3 - Structural Bay Overview.

In addition to the various furniture configurations of this space, the differentiator between the One-PACT CBOC and the Two-PACT CBOC is how the front bar of the space is utilized. In a One-PACT CBOC, the clinic size/patient enrollment does not trigger the need for a Pharmacy. Instead, and ADDS Room is included in the Program for Design. The Heights and Weights alcove and a Staff Toilet occupy the remaining footprint of that node. Unlike the One-PACT CBOC, the Two + Three-PACT CBOCs both have dispensing pharmacies included in their Program for

Design. The front bar is reconfigured with a larger Heights and Weights Room, a Flex Office, a crash cart alcove and a medications alcove. Due to the number of supporting staff involvement in primary care visits, the location of exam and procedure rooms immediately accessible off the team work areas is prioritized to minimize the movement of the patient.

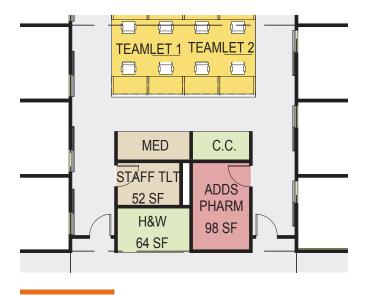


Figure 2.51
Front of Team Work Area for One-PACT CBOC

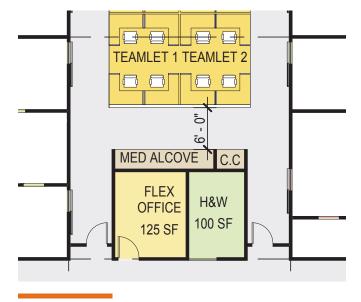
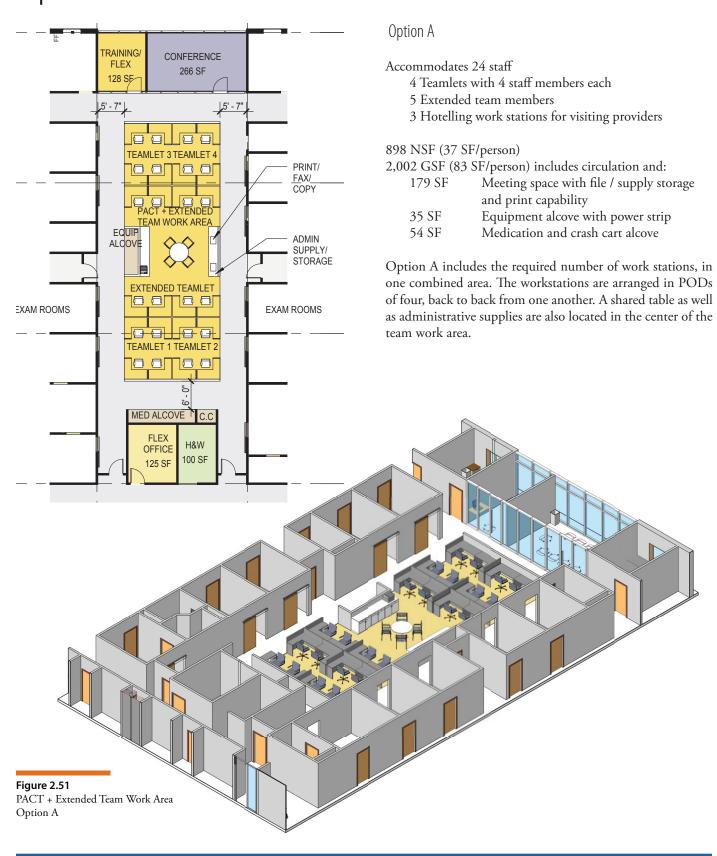
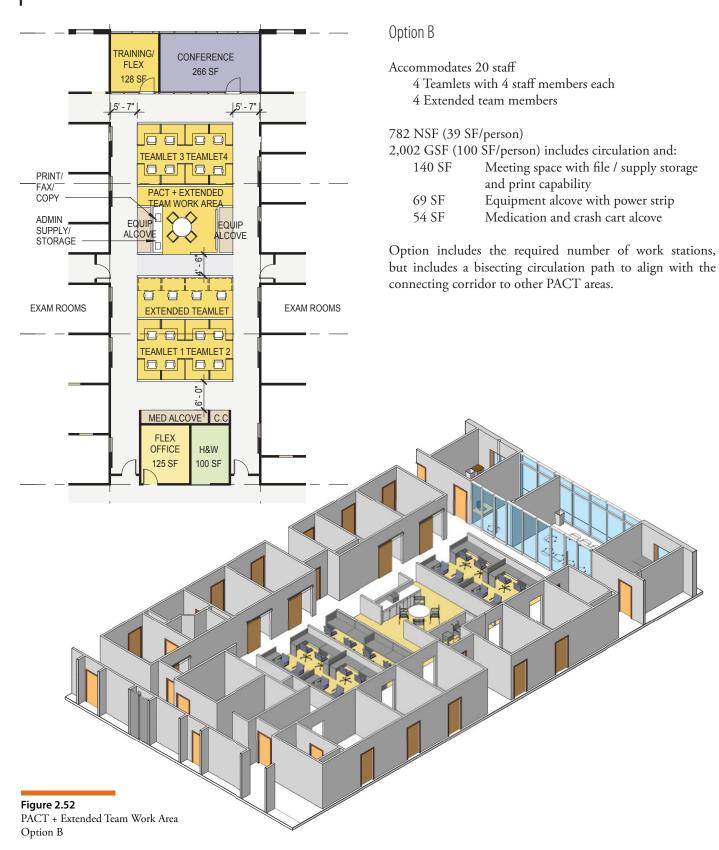


Figure 2.52
Front of Team Work Area for
Two and Three-PACT CBOCs

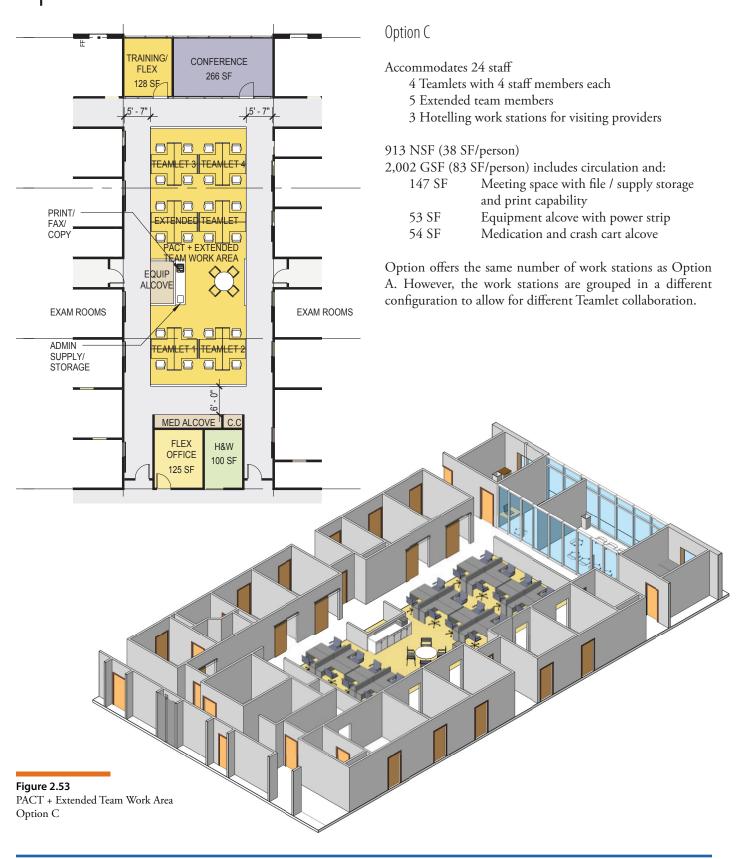
## PACT + Extended Care Team Work Area - Option A



## PACT + Extended Care Team Work Area - Option B



## PACT + Extended Care Team Work Area - Option C



# PACT + Extended Care Team Work Area - Option D

