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Learning Objectives

• Learn specific, strategic responses to the forces of healthcare reform
• Explore an integrated process that leads to a broad consensus
• Identify a flexible, long range vision that can be phased to align to the capital available
• Learn to prioritize numerous agendas, evaluate facility options and arrive at an optimal final plan within budget guidelines
Agenda

• Introduction
  – L&M Context
  – Health Care Reform Overlay
  – Core Capabilities

• Partnership

• Thinking in Systems

• Data Driven Decisions

• Q&A
Introduction

- Lawrence & Memorial Hospital
  - Non-Profit Community Hospital in New London, CT
  - Founded in 1912
  - 280 Licensed Beds
    - Medical, Surgical, Rehab, Obstetrics, Psych
  - Centers of Excellence
    - Critical Care, Rehab, NICU, Oncology
  - 2,300 Employees
  - 302 Active Staff Physicians
  - 14,000 Inpatient Discharges,
    10,000 OR Cases, 84,000 ED Visits
Introduction

• Healthcare Reform Overlay
  – How do You Prosper in a Post Reform World?
  – Requires a New Business Model
    • FFS to Patient Management
    • Volume to (Value = Quality/Cost)
    • Downward Pressure on Price
    • Cost Management to Cost Structure
    • Create Scale
Introduction

Assessing Your Core Capabilities

Source: Kaufman, Hall & Associates, Inc.
Introduction

How L&M Stacked Up

- Physician Alignment
- Provider Integration
- Efficiency
- Facility Condition
- Labor Flexibility

Source: Kaufman, Hall & Associates, Inc.
Introduction

3 Core Capabilities to Work On

Source: Kaufman, Hall & Associates, Inc.
1. Multi-Disciplinary Approach

The Blind Men & the Elephant
– To Learn What it is Like
 Each Touches a Different Part
 • Side…”A Wall”
 • Trunk…”A Snake”
 • Leg…”A Tree”
 • Ear…”A Fan”

– No One Individual Can Know the Whole Truth About the Elephant
1. Multi-Disciplinary Approach

Integrated Process

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
<th>Phase IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGIC PLANNING</td>
<td>ANALYSIS</td>
<td>DISCUSSION</td>
<td>DIRECTION</td>
</tr>
<tr>
<td>STRATEGY</td>
<td>Where Are We?</td>
<td>Where Are We Going?</td>
<td>How Do We Get There?</td>
</tr>
<tr>
<td>FACILITIES</td>
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<tr>
<td>FINANCE</td>
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<tr>
<td>OPERATIONS</td>
<td></td>
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</tbody>
</table>
2. Partner With Physicians

Benefits of Hospital-Physician Alignment

- **Growth** – hospitals need to grow to maintain financial performance to fund investment in clinical programs, new technology, etc.

- **Efficiency** – physicians can assist hospitals in reducing costs, increasing throughput, access, quality, outcomes, and value
2. Partner With Physicians

*Hospital-Physician Alignment Models*
- Physician employment (L&MPA)
- Practice acquisition
- Contractual arrangements (co-management agreements)
- Customer service offerings (physician liaison, EMR, joint marketing)

Partnerships are chosen that most effectively support organization’s strategic goals.

One size does not fit all.
3. Clinical Affiliations

L&M’s Partners

- Neonatology
- Radiation Oncology
- Cardiac
- Pediatric ED (pending)

Joslin Diabetes Center

- Diabetes Management

NCI-Designated Cancer Center

- Medical Oncology

Natchaug Hospital

- Inpatient/outpatient psychiatry

Westerly Hospital

- Strategic Partnership
3. Clinical Affiliations

Benefits of Clinical Affiliation

– Increase market share and volume
– Decrease cost; improve financial strength
– Leverage clinical expertise
– Improve quality of care locally; reduce outmigration
– Make best use of scarce capital and clinical resources
4. Integrated Project Delivery (IPD) Partnership

What is IPD?
– “Integrated project delivery is a project delivery approach that integrates people, systems, business structures and practices into a process that collaboratively harnesses the talent and insights of all participants to reduce waste and optimize design efficiency through all phases of design fabrication and construction.”

Source: American Institute of Architects
4. Integrated Project Delivery (IPD) Partnership

**IPD Principles**
- Trust
- Shared Risk and Reward/Single Contract
- Effective Collaboration
- Open Information Sharing
- Team Success is Tied to Project Success
- Value Based Decision Making
- Utilization of Technology/BIM
## 4. Integrated Project Delivery (IPD) Partnership

### Traditional vs. IPD

<table>
<thead>
<tr>
<th></th>
<th>Traditional</th>
<th>IPD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEAM</strong></td>
<td>FRAGMENTED</td>
<td>INTEGRATED</td>
</tr>
<tr>
<td><strong>PROCESS</strong></td>
<td>LINEAR</td>
<td>CONCURRENT</td>
</tr>
<tr>
<td><strong>RISK</strong></td>
<td>INDIVIDUAL</td>
<td>COLLECTIVELY MANAGED</td>
</tr>
<tr>
<td><strong>COMPENSATION</strong></td>
<td>INDIVIDUAL</td>
<td>TEAM SUCCESS</td>
</tr>
<tr>
<td><strong>COMMUNICATION</strong></td>
<td>PAPER / 2D</td>
<td>VIRTUAL / 3D / BIM</td>
</tr>
<tr>
<td><strong>AGREEMENTS</strong></td>
<td>ISOLATED</td>
<td>COLLABORATIVE</td>
</tr>
</tbody>
</table>
4. Integrated Project Delivery (IPD)

**Partnership**

**Shifting the Curve to the Left**

1. Ability to Impact Cost
2. Cost of Changes
3. Traditional
4. IPD
5. Strengthening the Core

Thinking in Systems

• It can be easy to forget what is working well
• Must balance new initiatives with the core of your business
• Continual analysis of what you have
• A long range vision
5. Strengthening the Core

Thinking in Systems

Circulation
- Imbedded into the urban neighborhood
- Multiple access points
- Internal “street”
- Parking shortages
- Congestion
5. Strengthening the Core

**Thinking in Systems**

Building Condition
- 45% space over 50 years
- Best long term use
- Vertical growth
5. Strengthening the Core

Thinking in Systems

Quadrants
– Clear zoning
5. Strengthening the Core

Thinking in Systems

Topography
– 3 different entry levels
  • Level 1- Main
  • Level 2- Receiving
  • Level 3- Emergency
– Disconnect
5. Strengthening the Core

3rd Floor Congestion
- Lab
- Imaging
- Emergency
- Surgery
- Ambulatory Surgery/Endoscopy
5. Strengthening the Core

Thinking in Systems

Summary of Goals
– Phase out obsolete structures
– Wayfinding disconnect
– Overcrowded 3rd floor
– Program
  • Emergency
  • Surgery
  • Laboratory
  • Private beds
5. Strengthening the Core

Thinking in Systems

Future Vision
– Build on best buildings
– Connect vertical cores
– Rebuilt major D&T
– Redevelopment strategy for Nursing
– Phasing options
5. Strengthening the Core  

Thinking in Systems

Existing
5. Strengthening the Core

Thinking in Systems

Demolition
5. Strengthening the Core  

**Thinking in Systems**

**New**

1. Lab & Pharmacy
2. Emergency
3. ICU / CCU
4. M/S Beds
5. M/S Beds
5. Strengthening the Core

Thinking in Systems

Wayfinding Network

New Elevator Core
New Atrium
Red Elevator Core
Green Elevator Core

Legend:
- New Building
- Pedestrian Connector
- Vertical Circulation
Factors Driving the Emergency Network
– ED utilization rates have been increasing
– Reform will increase number of insured
– Primary care shortages will persist
– 60% of inpatient admits through ED
– ED key point of entry for many residents
– Population aging and few psychiatric options
– Seasonal population growth

Figure 11: Emergency Department Utilization Rate Per 1,000, FYs 2003-2009

[Bar chart showing utilization rates from FY 2003 to FY 2009]
L&M’s Approach to ED Services

– Ensure services are available to meet needs of our market

– Strategically locate EDs in two locations in PSA to increase access and decompress main ED
  • Expand and build ED capacity
  • Develop efficient staff and patient flow via process and layout optimization
  • Increase hours of operation at satellite ED to 24/7

– Also focus on lower cost settings; develop walk-in centers
Factors Driving Ambulatory Network
– Growth in ambulatory care services
  • Healthcare reform
  • Shift of care to outpatient setting
  • Reimbursement policies that support outpatient investment
  • Rise in chronic conditions (e.g., diabetes)

– Decompress main campus
– Increase access and visibility of L&M in market
– Opportunity to align with physicians (MOB strategy)
7. Ambulatory Network

Thinking in Systems

L&M’s Market Attractiveness Study

<table>
<thead>
<tr>
<th>PSA Town</th>
<th>‘09 to ‘14 Population Growth</th>
<th>Market Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Lyme</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Groton</td>
<td>High</td>
<td>Med-High</td>
</tr>
<tr>
<td>Ledyard</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Lyme</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Montville</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>New London</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>North Stonington</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Old Lyme</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Stonington</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Waterford</td>
<td>Medium</td>
<td>Med-High</td>
</tr>
</tbody>
</table>

When considering net population growth and opportunity capture more private and Medicare inpatients, the most attractive PSA towns include Montville, Groton, Ledyard, and East Lyme.

KEY: Net population growth: <100 residents=low, 100-500 residents=medium, >500 residents=high. Market opportunity based on the following for private/Medicare payors: >80% share for L&M=low, 70%-80% share=medium, <70% share=high AND <50 discharges market size=low, 50-100 discharges market size=medium, >100 discharges market size=high.
# 7. Ambulatory Network

## Thinking in Systems

### L&M Sites of Service

<table>
<thead>
<tr>
<th>Site</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>L&amp;M Hospital</td>
<td>Inpatient, ED, surg, lab, imaging</td>
</tr>
<tr>
<td>Pequot Health Center</td>
<td>ED, imaging, lab, rehab, surg</td>
</tr>
<tr>
<td>Waterfall Rehab Center</td>
<td>Rehab</td>
</tr>
<tr>
<td>Wound Care Center</td>
<td>Wound care, hyperbaric therapy</td>
</tr>
<tr>
<td>Flanders Health Center</td>
<td>Rehab, lab</td>
</tr>
<tr>
<td>Old Saybrook Center</td>
<td>Imaging</td>
</tr>
<tr>
<td>Stonington Walk-In Center</td>
<td>Imaging, lab, primary care</td>
</tr>
<tr>
<td>Crossroads Imaging Center</td>
<td>Imaging</td>
</tr>
<tr>
<td>Sleep Center</td>
<td>Sleep lab</td>
</tr>
<tr>
<td>Cancer Center (pending)</td>
<td>Radiation and medical oncology</td>
</tr>
<tr>
<td>Joslin at Mystic</td>
<td>Diabetes center</td>
</tr>
</tbody>
</table>

[Map of Healthcare Facilities]

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*HEALTHCARE FACILITIES SYMPOSIUM & EXPO*
8. Strategic Land Purchase

Existing Service Distribution
- What is the next move?

Source: Stroudwater Associates
8. Strategic Land Purchase

Discharges
– 44,000 Annual

Source: Stroudwater Associates
8. Strategic Land Purchase

Existing Drive Times
– 15-20-25 Minutes

Source: Stroudwater Associates
8. Strategic Land Purchase

New Drive Times
– 15-20-25 Minutes
– For a potential west campus location
– Improve access by 13%
– 93% of patients within 25 minutes

Source: Stroudwater Associates
8. Strategic Land Purchase

New Service Distribution
– New Western Campus

Source: Stroudwater Associates
8. Strategic Land Purchase

- 100 Acres
- Direct highway access
- Site visibility from highway
- Overall site master plan
  - Ambulatory
  - Future impatient location
9. Strategic Land Purchase

Regional Cancer Center
- 50,000sf
- Programs
  - Radiation Oncology
  - Medical Oncology
  - Laboratory
  - Pharmacy
  - Community Space

- $34M Project Cost
9. Market Analysis

Environment Assessment

– Market analysis (population, regional trends, market share, competition)

– Internal overview (utilization, financial performance, quality)
  - Portfolio (service line) analysis
  - Bed need analysis
9. Market Analysis

Data Driven Decisions

L&M’s Portfolio Analysis
9. Market Analysis

Data Driven Decisions

Bed Need Analysis

Baseline Discharge Projections

Source: Thomson Reuters

(5.6% market growth)

Adjusted Discharges

(3.7% market growth)

Changes in Overall Bed Demand - 2025

<table>
<thead>
<tr>
<th>Factor</th>
<th>Potential Influence</th>
<th>Chance of Impact</th>
<th>Net Impact</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Status</td>
<td>5.0%</td>
<td>50%</td>
<td>80%</td>
<td>2.5% 4.0% Uninsured to Medicaid and Commercial</td>
</tr>
<tr>
<td>Less Population</td>
<td>-2.0%</td>
<td>25%</td>
<td>40%</td>
<td>-0.5% -0.8% Moderates assumed population increases in baseline</td>
</tr>
<tr>
<td>Reduced Readmissions</td>
<td>-10.2%</td>
<td>25%</td>
<td>50%</td>
<td>-2.8% -5.1% Revisions to payment policies</td>
</tr>
<tr>
<td>LOS Management</td>
<td>-10.4%</td>
<td>25%</td>
<td>50%</td>
<td>-2.6% -5.2% Based on LOS target of 4.8 to 4.3</td>
</tr>
<tr>
<td>HMO/ACO Mgmt.</td>
<td>-5%</td>
<td>25%</td>
<td>40%</td>
<td>-13% -2.0% Expectation is 1% per year; beg. 2016</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>-4.4% -9.1%</td>
</tr>
</tbody>
</table>

Source: Stroudwater Associates.
First, the Good News
Where are revenues going with healthcare reform?
– Some volume opportunity
– Payer Mix Remains Constant
– Medicare Follows the Reform Mandates
– Medicaid = No Increase
– Other Rates Increasing at 4%
## 10. Financial Proforma

### Medicare Gap

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Cost</th>
<th>% of Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare 2009</td>
<td>85.50%</td>
<td>39.50%</td>
</tr>
<tr>
<td>Medicare 2016</td>
<td>64.80%</td>
<td>39.50%</td>
</tr>
</tbody>
</table>
What about expenses?
– Salaries Increase 4% Per Year
– Benefits Increase 4.5% Per Year
– Supplies Increase 3% Per Year
– Purchased Services Increase 3.5% Per Year
– All Other Expenses increase 5% Per Year
10. Financial Proforma

Data Driven Decisions

Status Quo Model
Where Should We Invest Our Capital?

- Surgery
- Emergency Care
- Cancer
- Inpatient Beds

Why?

- Overall decrease in market share due to facility constraints
- Some increasing volume opportunity

$140M facility investment capacity

- Use scenario planning menu tool
## 10. Financial Proforma

### Data Driven Decisions

<table>
<thead>
<tr>
<th>Master Facility Plan Menu</th>
<th>&quot;Balanced&quot; Scenario</th>
<th>Options Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campus</strong></td>
<td><strong>Item</strong></td>
<td><strong>A</strong></td>
</tr>
<tr>
<td>Pequot ED, MOB, ASC Recovery</td>
<td>A - WEST CAMPUS</td>
<td>New: Comprehensive Cancer Center</td>
</tr>
<tr>
<td></td>
<td>B - WEST CAMPUS</td>
<td></td>
</tr>
<tr>
<td>Varies Cancer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main ED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical / Surgical Beds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. Financial Pro forma

Data Driven Decisions

Balanced Facility
Investment Scenario

HEALTHCARE FACILITIES
SYMPOSIUM & EXPO
10. Financial Proforma

Data Driven Decisions

Staffing & Wage Strategies

- Basic
- L+M
- Median
- Revolutionary

Staffing & Wages

- Basic
- L+M
- Median
- Revolutionary

Supply Strategies

- Basic
- L+M
- Median
- Revolutionary

Utilization / ALOS Strategies

- Basic
- L+M
- Median
- Revolutionary

TOTAL: $13.1 M Savings
10. Financial Proforma

Project + Efficiencies = +3% Margin

Data Driven Decisions
What is LEAN?
– A disciplined and focused process to identify and eliminate waste and improve quality, care, and safety

– Shift in hospital culture
  • Looks at process through eyes of the customer
  • Questions the status quo
  • Asks “why”
  • Continuous improvement
11. In House Process Improvement  Data Driven Decisions

How is LEAN Incorporated at L&M?
– Four person department (process innovation); 200 others trained in lean principles
– 38 projects currently
– Facility development using lean design
  – Design based on data and direct observation
  – Trial and error with testing and simulations
  – Full size mockups
  – Use data to document existing process, find waste, and design new processes
  – New processes leads to conceptual space design
– 3P (production, preparation, process) workshop begins lean design
11. In House Process Improvement  

Data Driven Decisions

3P Workshop

- Programming and space planning condensed to one week

- Multidisciplinary team including clinical staff, architects, contractors, vendors, patients, lean experts, and other stakeholders

- Team identifies and defines flow challenges and preferred flow patterns from the patient perspective
11. In House Process Improvement  

Data Driven Decisions

3P Workshop
- Team builder
- Facility design supports model of care
- Streamline design process
- Architect and contractor with real-time input into design
11. In House Process Improvement  Data Driven Decisions

3P Tools
– Fish bone diagrams
– String diagrams mapping 7 flows of medicine
– Simulations
– 4 options
– Mock ups
Questions?