1.1 Foreword

This project germinated in a selected entry to the Veterans Health Administration's (VHA) Innovation competition by Jay Sztuk, AIA, Director of the Office of Facilities Planning (OFP) of the Office of Construction & Facilities Management's (CFM) Facilities Estimating Service. This very successful partnership effort with VHA was spearheaded by him jointly with W. Ward Newcomb, MD, Senior Consultant, PACT Space Design Model, Primary Care Services.

This partnership of VHA, CFM, and our consultants, SmithGroupJJR + URS with The Innova Group, was focused on creating faster, more effective, and economical project delivery of outpatient facilities, incorporating standardized but flexible patient and family care planning and operations for our Nation's Veterans.

This could not have been accomplished without the wholehearted support and assistance by all, especially those mentioned in the following Acknowledgments.

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1.3 Executive Summary

Introduction

The Community Based Outpatient Clinics (CBOCs) make up a large part of Department of Veterans Affairs (VA) healthcare system. VA identified that there are potential cost and schedule savings in developing CBOC facilities with the use of standard design elements and off-site construction.

The goal of this task order is to develop standard designs, referred to as design modules, for various functional areas within outpatient clinics. These modules are made up of smaller elements referred to as "components". These become the building blocks that are utilized to develop three outpatient clinic templates of graduating size, while maintaining flexibility and expansion capabilities. Utilizing the modules will also enable the use of modular building practices that facilitates improved cost and schedule performance.

The development of the modules and standardized clinic templates focuses on lease-based clinics to be constructed as developer-led design-build projects for VA. These modular principles and over arching clinic layouts will also support the development of VA-owned clinics and apply to clinics of all sizes, as well as for renovations in clinics and hospitals. This project does not specifically address tenant build-out within existing buildings; however, understanding of the principles developed here and as presented in the PACT Module Design Guide will inform the selection and build-out of a suitable property.

Project Team

To accomplish this task order, the project team included VA subject matter experts, VA program officials, Office of Construction & Facilities Management (CFM) staff, VA medical center staff from three Veterans Integrated Service Networks (VISNs) and the design consultant team. A Core Steering Group comprised of clinicians and CFM staff was established. Three participating VISNs were also engaged. Each VISN assigned interdisciplinary teams to participate.

Process

The Core Steering Group was assigned to facilitate the overall decision-making process. The Core Steering Group retained responsibility for the development of the prototypes, and oversaw the decision making of each VISN, as the test and fits were developed. VISN leadership influenced the prototype development, were empowered to make decisions for their facility within the boundaries of the prototypes, and acted as advisors to the other VISN's test and fit layout.

The process was a collaborative effort intended to elicit participation of a diverse group representing the typical cross-section of project stakeholders. The group came together in a series of collaborative working sessions over several months. Meetings were conducted in each participating VISN in order to allow greatest opportunity of local participation. Through the course of the project more than 120 people participated in collaborative work sessions, breakout meetings, individual meetings with Central Office subject matter experts, and reviews of progress submissions.

With the concurrence and support of VA leadership the process will continue with implementation of these prototypes in upcoming CBOC projects and through a feedback loop of lessons learned to further refine and improve them.

Prototype Programs for Design

The initial task was to develop the Program for Design (PFD) for the three different sizes of CBOCs. The CBOC Prototype Programs for Design and subsequent templates are driven by the implementation of Patient Aligned Care Teams, or PACTs. 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.

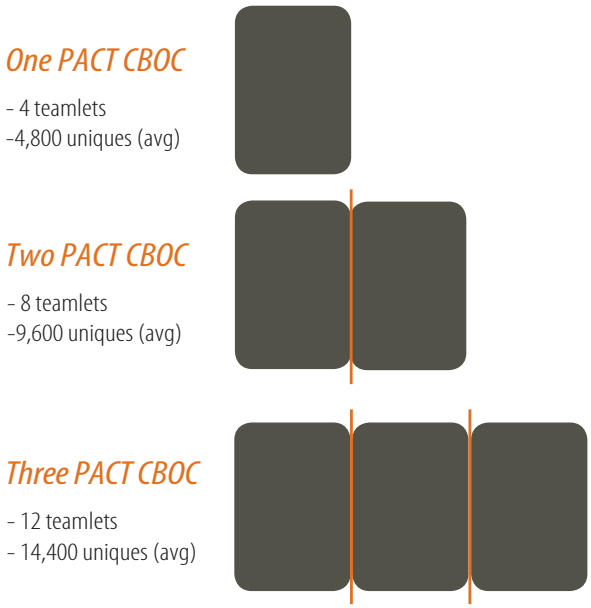

Figure 1.1
PACT Space Module Overview

The project team developed three prototype PFDs that are the basis of design for the design modules, clinical diagrams and clinic layouts for the One-PACT CBOC, Two-PACT CBOC and Three-PACT CBOC; this relates to the number of PACT clinical space planning modules programmed within each clinic. Each module is arbitrarily set at four PACT teamlets. A single PACT module includes four teamlets and includes an additional four to five extended team members. The teamlet consists of a primary care provider, RN-care manager, Clerical Associate and Administrative Associate; together, they form a partnership with the Veteran. This is illustrated in the One-PACT Module. As additional PACT modules are added to the PFD, there is a scalable growth to the ancillary and support services. This is referred to as the Ancillary Services Diagnostic Module (ASDM).

Planning Components + Modules

The modules are composed of smaller standard components with a 125-net-square-foot universal room as the basic element, working within a 31'-10" column grid. This column grid provides an optimal bay that contains six universal rooms and a six-foot clear corridor, allowing for maximum flexibility in a majority of the rooms in a typical CBOC. The universal rooms can be equipped and furnished as exam rooms, women's health exams, consult rooms, tele-health rooms, offices, specialty exam rooms and clean or storage rooms.

The modules were continually refined as the three prototypical plans were developed. Each CBOC size was studied to ensure efficiencies and flexibility in the modules. These plans were then applied for the case studies for each of the VISNs participating in this study. They are VISN 21, VISN 8, and VISN 23; each representing a small, medium or large CBOC (referred to in this study as the One-PACT CBOC, Two-PACT CBOC and Three-PACT CBOC).

Three separate working sessions/charrettes were held over the course of the project to facilitate collaboration on the development of the principles and concepts presented here. Each of the working sessions was held at one of the three VISN locations. The PFDs, components, modules and prototype plans were discussed, developed and refined at these sessions. A test and fit was also part of the agenda for each VISN. This worked extremely well since the order of the visits coincided with the respective clinic sizes, starting with the smallest - the understanding is that the two larger clinics grow from the One-PACT CBOC.

Test and Fit Programs for Design

A test and fit process was used to validate whether the prototype designs solutions work with little to no modifications, except in unique circumstances. In all cases, each of the VISN PFDs involved in this study had unique elements requiring additional reworking of the prototypes. The test and fits proved to be successful; however, some of the initial programs received from the different VISNs needed to be vetted or adjusted to align with the PACT model of care. Because the components and modules developed are interchangeable within the column grid, the template allows for the program differences between the prototype CBOC and the VISN CBOC PFD to be reconciled. Utilizing the same grid and module increments allows for components to be used across clinic of different sizes, meeting patient workload needs in each specific location.

The One-PACT CBOC, Two-PACT CBOC and Three-PACT CBOC designs are defined with standard floor plans and an equipment plans. The building shell design is not a part of this scope of work. The mechanical, plumbing and electrical design for this project consists of a broad overview of the requirements to support each clinic size. It includes approximate floor area associated with the different systems for preliminary planning purposes. Once the prototype plans are adopted, structural elements and building systems can also be standardized.

Project Outcomes

Overall, this project developed standard components and modules to facilitate the design of the CBOCs while embracing the PACT criteria. The prototypes allow these clinics to be developed in less time, deliver highly functional and efficient patient care, maintain flexibility, and allow for future expansion. Applying the principles defined by this project, the CBOC templates can also utilize off-site construction methods, such as prefabricated components, panelized structures or full scale permanent modular systems.

Challenges

While the project team was developing the programs, VA was simultaneously developing additional PACT criteria including the Design Guide for Patient Aligned Care Team Lean and the PACT Design Standard. Another challenge was utilizing some of the existing VA space criteria that is out of date as we worked through developing optimal layouts to facilitate patient care and clinical efficiencies. Refer to Section 9.4 - Deviations from VA Criteria for additional information.