PLANNING AND DESIGN REQUIREMENTS FOR TELEHEALTH SERVICES IN AN AMBULATORY ENVIRONMENT

The View from Leading Health Delivery Systems & MedCraft Healthcare Real Estate

INTRODUCTION

As technology rapidly advances, it is changing how healthcare organizations deliver care, compete, and expand services to meet changing consumer preferences and demands. This rapid evolution led MedCraft to fund a survey of leading health systems with the goal of understanding the breadth and depth of telehealth adoption and its impact on ambulatory facility planning, design, and development.

> *"Systems are increasingly investing in new telehealth programs to capture new revenue, efficiencies, and compete within and beyond traditional service areas. This is impacting the need for dedicated telehealth centers and spaces going forward."*
>
> Bryan Arkwright
> Chief Research Officer, Cromford Health

SURVEY AND FINDINGS

The study consisted of in-depth interviews with industry executives from national and regional health systems who are shaping telehealth delivery within their systems including:

Survey Executives

- CIOs
- Telehealth Executives
- Physician Leaders
- Strategic Planning Executives

Survey Organizations

- Allina Health – Minneapolis, Minnesota
  13 hospitals, 90 clinics
- Ascension – Austin, Texas
  151 hospitals, 2,600 facilities
- Atrium Health – Charlotte, North Carolina
  40+ hospitals, 900 facilities
- Christus Health – Irving, Texas
  60+ hospitals, 350+ facilities
- Mission Health – Asheville, North Carolina
  8 hospitals, 25 facilities
- Mount Sinai Health System – New York, New York
  8 hospitals, 57+ facilities
- Sutter Health – Sacramento, California
  24 hospitals, 56+ facilities
- Virtua – Marlton, New Jersey
  3 hospitals; 200+ facilities

These interviews were insightful and illuminated several issues that affect MedCraft's perspective on ambulatory facility planning and design going forward:

- All organizations are expanding their telehealth offerings, but systems that have allocated dedicated leadership and capital resources to telehealth have the most robust programs.
- Most organizations are focusing investment on telehealth for inpatient services such as telestroke, eICU, and inpatient observation.
- For outpatient care, the focus of telehealth investment has primarily been on specialty services where there are shortages of available physicians such as psychiatry and often include outsourcing of specialty telehealth providers.
- Several organizations have developed dedicated telehealth facilities or are considering them in the future.
- Many health systems feel that they are playing "catch-up" and are in the early stages of adoption for ambulatory care visits where providers are providing services to patients in other locations.
- Few systems have adopted facility planning and design standards for telehealth and mentioned the operational challenges and costs of retrofitting existing spaces.

As a result of the study, MedCraft developed a set of planning and design guidelines to help clients, architects, and contractors navigate through the process of telehealth integration in an ambulatory setting. In order to address the range of integration levels and different types of care delivery, and the host of challenges associated with retrofitting facilities to support telehealth, the following points are imperative when establishing guidelines for development:

1. Provide an informed design that includes input from telehealth leaders, industry best practices, and Facility Guidelines Institute (FGI) telehealth guidelines.

2. Provide flexible designs that allow telehealth integration over time and minimize the barriers to retrofitting or converting spaces for telehealth in the future.

3. Provide guidance that can be applied wherever telehealth services are provided.

DESIGN PRINCIPLES AND SPECIFICATIONS

The design guidelines primarily focus on three potential applications of telehealth in the ambulatory setting including:

- Provider with remote patient
- Provider and patient with remote consult
- Provider to provider

To meet the needs of these functions, there are several considerations that affect the typical design and layout of both exam rooms and provider work rooms where telehealth services are provided including:

- The placement of the exam table and furniture for patient and provider visualization.

- Sound transmission and insulation requirements necessary for facilitating effective verbal communication while maintaining appropriate HIPAA compliance.

- The location and type of lighting sources in both the exam room and provider work areas to ensure visual quality.

- The power, electrical, and IT infrastructure that are necessary to support the technical requirements of telehealth technology.

Given these important considerations, the design standards are focused on ensuring a high-quality audio and video experience to facilitate effective communication between patients and providers. Addressing these issues early in the planning and design process helps mitigate retrofit needs and costs in the future.

MOBILE CART OR INTEGRATED WALL UNIT?

As health systems work to design their telehealth spaces, choosing the right technology has a great impact in the delivery of the service. As in any industry, there are multiple vendors that provide tele-carts, integrated wall units, or hybrid systems. Understanding the pros and cons associated with each approach along with the implementation plan for a telemedicine strategy helps inform the appropriate hardware choice.

A STARTING POINT FOR STANDARDIZING TELEHEALTH SPACES:

While technology and practices continue to evolve, the one constant is that the environment must support a positive human experience and interaction between providers and patients. As health systems continue to develop and expand telehealth services, the focus of our research and planning guidance will be to ensure that the physical environment effectively responds to this important requirement.

For more information contact MedCraft Healthcare Real Estate at 952-829-3488.

Design and Layouts of Exam and Provider Rooms

Single Entry Exam Room

10'

10'

Telehealth Ready   Telehealth Cart   Telehealth Integrated

Dual Entry Exam Room

10'

12'

Telehealth Ready   Telehealth Cart   Telehealth Integrated

Provider Talk Room

8'

6'

Telehealth Ready

Provider Office

10'

8'

Telehealth Ready