

# New Developments from NDNQI<sup>®</sup>

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**&**

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**New Orleans, LA**

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## IOM report: *To Err is Human, Crossing the Quality Chasm*

- **10 years** have passed since IOM identified errors in healthcare
- **90% of errors due to system failure**, not active individual failures
  - Understaffing
  - Fatigue
  - Lack of education
  - Training on how to identify a rescue situation
- Dozens of recommendations for change

Institute of Medicine: *To Err Is Human: Building a Safer Health System*. Washington, DC: The National Academies Press: 2001

# *IOM: Keeping Patients Safe: Transforming the Work Environment of Nurses*

- Typical work environment of nurses is characterized by **inefficiencies and distractions**
- **Front line nurses must be involved** in the process of creating a safer work environment
- Focus error reduction on
  - **Surveillance** of patient health status
  - Patient transfers and **handoffs**
  - **Complex** care processes
  - **Reduce non-value-added RN activities**

# Policy Responses to IOM Reports

- Define and Collect **Quality Indicators**
- **Public Reporting**
- **Financial Incentives**
  - Pay for performance, e.g., Leapfrog
  - Nonpayment for poor performance, e.g., CMS
- **CMS 2010 IPPS Rule**
  - Participating in **nursing quality registry**

# Nursing Quality Initiatives

- ANA's Quality & Safety Initiative - **NDNQI**<sup>®</sup>
- ANCC's **Magnet**<sup>®</sup> program
- Robert Wood Johnson's Interdisciplinary Nursing Quality Research Initiative (**INQRI**)
- National Quality Forum (**NQF**) nursing-sensitive measures
- National Priority Partners (**NPP**)

# Has Quality Improved?

- *To Err is Human* (1999): It would be irresponsible to have less than a 50% reduction in error rates within 5 years
- After 10 years **patient safety is declining!**
  - AHRQ National Healthcare Quality Report found
    - **-0.9% annual** decline in patient safety measures

<http://www.ahrq.gov/qual/nhqr08/Key.htm>

# Consumer Reports (2009)

## *To Err is Human—To Delay is Deadly*

- Probably **still 100,000 lives lost** every year due to medical errors
- Recommendations
  - **Mandatory, validated public reporting** to create external pressure for change
  - MDs and **RNs** should be required to **demonstrate continuing competency** and knowledge of patient safety practices

# Has Nursing Quality Improved in NDNQI Hospitals?

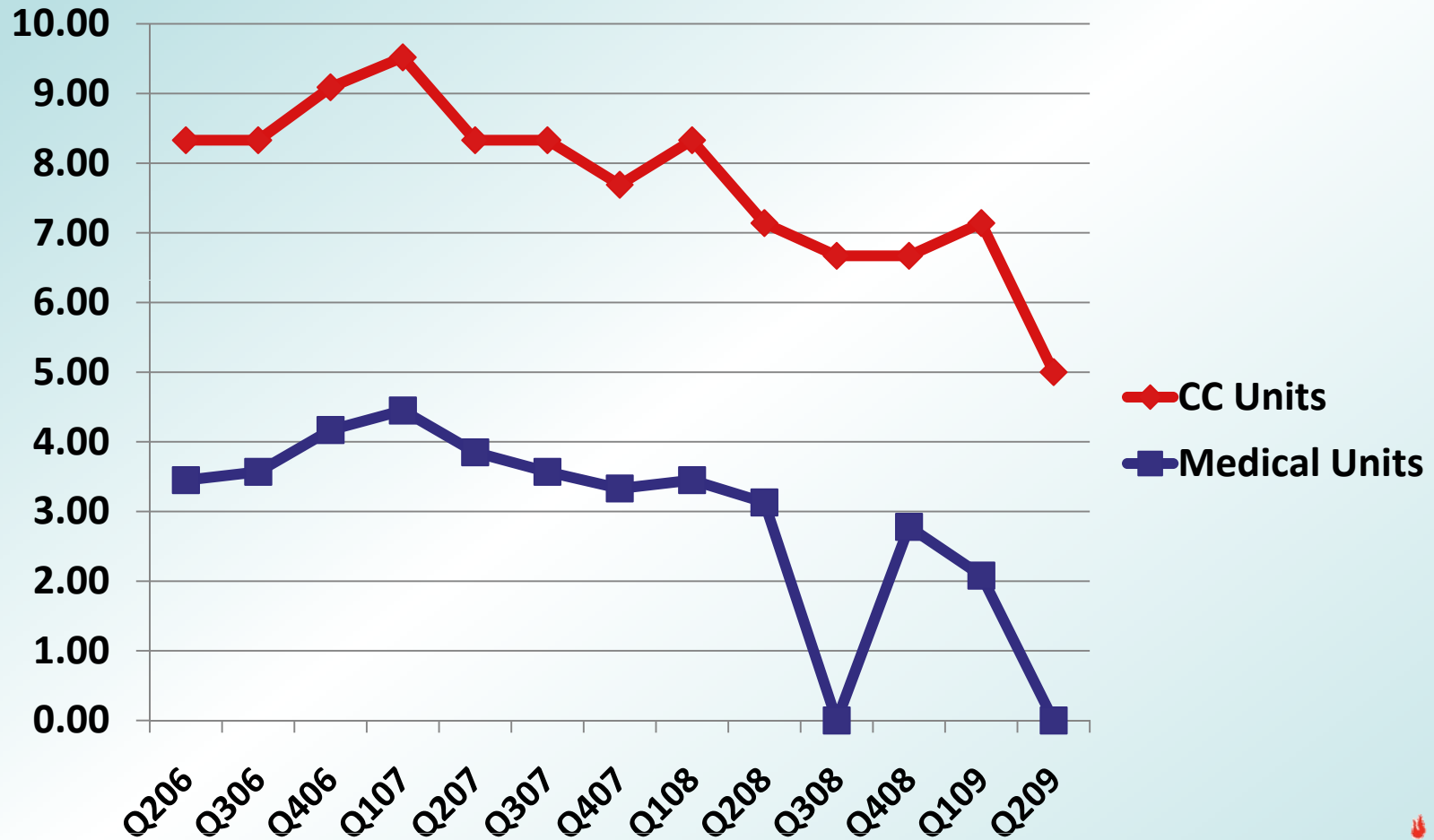
- **Cross-sectional** comparison data from quarterly reports.
  - 13 quarters: 2Q06 through 2Q09
  - Selected unit types, where adverse outcome were common
- Results validated using **longitudinal** analysis, following units in hospitals that were participating in 1Q06
  - Adjusting for drop outs in longitudinal analysis didn't affect results



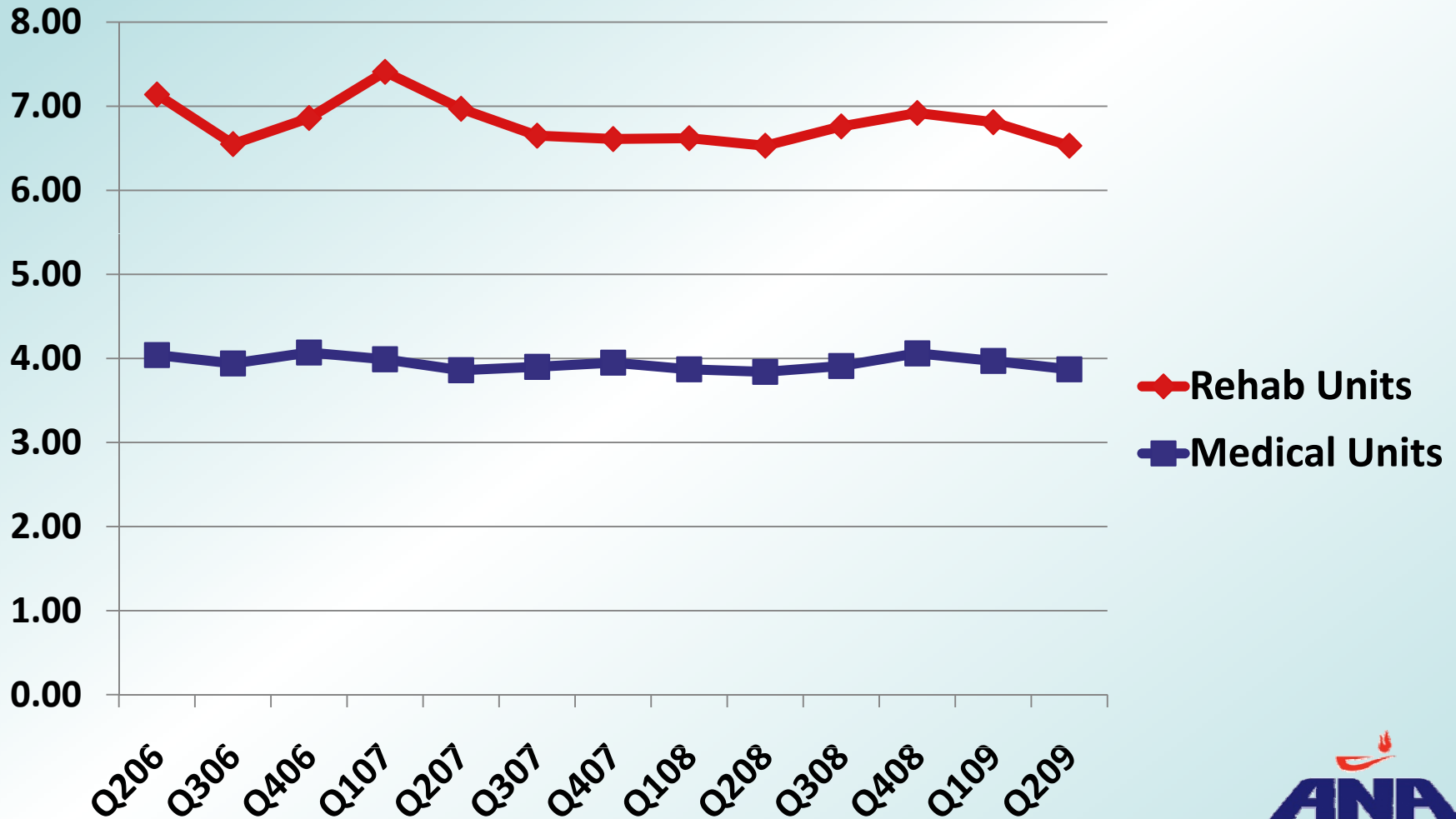
# Results Overview

- **Some NDNQI outcome rates have improved** over past three years, such as
  - Hospital Acquired Pressure Ulcer Rates for critical care and medical units
  - Injury Fall Rates for rehab and medical units
  - Injury assault rates for adult psych units
- **No meaningful improvement or worse rates for other outcomes,** such as
  - Fall Rates for rehab and medical units
  - Mean # of pain assessments/patient for peds units
    - Perhaps in compliance with unit, hospital, or national standards

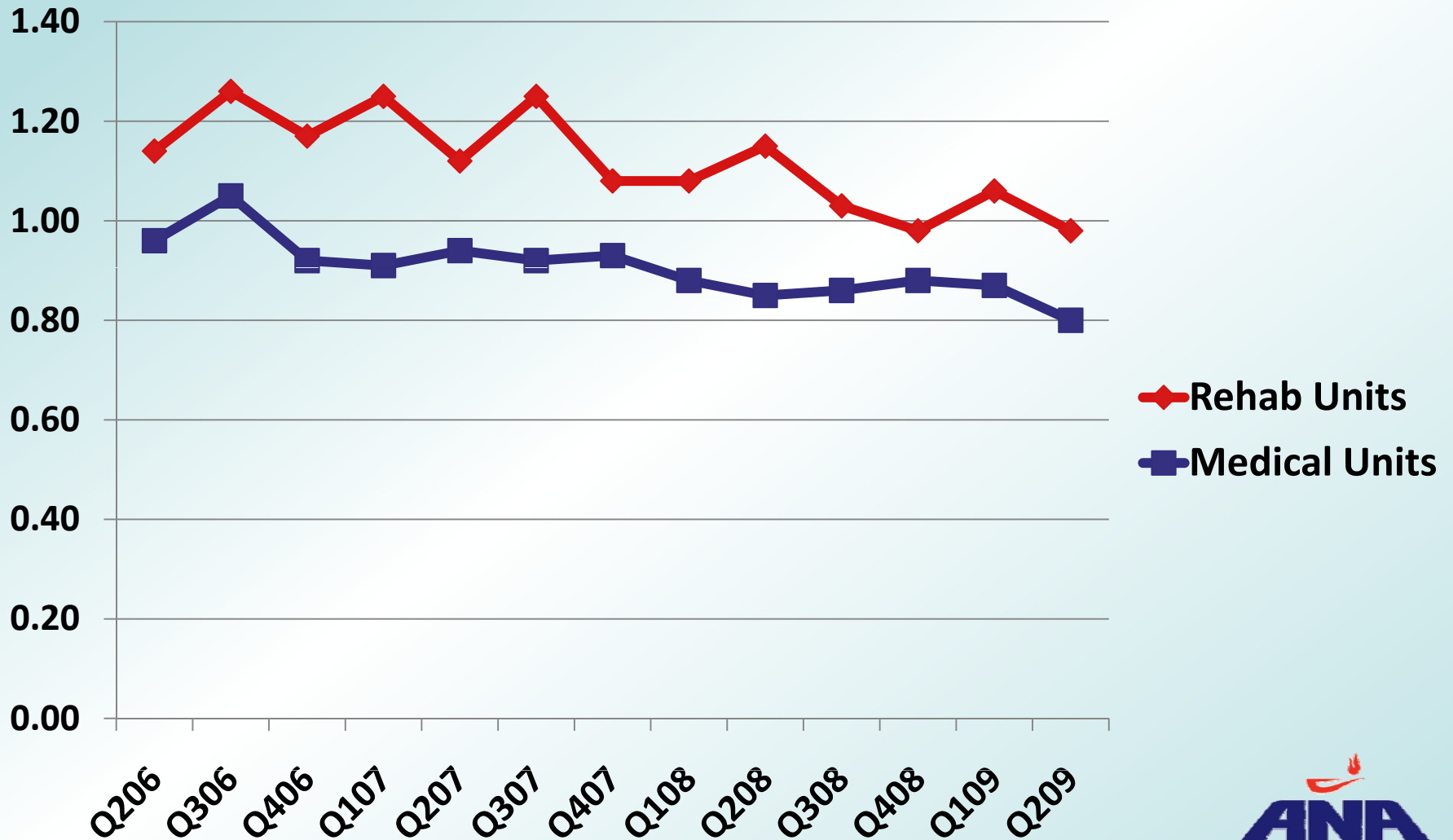
# Median Hospital Acquired Pressure Ulcer Rates



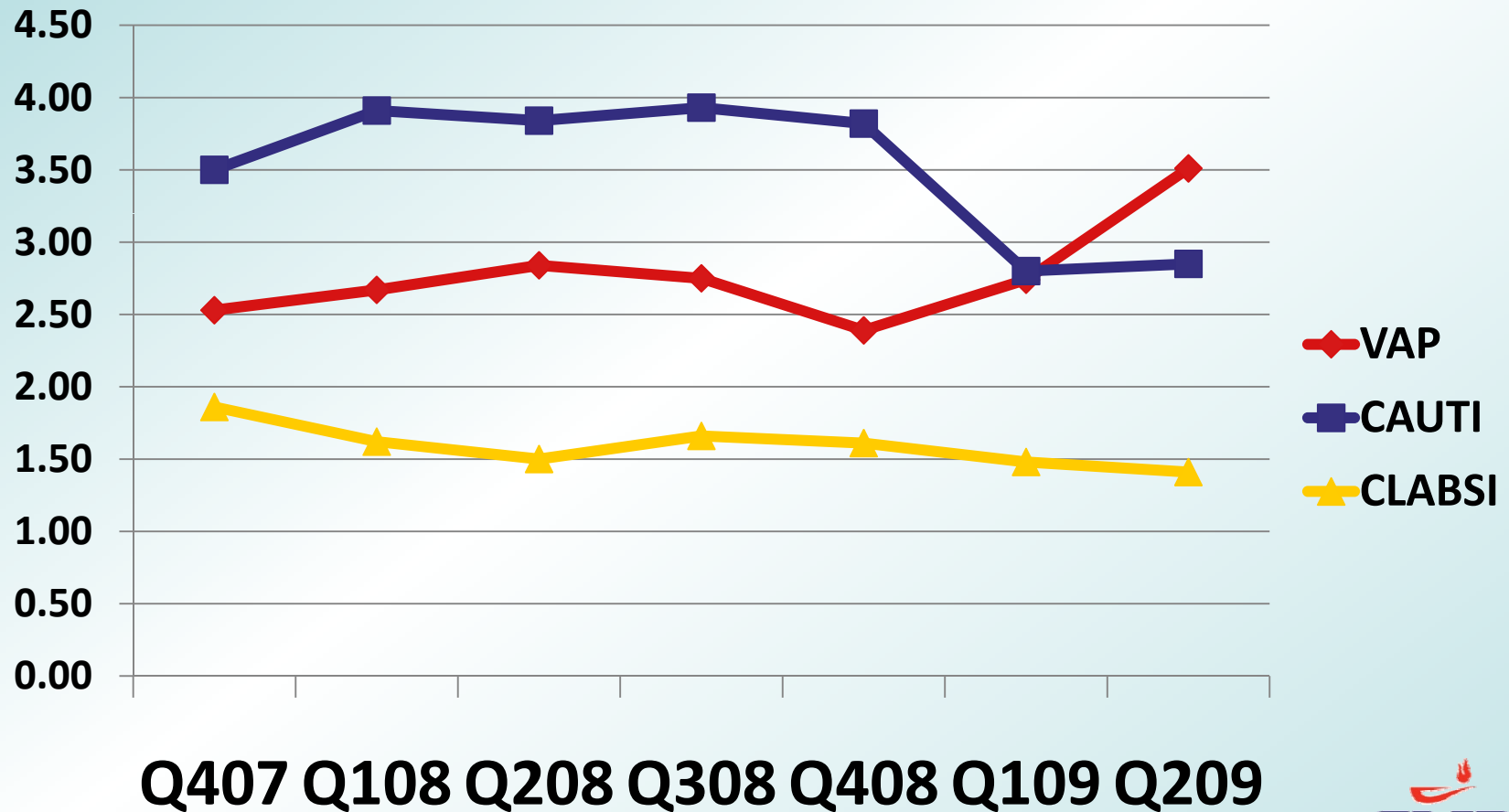
# Median Fall Rates



# Median Injury Fall Rates

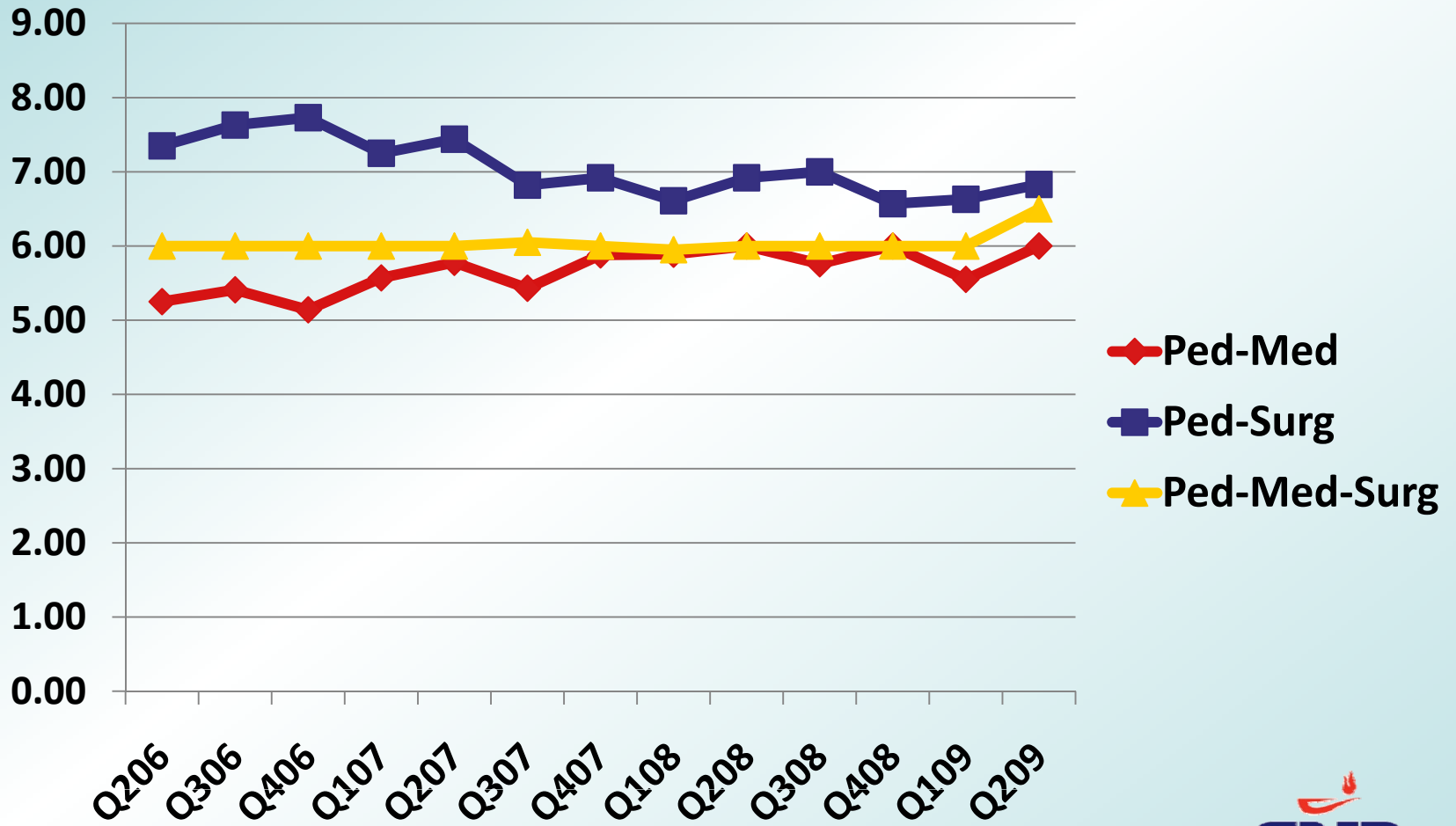


# Trends in Mean\* Nosocomial Infection Rates, Critical Care Units

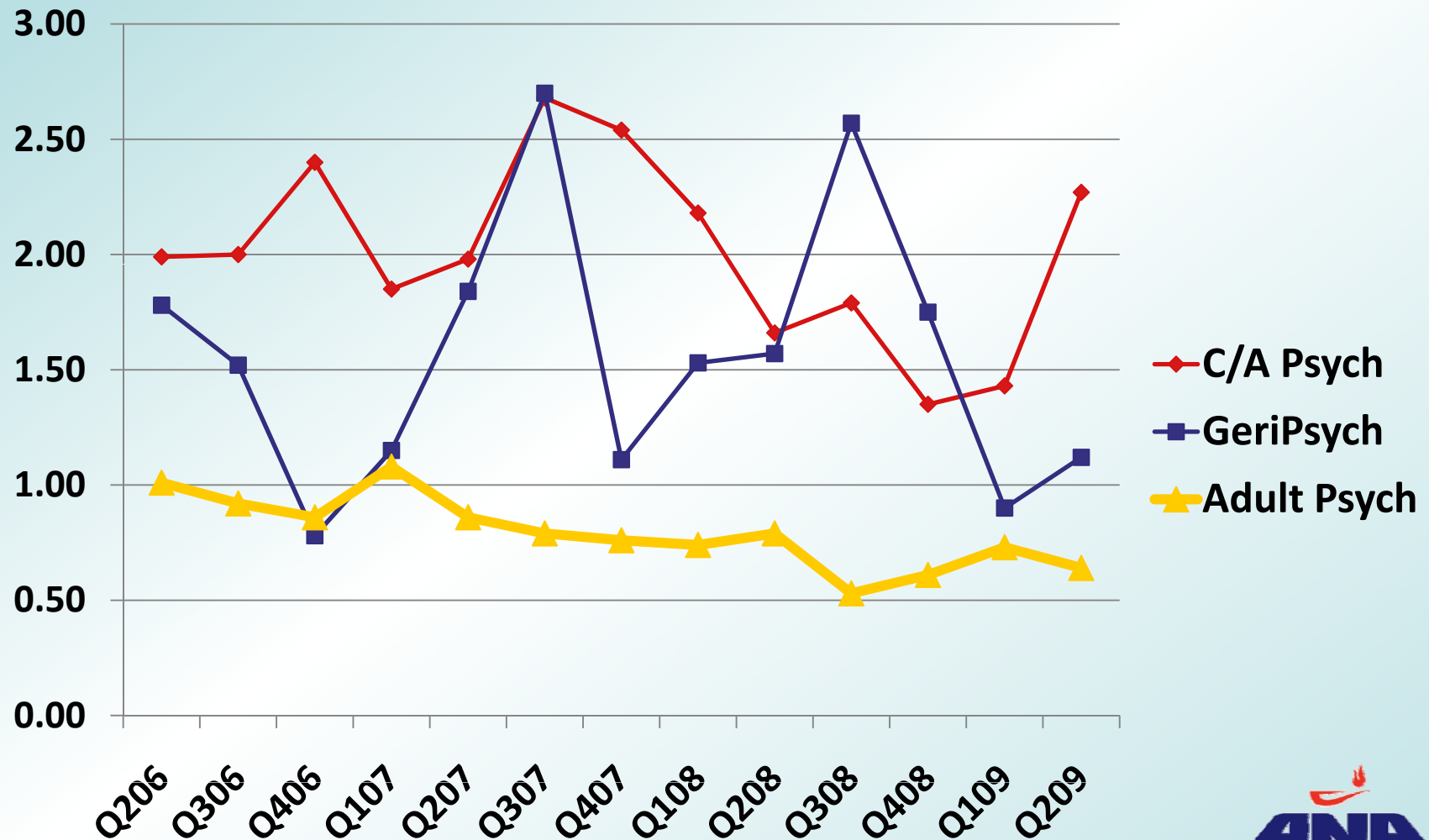


\*Medians all 0.00

# Trends in Median Rates # of Pediatric Pain Assessments



# Trends in Mean\* Injury Assault Rates



\* Medians all 0.00

# Length of Time in NDNQI Related to Some Outcomes

- Lower Unit Acquired Pressure Ulcers
  - All adult unit types
  - Low correlations range from -0.06 to -0.19
- Lower Injury Fall Rates
  - All unit types, but significant only for Rehab
  - Low correlation = -0.17



**You Can Celebrate Progress  
in Some Areas,**

**But more can  
be done!**



# Moving Forward

- How do we make use of NDNQI quality indicators?
- How do we involve staff?
- How do we actually improve?

## Use your data...we'll help

- Your organization invests resources in measuring nursing quality
- NDNQI invests resources in publishing comparative reports
- **New online education** to help you make the most of your investment!

NDNQI: Reports Online Training - Windows Internet Explorer

http://ndnqi

File Edit View Favorites Tools Help

NDNQI: Reports

## NDNQI<sup>®</sup>

### NATIONAL DATABASE OF NURSING QUALITY INDICATORS

Interpreting and Using Your NDNQI Reports

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**Module 1**  
Managing Reports

**Module 2**  
Understanding Data

**Module 3**  
Answering Quality Questions

**Module 4**  
Improving Performance

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[Begin](#) ➔

Internet 100%

# Module 1: Managing Reports

- Download and distribute NDNQI reports to build organization-wide support for QI

**Module 1 | Managing Reports**

Home | Managing Reports | Understanding Data | Answering Quality Questions | Improving Performance | Resources | Feedback

### Distributing Reports

We encourage you to send reports and graphs to managers, staff nurses, executives, and to quality-related groups. This promotes unified goals and cooperation among all 'levels' of the hospital.

Custom reports and dashboards are especially useful for distributing results. (Dashboards are a collection of graphs, discussed in Module 2).

You are free to tailor the distribution of NDNQI reports to meet your hospital's needs. Here are just a few ideas:

- Email a custom report to each nurse manager
- Post unit dashboards in break rooms
- Send dashboards to nursing executives, hospital administrators, board of directors, etc.
- Run custom reports for different councils and departments
- Upload reports on your hospital's intranet site

```

graph TD
    NE([Nurse Educators]) --- UN([Unit Managers])
    SN([Staff Nurses]) --- UN
    UN --- SC[Site Coordinator]
    SC --- MR[Marketing & Recruitment]
    SC --- RM[Risk Management]
    SC --- RC[Research Council]
    SC --- QC[Quality Council]
    SC --- MC[Management Council]
    SC --- PC[Practice Council]
    SC --- NExec[Nursing Executives]
    NExec --- HExec[Hospital Executives]
    NExec --- BD[Board of Directors]
  
```

# Module 2: Understanding Data

- Understand table structure, indicator definitions, & statistics to correctly interpret

To calculate the hospital unit-type median, we...

- Organize the units' results from lowest to highest
- Find the number in the middle. If there is an even number of units, we take the average of the middle two units.

You'll compare the unit-type median to the comparison data to see how your critical care units are doing as a whole.

Scroll over the highlighted words and numbers for interpretations.

National Database of Nursing Quality Indicators ®

**Table U4**  
**Adult Critical Care**  
**Percent of Surveyed Patients with Unit Acquired Pressure Ulcers**

Adult Critical Care	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	3Q08	4Q08	1Q09
Surgical ICU	10.00	16.67	7.14	5.00	30.00	0.00	11.75	18.18	8.51
Medical ICU	8.33	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
Cardiac ICU	0.00	8.71	11.11	10.00	8.33	0.00	11.75	18.18	8.51
Neuro ICU	n.d.	n.d.	n.d.	5.00	10.11	16.67	5.26	0.00	7.41
<i>Hospital Adult Critical Care Median</i>	8.33	8.71	7.14	5.00	9.22	10.35	7.18	11.59	8.44

**8.33**

8.33% of surveyed patients on the Cardiac ICU had unit acquired pressure ulcers. For example, if 12 patients were assessed during the Cardiac ICU's 1st quarter prevalence survey, 1 patient had a pressure ulcer that developed after admission to the unit.

$$1/12 \times 100 = 8.33$$

# Module 3: Answering Quality Questions



[Home](#) | [Managing Reports](#) | [Understanding Data](#) | [Answering Quality Questions](#) | [Improving Performance](#) | [Resources](#) | [Feedback](#)

## Interpreting and Using Your NDNQI<sup>®</sup> Reports

### Module 3 Overview

- › Comparing units to peers
- › Identifying trends
- › Prioritizing problems
- › Setting goals
- › Other uses for reports

## Welcome to Module 3

### Answering Quality Questions

NDNQI reports help you answer key quality improvement questions:

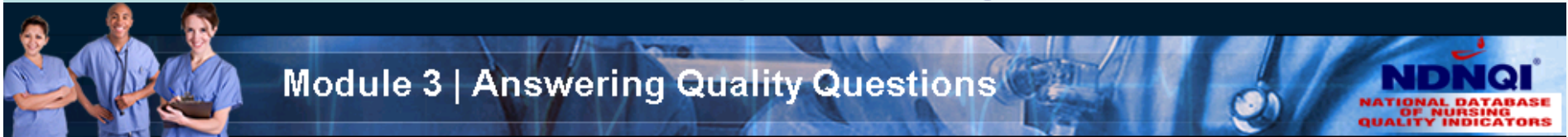
1. How good are my units compared to similar units in other hospitals?
2. Have things been getting better or worse?
3. What's my biggest problem?
4. What would be a good improvement goal?

Module 3 demonstrates how to answer these questions using your tables and graphs.

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Next →

# Module 4 Overview: Improving Performance



Module 3 | Answering Quality Questions

Home | Managing Reports | Understanding Data | Answering Quality Questions | Improving Performance | Resources | Feedback

## Prioritizing Problems

After you've found out how your units are doing and if things are getting better, what are your improvement efforts?

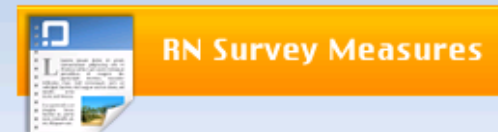
In other words, **what is your biggest quality or workforce problem?**

Lots of factors affect your performance improvement priorities, such as:

- Impact on patients' safety, health, and satisfaction with care
- Costs of treating vs. preventing adverse outcomes
- Medicare/Medicaid reimbursement rules
- Accreditation requirements, etc.

NDNQI's contribution is evidence-based information on the severity and duration of the problem.

Use these examples to practice deciding which indicator is a bigger problem. The next page summarizes 'lessons learned' from these examples.



### Module 4 Overview

Performance improvement

Identify problems

Drill down

Review literature

Design & implement plan

Monitor progress

Examples

Nursing work environment

Summary

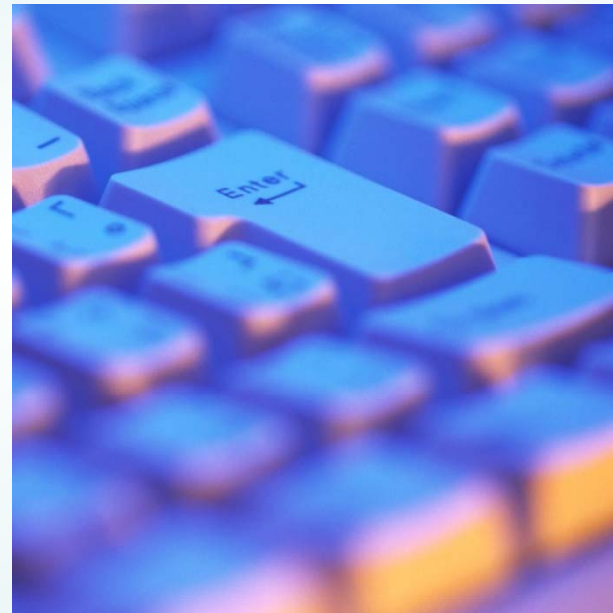
to begin your performance

← Previous      Next →



# Using NDNQI Reports Education Available Today!

- Must be an authorized **NDNQI “user”**
- **Sign in** to NDNQI website
- Click on a new button: **“Learning Center”**
- Then click on **“Interpreting and Using Your NDNQI Reports”**



# Noteworthy Features

- **Not required**, like NDNQI tutorials
- May need to add to your list of **authorized NDNQI users**
- Specifically for NDNQI reports, so **Continuing Education credits not available**
- **Interactive**: rollovers, links, exercises with feedback
  - No tests
- 4 modules: total time to complete is **~ 4 hours**

# NDNQI Data Are The Starting Point

- Identify problem areas
- Explore possible causes
- Monitor the effects of your improvement plan

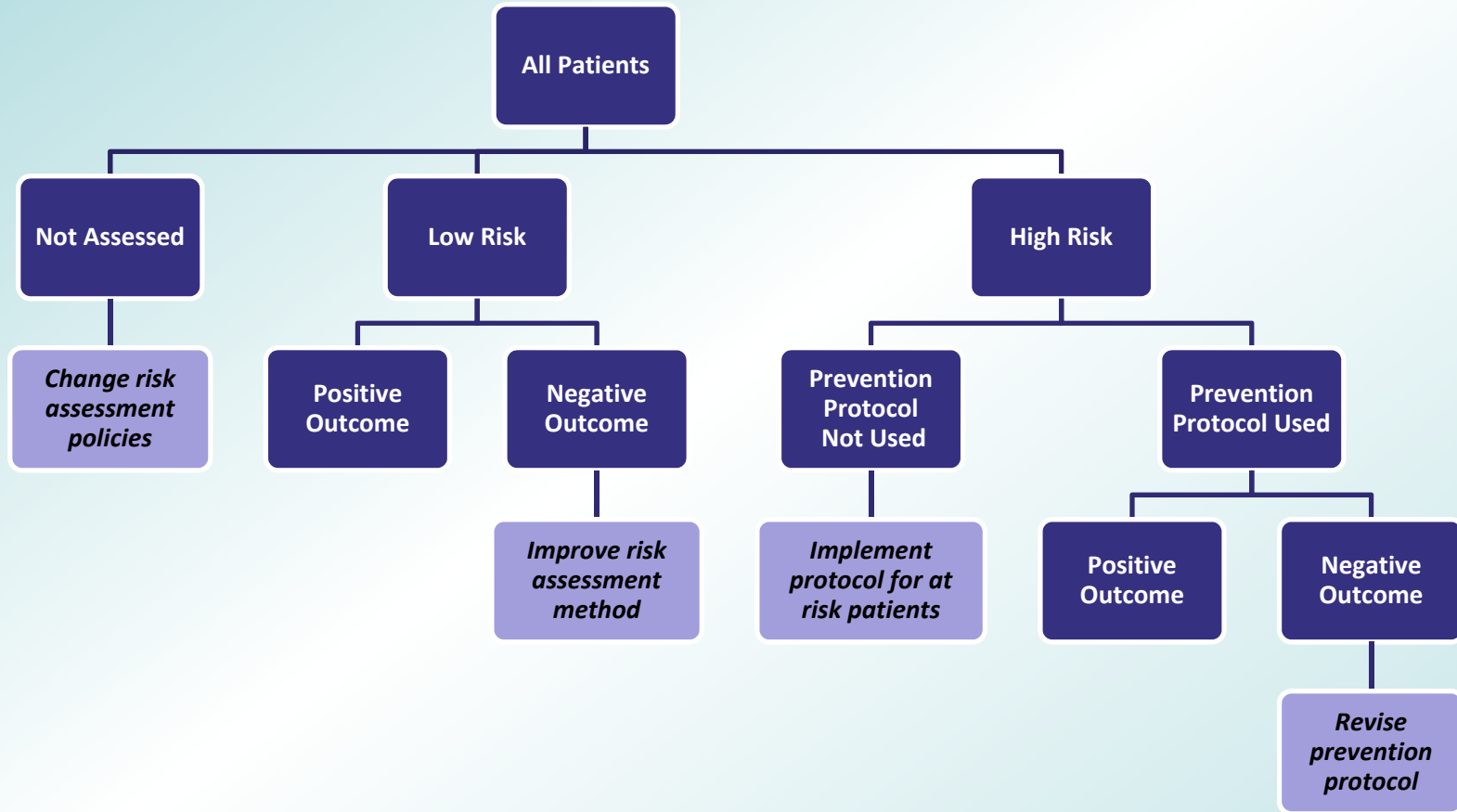
# Identify Problems

- How does our unit's data compare to the percentiles?
- What does that say about our unit's nursing quality?
- Is our unit in the bottom 25% of peers?
- Should there be zero tolerance for the outcome?

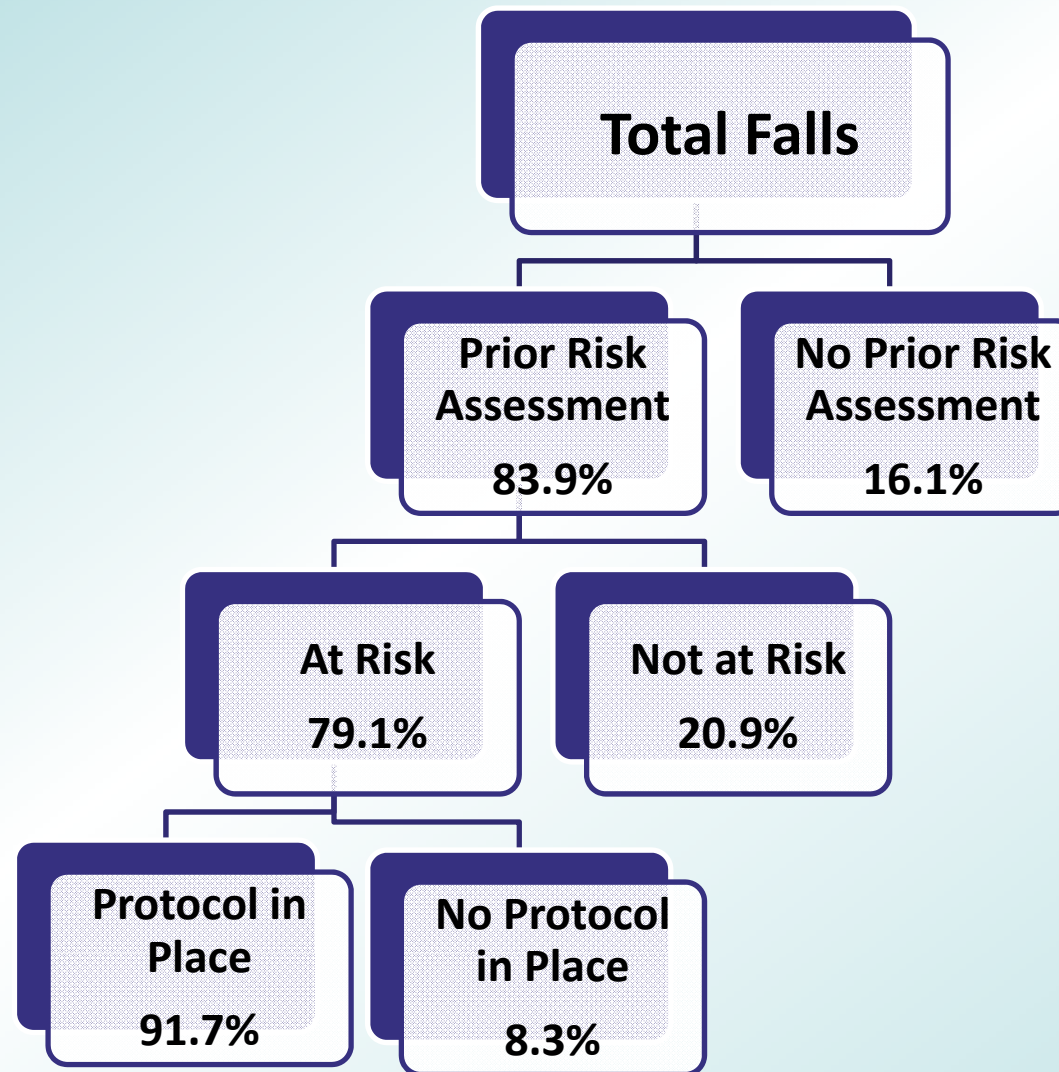
## Drill Down

- How can we gain a better understanding of the problem and its causes?
- What additional data do we need to collect?
- Look at multiple sources of information:
  - Other NDNQI data(e.g., staffing & RN Survey)
  - Patient satisfaction surveys
  - Patients' medical records
  - Staff nurses' input

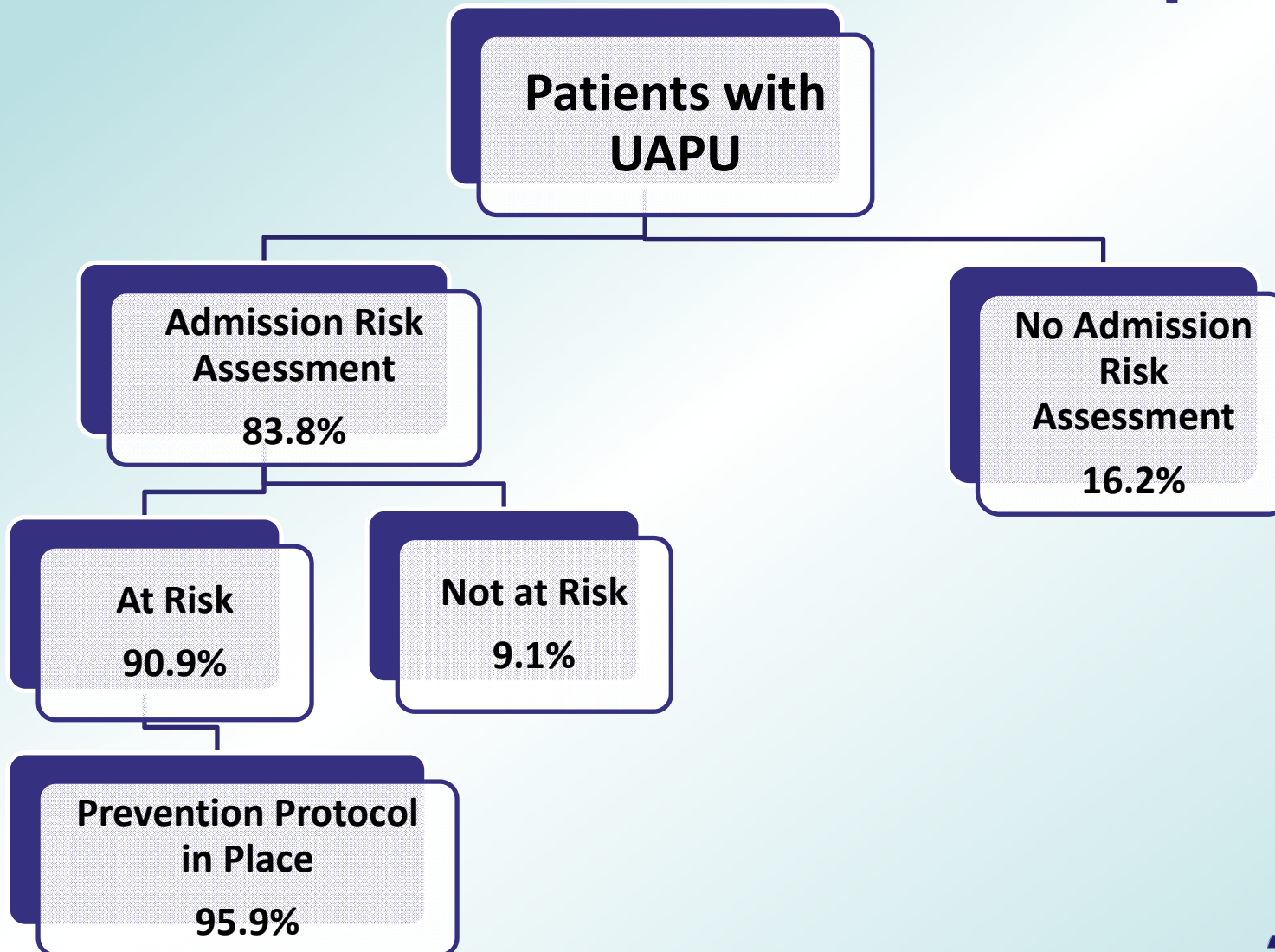
# Example of Drill Down



# Could the Fall Prevention Process Be Improved?



# Could Pressure Ulcer Prevention Be Improved?



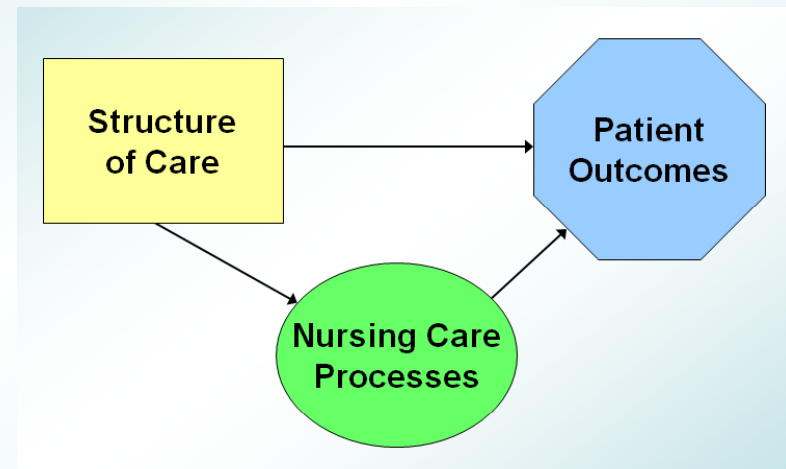


# Follow-up Questions From Drill Down

1. What is preventing risk assessments?
2. Is risk assessment tool effective?
3. Does prevention program work?

## Next Step: Review Literature

- What is known that can help you improve your outcome?
  - Staffing situations
  - Nursing processes
  - Nursing work environment



# Nursing Structure

## Staffing Situations

- Nursing Hours per Patient Day
- Skill Mix
- % Agency Staff
- RN Education
- RN Certification
- Years of Experience

## Outcome

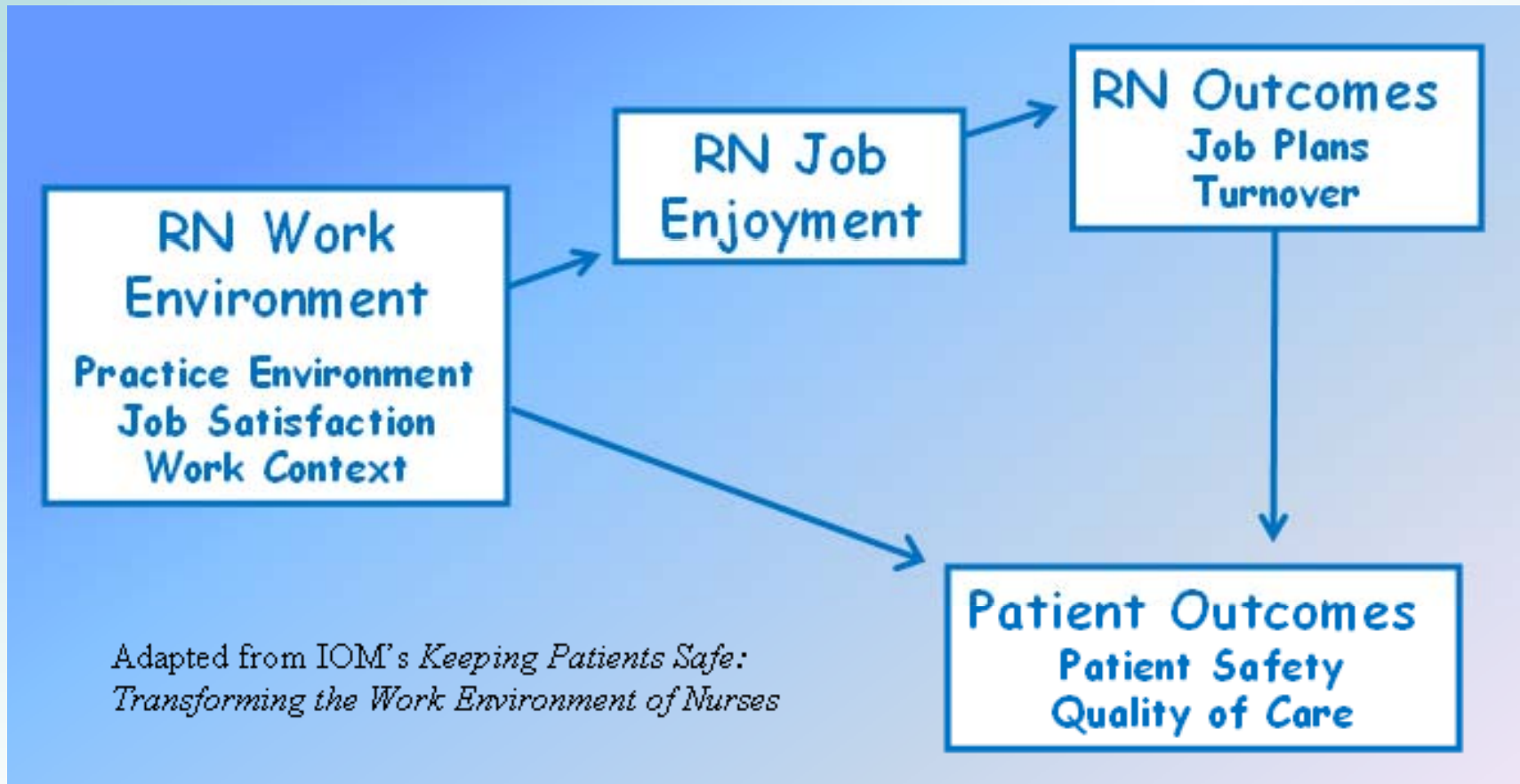
- Falls - medical unit

# Nursing Processes

- **Risk assessment**
  - Frequency
  - Recentness
  
- **Evidence-based prevention protocols**



# Improving the Nursing Work Environment



# Useful Resources

- Research on nursing workforce and patient outcomes
- Evidence-based practice
- Implementing organizational change

## NDNQI Books & Articles

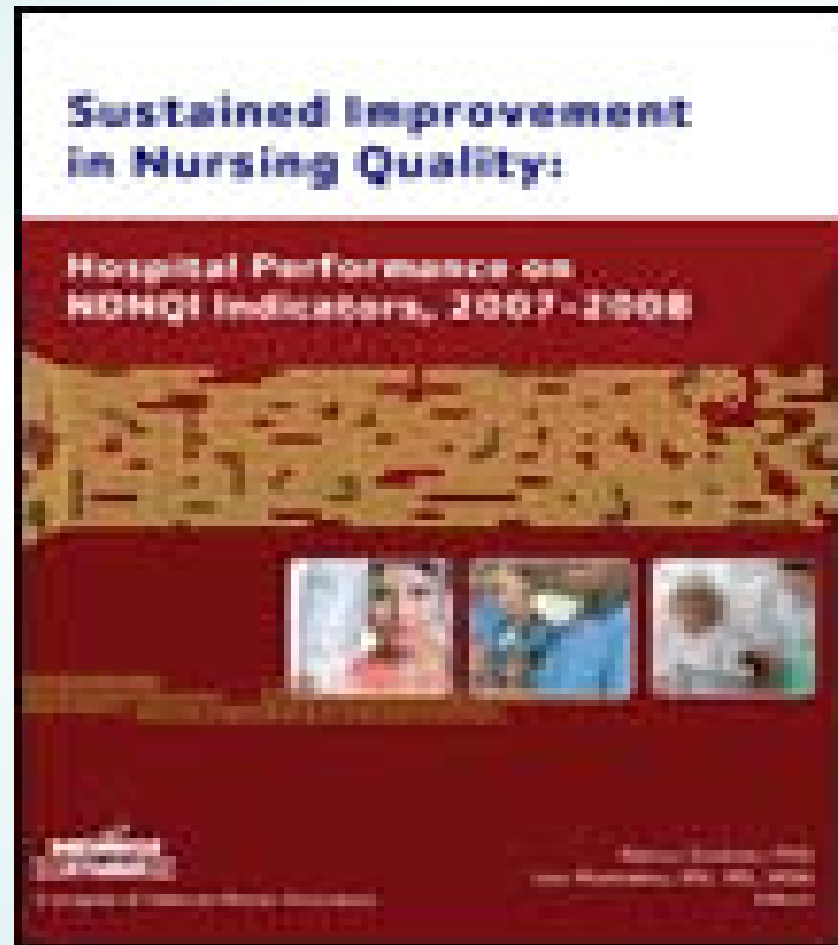
- > [Transforming Nursing Data into Quality Care](#)
- > [Sustained Improvement in Nursing Quality](#)
- > [Relationship of Nursing Workforce Characteristics to Patient Outcomes](#)

## Other Links

- > [Patient Safety & Quality: An Evidence-Based Handbook for Nurses](#)
- > [National Guideline Clearinghouse](#)
- > [IHI Improvement Map](#)
- > [Health Care Innovations Exchange](#)
- > [HAI Prevention Compendium](#)

# NDNQI Monographs

- Chapters written by hospitals with **sustained improvement**
  - Case studies of the QI process



# Monograph Lessons

- NDNQI reports triggered inquiry
- Drilled down, sometimes with special data collection, to define problem and develop solutions
- Used literature and EBP to design intervention
- Organizational change requires leadership, budget, & **persistence**



# To Obtain Monographs

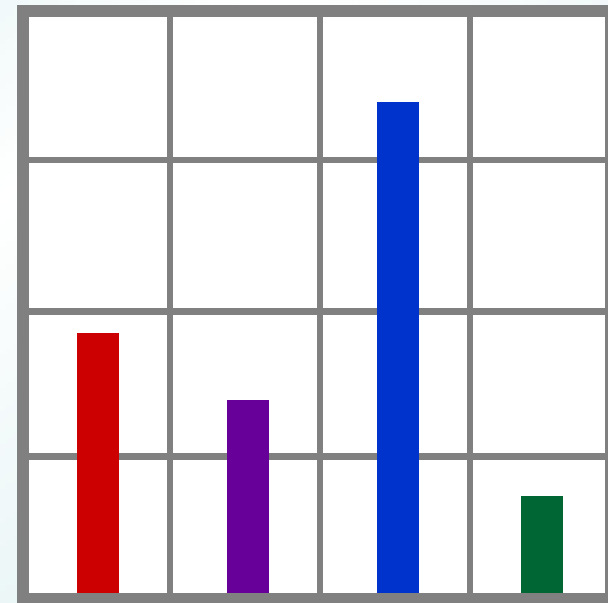
- Available through  
<http://nursingworld.org/books/>
  - **Transforming Nursing Data Into Quality Care: Profiles of Quality Improvement in U.S. Healthcare Facilities**
  - **Sustained Improvement in Nursing Quality: Hospital Performance on NDNQI Indicators, 2007-2008**

# Design & Implement Plan

- What evidence-based strategies will we adopt?
- How can we foster the commitment and persistence needed to create positive change?
  - **Administrators** make safety a top priority
  - Identify and obtain **resources**
  - Assign **accountability**
  - Identify change **CHAMPIONS** for each unit
  - Roll out intervention
  - Persistent **COMMUNICATION & EDUCATION**

## Monitor Progress

- Have we reached our goals?
- What do we need to continue or change to see sustained improvement?



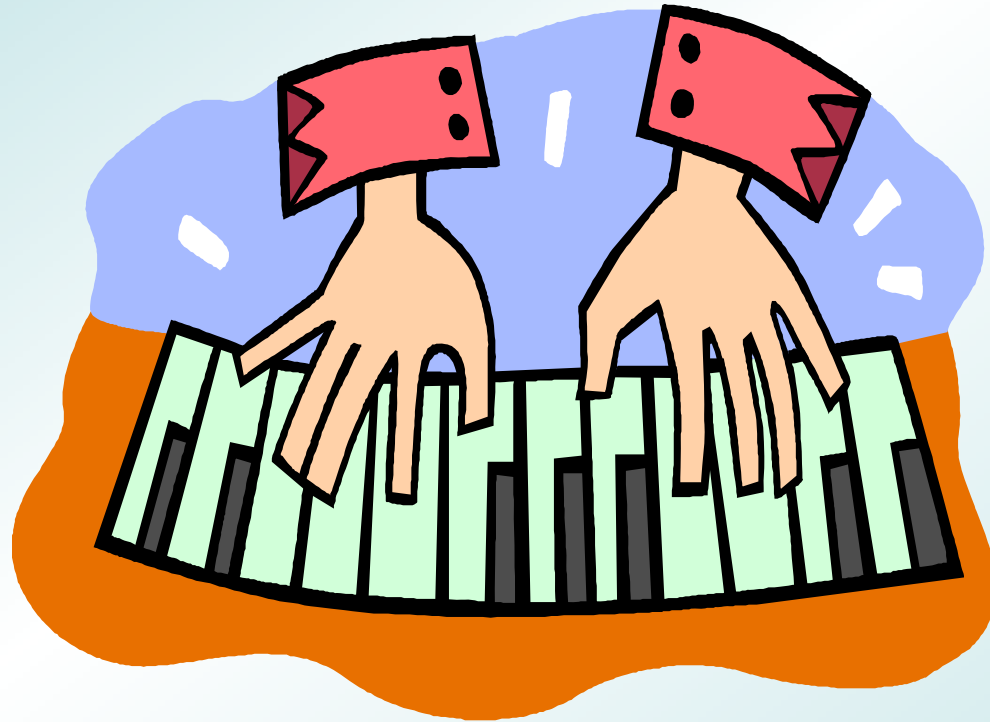
# Spiral of Improvement

- Persistence & time
- Adjustments to original improvement plan
- Continual evaluation of actual vs. desired performance

*Upward Spiral of  
Improvement*



# Keys to Success



# Research on Safety-Sensitive Industries

- Multiple , independent strategies have to be brought to bear in order to ensure consistently positive outcomes
- Transformational leadership needed
- Implement a culture of safety
  - Every point of care staff person becomes a change agent

Hinshaw AS. Keeping patients safe: A collaboration among nurses administrators and researchers. Nurse Admin Q, 2006. 30(4):309-320

# Critical Drivers of Sustained System Change

1. **Pressure** to transform is **sustained**, often from outside the organization
2. **Leadership** for change begins at the top, but involves all levels of the organization
3. Actively **engage staff** in meaningful problem solving
4. **Goals and resources** aligned top to bottom of organization to support change (Accountability)
5. **Integration** across organizational units

Lukas C, et al. Transformational change in health care systems: An organizational model. Health Care Management Rev, 2007, 32(4) 309-320.

# 7 Factors Important to Quality Improvement

1. Strong **administrative support**
2. Active involvement of board of directors
3. **Multidisciplinary** involvement
4. Expert **performance improvement staff**
5. Effective quality **data systems**
6. **Staff-level involvement** & accountability
7. **Effective communication** structures & processes

Barron WM, Krsek C, Weber D, Cerese J. Critical success factors for performance improvement programs. *Jt. Comm J Qual Patient Saf.* 2005; 31(4):220-226.



## Champions for QI are:

- Opinion leaders and change agents
  - Possess strong communication and interpersonal skills
  - Have ability to influence others
  - Seen as credible by peers and senior management
- Advocate the use of evidence based practice
- Adopt & model care management practices
- Recognize improvement
- Unit based

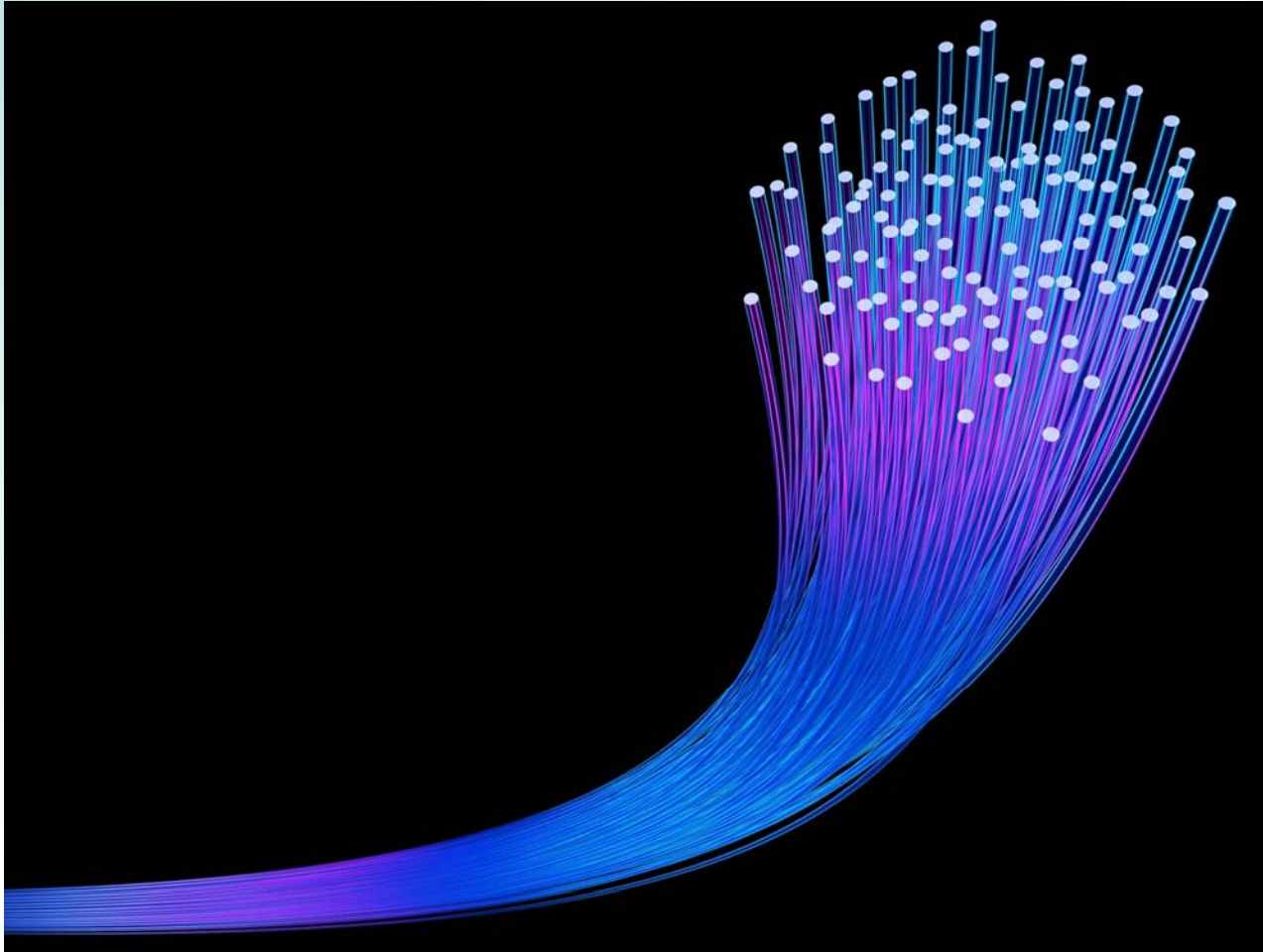
Wang MC, Hyun JK, Harrison M, Shortell SM, Fraser I. Redesigning health systems for quality: Lessons from emerging practices. *Jt. Comm J. Qual Patient Saf.* 2006; 32(11): 599-611

# Persistence

“There is no quick fix or easy overall remedy. Instead, it seems clear that quality improvement in health care, as in other sectors, requires a coordinated, deliberate, consistent, and sustained approach” (AHRQ, 2008)

<http://www.ahrq.gov/qual/nhqr08/Key.htm>

# Future NDNQI Tool



# Literature/Research Widget In Development

- Content will evolve over time
- To obtain information within NDNQI website, you will click on button in a matrix of “Problem by Unit Type”
- The content will be nursing factors that influence outcome on the unit type

# All Aboard!!

- Use the Reports education modules
- Give us feedback!
- Share your successes!





# Contact NDNQI for More Information

[www.nursingquality.org](http://www.nursingquality.org)

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