Implementation of an Evidenced Based Nursing Practice Guideline on Physical Restraints

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Objectives

- Describe a process for implementing evidence based practice guideline on restraints
- Identify metrics for monitoring restraint utilization

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- Located in Madison, Wisconsin
- Academic medical center and health system for the University of Wisconsin
- Includes:
  - UW Hospital
    - 536 licensed beds
  - American Family Children's Hospital
  - UW Paul P. Carbone Comprehensive Cancer Center

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- **UW Hospital and Clinics** (FY10)

Licensed Beds	536
ICU Beds-Peds & Adult	83
Inpatient admissions	25,901
Emergency Dept Visits	42,534
Clinic visits	577,729
Employees	7468

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Awards and Recognition

- January 2010-HIMSS Analytics Stage 7 Award
- May 2009-Magnet hospital designation by the American Nurses Credentialing Center
- January 2009- Named #1 academic medical center nationwide for outstanding nursing quality by American Nurses

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UWHC and NDNQI

- Member of NDNQI since 2003
- UWHC has participated in RN Satisfaction Survey for 8 years (2003-2010)
- Published monograph in ANA's publication "Transforming Nursing Data into Quality Care: Profiles of Quality Improvement in US Healthcare Facilities"
- Previous poster and podium presentations

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Definition

- Restraint is any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his/her arms, legs, body or head freely.

Restraint Program Goals for Fiscal Year 2010

- Roll Out Restraint Guideline
- Implement New Restraint Policy
- Change Health Link build
- Reduce restraint days
- Increase restraint documentation compliance

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Nursing Practice Guidelines at UWHC

- Nursing Practice Guidelines Committee established in 2006
  - Subcommittee of Nursing Practice Council
  - Developed definition of terms
  - Developed development process
  - Developed implementation process
  - Endorse priority topics
  - Recommend guidelines to Nursing Practice Council
  - 18 Nursing Practice Guidelines

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Guideline Process

Practice topics chosen (4-5/year)

Lit review → evidence synthesized

Workgroup develops new guideline or adopts external guideline

Nursing Practice Guideline Committee reviews and makes recommendations

Practice Council approves

Implementation

Evaluation

Guidelines updated every 3 years



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Development & Approval Flow Diagram

Nursing Service Practice Guidelines

Step 1. Practice Council identifies priorities for development of Nursing Service Nursing Practice Guidelines (NPGs)

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Step 2. NPG Committee creates workgroups for each nursing service NPG to be developed. Each workgroup would include membership from NPG committee and content experts for the NPG topic to be developed.

▼

Step 3. For each NPG to be developed:
Review external literature for existing guidelines
Review existing internal documents related to the topic

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Development & Approval Flow Diagram

FOR EXTERNAL GUIDELINES

Step 4. If external guidelines exist, assess the relevance and quality of the guidelines for potential adoption. Determine whether to propose adoption at UWHC .

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Step 5. Formulate at-a-glance version according to UWHC format

▼

Step 6. Proceed to Step 11

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Development & Approval Flow Diagram

FOR INTERNAL GUIDELINES

Step 7. If no external guidelines exist suitable for adoption, proceed with development of internal guidelines

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Step 8. Conduct search of literature with assistance of hospital librarian

▼

Step 9. Evaluate strength of research base supporting practice related to the topic

▼

Step 10. Formulate guideline and at-a-glance version according to UWHC format

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Development & Approval Flow Diagram

Step 11. Bring draft to NPG Committee for review & recommendation

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Step 12. NPG Committee refers to Practice Council for approval

▼

Step 13. Communication of new guideline to nursing staff

▼

Step 14. Guidelines reviewed every 3 years for potential updates & re-approval

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Restraint and Personal Safety Attendant

- Patients with the Actual or Potential Need for Restraint or Personal Safety Attendant Nursing Practice Guideline
- External Guideline Adopted
  - "Changing the Practice of Physical Restraint Use in Acute Care" from the University of Iowa College of Nursing (Park, M., Tang, J. H., & Ledford, L., 2005)
  - Critical Care Considerations Addendum
  - Pediatric Nursing Considerations
  - Personal Safety Attendant Tools

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Nursing Restraint and Patient Safety Attendant (PSA) Guideline

- Unknown benefits of restraints
- Use of physical restraints is associated with numerous risks
  - increase risk for falls with injury
  - death
  - increase confusion
  - adverse effects of immobilation
  - emotional distress
  - violation of patient rights
  - risk of being sued for poor standard of care

Nursing Restraint and Patient Safety Attendant (PSA) Guideline

- The standard of care is not to use restraints
- Strive to promote restraint-free care while maintaining patient safety
- Use physical restraints only when positive, nonrestrictive procedures have failed to produce the desired behavioral change and remove them as soon as possible

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Implementation Strategies

Evidence on Implementation Strategies		
generally effective	**sometimes effective**	**little or no effect**
■ Educational outreach visits	■ Audit and feedback	■ Educational materials
■ Reminders	■ Local opinion leaders	■ Didactic educational meetings
■ Interactive educational meetings	■ Local consensus processes	
■ Multifaceted intervention including two or more of:	■ Patient mediated interventions	
• Audit and feedback		
• Reminders		
• Local consensus processes		
• Marketing		

Taken from Registered Nurses Association of Ontario (2002). Toolkit: Implementation of Clinical Practice Guidelines. Toronto, Canada: Registered Nurses Association of Ontario.

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Implementation Plan

- Typical four hour education
  - Offered three times
  - Videotaped session available on internet
- Meet with unit leadership
  - Review guideline
  - Review data
  - Develop plan to become in line with guideline
  - Develop short term and long term goals with staff
  - Monitor progress with data

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Restraint Guideline Roll Out

- Education March 2010
- Began pilot roll out January 2010 with Trauma and Life Support Center (TLC)
- Met with Leadership & Unit Councils on:
  - Neurosurgery, Neuro ICU, General Medicine & Geriatrics, Family Practice & Forensics
- Developed content for guidance on less restrictive alternatives and least to most restrictive restraint types

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Restraint Days

- One Day Prevalence -
  - NDNQI
  - Includes limb and vest
- Health Link Data
  - All documented restraints
  - All restraint types
- Percent of patients in restraints
- Share information via Focus on Quality Newsletter, Nursing Quality Council, Safety Resource Nurses

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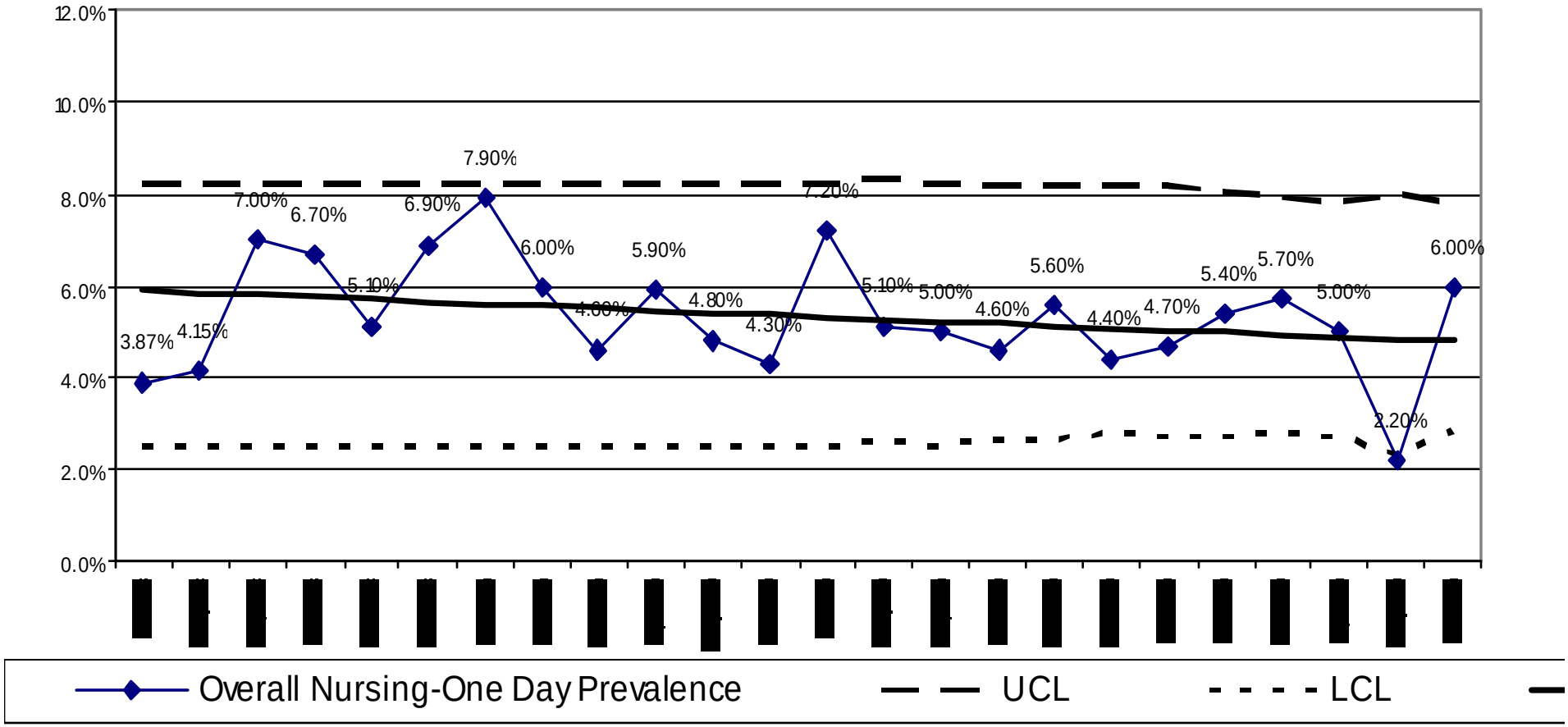
Percent of Patients with Physical Restraint



Restraint Prevalence = Percent of patients with limb or vest restraint on day of prevalence study. Restraint prevalence data based upon one-day prevalence study (conducted with pressure ulcer audit).

Upper Control Limit (UCL) +2 Standard deviations from mean

Lower Control Limit (LCL) -2 Standard deviations from mean

Mean based upon 24 data points

Percent of Patients with Physical Restraint

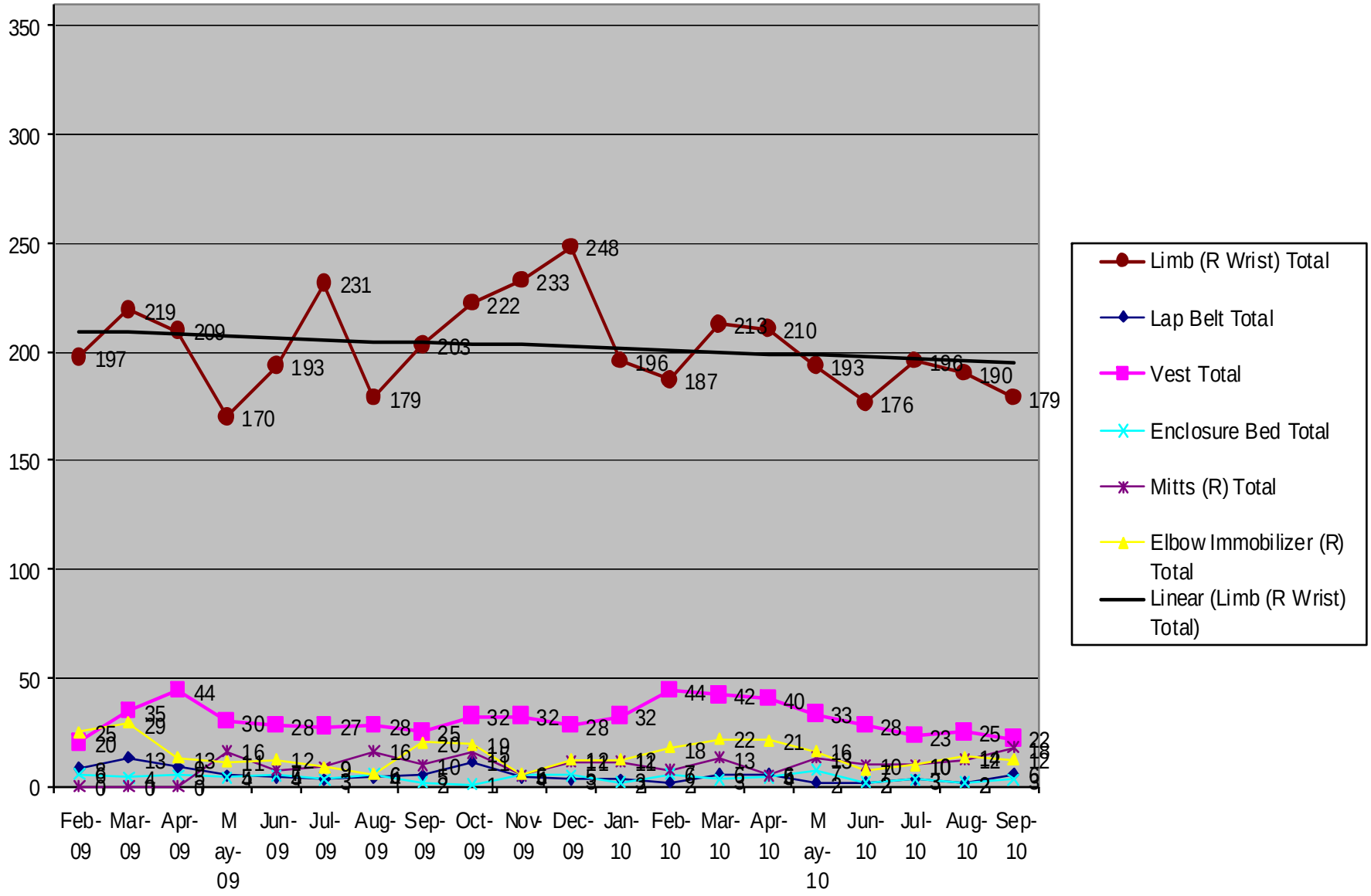
Restraint Prevalence = Percent of patients with limb or vest restraint on day of prevalence study.
Note: Restraint prevalence data based upon one-day prevalence study (conducted with pressure ulcer audit).

NDNQI National Comparative Benchmark - Academic Medical Centers - Benchmark updated 7/6/10

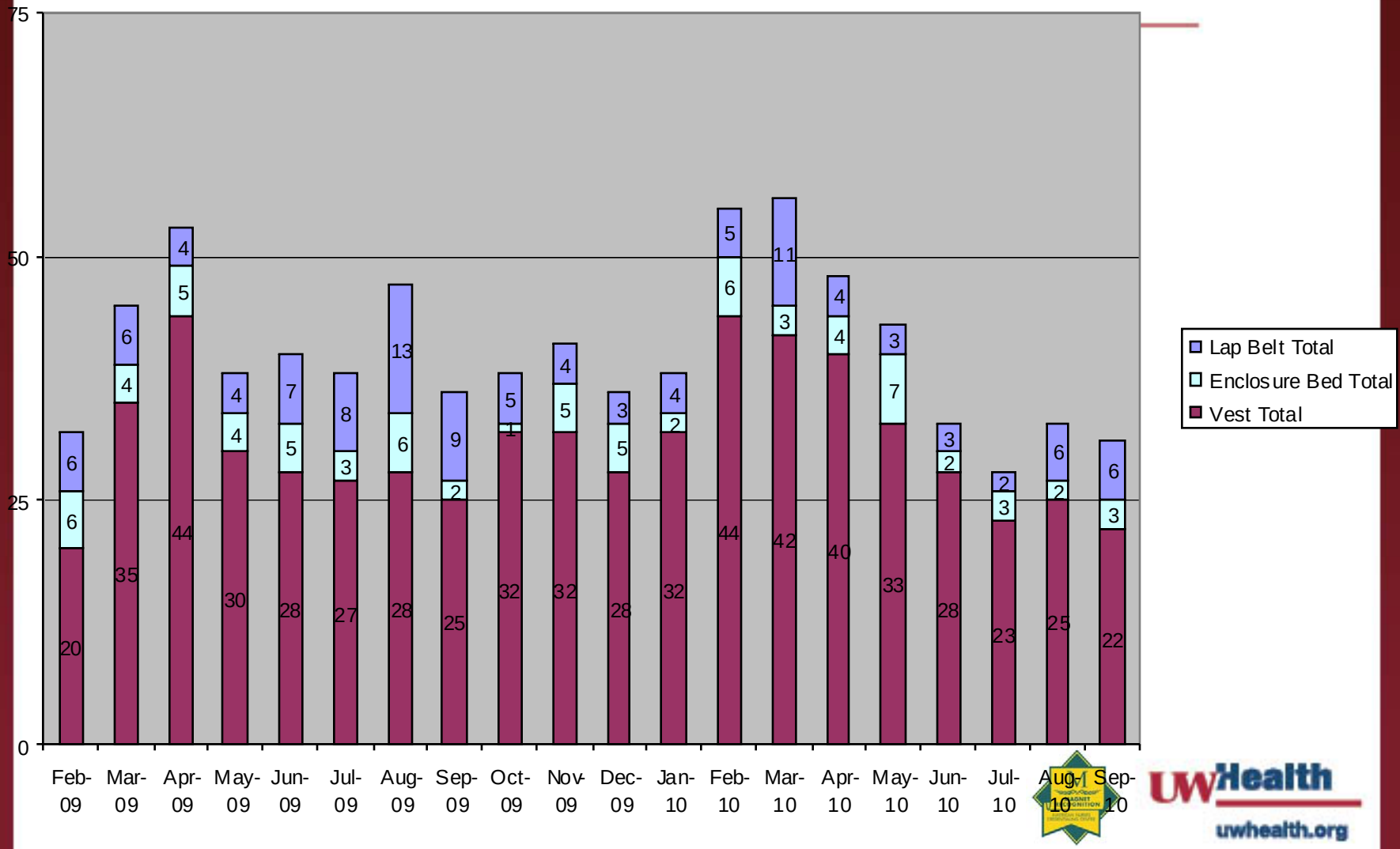
NDNQI Division	Cost Center	Unit	NDNQI Benchmark - Mean Apr 08 - Mar 10	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jun-10 Total # Restraint Pt's
Critical Care	9335			62.5%	47.8%	30.0%	44.4%	40.9%	40.9%	35.0%	45.5%	41.2%	42.1%	10.5%	56.3%	9
	9336			0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	28.6%	0.0%	0.0%	0.0%	25.0%	1
	9339			46.7%	18.8%	33.3%	25.0%	37.5%	18.8%	31.3%	38.5%	58.3%	35.7%	20.0%	58.3%	7
	9359			40.0%	20.0%	0.0%	0.0%	33.3%	0.0%	0.0%	20.0%	33.3%	20.0%	0.0%	20.0%	1
Step Down	9352			7.7%	3.7%	3.8%	0.0%	10.7%	10.7%	3.6%	3.6%	3.4%	0.0%	3.4%	10.7%	3
	9357			0.0%	4.2%	5.0%	0.0%	5.3%	4.2%	0.0%	5.9%	10.5%	0.0%	0.0%	0.0%	0
Medical	9342			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	4.8%	4.3%	0.0%	0.0%	0.0%	0
	9349			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
	9358			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
	9368			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Surgical	9338			0.0%	0.0%	12.5%	14.3%	0.0%	3.8%	0.0%	0.0%	0.0%	4.8%	0.0%	0.0%	0
	9343			0.0%	8.7%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
	9354			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
	9361			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
	9365			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
	9366			4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Adult Rehab	9345			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Adult Psychiatric	9353			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	7.1%	0.0%	0.0%	0.0%	0.0%	0
Pediatric Med/Surg	9341			0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0
	9348			0.0%	0.0%	7.7%	6.7%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Pediatric Critical Care	9340			25.0%	9.1%	20.0%	17.6%	7.7%	0.0%	20.0%	5.9%	15.4%	33.3%	0.0%	8.3%	1
Other	9401			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
	9347			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Overall Nursing				7.2%	5.1%	5.0%	4.6%	5.6%	4.4%	4.7%	5.4%	5.7%	5.0%	2.2%	6.0%	
Total # Restraint Patients				30	20	20	18	22	19	19	23	22	18	8		22

*No NDNQI benchmark thus redline based upon unit mean from Jul 07 - Jun 09

Number of Restraint Types Documented in Health Link



Number of Restraint Types Documented in Health Link



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CB Numbers:	2200688	2200686	2200684	4006822	4008146		
	Vest Poly/Cotton X-Large #8080 $16.61	Vest Poly/Cotton Large #8080 $16.61	Vest Poly/Cotton Medium #8080 $16.61	Vest Poly/Cotton Small #8080 $16.61	Vest Poly/Cotton XX-Large #8380 $18.88 (Now $22.78)	Total Out, Nov, Dec 2008	Health Link Documentation Out, Nov, Dec 2008
AFCH P4						0	0
AFCH P5			1	2		3	0
B4/3						0	0
B4/4						0	0
B4/5	2	1				3	1
B4/6						0	0
B6/4		1	3		1	5	3
B6/5			1			1	1
B6/6						0	0
D4/4		1				1	0
D4/5			1			1	1
D4/6					1	1	1
D6/4	3	10	15	4	1	33	20
D6/5	2	3	4			9	14
F4/6		1	1			2	2
F4M5						0	2
F4/5 & F4/M5 CS Stock Room		1	1			2	0
F6/5	6	15			2	23	15
F6/6						0	0
F8/4	7	13	30		2	52	36
TLC	4	13	6	3	4	30	19
PICU						0	0
FY10Q2 TOTAL TYPE	24	59	63	9	11	166	115

Pilot Implementation

- Trauma and Life Support Center (TLC)
- 24 Bed Intensive Care Unit
- Started meeting in January, 2010

Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Sep-10 Total # Restraint Pt's
44.4%	40.9%	40.9%	35.0%	45.5%	41.2%	42.1%	10.5%	56.3%	29.2%	13.3%	13.6%	3

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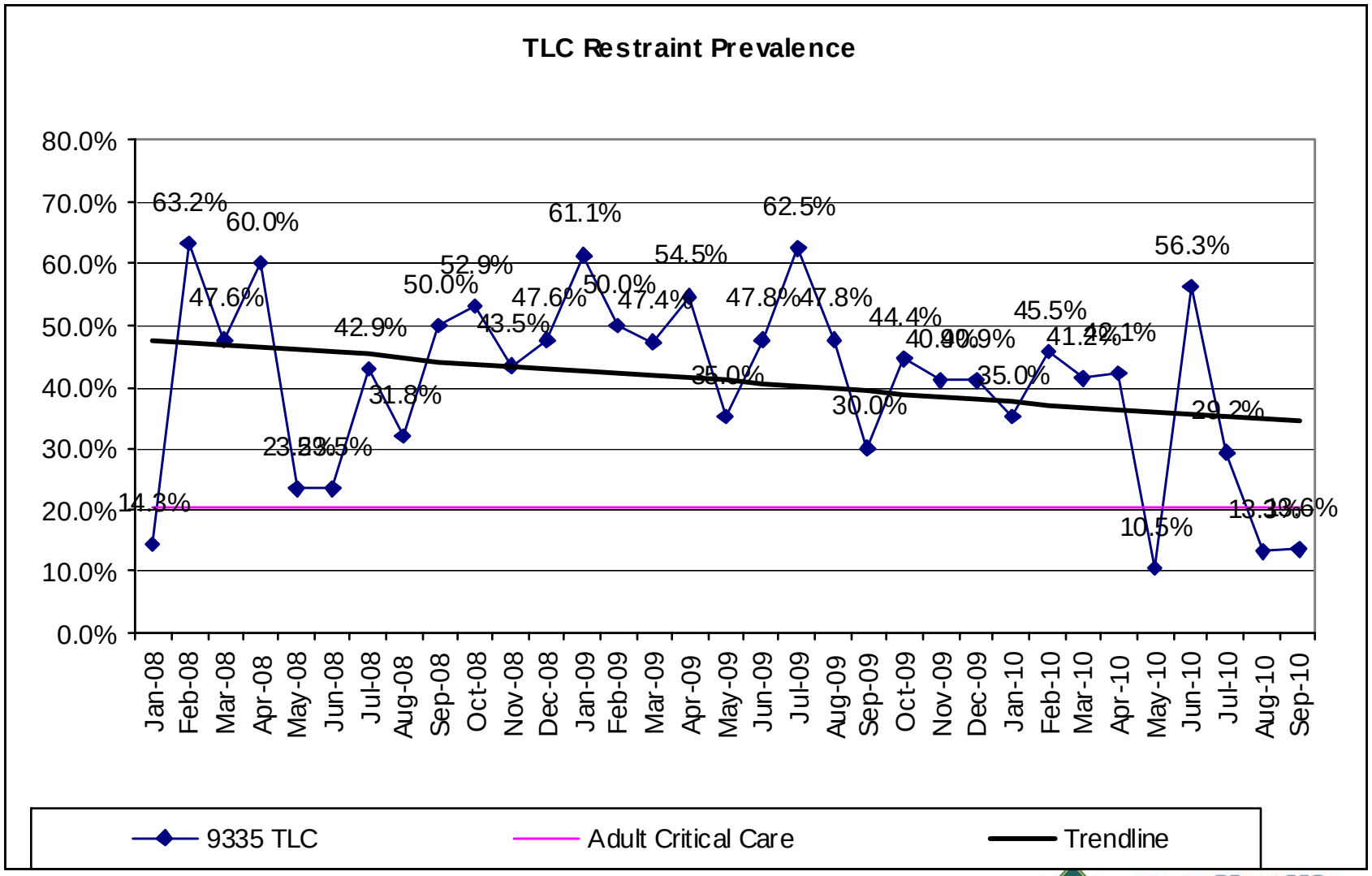
Goals for TLC

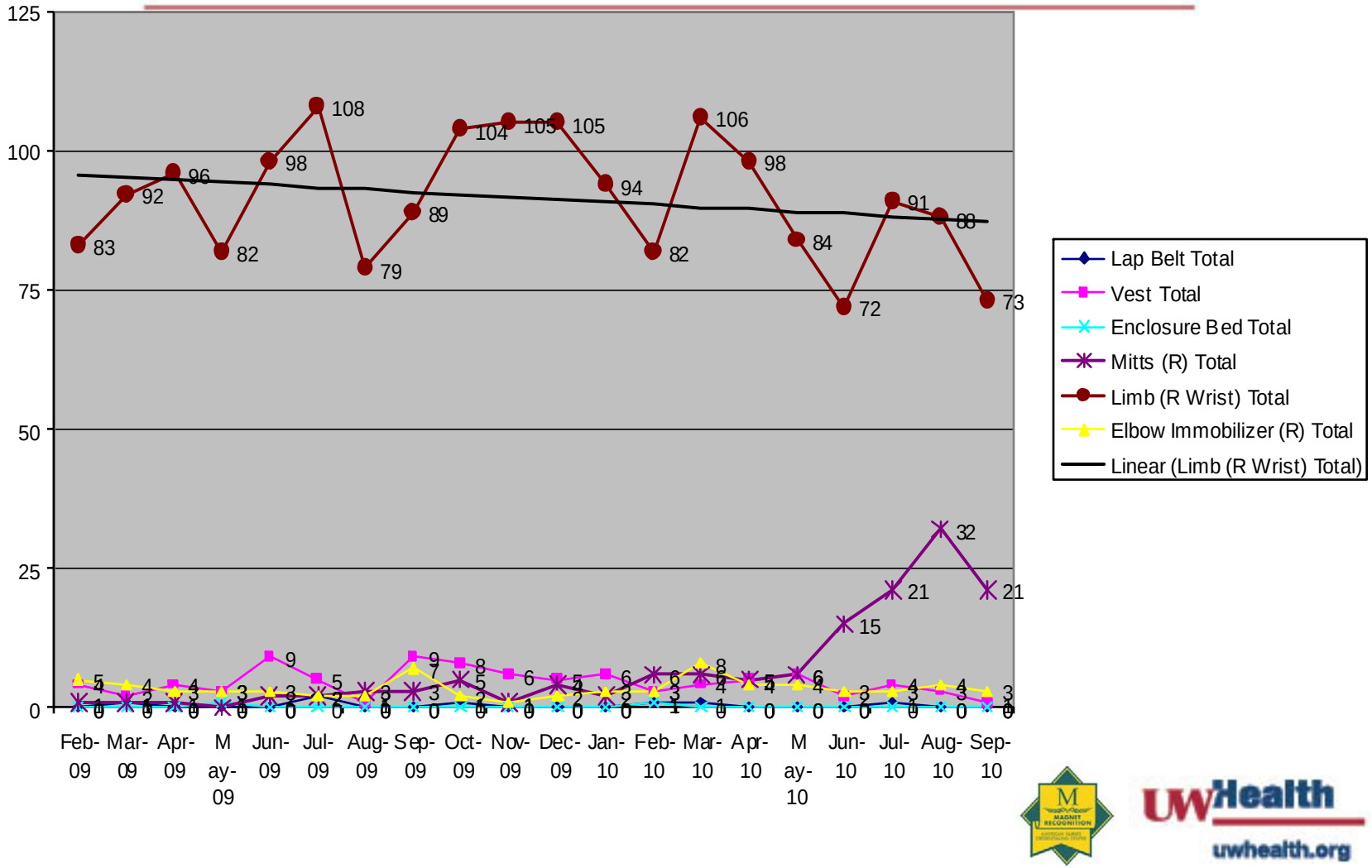
- Increase use of less restrictive restraint types
- Decrease the length of time in restraints
- Decrease the number of patients in restraints
- Review data at monthly meetings

Strategies

- Stock bedside carts with less restrictive restraint types
- Review need for restraints daily on rounds
- Review need for tubes, lines, drains
- Restraint not automatic for life sustaining devices
- Clinical Nurse Specialist daily rounding of patients in restraints



Number of Restraint Types Documented in Health Link
TLC



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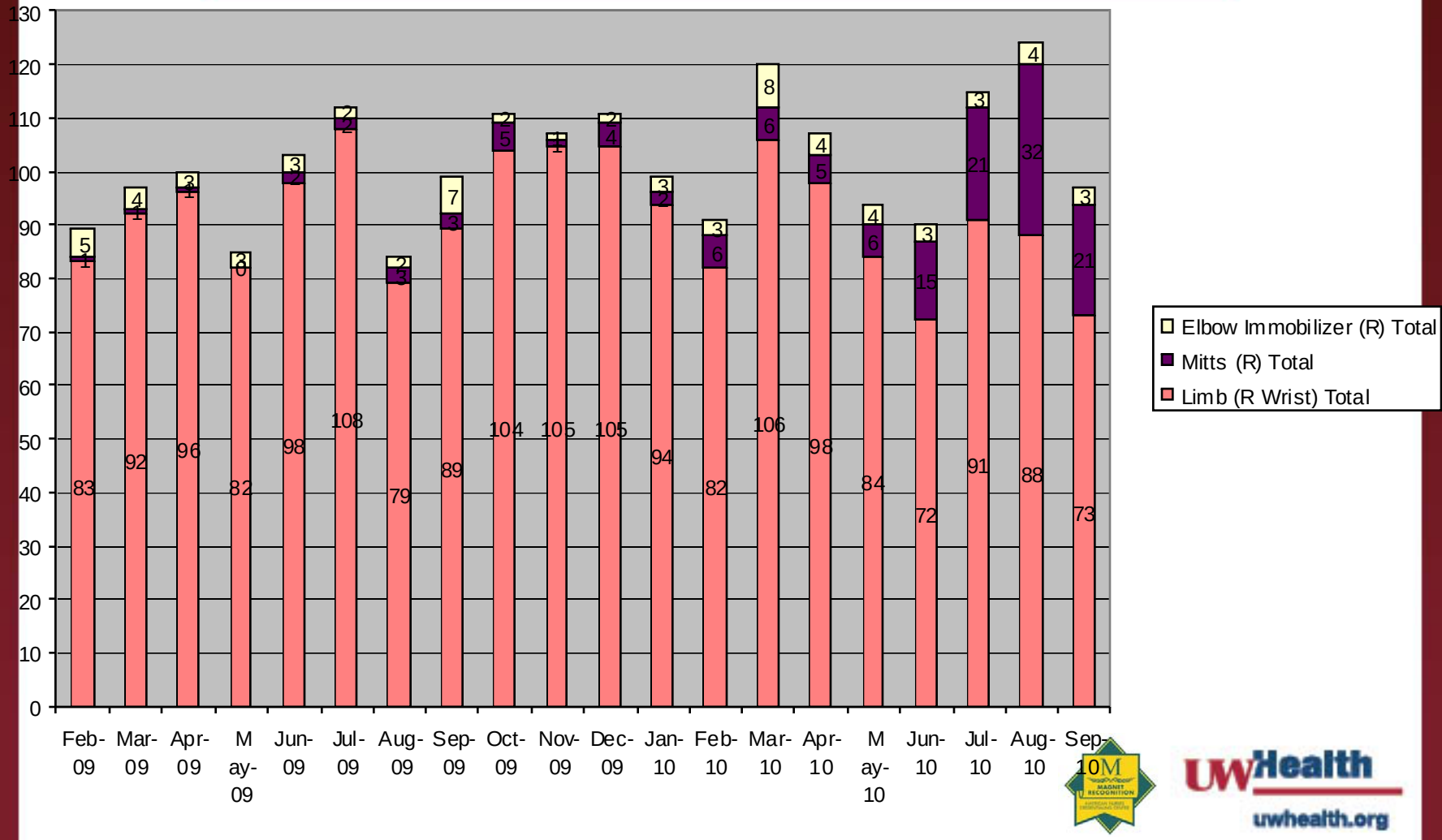
Number of Restraint Types Documented in Health Link
TLC



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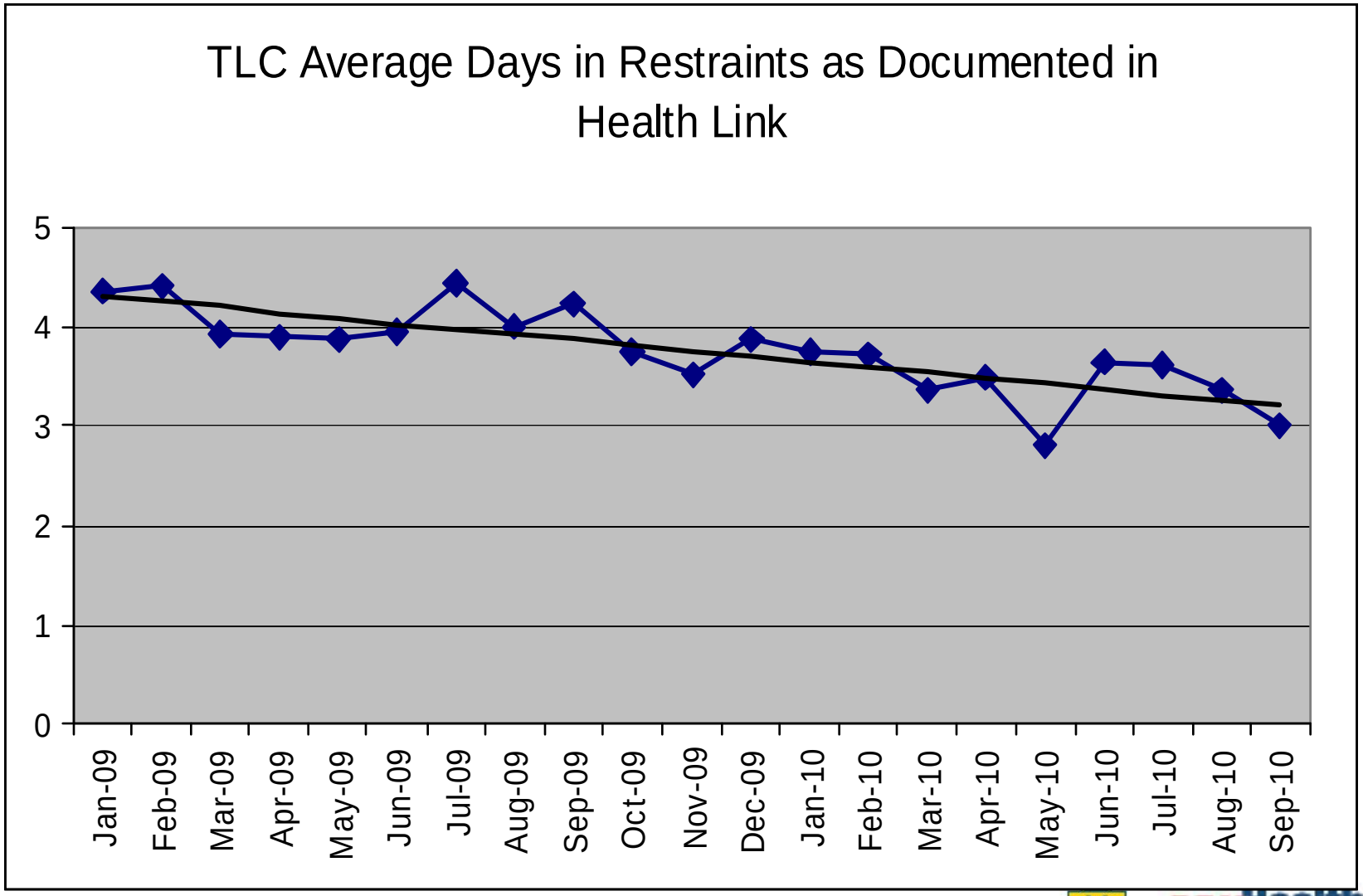

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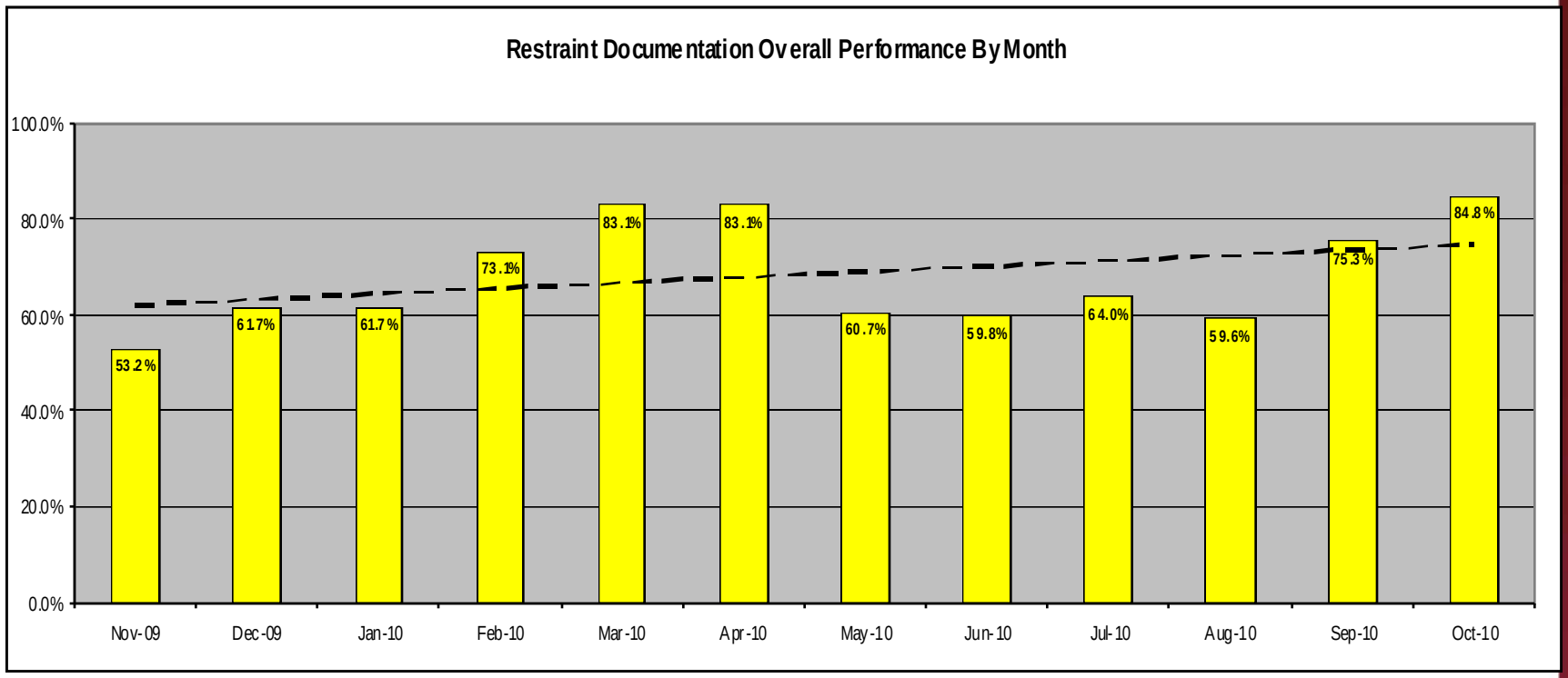
Restraint Hours

- Abstracting hours in restraints
- Dependent upon correct documentation

TLC Unplanned Extubations

- 52/60 (87%) of the patients were in soft wrist restraints when they had an unplanned extubation for calendar year 2009 (Respiratory Therapy Data)

Documentation Compliance



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General Medicine & Geriatrics

- Presented data to unit leadership
- Shared with unit council
- Chart review completed
- Nurse resident project beginning on Perceptions of Restraint Use

Neuro ICU

- Restraints used per guideline
- Benchmark with other neuro ICU
- Chart review – evidence of guideline

Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Sep-10 Total # Restraint Pt's
25.0%	37.5%	18.8%	31.3%	38.5%	58.3%	35.7%	20.0%	58.3%	40.0%	42.9%	25.0%	3

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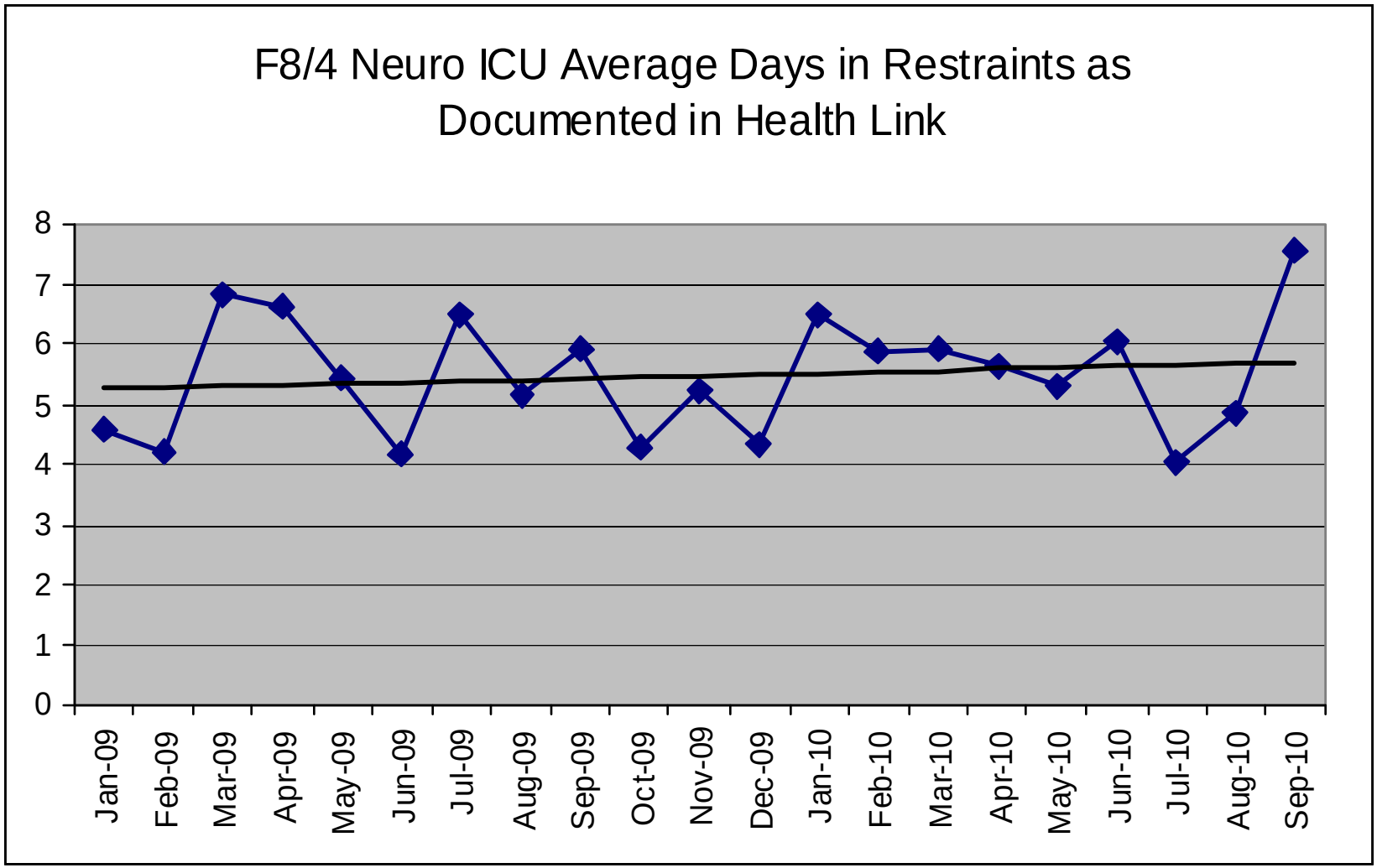

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Conclusions

- Implementation of an evidence based guideline occurs slowly over time
- Requires constant attention
- Regular review of the data assists in process
- Appears to be a strong relationship between restraint documentation data and restraint prevalence data submitted to NDNQI

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References

Park, M., Tang, J. H., & Ledford, L. (2005). Evidence-Based Practice Guideline: Changing the Practice of Physical Restraint Use in Acute Care. Iowa City, IA: University of Iowa Gerontological Nursing Interventions Research Center (GNIRC), Research Translation and Dissemination Core (RTDC).

Registered Nurses Association of Ontario (2002). Toolkit: Implementation of Clinical Practice Guidelines. Toronto, Canada: Registered Nurses Association of Ontario.

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