




Driving Practice Changes in Restraint Use in ICU: Project Inception to Publication


Dannette Mitchell, APRN, MSN, ACNS-BC, CCRN
Maureen Seckel, APRN, MSN, ACNS-BC, CCRN, CCNS, FCCM





Christiana Care Health System

Major teaching health system with 2 hospitals

- Level 1 Trauma & Level 3 NICU
- 2 Hospital EDs plus 1 freestanding ED
- 5 Adult Intensive Care Units
 - *Cardiovascular Critical Care Complex
 - *Medical Intensive Care Unit
 - Neurological Critical Care Unit
 - *Surgical Critical Care Complex
 - *Wilmington Intensive Care Unit



 * AACN Beacon Units





Christiana Care Health System



Christiana Hospital



Wilmington Hospital



Middletown Emergency Dept

Objectives

1. Review background of restraint use and associated morbidity including delirium and self extubation
2. Analyze evidence based approach to restraint reduction
3. Apply knowledge to evaluate methods of dissemination



Introduction

- The literature has shown that restraint use has been associated with an increased risk for delirium, unplanned extubation, prolonged ICU length of stay, and post traumatic distress disorder
- CCHS participates in and uses the National Database of Nursing Quality Indicators (NDNQI®) to benchmark* restraint use. Prevalence data is collected monthly on the nursing units, posted on the portal, and submitted to NDNQI
- The restraint mean in the ICUs was greater than the NDNQI benchmark mean and the need for collaboration across the ICUs to change the culture of restraining patients using unit based teams was identified



Restraint Collaborative

- Systemwide Restraint collaborative September 2012 - November 2012
- Ad hoc CNS-led Intensive Care Unit Restraint Collaborative initiated in 2013
 - Recognizing the reduction in overall restraint use, the ICUs were still the highest user, which led to the ICU collaborative to determine if there were strategies specific to ICUs
 - 5 Intensive Care units across two hospitals participated
 - Surgical Critical Care Complex (SCCC)
 - Cardiovascular Critical Care complex (CVCCC)
 - Medical Intensive Care Unit (MICU)
 - Wilmington Med/Surg Intensive Care Unit (WICU)
 - Neurological Critical Care Unit (NCCU)



Survey Results

- Survey excerpt sent to all ICU RNs start of 2012 collaborative and 2013 post
- Likert scale 1-4; 0= (Never) to 4 = (Always)
- Mean ranking

	2012 N=117	2013 N=91	% improvement
Restraints prevent self-extubation	3.58	3.24	9.5%
Restraints prevent falling	2.16	1.90	12.04%
Restraints are used for acute delirium	2.45	2.19	10.61%

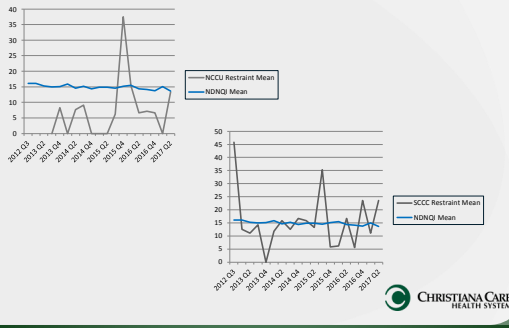
ICU Restraint Data

Note: Collaborative Start September 2012



ICU Restraint Data

Note: Collaborative Start September 2012



Dissemination

- System
 - Christiana Care Way Awards 2014
- Conferences
 - AACN SePA Trends Poster 2013
 - ANA Conference 2014
 - AACN National Teaching Institute (NTI) Poster 2014
 - NACNS Poster 2016
 - NACNS Podium 2018
- Publications
 - Accepted for publication in Critical Care Nurse 2018



CNS Mentorship



Critical Care CNS group



**IT'S NO USE SAYING,
"WE ARE DOING OUR
BEST." YOU HAVE GOT
TO SUCCEED IN DOING
WHAT IS NECESSARY.**

WINSTON CHURCHILL

Thank You

Damitchell@christianacare.org
mseckel@christianacare.org



References

1. American Association of Critical Care Nurses. AACN Practice Alert: assessment and management of delirium across the lifespan. *Crit Care Nurs.* 2016;36:e14-e19.
2. Balas MC, Vasilevskis EE, Olsen KM, et al. Effectiveness and safety of the awakening and breathing coordination, delirium monitoring/management, and early exercise/mobility bundle. *Crit Care Med.* 2014;42:1024-1036.
3. Barr J, Fraser G, Puntillo K, Ely W, et al. Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit. *Critical Care Medicine.* 2013;41: 263-306.
4. Chang LY, Wang KK, Chao YF. Influence of physical restraint on unplanned extubation of adult intensive care patients: a case-control study. *Am J Crit Care.* 2008;17:408-416.
5. Choi E, Song M. Physical Restraint use in a Korean ICU. *J Clin Nurs.* 2003;12:651-659
6. Emberger JS, Mixell JH, Brown JB, et al. (2014, October). *Unplanned extubation rate and outcomes in the adult intensive care unit.* Poster session presented at AARC Congress 2014, the 60th International Respiratory Convention & Exhibition, Las Vegas, NV.
7. Kiekkas P, Aretha D, Panteli E, et al. Unplanned extubation in critically ill adults: clinical review. *Nurs Crit Care.* 2012;18:123-134.
8. Kirk AP, McGlinsey A, Beckett A, Rudd P, Arbour R. Restraint reduction, restraint elimination, and best practice: Role of the clinical nurse specialist in patient safety. *Clinical Nurse Specialist.* 2015: 321-328.
9. Luk E, Burry L, Rezale S, et al. Critical care nurses' decisions regarding physical restraints use in two Canadian ICUs: a prospective observational study. *CJCCN.* 2015;26:16-22.
10. Macoceli G, Dorman T, Brown B, et al. Clinical practice guidelines for the maintenance of patient physical safety in the intensive care unit: Use of restraining therapies-American College of Critical Care Medicine Task Force 2001-2002. *Crit Care Med.* 2003;31:2665-2676.

References

11. Martin B, Mathisen L. Use of Physical restraint in adult critical care: A bicultural study. *Am J Crit Care.* 2005;14:133-142.
12. Minnick A, Mion L, Johnson M, et al. Prevalence and variation of physical restraint use in acute care settings in the U.S. *J Nurs Scholar.* 2007;39:30-37.
13. Mion L, Minnick A, Leipzig R, et al. Patient-initiated device removal in Intensive Care Units a National Prevalence Study. *Crit Care Med.* 2007;35:2714-2720.
14. Mion L. Physical Restraint in Critical Care Settings: Will They Go Away? *Geriatr Nurs.* 2008; 29 (6):421-423.
15. Montalvo, I. The national database of nursing quality indicators (NDNQI). *OJIN-Online Journal of Issues in Nursing.* 2007; 12:3
16. Ranier NC. Reducing physical restraint use in alcohol withdrawal patients. *Dimens Crit Care Nurs.* 2014;33(4):201-206.
17. Rose L, Burry L, Mallick R, et al. Prevalence, risk factors, and outcomes associated with physical restraint use in mechanically ventilated patients. *J Crit Care.* 2016;31:31-35.
18. Sergio P, Silva L, Fonseca M. Unplanned endotracheal extubations in the intensive care unit: Systematic Review, Critical Appraisal, and Evidence-Based Recommendations. *Anesth Analg.* 2012;114:1003-1014.
19. Stinson KJ. Nurses' attitudes, clinical experience, and practice issues with use of physical restraints in critical care units. *Am J Crit Care.* 2016;25(1):21-26.
20. Taniós M, Epstein S, Grzeskowiak M, et al. Influence of physical restraint on unplanned extubation of adult intensive care patients: a case-control study. *Am J Crit Care.* 2014;23:306-314.

References

21. Turgay AS, Sari D, Genc RE. Physical restraints in Turkish Intensive Care Units. *Clin Nurs Spec*. 2009;23:68-72.
22. Van der Kooi AW, Peelen LM, Raijmakers, et.al. Use of physical restraints in Dutch intensive care units: A prospective multi-center study. *Am J Crit Care*. 2015;24(6):488-495.
23. Yont GH, Korhan EA, Dizer B, et al. Examination of ethical dilemmas experienced by adult intensive care nurses in physical restraint practices. *Holist Nurs Pract*. 2014;28(2):85-90.
