Leveraging Nursing Information Technology

To Improve NDNQI Outcomes and Achieve Meaningful Use Goals

January 2011

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Newport Hospital, Newport Rhode Island

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Newport Hospital

Services include:

- Medical
- Surgical
- Pediatrics
- Birthing Center
- ICU
- Emergency Department

- Adult Behavioral Health
- Vanderbilt Rehab (Acute/Ambulatory)
- Primary care practices

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Lifespan Rhode Island – 4 Affiliates

Bradley Hospital

60 bed Child Psychiatry Hospital

Newport Hospital

129 bed Community Hospital

Rhode Island Hospital

719 bed Academic Medical Center

The Miriam Hospital

247 bed Academic Medical Center

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Newport Hospital – Quick Stats

- 129 licensed beds
- 31,193 ER visits; 10,063 surgeries
- Total discharges 5802
  - Approx. 15-20% are Observation patients
- 30,881 adjusted inpatient days
- Average LOS 5.09

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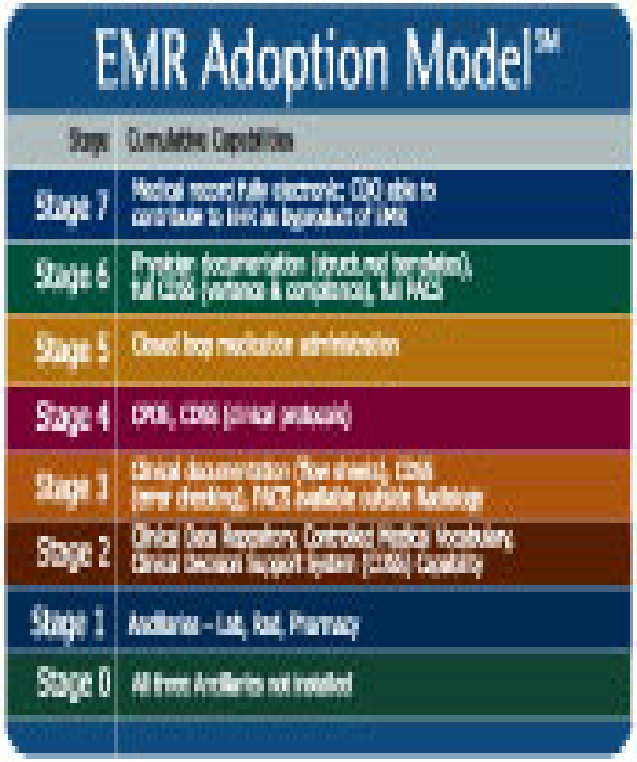
Professional Affiliations

HIMSS Analytics



Stage 6 - 2009

Re-designated 2010

NDNQI®

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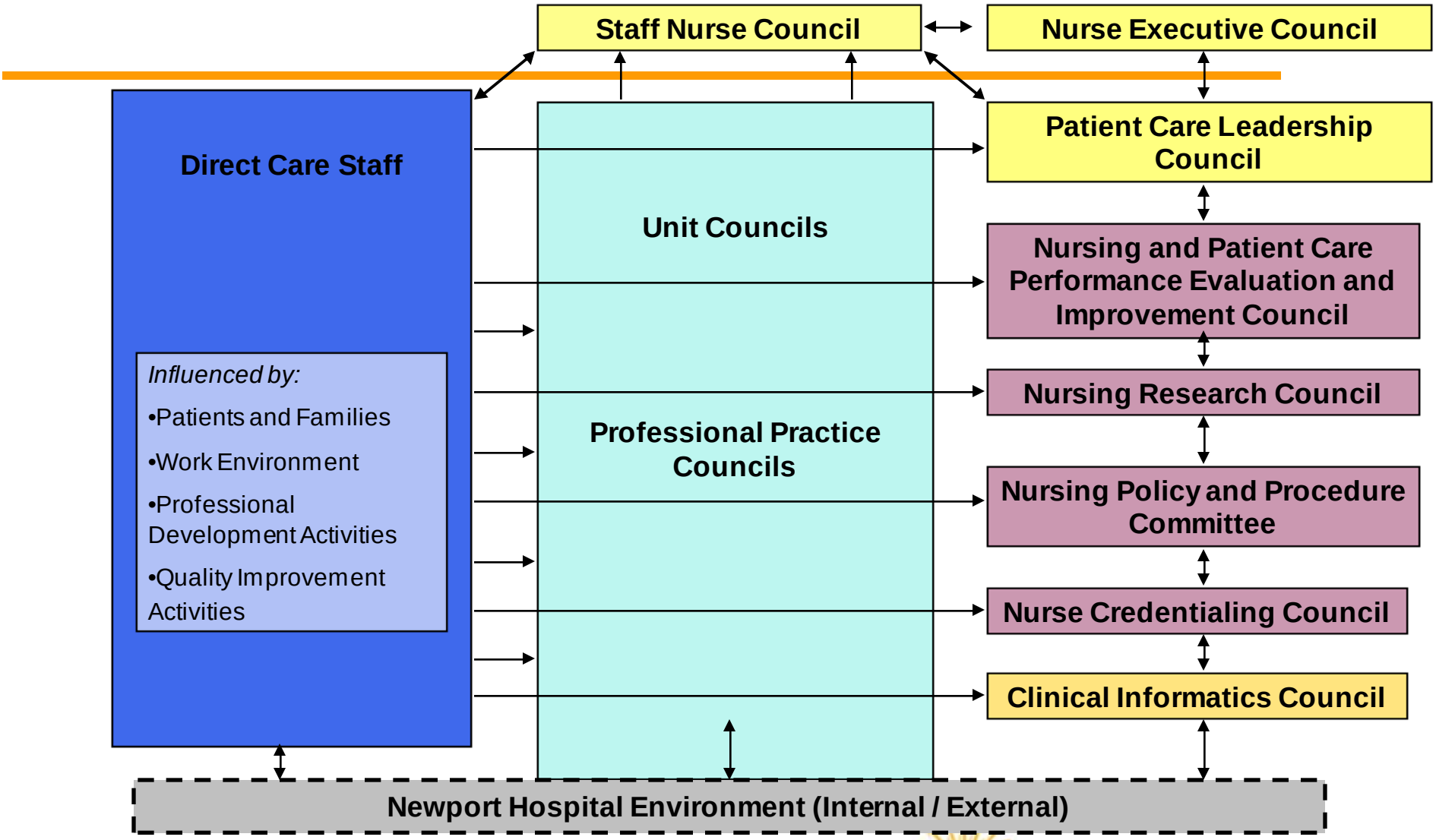
Newport Hospital Nursing Division Structure and Shared Governance Model



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Objectives

- 1) Discuss challenges and success factors involved in meeting meaningful use and NDNQI data requirement.

- 2) Demonstrate Electronic Health Record implementation strategies that meet ARRA and NDNQI.

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Nursing Informatics

Data Information Knowledge

These are the Key Contributors to meet Meaningful Use and NDNQI goals/outcomes

No Matter What Vendor is Engaged,
Nursing has the Experience and Knowledge to Not Only Capture Data but also To Make It Fit Into the Quality Nursing Care Process of Today

IS should be a support not the driver of patient care

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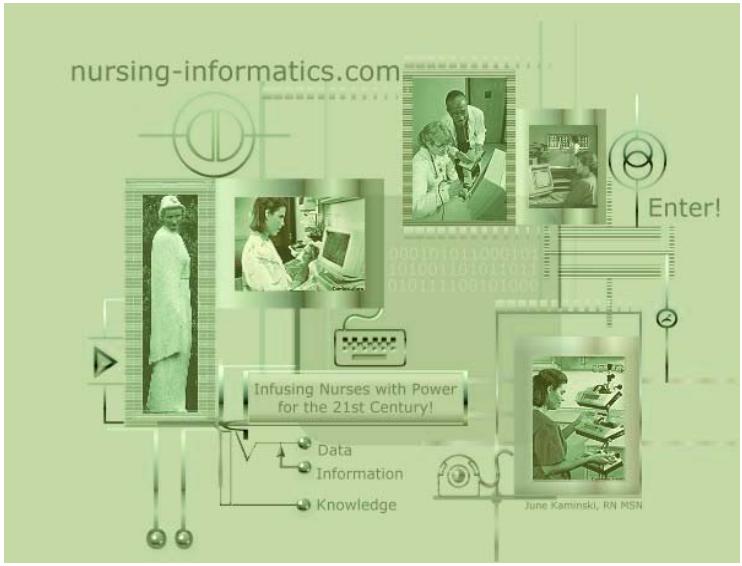
Nursing Informatics - Infusing Nursing with the Power of the 21st Century



Employs:

- Nursing Science
- Cognitive Science
- Information Science
- Computer Science
- All of the above are necessary to meet the challenges of Meaningful Use and NDNQI Outcomes reporting

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National Health Policy Goals

These have been Nursing Profession Goals for Years

- Improve quality, safety, efficiency and decrease disparities
- Engage patients and families
- Improve Care Coordination
- Improve population and public health
- Ensure adequate privacy and security protections for PHI

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ARRA - Meaningful Use

Federal government has established standards for the electronic medical record

Stage I (2011) – focus is on data capture

Stage II (2013) – focus will be on EHR has been integrated into transformed processes and used in HIE
(HIE=Health Information Exchange)

Stage III (2015) – focus shifts to improved outcomes with new care processes enabled by the EHR

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Three components of *Meaningful Use:*

1) Use of certified EHR in a meaningful manner (ex: VTE prevention)

2) Use of certified EHR technology for electronic exchange of health information to improve quality of health care

3) Use of certified EHR technology to submit clinical quality measures and other such measures selected by CMS

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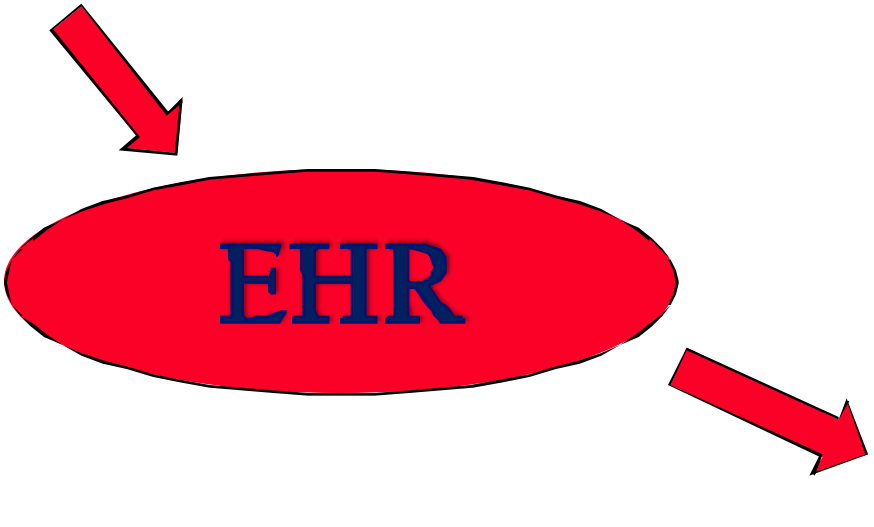
Reporting Quality Measures From EHR

eMeasure

Reporting quality measures from EHRs

HL7 Health Quality Measures Format

[http://www.hl7.org/v3ballot/html



HL7 CDA R2 Quality Reporting Document Architecture

[http://www.hl7.org/documentcenter/

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Health Level Seven International

Health Level Seven International (HL7) is the global authority on **standards for interoperability of health information technology** with members in over 55 countries.

The standards focus on facilitating the interchange of data to support clinical practice both within and across institutions, example areas covered by HL7 are orders, test results, clinical observations.

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Meaningful Use

- Translating requirements to your local environments, no clear roadmaps – What to do?
- Federal government has established standards for the Electronic Health Record – Why?
- Health Information Exchanges (HIE) are models These exchanges will be key to moving connectivity forward in your state.

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State Level Health Information Exchange » Participating States Contact Information - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://slhie.org/contact/participating-states-contact-information/

Go Links Contribute Edit in Contribute Post to Blog

STATE HEALTH INFORMATION EXCHANGE
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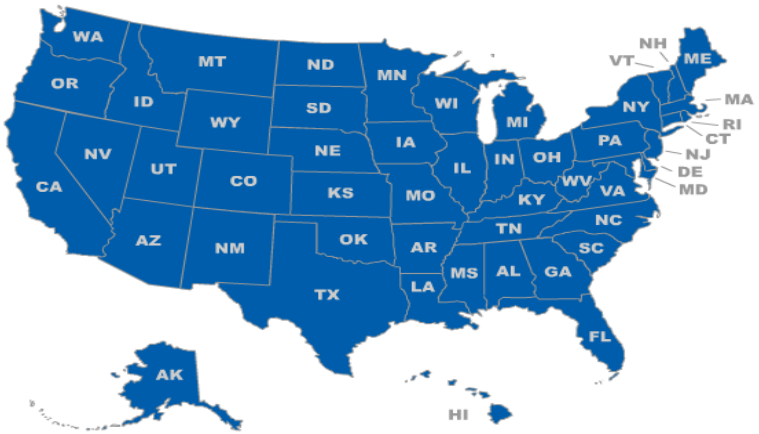

Rhode Island

State HIT Coordinator
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Providence
02908-5097
david.gifford@health.ri.gov

Statewide HIE Coordinating Entity
Rhode Island Quality Institute
http://www.riqi.org

Primary Contact
Laura Adams
President and CEO
275 Promenade Street, Ste. 225
Providence

Participating Territories: Guam, Puerto Rico, Northern Marianas Islands, American Samoa, Virgin Islands

Done Internet

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Information Systems in Use at Newport

Seiman's Invision

- POM (MD orders)
- MAK(Med admin)
- Clinical Documentation

GE CPM

- Surgical Services

Hill Rom

- Birthing Center

Medhost

- ED

Quadramed Acuity

- Transparent Classification

One Staff

- Scheduling

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Scope of EHR
Clinical Documentation

- Order Entry * ^
- Admission HX/Immunization HX/Allergies * ^
- Home Medications and Reconciliation *
- Admission & "Shift Assessment" * ^
- Patient/Family Education *
- Discharge Continuity of Care Form & CCD. *
- Closed Loop Medication Administration *
- ADL's/ Vital Signs *
- Clinical Decision Support Systems (CDSS)

* Meaningful Use Data Capture

^ NDNQI Data Capture

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Key Elements in the EHR

- **Incorporate Nursing's Unique Body of Knowledge**
  - Specialty specific doc. e.g. Psych, Pedi
- **Use Standardized Coded Language**
  - Newport Hospital uses CCC
- **Incorporate Evidence Based Practice**
  - Braden, Hendrich, RASS, CAGE,
- **Integrated Views of Patient Data**
  - Enhanced communication with all professionals
  - Analyze/aggregate data for quality reporting

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Nursing Language

Clinical Care Classification System™
www.sabacare.com

- Interdisciplinary
- Designed to tie with ICNP & SNOMED
- Recognized by CMS
- Supported by many software vendors
- Care Plan is classified by 21 Care Components which provide the standardized framework that links the CCC terminologies to each other and enables them to be mapped to other health-related classification systems.

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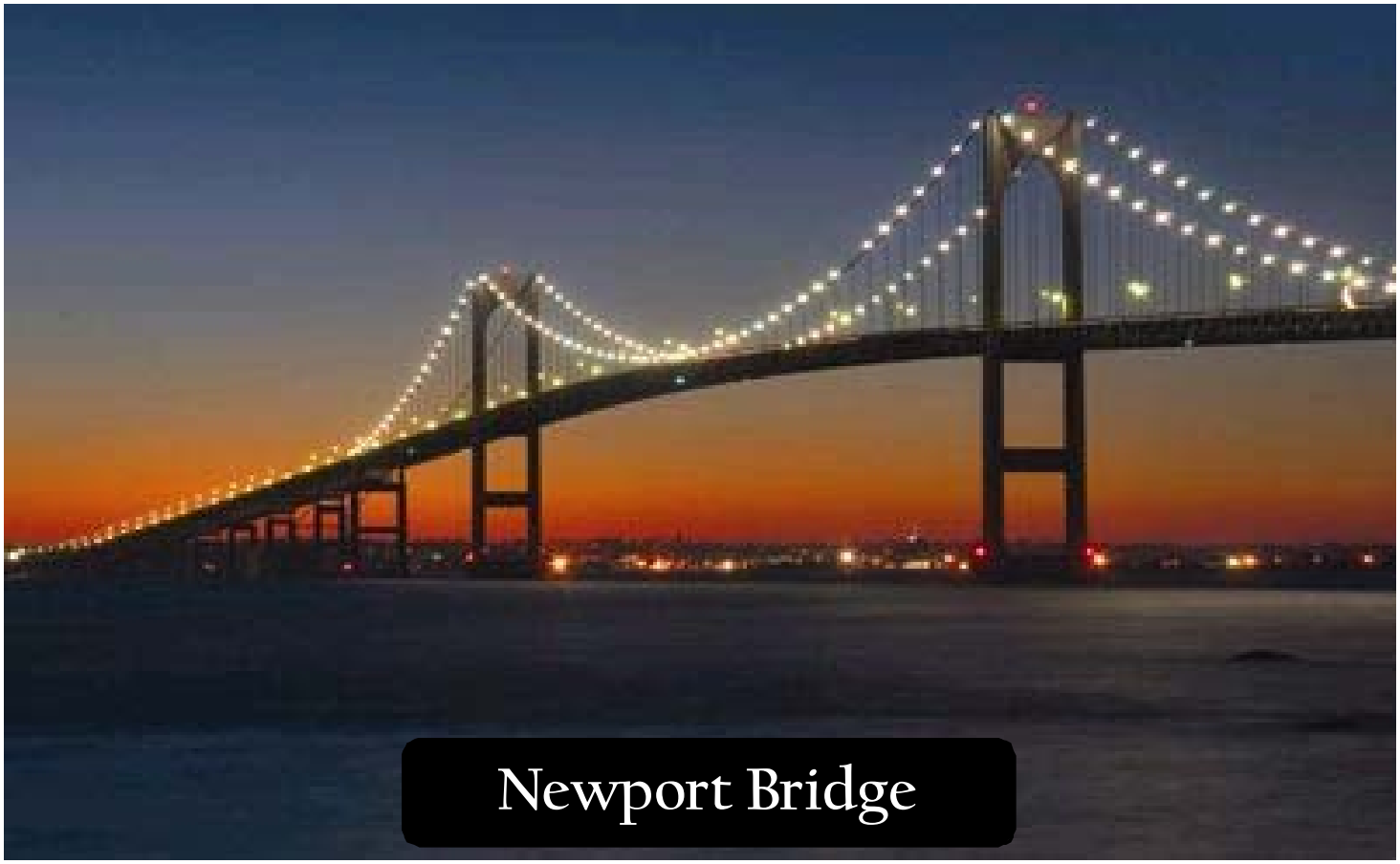
Bridging to Reality



Newport Bridge

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Meaningful Use Measures

- Generate lists of patients by specific conditions to use for quality improvement e.g. HAPU
- Report hospital quality measures to CMS or States
- Record smoking status, age 13 or older
- Implement clinical decision support rule
- Identify patient specific education

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Pressure Ulcers

- NDNQI Outcomes since 1st quarter 2010
- ↑ Pressure Ulcer Prevention ↓ Hospital Acquired PU
- 1) Due to standardized documentation and cueing
- 2) Skin Team is a resource & objective data collectors
- 3) Wound Care Center receives an "auto print" of all at risk patients
- 4) Flow sheet type EHR view easily retrieved

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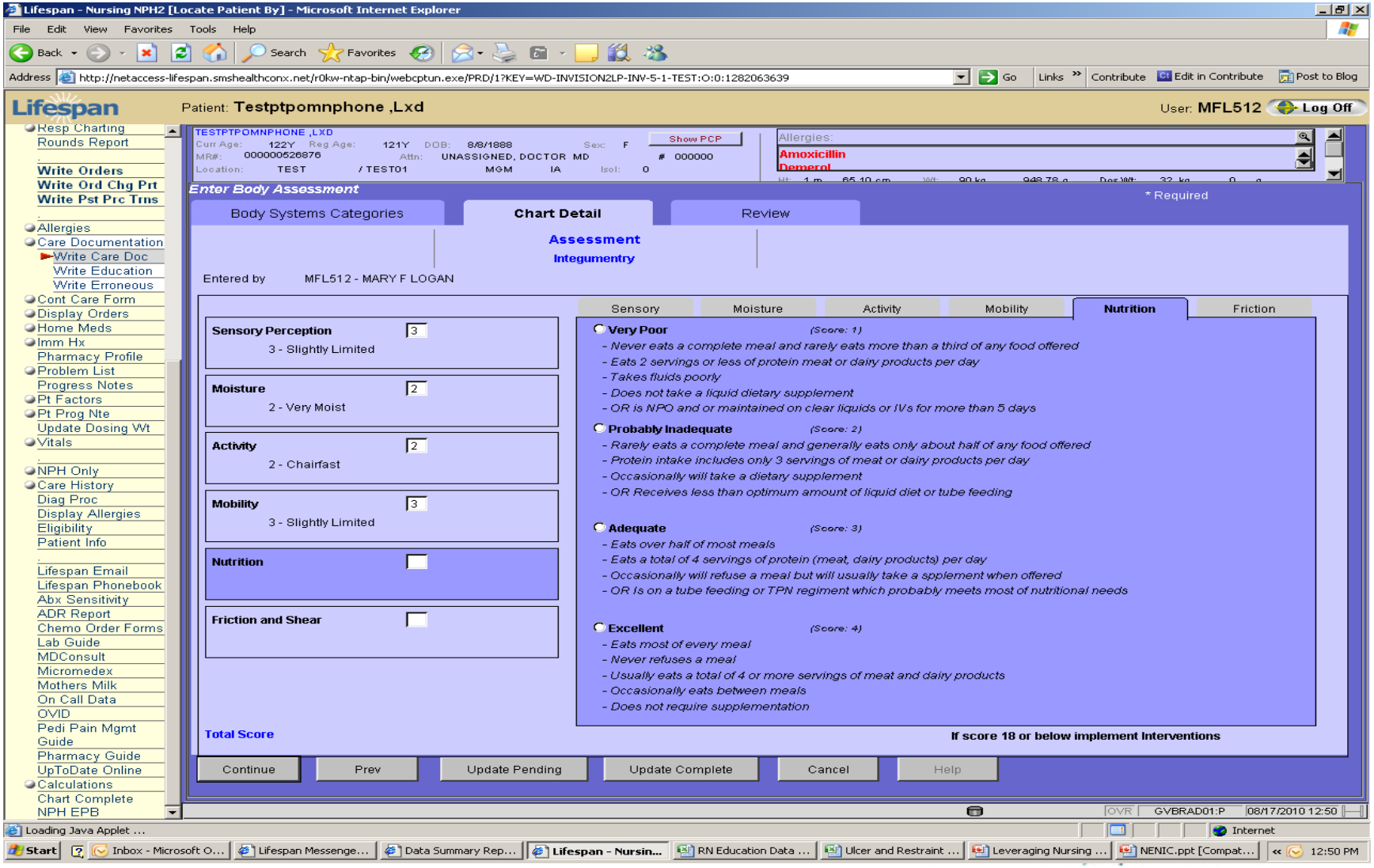
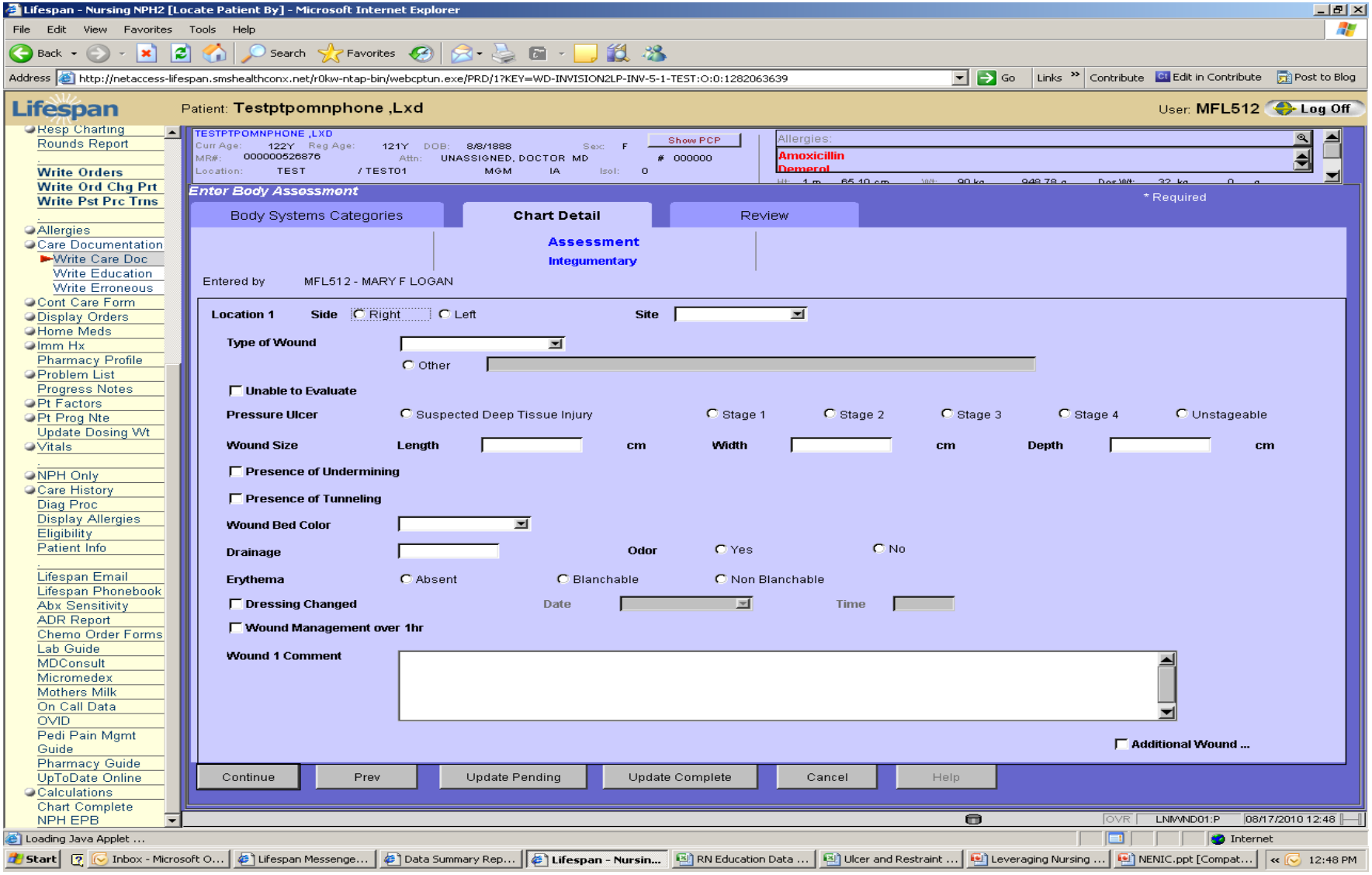
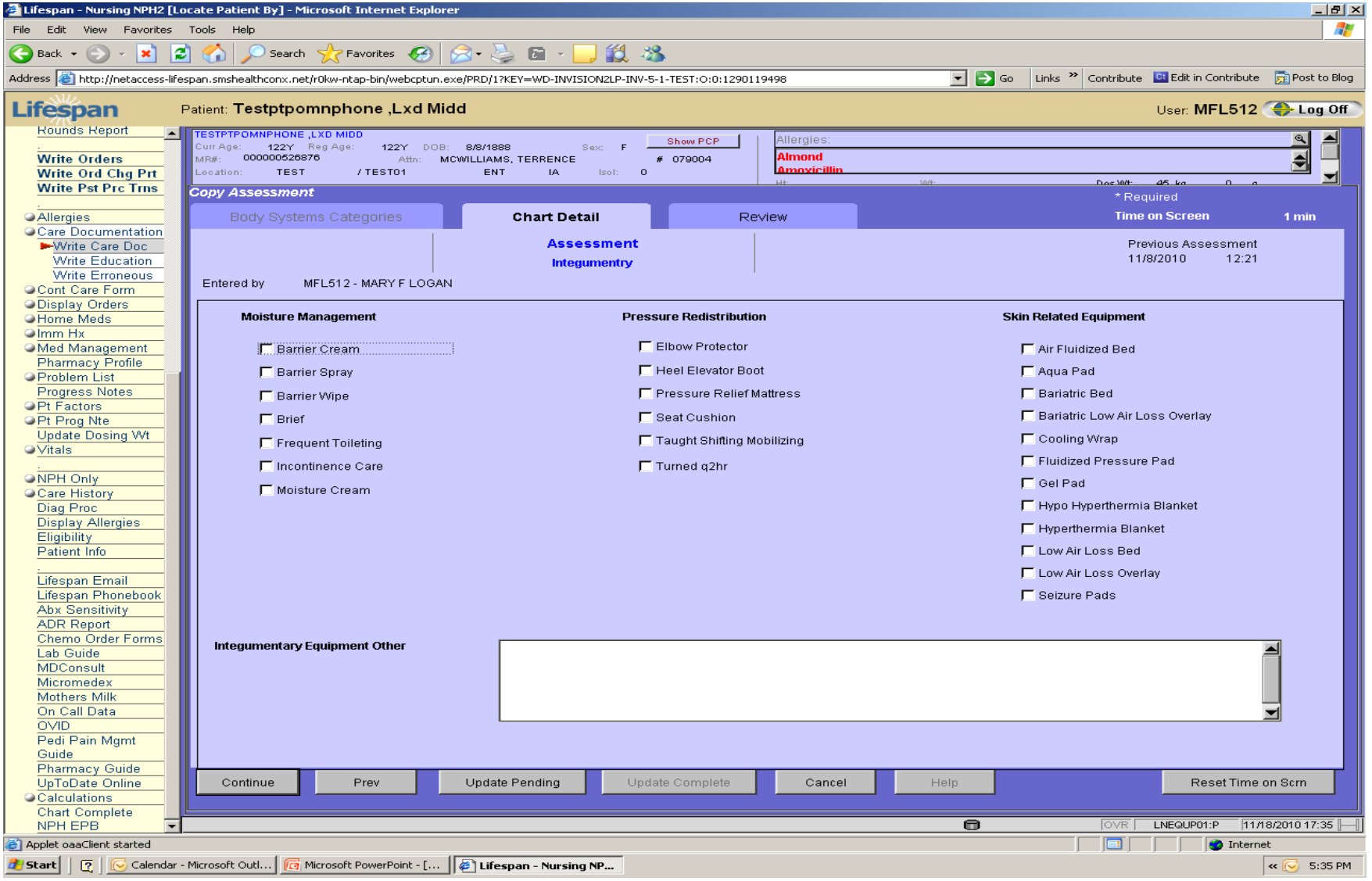
Embedded Evidence Based Practice Example: Braden Scale

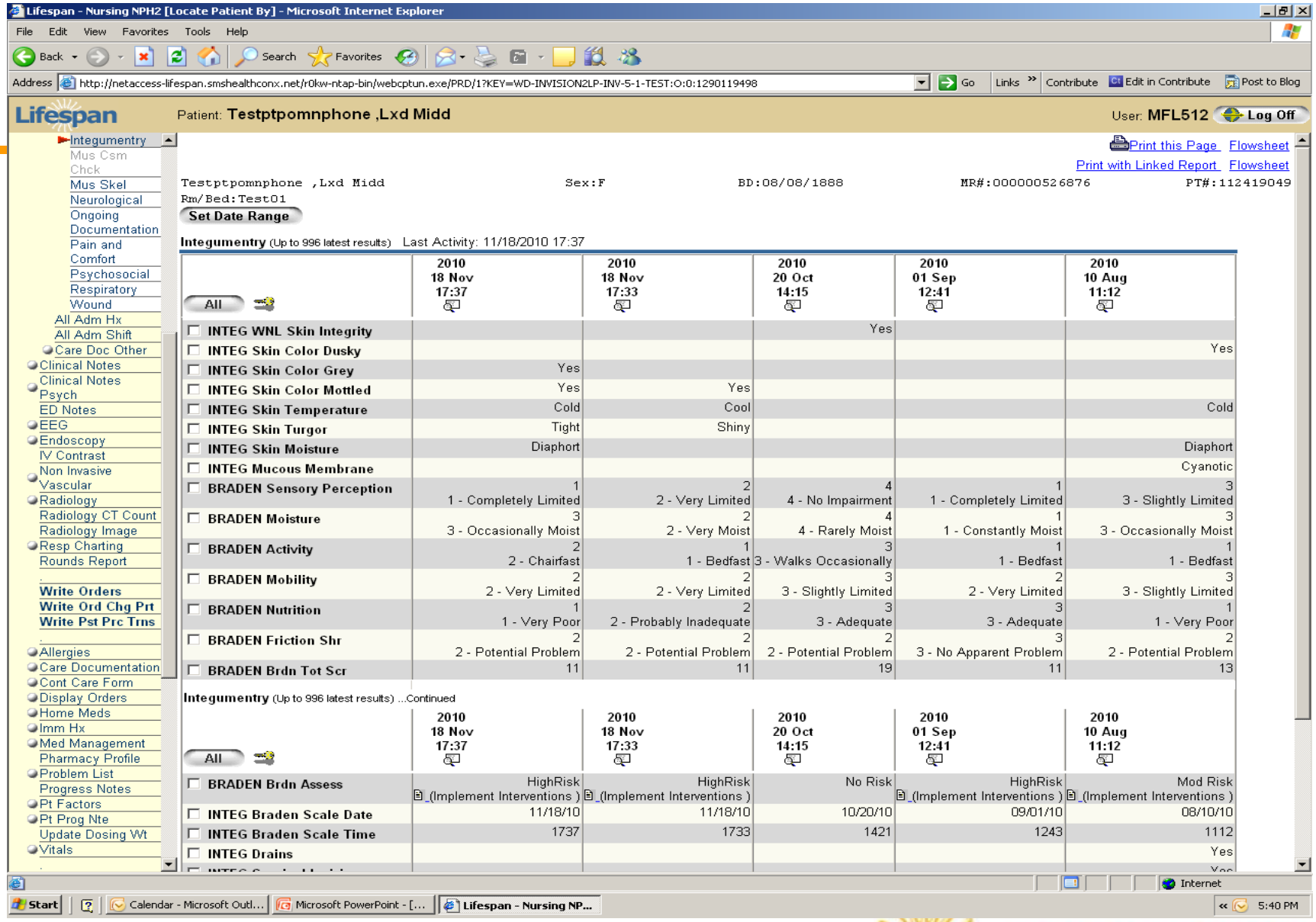


Pressure Ulcer Documentation



Skin Related Equipment





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Falls-NDNQI Outcome Improvement

- Total Falls/1000 days has decreased every quarter for the past 4 quarters
- How did we accomplish the decrease?

- 1) Restructuring the interdisciplinary team
- 2) Clinical presence of CNS
- 3) Research and eval fall prevention equipment
- 4) Improved documentation for trending

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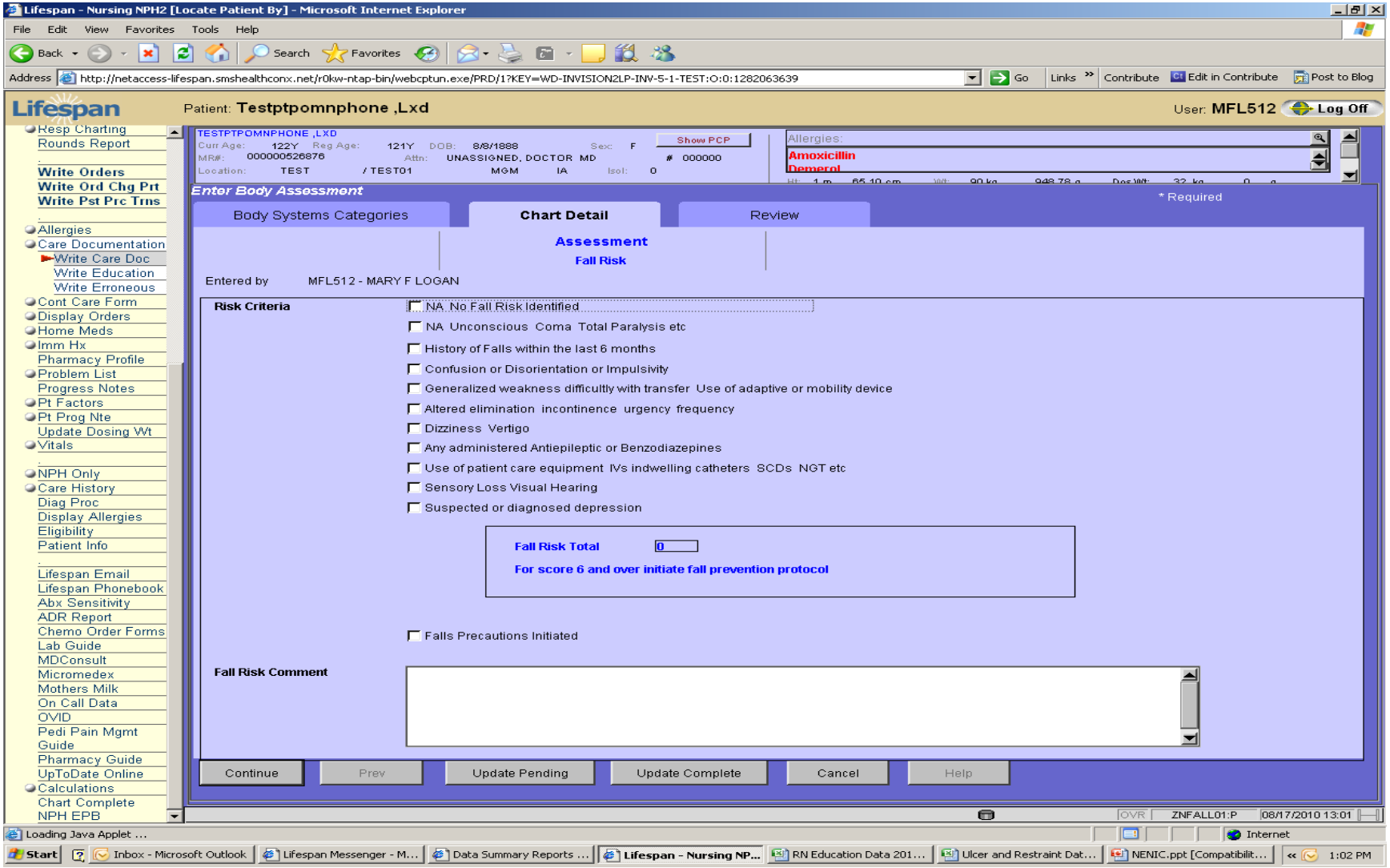
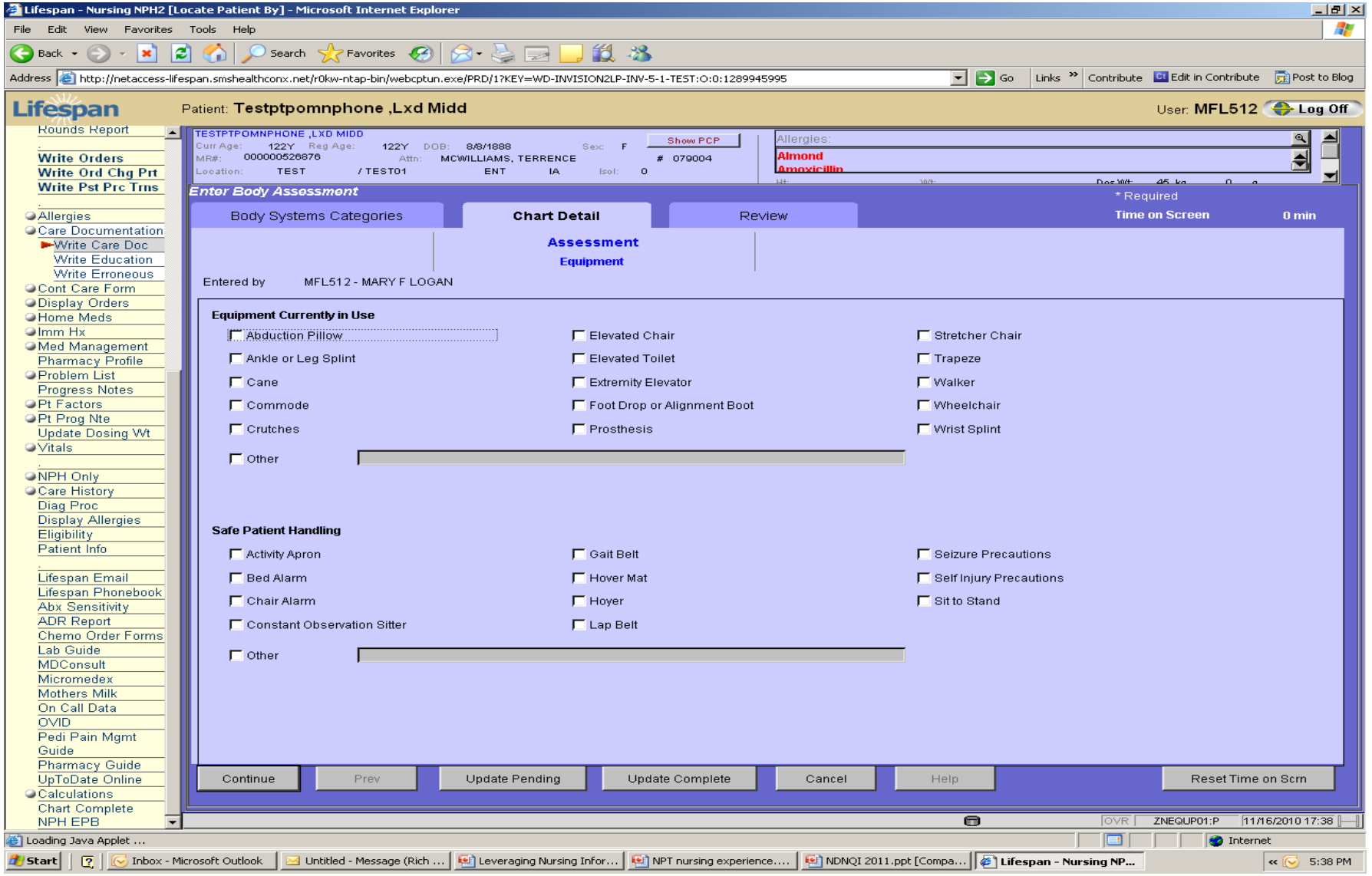
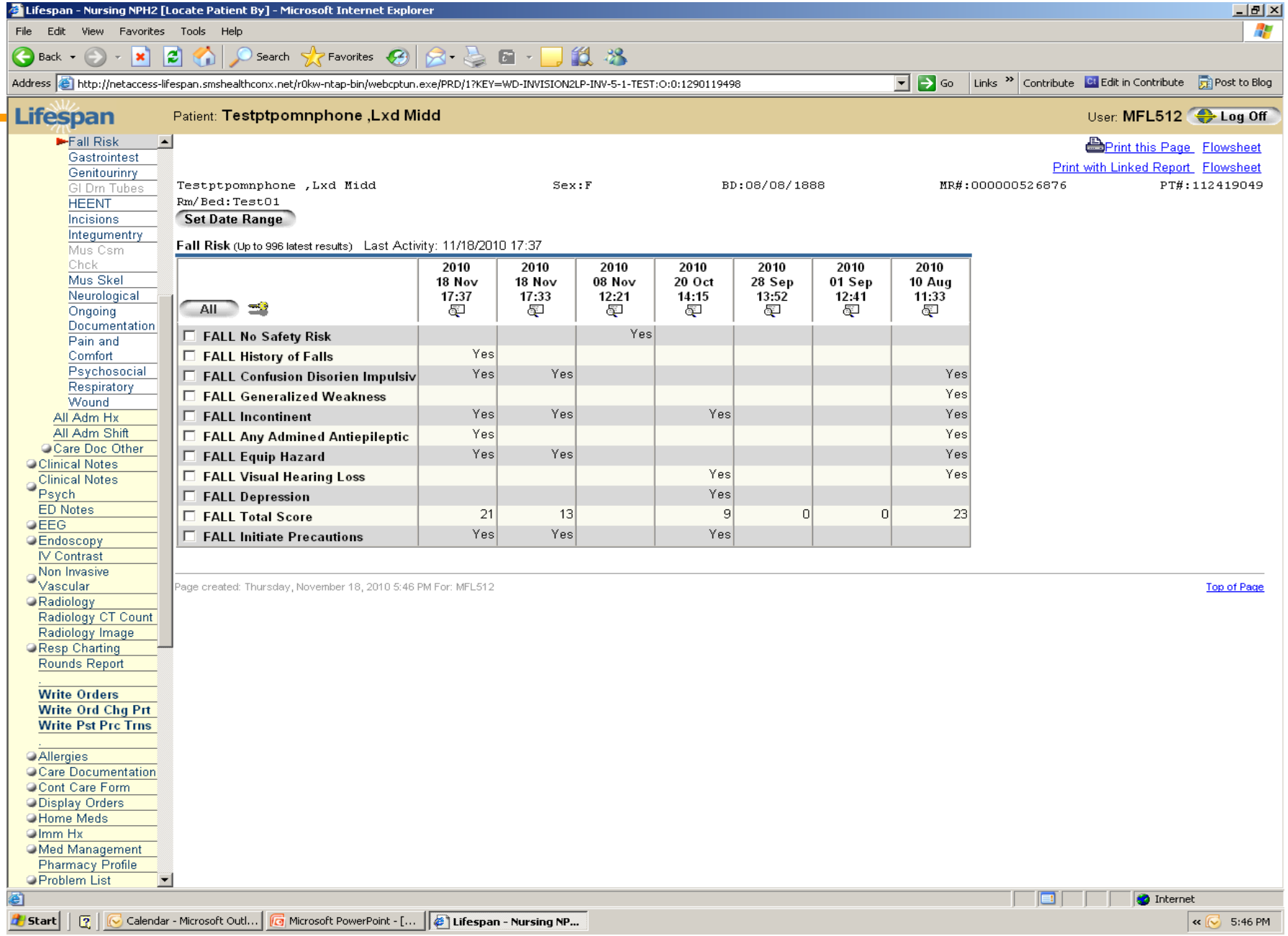
Modified Hendrich II



Safe Patient Handling

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Ongoing Documentation
Pain and Comfort
Psychosocial
Respiratory
Wound
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Care Doc Other
Clinical Notes
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ED Notes
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Care Documentation
Cont Care Form
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Problem List
Print this Page Flowsheet
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Testptpomnphone ,Lxd Midd Sex:F BD:08/08/1888 MR#:000000526876 PT#:112419049
Rm/Bed:Test01
Set Date Range
Fall Risk (Up to 996 latest results) Last Activity: 11/18/2010 17:37
All
2010 18 Nov 17:37
2010 18 Nov 17:33
2010 08 Nov 12:21
2010 20 Oct 14:15
2010 28 Sep 13:52
2010 01 Sep 12:41
2010 10 Aug 11:33
FALL No Safety Risk Yes
FALL History of Falls Yes
FALL Confusion Disorien Impulsiv Yes Yes Yes
FALL Generalized Weakness Yes
FALL Incontinent Yes Yes Yes Yes
FALL Any Admined Antiepileptic Yes Yes
FALL Equip Hazard Yes Yes Yes Yes
FALL Visual Hearing Loss Yes Yes
FALL Depression Yes
FALL Total Score 21 13 9 0 0 23
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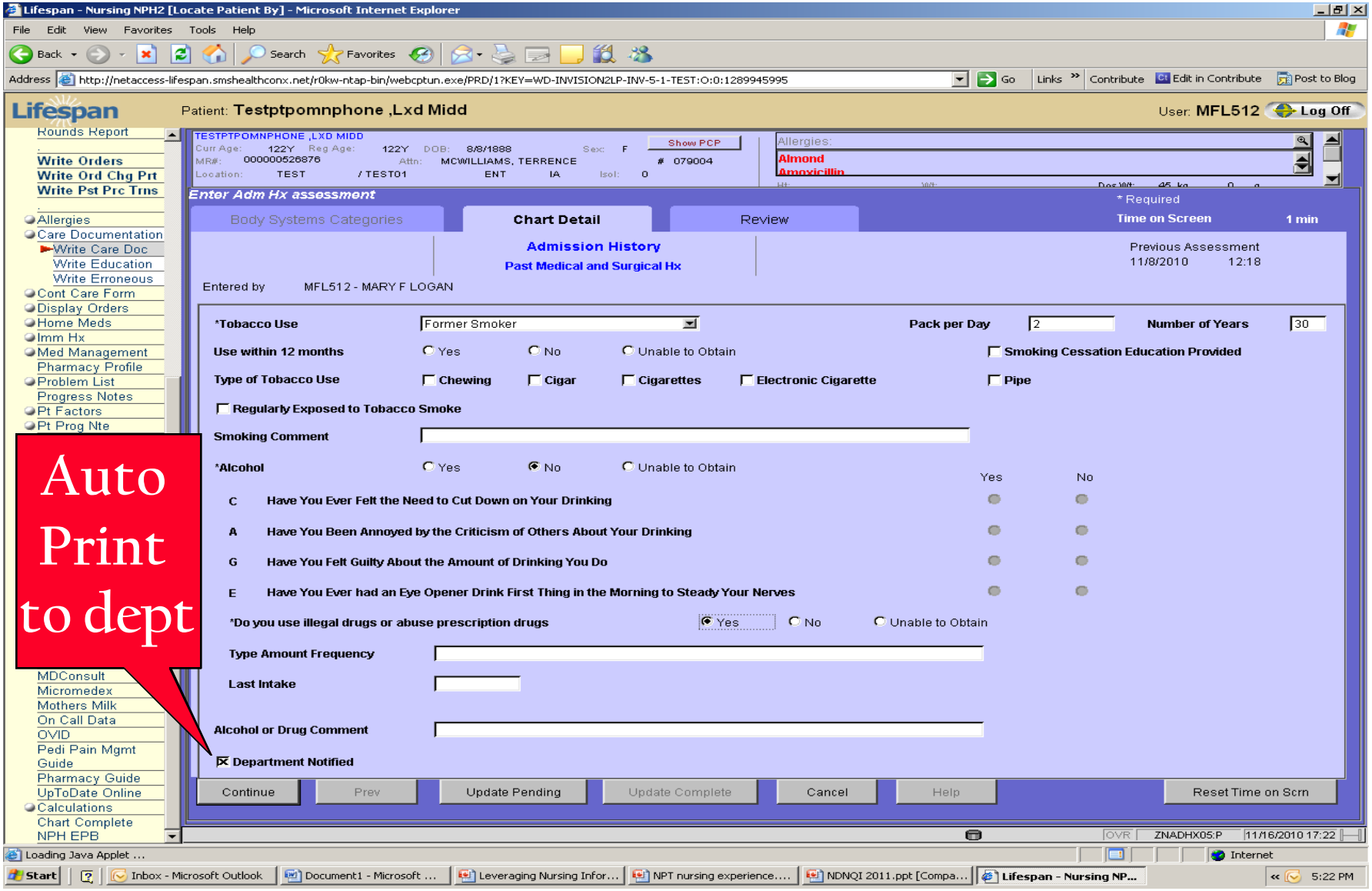
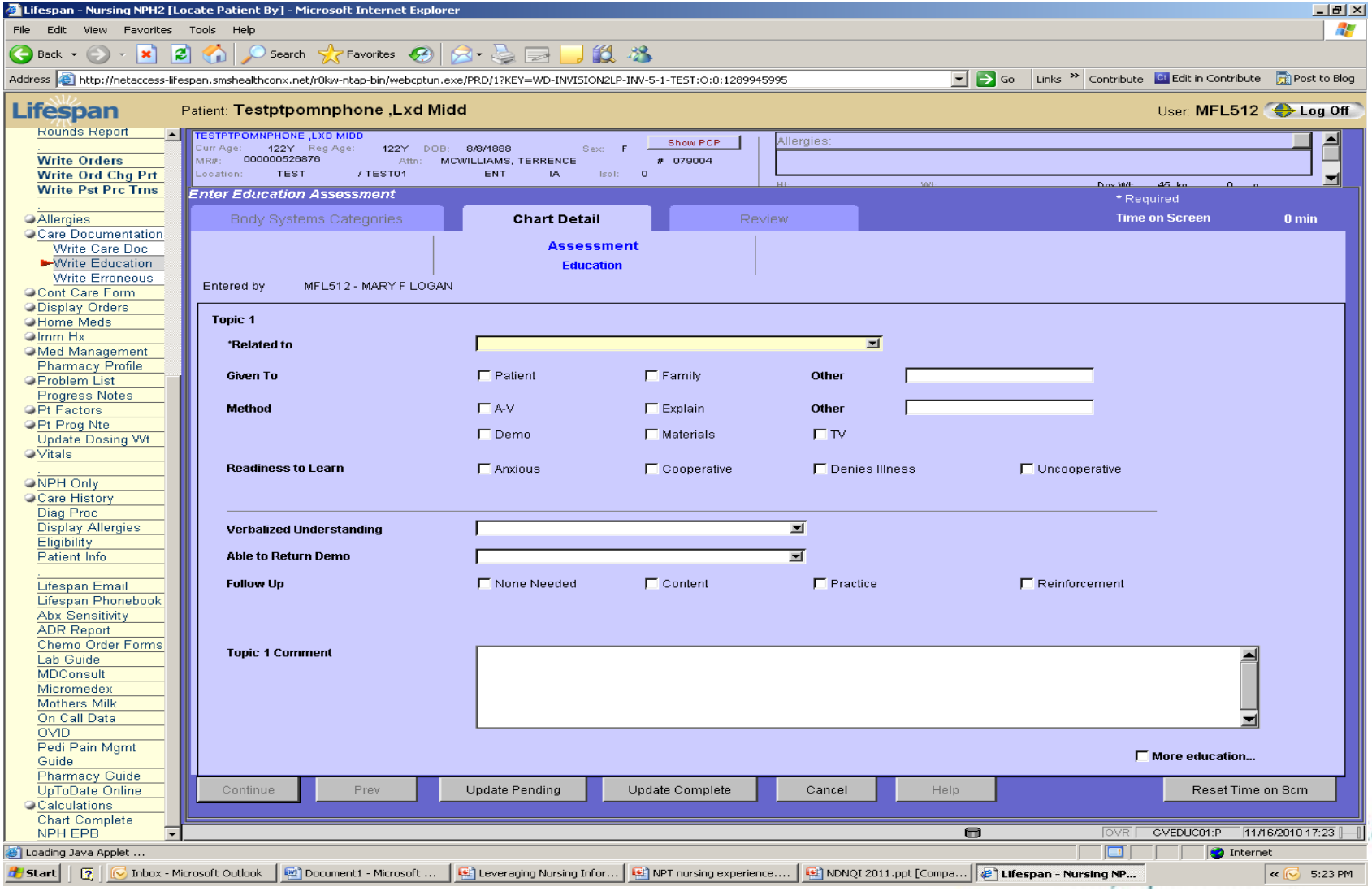
Smoking and CAGE



Patient Education



Impact of Technology on Nurse Activities JONA October 2010

- "Three computer related tasks – electronic charting, information retrieval and navigation account for 19% of time…"
  - "…Nurses spent approximately the same amount of time in the patient room."
- "Simple things such as log on times, computer availability and tech support can undermine an otherwise superior solution"
  - "…Use of personal notes, that is "paper brain", did not change."

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IOM and RWJ Work 2010

- The Future of Nursing: Leading Change, Advancing Health
- 2008-2010
- Action Oriented Blueprint for the Future of Nursing

- Technology Drill Down
  - ID Potential Tech Solutions to Improve Nurse Work Environment on Medical Surgical Units
  - 2 day drill down
  - www.rwjf.org

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Success Factors

- Engaging End Users from the outset of any Informatics Project engenders ownership
- Creating a Nursing Informatics Council – CLIC
- Integrating Evidence Based Practice focuses discussions
- Document your progress
- Be prepared for anything
- Communicate, Communicate, Communicate

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Thank You

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