The Road Less Traveled: Facilitating Cultural Change in Healthcare Through the Built Environment

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Presenters

• Robert Y. Copeland, Jr.
  FACHE
  CEO
  McCune-Brooks Regional Hospital
  Carthage, Missouri

• Earl R. Wilson
  ACHE, ASHE, LEED AP
  Senior Associate
  HMN Architects, Inc.
  Overland Park, Kansas

Learning Objectives

• Explore how institutions can take the opportunity of building a replacement hospital to re-invent how they provide healthcare services.

• Reinforce the internal cultural changes needed to compete in the marketplace.

• Learn how strategies for incorporating daylight and nature into patient care spaces as part of the healing process were employed.

“...I shall be telling this with a sigh 
Somewhere ages and ages hence: 
Two roads diverged in a wood, and I — 
I took the one less traveled by, 
And that has made all the difference.”

— Robert Frost
Learning Objectives

- Explore how the objectives for patient- and family-centered care were executed through strategies in the planning and design of the facility.
- Discover what lessons were learned about the overall results and patient satisfaction.
- Learn to embrace the challenges of healing.

Agenda

- Welcome
- History
- Our Story
- A Journey
- Bridging Culture & Design
- Setting the Stage
- Big Ideas
- Results
- A Challenge
- Discussion

BACKGROUND

Carthage, Missouri

- Location: Southwestern part of Missouri, near Joplin
- Statistics: Founded in 1842, Population: 12,668
- Americana: "Maple Leaf City", Route 66, Battle of Carthage

Local Environment
Existing Facility Issues
Carthage, Missouri

- Home to:
  - Leggett & Platt
  - Williams Lighting
  - Schreiber Cheese
  - Precious Moments
- Notable Natives:
  - Marlin Perkins
    - Naturalist
  - Belle Starr
    - Wild West Outlaw
  - Dr. Janet Kavandi
    - Astronaut

Our Prior Facility

- Issues:
  - Federal style building constructed in 1929 with numerous additions.
  - Hampered by:
    - Inadequate Parking
    - Restricted Access
  - Renovation was possible but would not have facilitated the type of change we wanted.

Issues

- Surgery & Endoscopy
  - Departmental areas were split onto two floors.
  - Compromised segregation of sterile/non-sterile areas.
  - Central sterile services occupied left over hallways, closets, etc.
  - Inadequate facilities for:
    - Pre-op Care
    - Post-op Care
    - Patients, Staff & Visitors

- Emergency & Imaging
  - Compromised segregation of sterile/non-sterile areas.
  - No decontamination space.
  - Inadequate space for supplies and storage.
  - Inadequate facilities for patients, staff and visitors.
**Issues**

- **Inpatient Care**
  - Medical and Surgical care was split onto two floors.
  - Predominately semi-private rooms.
  - Critical care provided in a ward setting.
  - Inefficient bed mix.
  - Inadequate space for supplies or storage.
  - No facilities for family-centered care.

**Medical/Surgical Patient Room**

- **Other Functions**
  - Administrative, cardiac and physical therapy services were scattered across town.
  - Obsolete kitchen and other service spaces.
  - Lack of meeting, training and conference space.
  - Absolutely no space for community events.
  - Parking and expansion were major concerns.

**Rehab Gym**

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**OUR STORY**

**A New Approach**

**A JOURNEY**

**We Have a Choice**

**A Different Point of View & Experience**
Healthcare Is Broken

• Experientially
• Financially
• Spiritually

Take a New Approach

• Goals:
  ▪ Redefine what healthcare means.
  ▪ Determine how best to execute that care.
  ▪ Incorporate both new and traditional concepts that enhance the healing process.
  ▪ Embrace change in healthcare creatively.

The Challenge

• Imagine a different healthcare experience.
  “Some men see things as they are and say, ‘Why’?
  I dream of things that never were and say, ‘Why not?’”
  — Robert F. Kennedy
  University of Kansas
  March 18, 1968

A Different Point of View

• We need to change our point of view.
  ▪ We looked at McCune-Brooks Regional Hospital with new eyes…
  …through the eyes of experiences.
Create a New Experience

- Experiences are personal.

“Experiences are inherently personal, existing only in the mind of an individual who has been engaged on an emotional, physical, intellectual or even spiritual level.” — Joe Pine & Jim Gilmore

Welcome to the Experience Economy

Harvard Business Review

Bridging Culture & Design

Design Goals & Principles

BRIDGING CULTURE & DESIGN

- We used this opportunity to improve:
  - Processes
  - Outcomes
  - Culture
- Incorporate best management practices.
  - Apply Evidence Based Research.
  - Allow for the unknown.
  - Streamline and reorganize everywhere.
  - Learn from the best, no matter where.

Design & Planning Goals

- Admissions
  - Make the pre-admission process more patient-friendly.
  - Provide single point of care service.
  - Concierge & Admissions
  - Pre-Admission Services, etc.
- Emergency Services
  - Design flexible zoning & private rooms.
  - Provide women’s emergency care.
  - Address infection control needs.
Design & Planning Goals

Surgery and Endoscopy
- Consolidate services.
  - Provide a better ratio of pre/post rooms.
  - Design more adaptable O.R.s.
- Focus on outpatient care.

Diagnostic Imaging
- Fully implement the "on-stage" idea.
  - Create a women’s center.
  - Allow for new technologies & digital format.

Respiratory Therapy
- Consolidate functions from different departments.
- Provide patient-centered sleep therapy services.

Food Service
- Convert to a room-service approach.

Inpatient Care
- Provide a truly restorative environment & responsive patient care.
- Design adaptable/universal patient rooms.
- Provide a family-centered environment.
  - Rooming-in
  - Family room

Planning Principles

- Create a new experience.
  - Create a new patient experience.
  - Design a new staff experience.
    - "A new play commands a new stage."
    — B. Joseph Pine, II
- Think from the patient’s point of view.
Learning From Disney

Evidence-Based Design Hypotheses

SETTING THE STAGE

Learning from Disney

- The Disney Experience
  - One of the world’s greatest marketers.
- Key concepts in creating an experience:
  - Look for opportunities to create surprise & delight.
  - Make individuals feel special.
  - Be true to your brand.
  - People talk about their experiences.

Learning from Disney

- Create a Memorable Experience
  “Work is theatre...Even those businesses which do not yet stage experiences must understand that whenever employees work in front of customers an act of theatre occurs...the question isn’t whether your employees are performing, it's whether they are performing in mundane or memorable ways.”

--- Joe Pine & Jim Gilmore
Welcome to the Experience Economy
Harvard Business Review

Evidence-Based Hypotheses

- Patient Satisfaction:
  - Access to nature will increase patient satisfaction scores.
- Pain Management & Medication Use:
  - Large windows & lack of shadows will improve pain management scores & decrease medication use.
- Patient Safety:
  - Wide entries at patient rooms & at patient toilets will help reduce slip & fall incidents.
Evidence-Based Studies

- Bright light (natural & artificial) can improve health outcomes:
  - Bright light reduces the effects of depression, agitation, SAD, bipolar and other disorders.
    — Seven distinct studies (1996)
  - Sunlight in patient rooms improves psychosocial health, quantity of medications used, and medication costs.
  - Patients who suffered heart attacks had half the mortality rate in sunny rooms.
    — Beauchemin & Hays (1998)

- Effect of light on improving patient health:
  - Exposure to bright morning light is effective in reducing agitation in elderly patients with dementia.
  - Exposure to morning light is more effective in reducing depression than evening light.
  - Views onto sunny spaces were twice as effective as those that looked onto spaces in shadow.
    — Beauchemin & Hays, et al. (1996 to 2006)

The Big Ideas

- We developed several “Big Ideas.”
  - They became the framework for our new hospital;
  - And were essential in the way we looked at the interaction between:
    - Healthcare
    - The Built Environment
The Big Ideas

1. Create a new patient experience.
2. Bring care to the patient, not just figuratively, but in actual practice.
3. Provide a healing and restorative environment for patients, families & staff.
4. Integrate nature as key part of the healing process.
5. Engage all senses in the patient care environment.
6. Provide “on-stage” & “off-stage” spaces.
7. Tell a story.

1. A New Patient Experience
   - Create a new patient experience.
     - Experiences begin in the community & are rooted in the culture of the hospital.
     - “Beacons of Light”
       - Announce a place that nurtures a sacred trust in healthcare.
1. A New Patient Experience

- Reinforce the patient experience.
  - Departments and functions were reorganized to reinforce the new patient experience.
  - Concierge & Admitting
  - Pre-Admission & Outpatient Care
  - Emergency Care
  - Dining & Food Service
  - Wayfinding was key in shaping the patient experience.

- Create a healing & restful environment.
  - Provide a place where patient-centered & family-centered care can flourish.
  - Reduce visual clutter & unwanted noise.
    - Wireless devices minimize overhead paging.
    - Carpeting is used in all non-invasive areas.
  - The patient rooms were designed to:
    - Make patient care more effective & efficient.
    - Harmonize with the other big ideas.
2. Bring Care to the Patient

- Bring care to the patient — not just figuratively, but in **everything** we do.
  - We examined and questioned everything:
    - Roles, responsibilities, relationships, departments, flow, etc.
    - Provide decentralized patient care.
    - Direct observation.
  - Provide universal rooms.
    - Yields flexibility in room assignments.

3. Provide for Healing

- Provide areas of rest and respite:
  - A quiet library with a fireplace.
  - Family gathering areas.
  - Places to sit & talk, or take in a view.
3. Provide for Healing

- Incorporate natural light & views.
  - Sunlight is essential for life.
  - Daylight provides natural illumination for most tasks.
    - Glare is controlled to minimize visual discomfort.
  - The outdoor spaces were designed so that views are not obscured by shadows.
4. Integrate Nature

- Use nature as an ally in healing.
  - As humans, we are innately connected to nature.
  - Create a feeling of intimacy with a special environment, with views of nature & water, even while in bed.

- Refresh the spirit.
  - Water is a universal symbol of healing, a journey, rebirth, a cleansing element, and clarity.
  - The passages are bridges over the brook, both literally & figuratively.

- Use sound to reduce stress.
  - The soothing sound of rippling water reinforces the visual image of the brook.
  - Piano music provides counterpoint.

5. Engage All Senses

- Create vistas.
  - Sightlines were carefully designed to frame views & provide places for rest & reflection.

- Use sound to reduce stress.
  - The soothing sound of rippling water reinforces the visual image of the brook.
  - Piano music provides counterpoint.
5. Engage All Senses

- An art program provides positive distractions.
  - Artwork by local artists helps reinforce a sense of place & the community.

6. On-Stage & Off-Stage

- Provide both “on-stage” and “off-stage” spaces.
  - “On-stage” areas:
    - The hospital is a stage in which employees “act” as caregivers.
    - They help set the stage for a positive experience.
  - “Off-stage” areas:
    - Were created for employees to de-stress, rejuvenate, and re-energize for their roles.
7. Tell a Story

- “The Journey of Life”
- Through the architecture we created a story of healing and care...
  in which a patient realizes they are connected to the environment...
  and have become a part of nature’s unique ability to create, revitalize and release...
  and celebrate the sacred trust in healthcare.
THE ROAD LESS TRAVELED:
FACILITATING CULTURAL CHANGE IN HEALTHCARE
THROUGH THE BUILT ENVIRONMENT

Searching ...... for what it means.

That's the way.....

...that life goes.
THE ROAD LESS TRAVELED: FACILITATING CULTURAL CHANGE IN HEALTHCARE THROUGH THE BUILT ENVIRONMENT

Press Ganey Surveys & Operations
Lessons Learned
RESULTS
The Results

Press Ganey Inpatient Survey

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<th>Peer Group Mean</th>
<th>Overall Hospital</th>
<th>Room Aesthetics</th>
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<td>07/31/05</td>
<td>100</td>
<td>80</td>
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<td>09/30/05</td>
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<td>5</td>
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</table>

The Results

Procedures & Revenue

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<thead>
<tr>
<th>Procedures &amp; Revenue</th>
<th>2007</th>
<th>2009</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR Hours / Mo.</td>
<td>91</td>
<td>155</td>
<td>+70%</td>
</tr>
<tr>
<td>Endoscopy Procedures / Mo.</td>
<td>84</td>
<td>125</td>
<td>+49%</td>
</tr>
<tr>
<td>Diagnostic Procedures / Mo.</td>
<td>1,681</td>
<td>2,210</td>
<td>+76%</td>
</tr>
<tr>
<td>Outpatient &amp; Clinic Visits / Mo.</td>
<td>1,955</td>
<td>2,864</td>
<td>+73%</td>
</tr>
<tr>
<td>ADC (69% Occupancy Rate)</td>
<td>17.97</td>
<td>22.27</td>
<td>+24%</td>
</tr>
<tr>
<td>Increase in Gross Revenues</td>
<td></td>
<td>+38%</td>
<td></td>
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</tbody>
</table>

The Results

Patient Statistics

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2009</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Days</td>
<td>535</td>
<td>625</td>
<td>+16%</td>
</tr>
<tr>
<td>ALOS (Medical / Surgical)</td>
<td>4.8</td>
<td>4.1</td>
<td>&lt;15%</td>
</tr>
<tr>
<td>ALOS (Swing Beds)</td>
<td>7.3</td>
<td>5.6</td>
<td>&lt;23%</td>
</tr>
<tr>
<td>ALOS (Generations Unit)</td>
<td>13.3</td>
<td>11.9</td>
<td>&lt;11%</td>
</tr>
<tr>
<td>Slips &amp; Falls / Discharge Day</td>
<td>1.7%</td>
<td>1.1%</td>
<td>&lt;35%</td>
</tr>
</tbody>
</table>
### Results

#### Patient Satisfaction
- Press Ganey ratings are above the 90th percentile for most inpatient categories.
  - Overall Hospital Rating & Level of Care
  - Patient Rooms, Noise Level & Visitor Comfort

#### Greatest Areas of Success
- Inpatient Care
- Specialty Clinics
- Surgery
- Food Service

### Results

#### Patient Safety
- Slips & falls have been reduced.
  - Additional study is needed to confirm that wide doorways help reduce fall incidences.
  - The solid color flooring in the Generations Unit performs well for minimizing slips & falls.

#### Medication Usage
- PRN & pain medication use is reduced.
  - Based on staff reports & interviews.
  - Generations Unit PRN usage has been reduced ~50%.

### Results

#### Evidence-Based Design Hypotheses
- Average Length of Stay (ALOS)
  - ALOS has been reduced (4.1 vs. 4.8 days).
  - The hypothesis that access to natural light & nature will help improve patient outcomes appears to be validated.

#### Pain Management
- Retrospective interviews appear to validate the hypothesis that access to nature & natural light reduce discomfort & demand for pain medications.

### Results

#### Transition Planning
- Equipment lease terms were adjusted to coincide with move-in.
  - This minimized the numbers of moved items & bundled set-up & calibration costs.
  - Apply new systems & procedures before move-in to shake out issues & build the new culture.
  - It is difficult to keep your “eye on the ball” with patient service in the midst of planning & construction.
Results

- Vision & Commitment
  - The vision & goals were identified early.
  - We had a common communication plan.
  - There were solid liaisons in the project.
  - There was commitment to the programmatic & fiscal goals of the project.
  - It is essential that all team members fully understand & are equally committed to the vision.

Our Challenge to You

- Change begins here.
  “Never underestimate the ability of a small group of committed people to change the world.
  They’re the only ones who ever have.”

  --- Margaret Mead

Our Challenge to You

- Nurture a sacred trust in healthcare.
  - Design healthcare facilities to promote wellness, family values & a sense of the community.
- Think from the patient's point of view.
BEGIN YOUR JOURNEY

"The journey is the reward." — Chinese Proverb

THE ROAD LESS TRAVELED: FACILITATING CULTURAL CHANGE IN HEALTHCARE THROUGH THE BUILT ENVIRONMENT

Project Team

- HMN Architects, Inc.
  Architecture & Interior Design
  Overland Park, KS, Springfield, MO

- Starizon, Inc.
  Experience Consulting
  Keystone, CO

- Brack & Associates, P.A.
  MEP Engineering
  Topeka, KS

- Bob D. Campbell & Co.
  Structural Engineering
  Kansas City, MO

- Walter P. Moore, Inc.
  Civil Engineering
  Kansas City, MO

- Santerre Becker Associates
  Food Service Design
  Mission, KS

- Palmerton Parrish
  Geotechnical Engineering
  Springfield, MO

- Patti Banks Associates
  Landscape Architecture
  Kansas City, MO

- Traffic Engineering Consultants Inc.
  Traffic Engineering
  Oklahoma City, OK

- Hospital Management Consulting
  Financing
  North Kansas City, MO

- J.E. Dunn Construction Co.
  Construction Management Services
  Kansas City, MO

Images

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References


References

References


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Thank You

Robert Y. Copeland, Jr.
FACHE
CEO McCune-Brooks Regional Hospital
3125 Dr. Russell Smith Way
Carthage, MO 64836
417.359.2560
bob.copeland@mbrh.org

Earl R. Wilson
ACHE, ASHE, LEED® AP
Senior Associate
HMN Architects, Inc.
Overland Park, Kansas
913.451.9075
ewilson@hmnarchitects.com