

# Delta Region Community Health Systems Development (DRCHSD) Program

## Telehealth Innovation – Virtual Smart Rooms





# The Center's Purpose

The National Rural Health Resource Center (The Center) is a nonprofit organization dedicated to sustaining and improving health care in rural communities. As the nation's leading technical assistance and knowledge center in rural health, The Center focuses on five core areas:

- Transition to Value and Population Health
- Collaboration and Partnership
- Performance Improvement
- Health Information Technology
- Workforce



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# DRCHSD Program Supported by FORHP and DRA



U.S. Department of Health & Human Services



**HRSA**

**Federal Office of Rural Health Policy**

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# Introductions



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# Learning Objectives

- Provide an overview of Smart Hospital Technology and current market solutions
- Gain understanding of the benefits of Virtual Nursing and where other organization have seen successful
- Hear from your peers about their journey with Smart Hospital Technology and Virtual Nursing

# Smart Hospital Technology

Healthcare organizations have the potential to enhance care delivery with smart room technology, which can improve quality and experience, reduce costs, and optimize workforce capabilities. However, a strong strategy and organizational alignment is required to navigate today's complex, ever-changing technology landscape




# Benefits of Smart Hospital Solutions

Improved provider and staff satisfaction due to **administrative efficiencies and time savings**

Cost savings and increased capacity due to **operational efficiency**

Overall improved **patient outcomes and experience**

## Example Health System Results




**Physician Satisfaction**  
Increased by 8%<sup>1</sup>



**Operating Cost**  
Reduced by 10%<sup>3</sup>



**Readmissions**  
Reduced by 5%<sup>2</sup>



**Administrative Tasks**  
Reduced by 30%<sup>2</sup>



**OR Capacity**  
Increased by 15%<sup>4</sup>



**Wait times**  
Reduced by 20%<sup>7</sup>



**Nurse Turnover**  
Reduced by 15%<sup>3</sup>



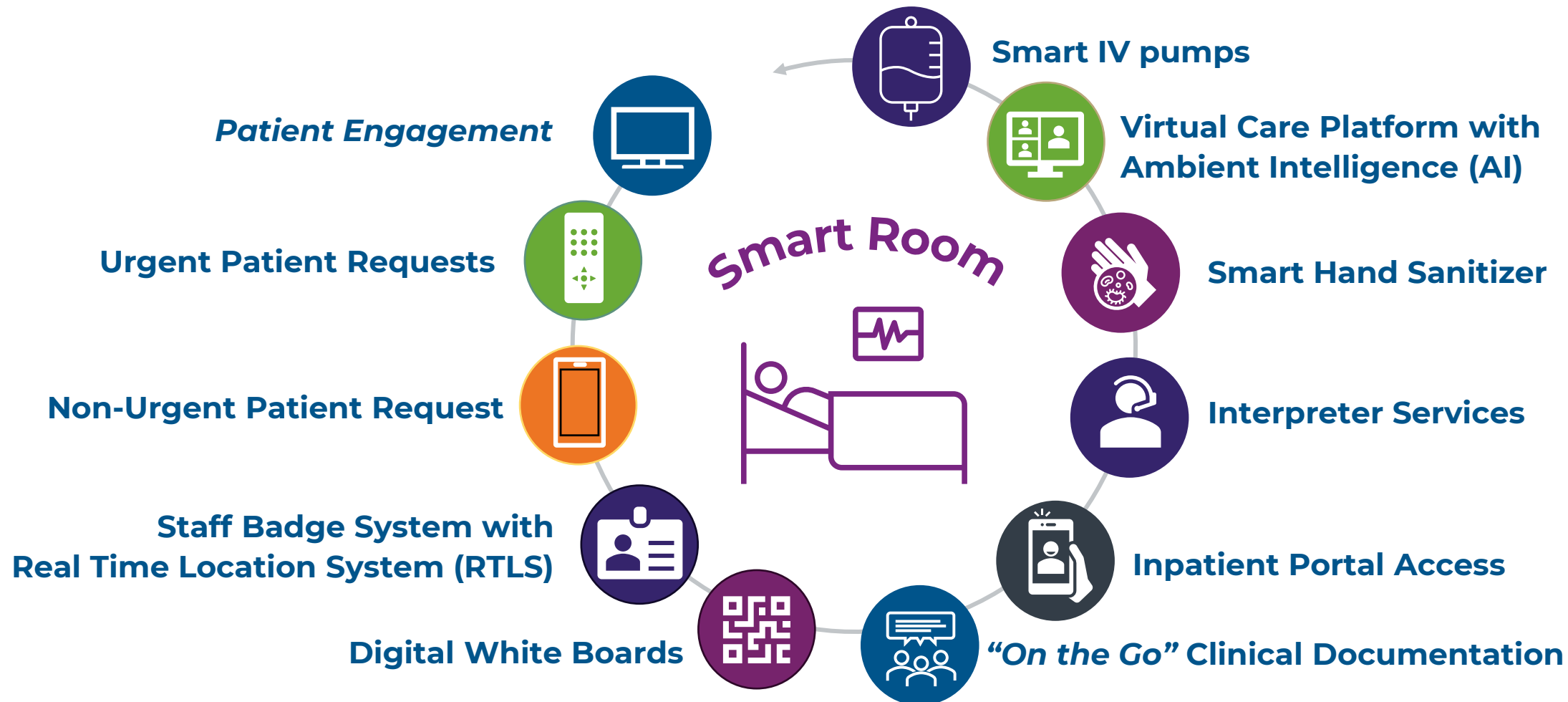
**Staff Workload**  
Reduced by 10,000 hours annually<sup>6</sup>



**Compliance**  
Improved post discharge compliance to 80%<sup>5</sup>

System & Sources: 1- Stanford; Becker's Hospital Review, 2024, 2- Mount Sinai; Becker's Hospital Review, 2023, 3- Cleveland Clinic; AppMaster Blog, 2024, 4- Houston Methodist; Beckers Webinar 2024, 6 - UCLA; Statista Research Department, 2024, 7 - Mayo Clinic; Statista Research Department, 2024

# Smart Hospital Technology 1





# Smart Hospital Technology 2

## Example #1

### **Critical Access Hospital (CAH) with management agreement connected to larger healthcare organization**

- *Organizational Structure:* Decisions are made in partnership between the CAH and their management team
- *Services:* Patient Care Services include acute care, emergency, primary care, and specialty care
- *Technology support:* Current and future technology is supported by the larger healthcare organization. EHR is provided by the larger health system

Larger health care system is planning to implement smart room technology at all their hospitals



# Smart Hospital Technology 3

## Example #2



**Short Term Acute Care with no formal affiliations or agreements. The organization has been challenged with low census and difficulty maintaining clinical staff**

- *Organizational Structure:* Leadership team consist of CEO, COO, CNO. Decisions for new programs or innovation require board approval
- *Services:* Patient Care Services include acute care, emergency. Currently no ambulatory services are provided
- *Technology support:* IT team consist of the IT director and IT analyst

Leadership would like to explore smart room technology

# Smart Hospital Technology 4

## Example #3

**Leaders of a CAH are in the planning phase of building a new hospital and looking to “future proof.” In preparation, leaders are defining what will be need to implement smart room technology.**

- *Organization Planning:* Key stakeholders and leaders design strategies for the organization advance with new technologies, evolve with patient’s needs, and withstand the evolution of the healthcare market
- *Services:* Patient Care Services include acute care, emergency, primary care, and specialty care
- *Technology support:* Current and future technology is supported by third-party vendors





# Smart Hospital Technology 5





# Virtual Nursing

## Define





# Virtual Nursing 1

## Challenges:

- High burnout rates among healthcare workers
- Staffing shortages and high turnover rates
- Inefficient administrative processes
- Limited patient engagement and satisfaction

## Impact:

- Increased workload on bedside nurses
- Reduced quality of care and patient outcomes

## Solutions:

- Streamlined administrative support and interdisciplinary communication
- Enhanced remote monitoring and virtual sitters
- Improved patient education and support

## Benefits:

- Reduced burnout and improved staff retention
- Enhanced patient safety and outcomes
- Increased efficiency and better resource allocation

# Virtual Nursing 2

It is widely believed that **in-person contact is crucial for delivering high-quality care**. This perspective stems from **traditional healthcare practices**, where physical presence is often linked with empathy and comprehensive understanding.

Myth

**Replacing traditional, in-person care**

**Valuable addition to traditional, in-person nursing care**

Fact

- Virtual nurse work in **partnership** with bedside nurses as a **care team**
- Enhance overall **patient experience**
- Offering **additional support** for nurses for tasks, e.g., documentation, coordination

# Benefits of Virtual Nursing Solutions

Increased staff satisfaction leads to reduced turnover and role vacancies

Time savings on administrative tasks allows nurses to focus on bedside care

Improved patient outcomes and experience


## Example Health System Results

**Staff Turnover**  
Decreased by 14%<sup>1</sup>


**Bedside Hours**  
Saved 3,000 hours for direct patient care<sup>4</sup>

**Quality**  
Decreased number of patient falls by 24%<sup>2</sup>

**Nurse Vacancies**  
Decreased by 46%<sup>2</sup>

**Admissions**  
Decreased time spent by nurses by 30 minutes<sup>5</sup>

**Experience**  
Increased patient experience scores by 66%<sup>7</sup>

**Staff Satisfaction**  
Increased by 25%<sup>3</sup>

**Discharge Event Time**  
Decreased by 2.7-2.9 hours<sup>6</sup>

**Documentation**  
100% completion of advanced care directives<sup>8</sup>

Source: 1- Cox Health; Beckers Hospital Review 2024, 2- Advocate Health; Beckers Hospital Review 2024, 3- Nebraska Medicine; THMA Research and Analysis 2024, 4- Baptist Health AL; Healthcare IT News, 5 - Orlando Health; THMA Research and Analysis 2024, 6- Duke Health & Jefferson Health; THMA Research and Analysis 2024, 7- Atrium Health; THMA Research and Analysis 2024, 8 - OSF HealthCare Saint Francis Medical Center; OSF Newsroom 2023



# Virtual Nursing 3

The perception that **older adults will not engage** with technology or will **inadequately adopt** virtual nursing is shaped by generational differences, lack of familiarity, and physical and cognitive challenges.

Myth

**Elderly will struggle to adopt new technology or virtual nursing**

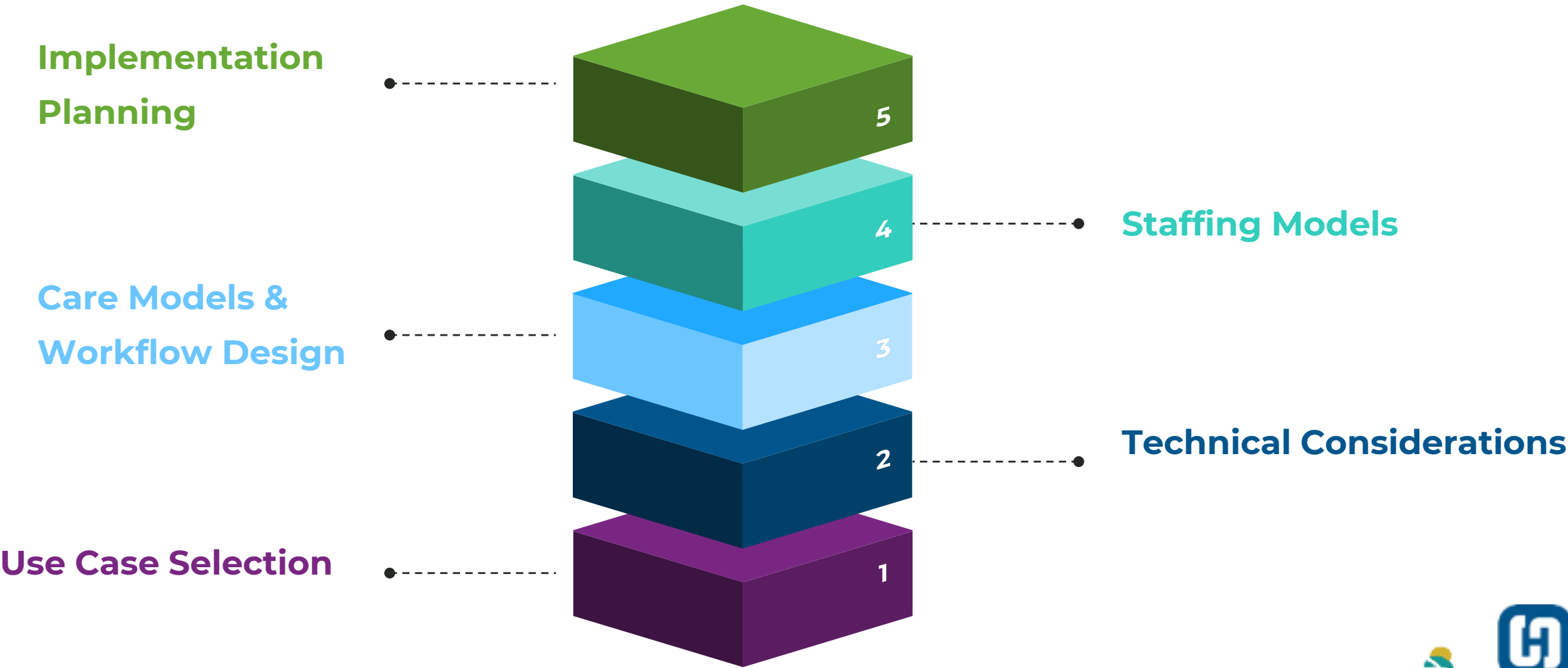
**Adoption is possible with support, education, and accessible design**

Fact

It is crucial to acknowledge that, with **appropriate support, education, and accessible design**, the elderly population can **overcome these barriers** and significantly benefit from the advantages offered by programs such as virtual nursing.

# Virtual Nursing 4

## Key Considerations for Implementations



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# Panel Discussion



# Peer Sharing Panel Introductions



## St. James Parish Hospital

CEO Mary Ellen Pratt

Location: Litcher, LA



## Lawrence Memorial Hospital

CEO Aaron Hilton

Location: Walnut Ridge, AR





# Panel Discussion 1

- Describe your general Virtual Smart Room set up



# Panel Discussion 2

- Did you encounter any unexpected challenges or surprises during the build?



# Panel Discussion 3

- What are your current or future use cases for Virtual Smart Room?



# Panel Discussion 4

- Any additional lessons learned the panel would like to share?





# Questions or Comments



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