



# *The Challenge of Delivering Patient Care in a Financial Environment*

Linda Chase, RN, MA, NEA-BC  
Chief Nursing Officer

University Hospital and Richard M. Ross Heart Hospital



# Goal

Provide an overall understanding of how nursing effects a hospital's day-to-day operations and financial performance

<http://www.youtube.com/watch?v=1SmgLtg1Izw>



# Objectives

1. Overall perspective of the financial impact that nursing has on hospitals
  - a) Salaries and benefits
  - b) Education and professional development
  - c) Recruitment and retention
2. Challenges with managing staffing
  - a) Budgets
  - b) Overtime
  - c) Float Pool concepts
  - d) Acuity / Productivity
3. Balancing cost effectiveness and customer service
  - a) Roles
  - b) Nurse sensitive indicators

# The Ohio State University Health System

- The OSU Health System
  - University Hospital
  - University Hospital East
  - Richard M. Ross Heart Hospital
  - Ohio State's Harding Hospital
  - Arthur G. James Cancer Hospital
  - OSU Rehabilitation Services at Dodd Hall
  - Primary Care Network
- 55,316 patient admissions
- 4,515 births
- 979,951 outpatient visits
- 114,137 Emergency Department visits
- 15,562 inpatient surgeries
- 17,949 outpatient surgeries

November 2009

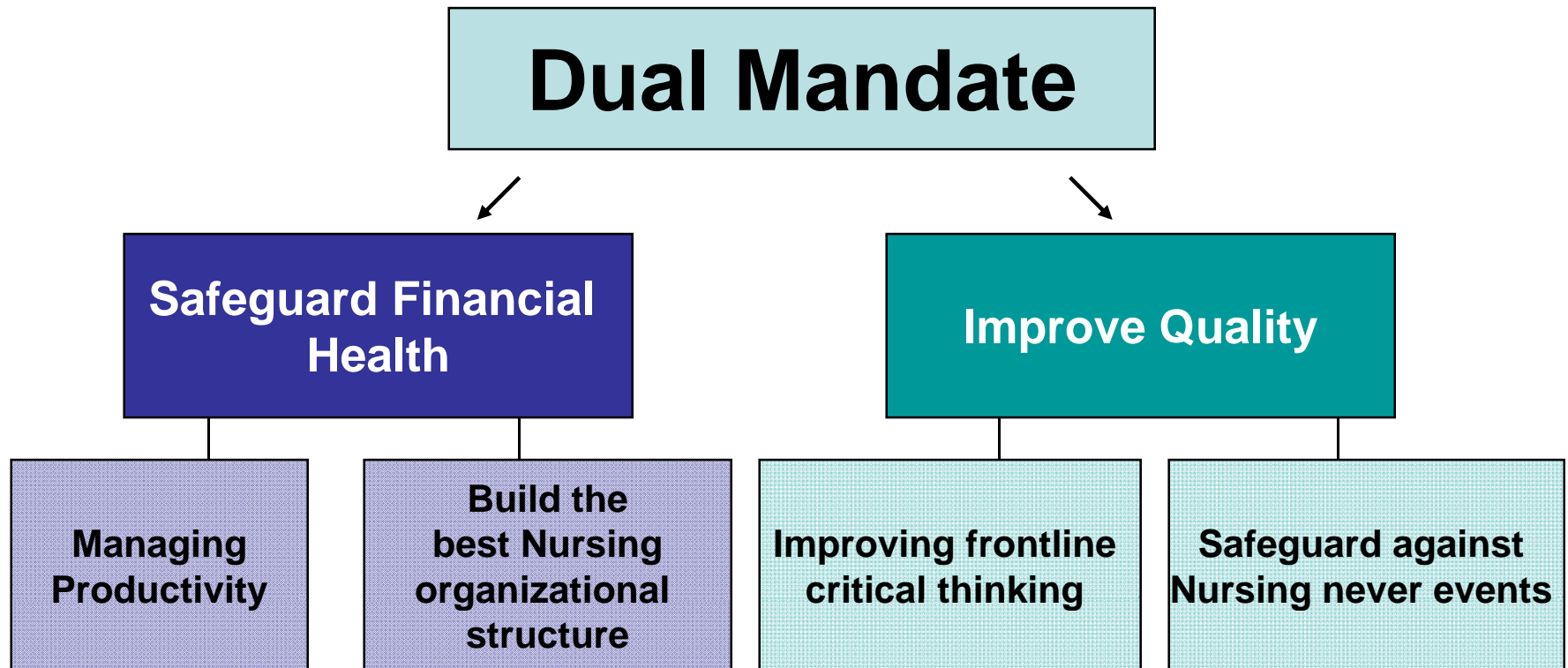


# Healthcare Today

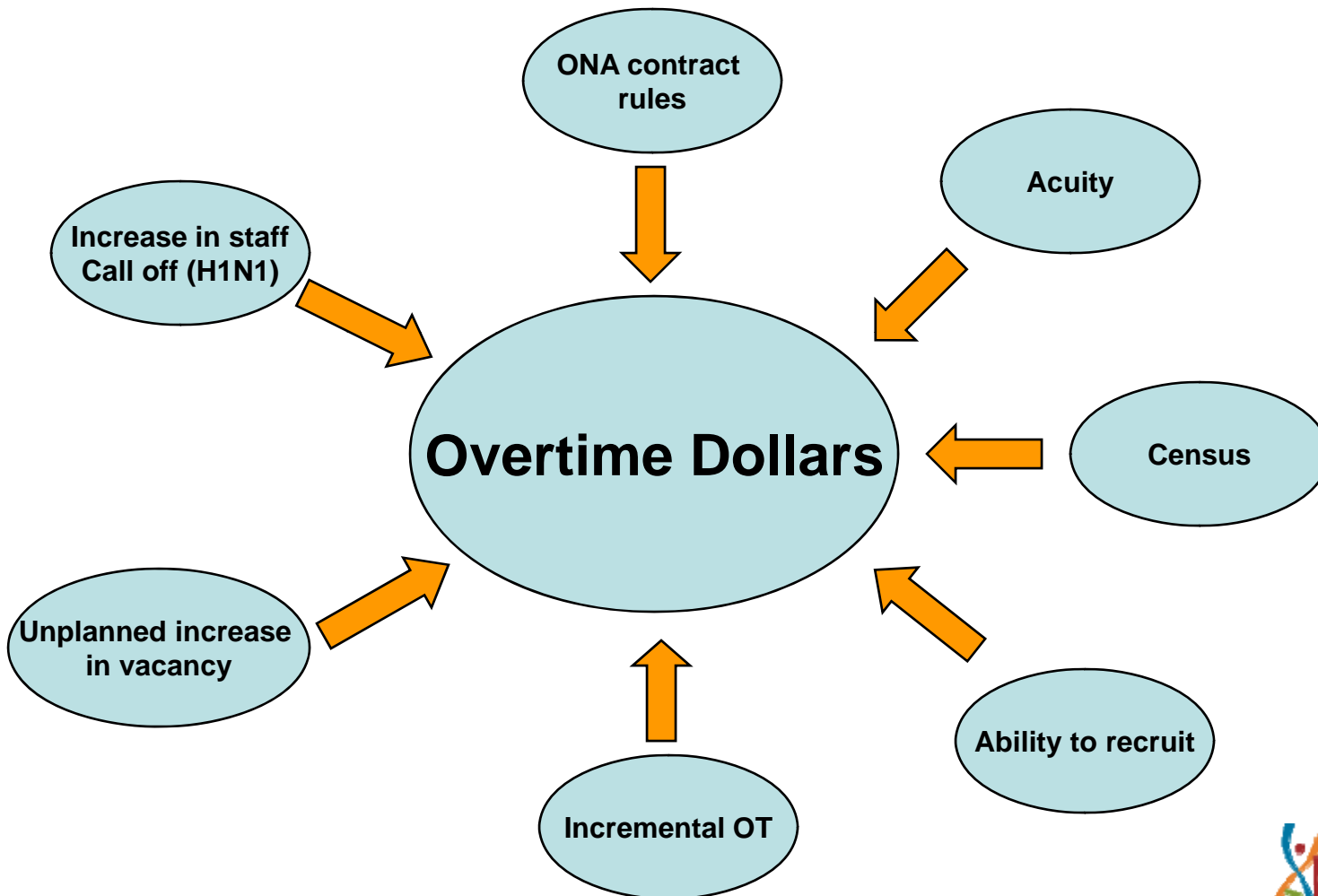
## Why is financial knowledge important?

- External standards (quality, external agencies, benchmarks)
- Government strategies
- Eroding payments
- Increasing expenses
- New technologies
- Patient mix shifting (Inpatient to Outpatient)
- Capacity
- Our day to day decisions effect the Hospital's financial strength

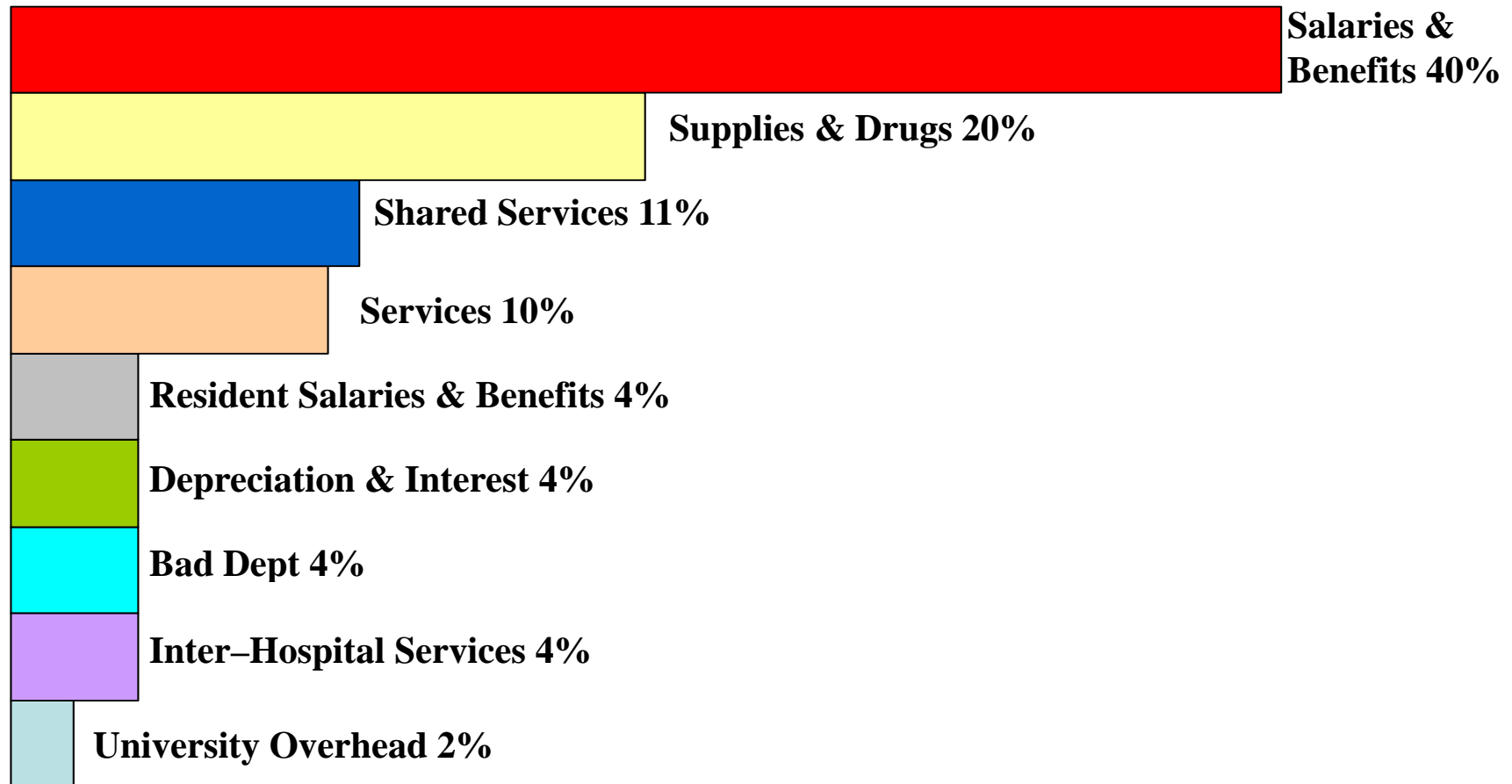
# Current Challenges Facing Healthcare Leaders



# Juggling Multiple Priorities

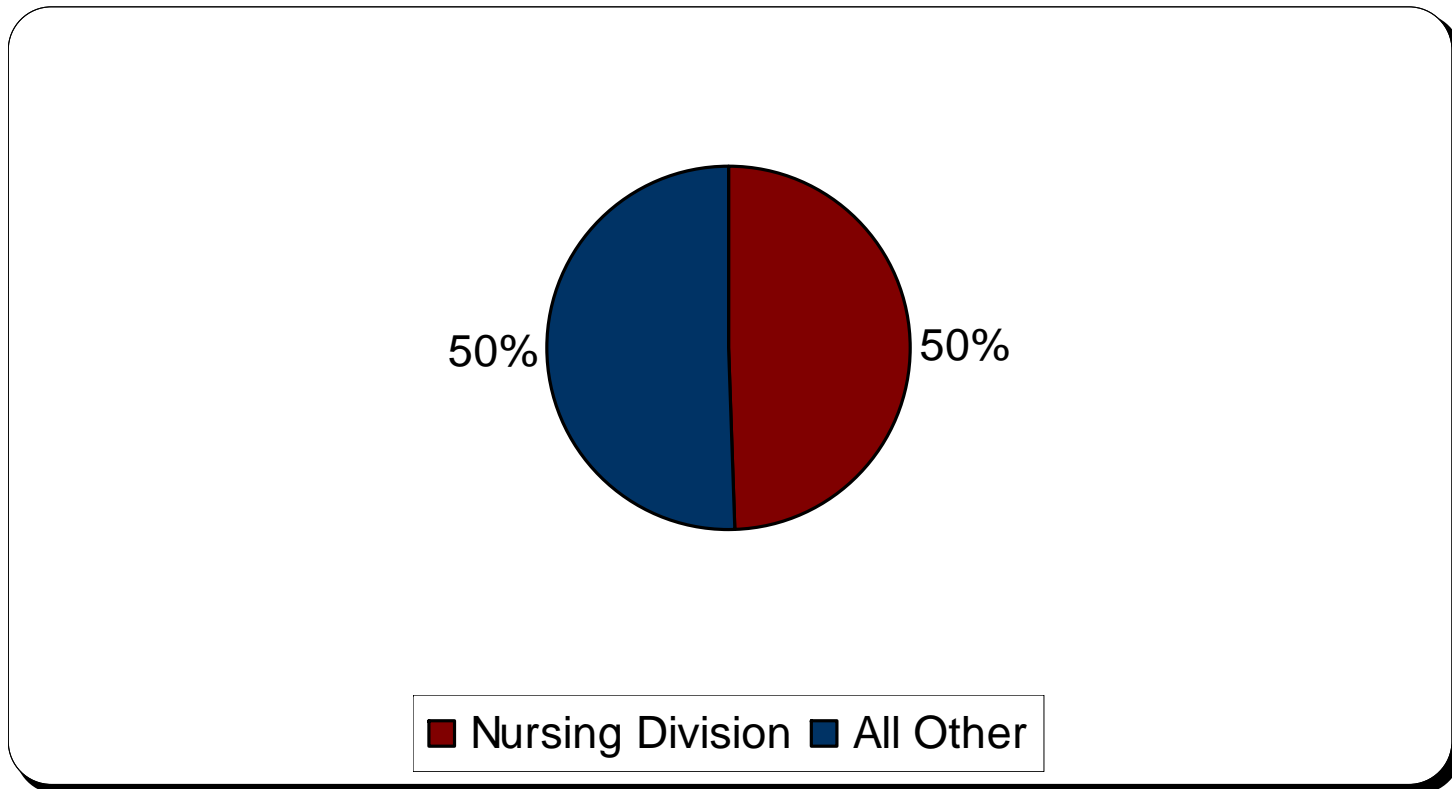


# Breakdown of Operating Expenses





# OSUMC Salary Expense



Fiscal Year 2009; includes The James



# Unions Impact on Managing Expense

- Scheduling requirements
- Overtime & Over percent
- Low census
- Annual salary increases set via contract
- Benefits



# Education & Professional Development

- Certification Program
- Education Days
- Clinical Ladder
- Education Reimbursement

# Recruitment & Retention

- Internship Program
- Externship Program
- Residency Program



**Decrease in Staff  
Turnover & Vacancy**

# Documenting the High Cost of Nurse Turnover

## Pro Forma of Turnover Costs for a Single Nurse

Study	Replacement Costs		Vacancy Costs		Total
Jones C. “Revisiting Nurse Turnover Costs: Adjusting for Inflation,” JONA, January 2008, 11-18	Advertising	\$3,378	Closed beds / patient deferrals	\$57,577	\$82,032 - \$88,006
	Hiring	\$2,679			
	Orientation / Training	\$6,333			
	Newly Hired RN Productivity	\$1,195- \$7,169	Labor (temporary staff, overtime, productivity loss)	\$8,125	
	Pre-turnover Productivity	\$2,629			
	Termination	\$116			
	<b>Subtotal</b>	<b>\$16,330- \$22,304</b>			

Range represents costs for new and experienced RNs, respectively

While the lion's share of turnover expense is attributed to vacancy costs, hospitals may still pay over \$20,000 per nurse even in areas without a labor shortage

<sup>1</sup>This model is applicable for institutions not currently experiencing a shortage of nurses in the market area. Calculation uses \$13,701 per new hire and assumes zero impact on bed availability and zero expense for temporary staff or overtime.

<sup>2</sup>This model is applicable for institutions experiencing a moderate, sustained labor shortage. Calculation uses \$82,032 per new hire and assumes historical vacancy levels and temporary labor costs.

# The Financial Challenge of Managing Staffing

*Once the budget is finalized to meet the institution's financial goals how do you operationalize the budget and provide outstanding patient care?*



# Staffing Challenges....

- Managing staff ill time, absenteeism, & FMLA
- Acuity fluctuations impact on staffing
- Census & ADT changes impact on staffing
- Allocating resources appropriately – RN competencies
- Float Pool utilization
- Core staffing – determining the correct staffing levels
- Development of a flexible staffing methodology to meet acuity and volume fluctuations – overtime reduction

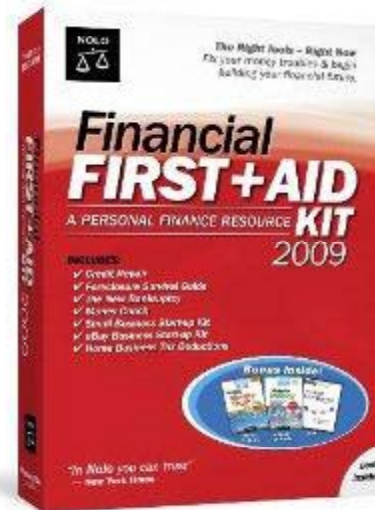
# More Challenges....

- Labor Contract
- Education
- Orientation Requirements
- Recruitment
- Retention of staff
- Aging workforce – baby boomers & a plan for the future
- Budgeting



# What's in my Finance Toolkit?

- Bi-weekly Productivity Reporting
- External Benchmarking
- Workforce Management System
- Float Pool



# Overtime

## Variables Resulting in Overtime

- FMLA coverage
- -Intermittent
- -Long Term
- Flu coverage
- Vacant positions
- School impact (August)
- Competency/hiring constraints - critical care
- Military leave
- Vacation coverage
- Contract challenges
- Patient volume changes

## Overtime Reduction Strategies

- Continued development of Float Pool
- Daily staffing meetings with all nursing units
- Housewide Nursing Supervisors
- Back fill long term FMLA
- Review of FMLA practices
- Hire vacant positions
- Review of baseline staffing practices
- Hiring fair options
- Balanced schedules

# Cost of Overtime Scales Quickly

## Sliding Scale for Overtime Differential Paid Per Year

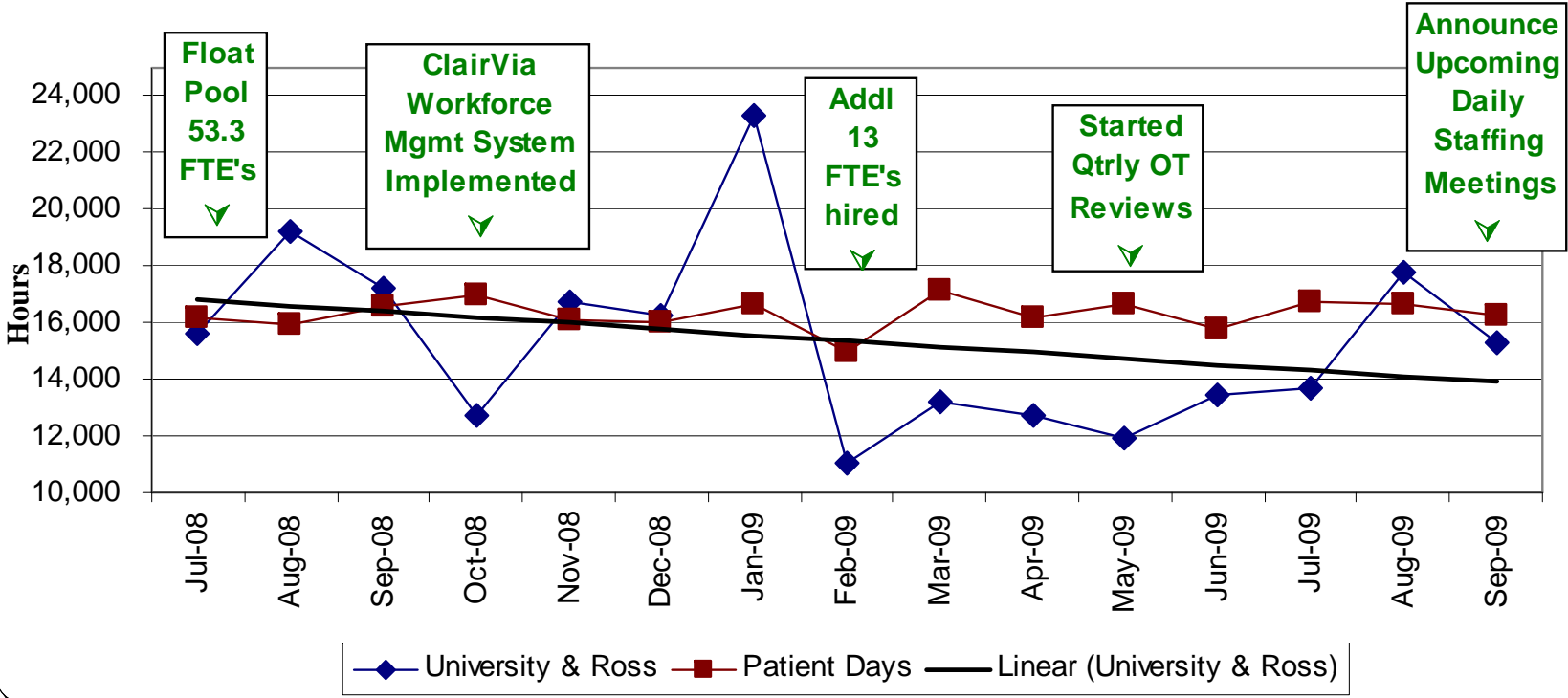
	2% OT hours	5% OT hours	8% OT hours
1 RN FTE	\$638	\$1,644	\$2,717
100 RN FTEs	\$63,758	\$164,429	\$271,666
250 RN FTEs	\$159,395	\$411,073	\$679,165
400 RN FTEs	\$255,033	\$657,718	\$1,086,664
550 RN FTEs	\$350,671	\$904,362	\$1,494,163
700 RN FTEs	\$446,308	\$1,151,006	\$1,901,663

\* Assume nurses paid national median wage per hour (\$30.03) and 1.5 hourly rate (\$45.05) for overtime hours, 40 hours per week, 52 weeks per year; figures rounded to the nearest dollar.

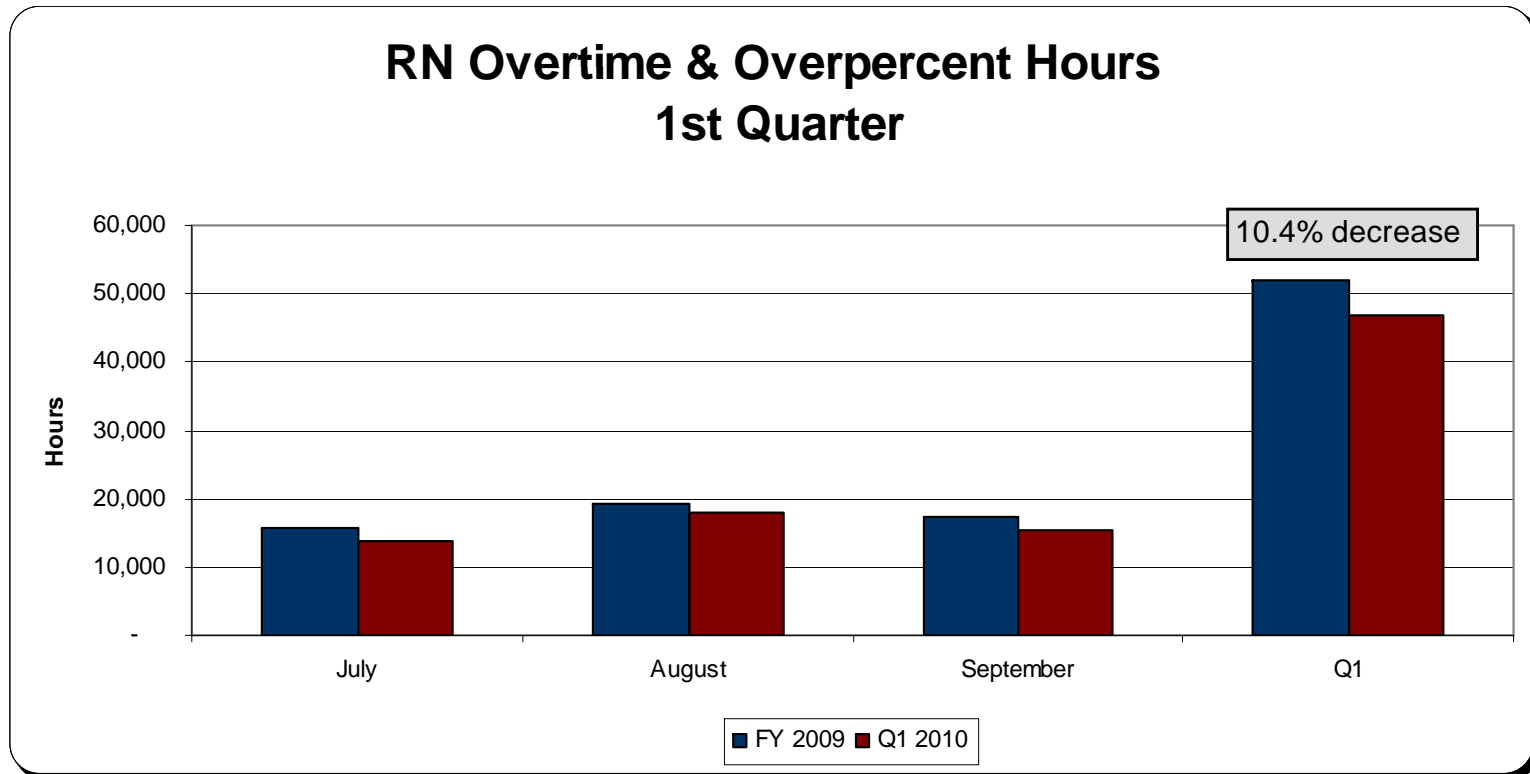
Source: Registered Nurses, Bureau of Labor Statistics, May 2003. "Occupational Employment and Wage," available at: [www.bls.gov](http://www.bls.gov), accessed September 4, 2009; Nursing Executive Center analysis.



# Overtime Utilization



# OSU Medical Center Successes



# Float Pool Concept

- Specialty Clusters
- Just in Time Assignments vs. Pre-assignment
- Determination of Supply/Demand
- Deployment Guidelines



# Phased Approach

## Phase 1 & 2

### Build

- Assess needs and bring in resources (quantify ROI)

## Phase 3

### Operational Improvement

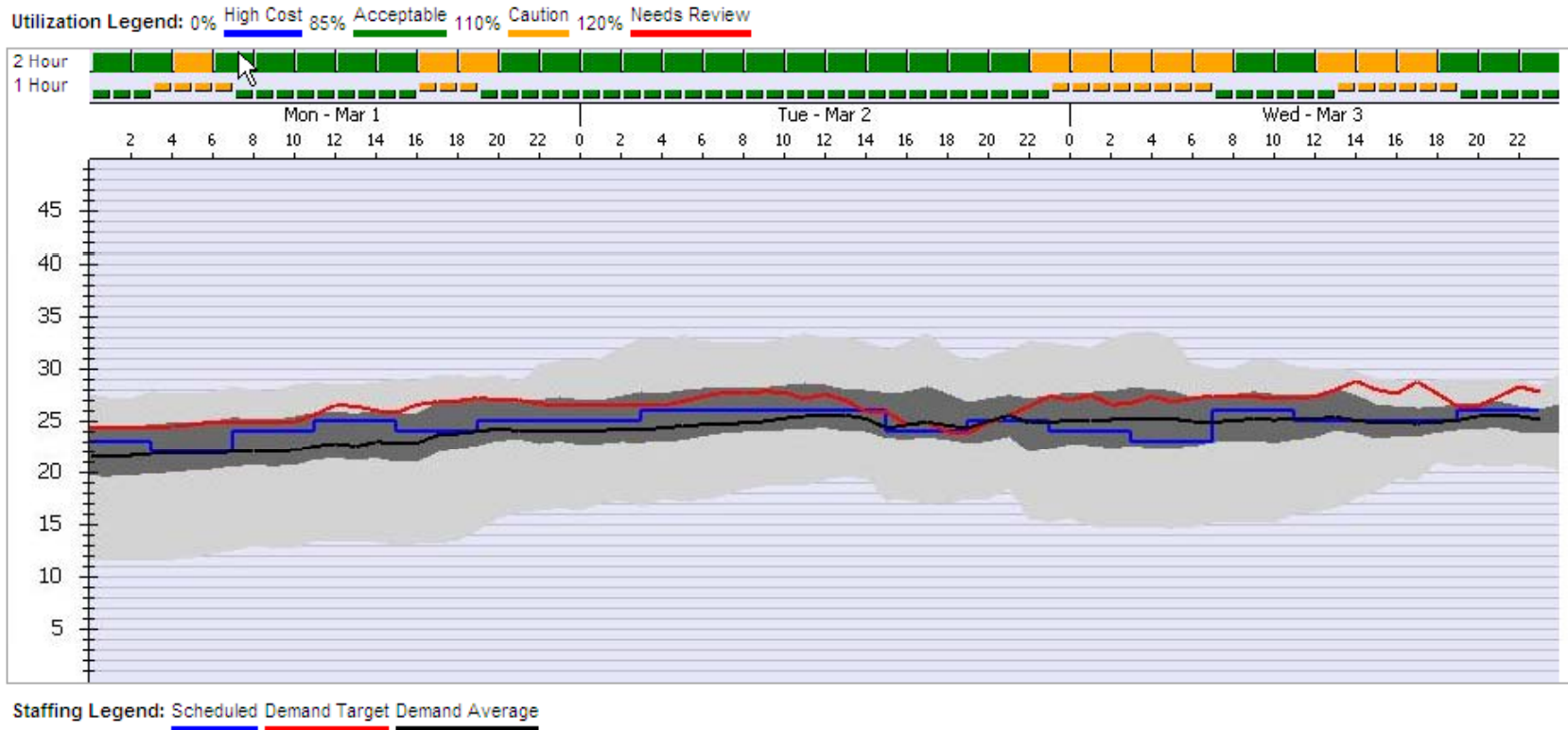
- Staffing Strategies
- Overtime Utilization
- ANS oversight of all staffing

## Phase 4

### Workforce Planning

- Assessing return on initial build and requesting additional staff to remove premium expense

# Impact of ADT & Acuity on Staffing





# How to Measure?

## Traditional Acuity System

- Nurse centric
- Focus on what nurses plan to do for the patient
- Measures tasks, activities, and interventions
- Captures acuity for an interval of time
- Prone to acuity creep

## Patient Outcomes Approach

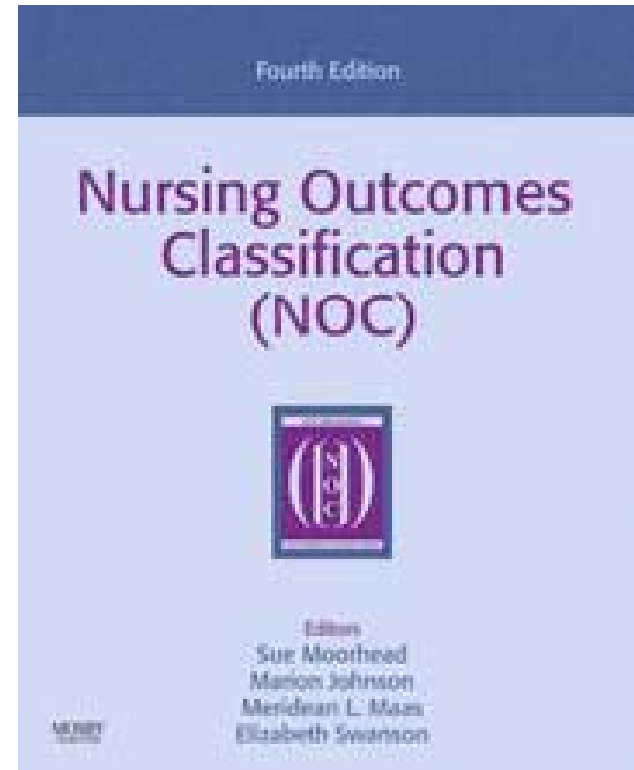
- Patient centric
- Focus on actual patient progress toward desired outcomes
- Measures nursing care required to move patient to next level of wellness
- Captures acuity and events across a continuum of time
- Statistical validity & reliability

# Nursing Outcomes Classification (NOC)

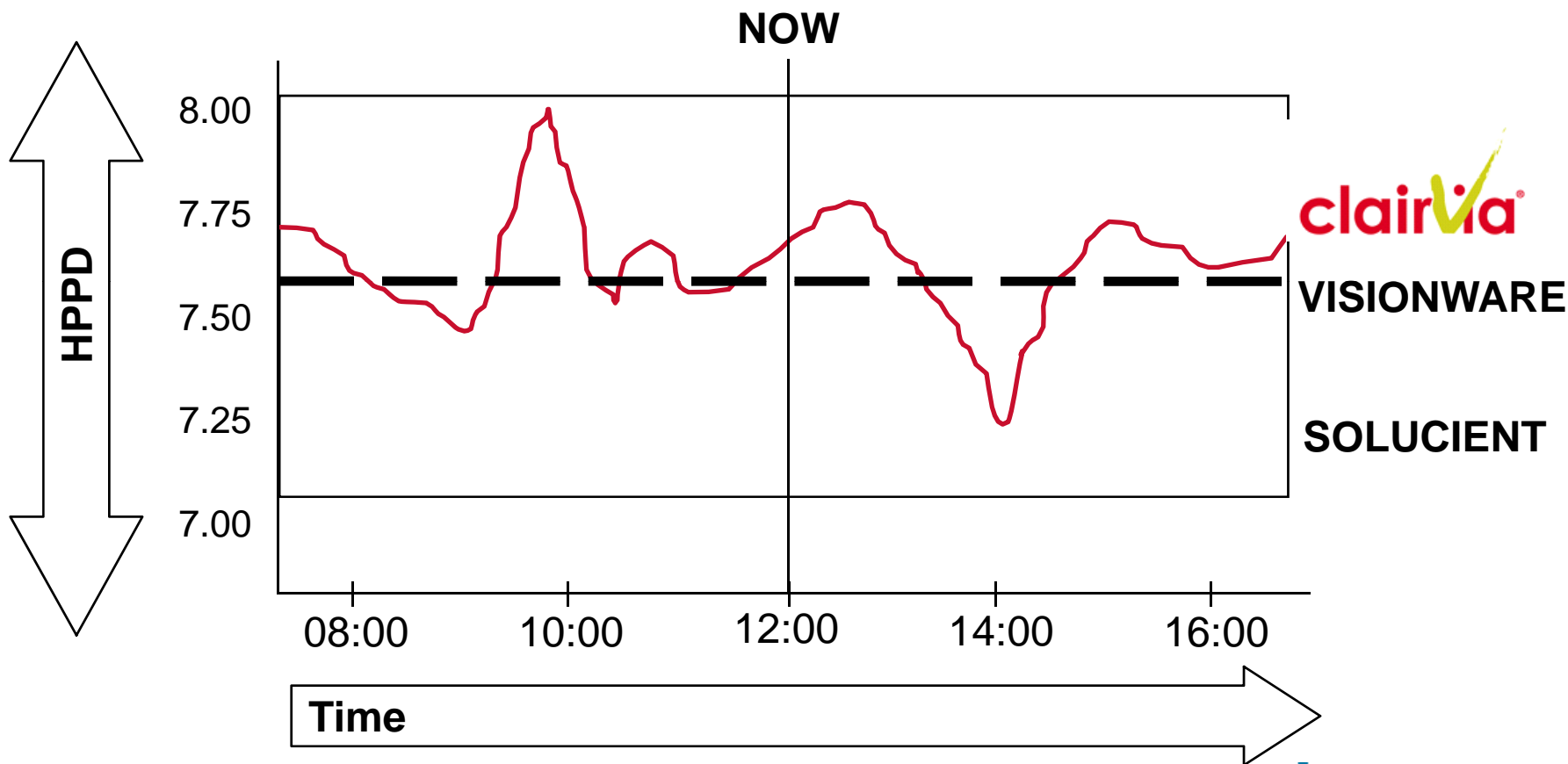
**An organized system of patient outcomes sensitive to nursing intervention.**

**16 years of clinical testing and development.**

**\*The University of Iowa, College of Nursing**



# Solucient, Visionware and ClairVia



# Budgeting

- Typically finance uses ADC as a unit of service for a nursing unit – midnight census is not reflective of census fluctuations
- A nursing unit hits their budgeted ADC only about 30% of the time
- How to account for flexing up – building overtime in the budget, build a float pool, etc.
- Difficult to forecast acuity levels
- Compromise between FTE budget and the institutions bottom line goal
- Provide outstanding patient care

# Census Variability

Budgeted ADC = 53.20

Census by Day of the Week & Shift Partition					
	0700 - 1100	1100 - 1500	1500 - 1900	1900 - 2300	2300 - 0700
Monday	46.09	48.44	49.59	43.26	43.88
Tuesday	49.53	52.82	53.15	47.79	48.71
Wednesday	54.80	57.69	56.71	50.20	52.43
Thursday	57.86	60.66	60.29	54.20	54.86
Friday	61.74	64.51	62.43	55.69	57.17
Saturday	63.31	65.89	63.29	53.00	51.57
Sunday	55.31	57.20	55.20	43.34	41.60



Mother & Baby 07/01/2009 – 02/28/2010

# Workforce Management System

- Electronic schedule
- Enterprise-wide view of staffing
- Staffing decision points
- Monitor fluctuations in census
- Admission, discharge, & transfer impact on staffing
- Acuity



# Four key imperatives to better manage productivity in the current environment



- **Defend principled productivity targets:** Most nurse executives possess strong opinions about appropriate targets for their organizations. However, to effectively defend such safe staffing targets, nursing leaders must speak fluently about different types of productivity metrics, as well as the advantages and disadvantages of various external benchmarks in establishing targets. *Additionally—after years of heated debate—the most progressive nursing leaders are now finally incorporating measures of nursing workload not captured by census, such as ADT and acuity, to more accurately set staffing targets.*



- **Guard against common drivers of variance:** Unit performance can often be undermined by factors not immediately associated with productivity. To that end, some institutions have achieved dramatic cost savings by finding safe and cost-effective alternatives to sitter utilization, better matching staff incentives to current market realities and leveraging employee-level tracking to reduce incremental overtime—an underappreciated but often sizable cost opportunity.



- **Match staffing to anticipated demand:** Establishing a more robust forecasting process by accounting for seasonal, day-of-week, and time-of-day variations remains a pivotal first step to better staffing. Beyond this, nurse executives should consider deploying non-traditional shifts tailored to predictable volume patterns, while being careful to mitigate the workload impact of additional hand-offs. Furthermore, integrating the patient placement and staffing functions is an ideal way to create staffing efficiencies.

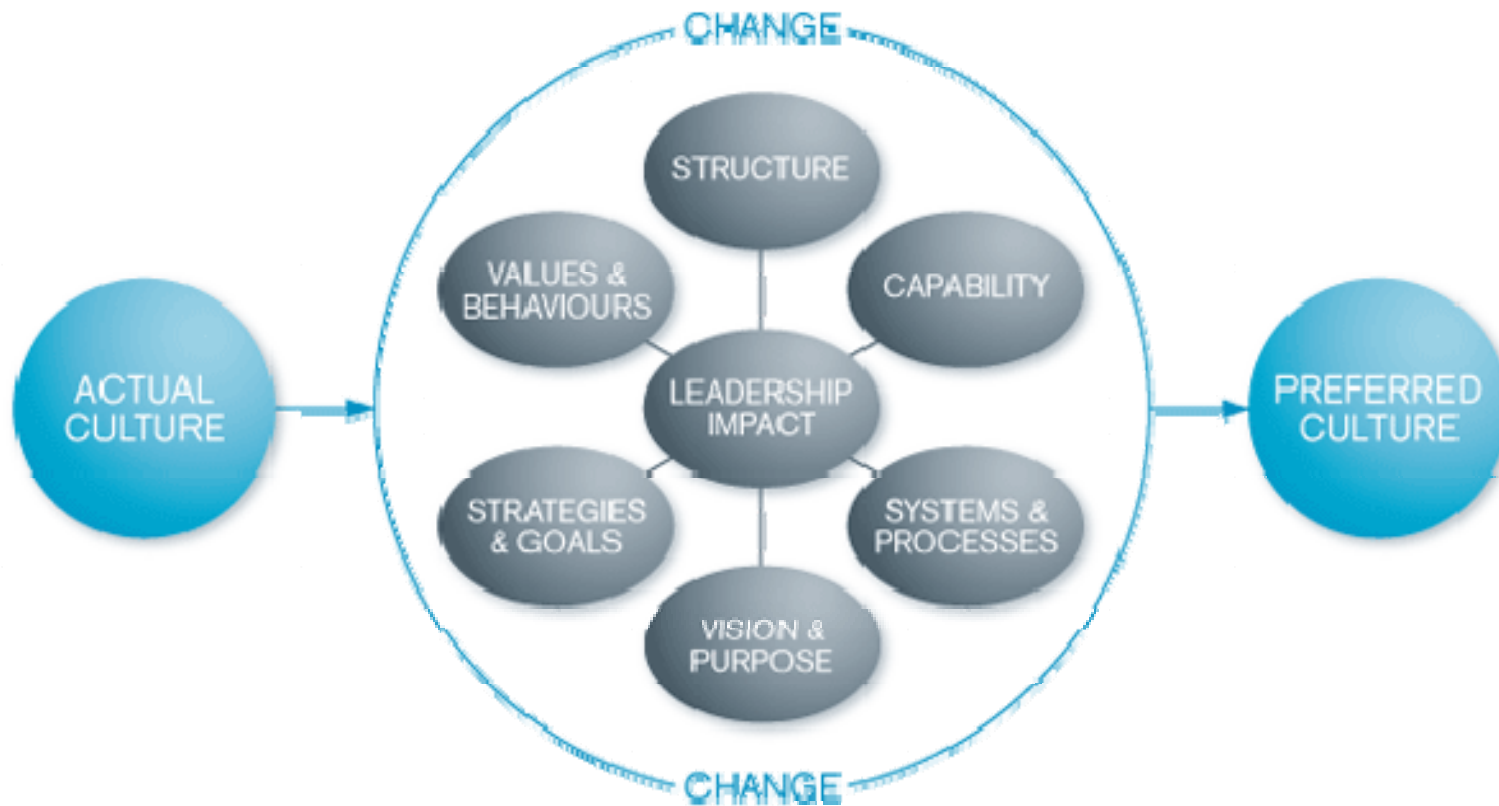


- **Build a more flexible workforce:** Patient volume predictions will never be 100% accurate. We must, therefore, build some flexibility into our staffing model. In fact, a number of for- and not-for-profit organizations have begun to employ a more aggressive core staffing model in which flexible labor—such as float pools and per diems—occupy a much larger portion of the workforce, virtually eliminating the need to flex down.

Advisory Board -four key imperatives to better manage productivity in the current environment, Dec 2009



# Balancing Cost Effectiveness and Customer Service





# Nursing Roles

## Chief Nurse Executive/Chief Nursing Officer

- Responsible for overall fiscal health of nursing enterprise
- Creates policy to build care standards
- Strategic budget planning
- Manages capacity
- Volume projections
- Approves all RN positions and requests additional as needed
- Requests Nursing Capital
- Creates business plans to support patient care needs
- Negotiates ONA contract
- Nursing voice to CEO, CFO, COO, MD's, etc.



# Nursing Roles

## Nursing Director

- Responsible for overall fiscal health of Service Line (CC, Med/Surg, LDR)
- Recommends, RN positions, requests additional as needed
- Create variance analysis reports
- Requests Nursing Capital
- Create business plans to support patient care needs
- Flexes staff between units to meet patient demand
- Service area voice to CNO
- Stays abreast of comparable staffing models and best practices

# Nursing Roles

## Nurse Managers

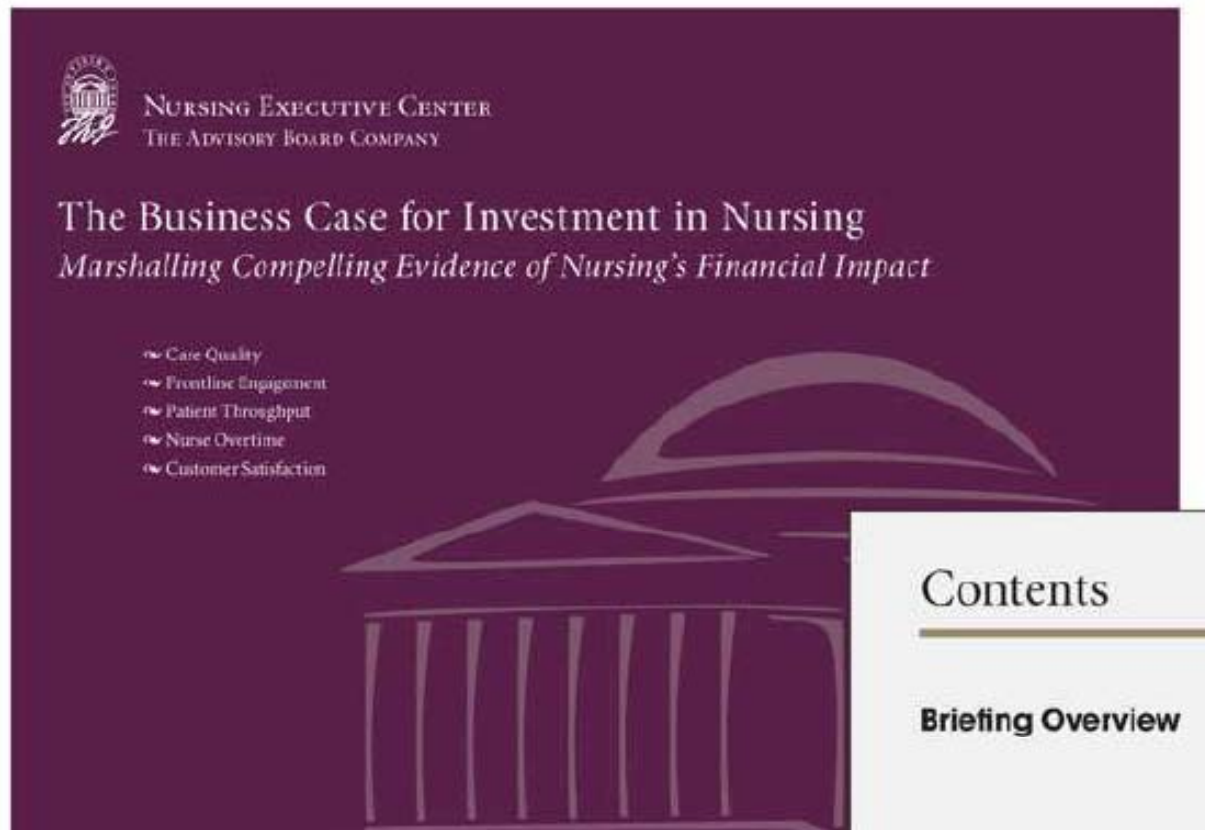
- Responsible for overall fiscal health of Unit
- Recommends, RN positions, requests additional as needed
- Create labor and supply variance analysis reports
- Managers OT, balances schedules
- Requests Nursing Capital
- Creates staffing plans to support patient needs
- Flexes staff between shifts/days
- Creates the unit culture of quality balanced with fiscal accountability
- Unit voice to Director

# Nursing Roles

## Charge Nurse

- Assists to create fiscal health of Unit
- Recommends changes in daily staffing to meet patient needs
- Communicates to Nurse Manager staffing concerns
- Has basis budget understanding
- Flexes staff between shifts/days

# Advisory Board



# Cost of Treating a Single Hospital-Acquired Condition

## Select Cost Estimates for Nursing-Sensitive Events

Incident Type	Treatment Costs per Incident	Source
Pressure Ulcer	\$3,529 to \$52,931 – depending on severity	National Pressure Ulcer Advisory Panel, “Pressure Ulcers Prevalence, Cost and Risk Assessment: Consensus Development Conference Statement,” <i>Decubitus</i> , 1989, 2(2): 24
Patient Fall	\$15,418	Rizzo, J. et al., “Health Care Utilization and Costs in a Medicare Population by Fall Status,” <i>Medical Care</i> , 1998, 36(8): 117
VAP (Ventilator Associated Pneumonia)	\$27,442	Anderson, DJ, et al., “Costs of Healthcare-Associated Infections (HAI) and Hospital Budgets for Infection Control and Prevention. Just a Drop in the Ocean?” SHEA 16 <sup>th</sup> Annual Conference, March 2006, Chicago, IL, available at: <a href="http://dicon.mc.duke.edu">http://dicon.mc.duke.edu</a> , accessed September 4, 2009

# Cost of Treating a Single Hospital-Acquired Condition, continued

Incident Type	Treatment Costs per Incident	Source
SSI (Surgical Site Infection)	\$11,460	Anderson, DJ, et al., "Costs of Healthcare-Associated Infections (HAI) and Hospital Budgets for Infection Control and Prevention. Just a Drop in the Ocean?" SHEA 16 <sup>th</sup> Annual Conference, March 2006, Chicago, IL, available at: <a href="http://dicon.mc.duke.edu">http://dicon.mc.duke.edu</a> , accessed September 4, 2009
Central Line-Associated BSI	\$42,090	Shannon, R. et al., "Economics of Central Line-Associated Bloodstream Infections," American Journal of Medical Quality, 2006, 21(6)
BSI (Blood Stream Infection)	\$25,421	Anderson, DJ, et al., "Costs of Healthcare-Associated Infections (HAI) and Hospital Budgets for Infection Control and Prevention. Just a Drop in the Ocean?" SHEA 16 <sup>th</sup> Annual Conference, March 2006, Chicago, IL, available at: <a href="http://dicon.mc.duke.edu">http://dicon.mc.duke.edu</a> , accessed September 4, 2009
DVT (Deep Vein Thrombosis)	\$4,819 to \$21,986 – Depending on severity	O'Brien J., Caro, J., "Direct Medical Cost of Managing Deep Vein Thrombosis According to the Occurrence of Complications," PharmacoEconomics, September 2002: 603-615
Pulmonary Embolism	\$19,385	Dalen, J., "Venous Thromboembolism," Marcel Dekker: 2003
	All values adjusted to 2008 Dollars	

\*Nursing leaders should closely examine all sources for what costs are included in estimates and ensure that figures are adjusted for inflation if the costs are dated.



# Staffing Investments Correlating with Reductions in Preventable Events

	<b>Medical Care</b> Licensed Nurse Staffing and Adverse Events in Hospitals	<b>Nursing Research</b> The Effects of Nurse Staffing on Adverse Events, Morbidity, Mortality, and Medical Care
Study Variable	10% increase in number of licensed nurses	10% increase in percentage of RNs
Outcome	<ul style="list-style-type: none"> <li>• 2% reduction in pressure ulcers</li> <li>• 3% reduction in falls</li> <li>• 1.5% decrease in lung collapse</li> </ul>	<ul style="list-style-type: none"> <li>• 9.5% reduction in pneumonia</li> </ul>
Publication Year	2003	2003

## Meta Analysis

For a more comprehensive review of recent studies examining the relationship between RN staffing levels and hospital-acquired conditions, see Dall T, et al., "The Economic Value of Professional Nursing," Medical Care, January 2009, 47(1):97



## Source:

Unruh, L., "Licensed Nurse Staffing and Adverse Events in Hospitals." Medical Care, January 2003, 41(1): 142., Cho S., et al., "The Effects of Nurse Staffing on Adverse Events, Morbidity, Mortality, and Medical Costs," Nursing Research, March/April 2003, 52(2):71; Nursing Executive Center analysis



# In 2010

## The Emphasis on Cost Continues

- The government is taking a more active role in demanding quality and managing costs
- The recession has pinched budgets, and both new and existing players are examining the value they bring to consumers.
- The potential for savings multiplies as the industry converges, squeezing out inefficiencies and duplication.



Source:

Pricewaterhouse Coopers' Health Research Institute, "Top 10 health industry issues in 2010: squeezing the juice out of healthcare, December 2009, 2-18

# Top 10 Health Industry Issues

Health leaders must look beyond their own organizations and figure out how they can benefit by reducing costs elsewhere in the value chain. As the industry addresses an increased emphasis on cost, the reductions could domino from one sector to another.



Source:

Pricewaterhouse Coopers' Health Research Institute, "Top 10 health industry issues in 2010: squeezing the juice out of healthcare, December 2009, 2-18

# Squeezing the Juice Out of Healthcare

- Last year, external forces put health organizations in a reactive mode, but 2010 and beyond will present an opportunity to step ahead of the changes. Success will hinge on squeezing the most value out of new and current relationships, impending health reform and regulatory changes, and consumer demands.



Source:

Pricewaterhouse Coopers' Health Research Institute, "Top 10 health industry issues in 2010: squeezing the juice out of healthcare, December 2009, 2-18

# Questions?





**Medical Center**

**O-H-I-O**

Nationally ranked. Good sports teams, too.

