Academic Medical Centers in the Turbulent Health Care Delivery System

University of Iowa Hospitals & Clinics
Board of Trustees
December 15, 2003
“The picture is pretty bleak, ladies and gentlemen... The healthcare climate is changing; costs are up, revenue is down; and, we all have a brain that functions like a committee.”
Economy, Security Costs Plunge
Federal Budget Into Deficit

Annual Percent Change,
GDP vs. Health Care Spending

Health Care Spending

GDP

Percent change from prior year


Federal Budget Surplus/Deficit
(1997 - 2003 (est.))

(in billions)

1997 1998 1999 2000 2001 2002 2003 (est.)

Health Care Spending As % of GDP

12.0% 13.3% 13.1% 14.8%

Source: CMS

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Economic Downturn Rekindles Uninsured Growth Rate

Uninsured Population

- 34.7 million in 1990
- 38.1 million in 1992
- 39.7 million in 1994
- 41.7 million in 1996
- 44.3 million in 1998
- 39.8 million in 2000
- 43.6 million in 2002

Sources: U.S. Census Bureau; U.S. Department of Labor - Bureau of Labor Statistics

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Recession Saddles States With Crippling Deficits

Distribution of State Surpluses/Deficits

- Median state deficit in 2002 = $408 million
- Aggregate state budget deficits in 2002 total $37 billion (estimated at nearly $90 billion for 2004)
- Average state budget deficit represents 20% of that state's total Medicaid spending
- 19 states reduced direct support for higher education in 2002 compared to zero in 1999

Sources: The Fiscal Survey of States, November 2002, National Governors Association; Center on Budget and Policy Priorities

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## Institute for the Future **Worst** Case Scenarios

<table>
<thead>
<tr>
<th>Primary Driving Forces in 2010</th>
<th>Current Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managed care programs fail to contain costs</td>
<td>Medical costs up 10%</td>
</tr>
<tr>
<td>Consumer backlash against managed care</td>
<td>Consumers demand choice. Out of network access required for successful plans. Health plans stop physician utilization review</td>
</tr>
<tr>
<td>Large employers unable to get price breaks</td>
<td>Premium hike triple CPI</td>
</tr>
<tr>
<td>Small employers drop health benefits</td>
<td>Trend continues</td>
</tr>
<tr>
<td>Uninsured increasing</td>
<td>44 million uninsured: Increasing 1 million/year</td>
</tr>
</tbody>
</table>

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## Institute for the Future Worst Case Scenarios

<table>
<thead>
<tr>
<th>Primary Driving Forces in 2010</th>
<th>Current Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation passed</td>
<td></td>
</tr>
<tr>
<td>- Mandatory Length of Stay</td>
<td>Many states pass Length of Stay laws</td>
</tr>
<tr>
<td>- Staffing ratios</td>
<td>California passes minimum nurse staffing ratios</td>
</tr>
<tr>
<td>- Any willing provider laws</td>
<td>Most managed care plans widen provider network voluntarily</td>
</tr>
<tr>
<td>Pharmaceutical “direct to consumer” advertising increases drug costs</td>
<td>Significant impact on patient requested drugs. Physicians grant request 70% of the time. Prescription drug costs up 15%</td>
</tr>
<tr>
<td>Costly medical technologies continue unabated</td>
<td>Technology development continues at aggressive pace</td>
</tr>
<tr>
<td>Information technologies ineffective</td>
<td>Continued poor performance</td>
</tr>
</tbody>
</table>
AHC Operating Margins Razor Thin

COTH Hospital Operating Margins

Median Revenue vs. Expense per Clinical Faculty FTE

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Revenue/ Clinical Faculty FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>$170,276</td>
</tr>
<tr>
<td>2002</td>
<td>$193,814</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Expense/ Clinical Faculty FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>$162,203</td>
</tr>
<tr>
<td>2002</td>
<td>$195,848</td>
</tr>
</tbody>
</table>

Generating strategic capital requires applying thinner margins to higher revenues – top line growth is essential

Sources: AAMC; UHC Funds Flow engagements; UHC Faculty Practice Solutions Center; HFMA "Financing The Future" Report 1, 2003

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Downgrades Outnumber Upgrades In Hospital Bond Market

- Hospital operating margins were flat in 2002, for the third year in a row
- Median operating margin in 2002 was 1.5%, the same as in 2001
- Median debt service coverage, at 2.7 times, was the lowest since 1994
- Liquidity declined and capital needs increased

COTH Hospital Operating Margins

<table>
<thead>
<tr>
<th>Year</th>
<th>Bonds Upgraded</th>
<th>Bonds Downgraded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>1999</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>2000</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>2001</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>2002</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>2003</td>
<td>14</td>
<td>3</td>
</tr>
</tbody>
</table>

(through May)

"There are no AAA bonds in the healthcare market that are based on the financial viability of the hospital...many hospitals have debt insurance...a AAA bond rating is based on the 'creditworthiness' of the insurance company." - Kellogg School of Management Bond Newsletter

Sources: Fitch Ratings, Kellogg School of Management
Understanding the Academic Medical Center Hospital

- Tripartite mission
- Specialty/subspecialty orientation
- Closed medical staff
- Referral hospitals
- Quality of clinical care
  - Team orientation
  - Teaching environment
- Medical Care for the uninsured
"Newgate, you'll report to Cunningham, who'll report to me. In one of those unexplainable paradoxes of the business world, will report to you."
Understanding the Academic Medical Center Hospital

- Managerial complexity
- "Federated" medical staff
- Cost of clinical care
- Balancing teaching and research with clinical care
Unique Pressures on Academic Medical Center

- Two standards of health care
  - Increased uninsured
  - Increased underinsured
  - Increased bad debts
- Reduced university hospital state fund support
- Reduced hospital ability to support educational and research mission
Teaching Hospitals Shoulder Disproportionate Burden Of Uncompensated Care

Uncompensated Care as a % of Total Costs
(30 NAPH Academic Medical Centers vs. All Hospitals)

- 30 NAPH AMCs  - All Hospitals Nationally

Sources: AHA; BC/BS Document

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Academic Mission Growing Reliance On Clinical Income

1965-1966

- Tuition and Fees: 4.6%
- Hospital Support: 3.5%
- Federal Research and Other Grants (Direct and Indirect): 19.2%
- Other: 11.1%
- State and local appropriations: 13.6%
- Faculty Practice Plan revenue: 2.8%

2001-2002

- Faculty Practice Plan revenue: 36.0%
- Federal Research and Other Grants (Direct and Indirect): 31.7%
- Other: 9.4%
- Tuition and Fees: 3.3%
- Hospital Support: 12.5%
- State and local appropriations: 7.1%

Source: AAMC Institutional Profile System
The New Agenda for Health Care Quality and Safety: Role of Senior Leadership and the Board

University of Iowa Hospitals and Clinics

Board of Trustees

December 15, 2003
The "Old" Agenda for University Health Systems

- Efficiency
  - Resource use (Length of stay, cost)

- Quality Assurance
  - Compliance (Joint Commission on Accreditation of Hospitals)
Evolution of the New Agenda

- Isolated reports in the medical literature describing adverse event occurrence.
- Highlighted by Institute of Medicine Report: To Err is Human: Building a Safe Health System (November, 1999)
- Amplified by second IOM Report: Crossing the Quality Chasm (2001)
- Fueling perception of purchasers that they were paying for a “broken system.”
- Meeting a growing “Consumerism” movement
- Reinforced by governmental, regulatory and health care purchasing organizations.
The Evolution of the Patient Safety Movement

• The Harvard Study – 1991
  - 6.7% error/accident rate
  - 3.1% of patients experience an adverse drug event (ADE)
  - 13% fatal
  - 72% avoidable
  - 120,000 deaths in US hospitals annually
  - $4,700 add to cost of care with ADE
Institute of Medicine National Roundtable on Health Care Quality

“...Serious and widespread quality problems exist throughout American medicine. These problems....occur in small and large communities alike, in all parts of the country, and with approximately equal frequency in managed care and fee-for-service systems of care. Very large numbers of Americans are harmed as a direct result....” JAMA 1998
To Err is Human: Building a Safe Health System

Institute of Medicine Report, November 1999

Medical Mistakes Leading Cause of Death in the United States

<table>
<thead>
<tr>
<th>Deaths/Year</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>44,000 – 98,000</td>
<td>Medical Accident</td>
</tr>
<tr>
<td>43,458</td>
<td>Motor Vehicle Accidents</td>
</tr>
<tr>
<td>42,297</td>
<td>Breast Cancer</td>
</tr>
<tr>
<td>16,516</td>
<td>AIDS</td>
</tr>
</tbody>
</table>

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Estimated Deaths Associated with Medical Mistakes Compared to the Leading Causes of Death in the U.S.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Deaths in 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart diseases</td>
<td>726,974</td>
</tr>
<tr>
<td>Cancers</td>
<td>539,977</td>
</tr>
<tr>
<td>Cerebrovascular diseases</td>
<td>159,791</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>109,029</td>
</tr>
<tr>
<td>Medical mistakes (IOM high estimate)</td>
<td>98,000</td>
</tr>
<tr>
<td>Unintentional injuries</td>
<td>95,655</td>
</tr>
<tr>
<td>Pneumonia and influenza</td>
<td>86,449</td>
</tr>
<tr>
<td>Diabetes</td>
<td>62,636</td>
</tr>
<tr>
<td>Medical mistakes (IOM low estimate)</td>
<td>44,000</td>
</tr>
<tr>
<td>Suicide</td>
<td>30,535</td>
</tr>
<tr>
<td>Nephritis and related</td>
<td>25,331</td>
</tr>
</tbody>
</table>

Estimated deaths associated with medical mistakes in hospitals rank among the leading causes of death in the U.S.

Health Care Consumerism Adds Fuel to the Fire

- Baby boom becomes elder boom
- Increased longevity
- Increased chronic conditions
- Cross-industry experience
- Patient safety concerns
- The Internet
Even so, Consumers Are Confused
Purchaser (Employer) Activism is Driven by:

- Institute of Medicine Reports
- Recognition that overall health status is declining as health care costs are rising
- Growing understanding that health care quality can be:
  - Accurately measured
  - Routinely assessed
  - Systematically improved
Health Care Through a Six Sigma Lens

Statistically
Six Sigma refers to a process that produces only 3.4 defects per million opportunities (DPMO)

<table>
<thead>
<tr>
<th>Sigma</th>
<th>DPMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>308,537</td>
</tr>
<tr>
<td>3</td>
<td>66,807</td>
</tr>
<tr>
<td>4</td>
<td>6,210</td>
</tr>
<tr>
<td>5</td>
<td>233</td>
</tr>
<tr>
<td>6</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Most U.S. Businesses

Goal

Business Strategy
An overall strategy that encompasses your business' quality philosophy. It sets the vision for achieving Six Sigma levels of quality in key processes and services.

Tools and Tactics
A set of statistical tools and a disciplined methodology used by specially trained individuals to improve processes by reducing variation and defects.

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## Sigma Level Comparisons

<table>
<thead>
<tr>
<th>Service</th>
<th>Sigma</th>
<th>DPMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRS tax advice (phone-in)</td>
<td>1</td>
<td>690,000</td>
</tr>
<tr>
<td>Mammography screening</td>
<td>2</td>
<td>308,537</td>
</tr>
<tr>
<td>Inpatient medication accuracy and airline baggage handling</td>
<td>3</td>
<td>66,807</td>
</tr>
<tr>
<td>44,000 – 98,000 preventable hospital deaths</td>
<td>4</td>
<td>6,210</td>
</tr>
<tr>
<td>Anesthesia during surgery</td>
<td>5+</td>
<td>233-</td>
</tr>
<tr>
<td>Domestic airline flight fatality rate</td>
<td>6+</td>
<td>3.4-</td>
</tr>
</tbody>
</table>
Sample Quality Indicator Summary

Medication Occurrence Rate

Number of Reported Inpatient Medication Occurrences in time period (per 1,000 patient days).

Benchmark

Comments: Source: Occurrence Reporting System
Definition of Medication Occurrence: any lapse that occurs in the process of prescribing, transcribing, dispensing, or administering a drug or IV fluid to a patient, whether or not there are any adverse consequences.

Medication Occurrences by Contributing Factor & Severity Level

Number of Inpatient Medication Occurrence by Contributing Factor and Severity Level for the current quarter.

Benchmark

Comments: DATA FOR Q3 FY2000
Source: Occurrence Reporting System

[^] Severity Level Scale: (0) Did not reach patient; (1) No injury to patient; (2) Minor injury and/or temporary functional impairment to patient; (3) Major injury and/or temporary functional impairment to patient; (4) Permanent injury and/or impairment to patient.

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# Performance Measurement

## Summary of Health System Indicators

**September 16, 2003**

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>TREND (Past 12 Months)</th>
<th>COMPARISON TO EXPECTED/TARGET Year To Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality and Efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. 31 Day Readmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. 48 Hour Unplanned/Unrelated ED Return</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Reported Medication Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Inpatient Mortality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Adequacy of Physician Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. LOS Efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ICU Appropriateness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Inappropriate Blood Utilization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Service and Access</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Overall Patient Satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Customer Service Issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. ED Wait Time to See Physician</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Time to Bed Assignment for Transfer Pt.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Radiology Turn Around Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Appointment Availability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Referring Physician Satisfaction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Actual data for this chart have been replaced with mock figures and do not reflect actual performance.

- ** Favorable
- ** Unfavorable

OSUHS’s Quality Scorecard is reviewed monthly; indicators are derived directly from the health system’s strategic performance objectives.

Each indicator is color coded to flag performance as favorable or unfavorable.

*July HealthSystem Consortium erpoint.ppt*
Regulation and Accreditation

- Quality assurance and performance improvement programs made a Medicare and Medicaid condition of participation
- Office of Inspector General and Department of Justice make quality of care a top priority under the False Claims Act
- Medicare recommends linking hospital payment to quality of care (2003)
- State regulations (e.g., CA nurse-patient ratios)
- Joint Commission Patient Safety goals
Institute of Medicine Recommendation for Establishment of Hospital Safety Programs

- Establish patient safety programs with defined executive responsibilities that are clearly focused on patient safety
- Implement non-punitive systems for reporting and analyzing medical errors
- Incorporate well-understood safety principles
- Establish interdisciplinary team training for providers of patient care which incorporates proven methods of team training
The Joint Commission Reaction: New Standards Specific for Patient Safety

- One set of standards relates to the involvement of leadership in creating an organizational culture of safety
- The second theme relates to the need for mandatory reporting of error and the development of a policy of open disclosure
Joint Commission Emphasizing Leadership’s Role

- The majority of JCAHO standards relate in some manner to improving patient safety and reducing risk.
- Emphasis is on accomplishing these activities thru an integrated and coordinated approach.
- Hospital leaders are charged with responsibility of an organization-wide safety program encompassing all safety related activities such as:
  - Performance Improvement
  - Environmental Safety
  - Risk Management
Joint Commission Emphasizing Leadership’s Role
2004 Leadership & PI Standards

- Doesn’t require new org structure or office
- Integrate all patient safety functions – new and existing
- Accountability focused on org leadership
- Focus on processes and systems minimizing individual blame
- Creation of environment that encourages recognition and acknowledgement of risk to patient safety and med/health errors – A Culture of Quality and Safety
Emphasizing Leadership’s Role

- Leaders are responsible for fostering such an environment
  - Establishing mechanisms that:
    - Support effective responses to actual events
    - Ongoing proactive reduction in medical/health care errors
    - Integration of patient safety priorities into the new design of all relevant organization processes, functions, services
A Health Care Culture of Quality and Safety

- Continuous learning and process redesign
- Errors readily identified and evaluated
- Knowledge and skills actively managed
- Performance and outcomes continuously measured and evaluated
- Collaboration and teamwork is the norm
- Care is highly coordinated and needs are anticipated
- Consistent and predictable performance
Medicare – New Conditions of Participation in 2003
Quality Assessment and Performance Improvement

- Section 482.21(e) – The fifth standard, executive responsibilities, clarifies the intent of Medicare:
  - To hold the hospital’s leadership responsible and accountable for quality and process improvement activities
  - Further the standard requires that the hospital’s governing body provide strong, clear, and visible attention to setting expectations for safety and for allocating adequate resources for measuring, assessing, improving, and sustaining the hospital’s performance and for reducing risks to patients.
Three Levels of Formal Accountability

I

Accountable for day to day care of individual patients

Patient

Attending physician
Consulting physician(s)
Nurse(s)
House-staff

II

Accountable for processes of care and outcomes within departments, sections, care units

Department Chair
Section Head(s)
Care Unit Director(s)

III

Accountable for high-level processes of care and aggregate outcomes in organization

Board

Senior Leadership (both hospital and School)
Department Chairs
Faculty members

All faculty members are expected to participate in quality improvement efforts. The Board holds the senior leadership accountable for performance and reciprocates by actively reviewing strategic plan.

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The Board’s Role in Promoting Accountability

- Best practice integration of quality and strategy
  - On an annual basis, the Board should participate in a quality planning process that is integrated with the strategic planning and budget processes.
  - Effective boards question, learn, and challenge the organization to continually excel.
  - In more than one health system, the board’s quality committee has pushed the system to come up with measures of care that will compel the system to improve and to perform better against industry standards.
Academic Medical Centers in the Turbulent Health Care Delivery System

University of Iowa Hospitals & Clinics
Board of Trustees

December 15, 2003
Ownership Structure: Assessment of Possible Structural Impediments

- Diverse mission/focus
- Human resources
  - Civil service rules
  - Wage and benefit inflexibility
- Political interference
- Access to capital markets

Continued
**Ownership Structure: Assessment of Possible Structural Impediments**

- Legal limitations
  - Purchasing
  - Architectural/construction restraints
- Flexibility in responding to market pressures
  - Fair market value contracting
- Decision support systems
- Philanthropy
State AMC Hospitals that Separated

- Florida
- Colorado
- Maryland
- Arizona
- Wisconsin
- Minnesota
- Georgia
- Tennessee
- Massachusetts
- Virginia Commonwealth
- Oregon
- Cincinnati
- Nebraska
- Kansas
- South Carolina
- Oklahoma
- Indiana
- Penn State
- West Virginia
Effective Governance Requirements

- Understanding of health care market pressures
- Free of conflict of interest
  - Political
  - Representational
  - Business
- Empowerment of leaders
- Understanding of strategies
- Change orientation
- Risk tolerant

Continued
Effective Governance Requirements

- Time and attention
- Accountability
- Commitment
- Stature to add value to external relationships
- Business skills
- Finance skills
Conclusions

- Consumers demand focus on quality and safety
- Health care delivery system under pressure
- University hospitals must adapt quickly to changing reimbursement and market demands
- Effective governance essential for long term success
Policy Considerations for the University of Iowa Hospitals and Clinics

1. How should the hospital and clinics address the growing cost of providing unreimbursed care as state fund support continues to decline?
Policy Considerations for the University of Iowa Hospitals & Clinics

2. Should the hospital and clinic be restructuring under a public authority?
3. How should the governing body be structured to provide effective governance?
"Today loving change, tumult, even chaos is a prerequisite for survival"

Tom Peters
“Somebody has to do something, and it’s just incredibly pathetic that it has to be us.”

Jerry Garcia of the Grateful Dead