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Clinical Nurse Specialists' Efforts to Reduce Restraint Use on General Practice Units

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Learning Objectives

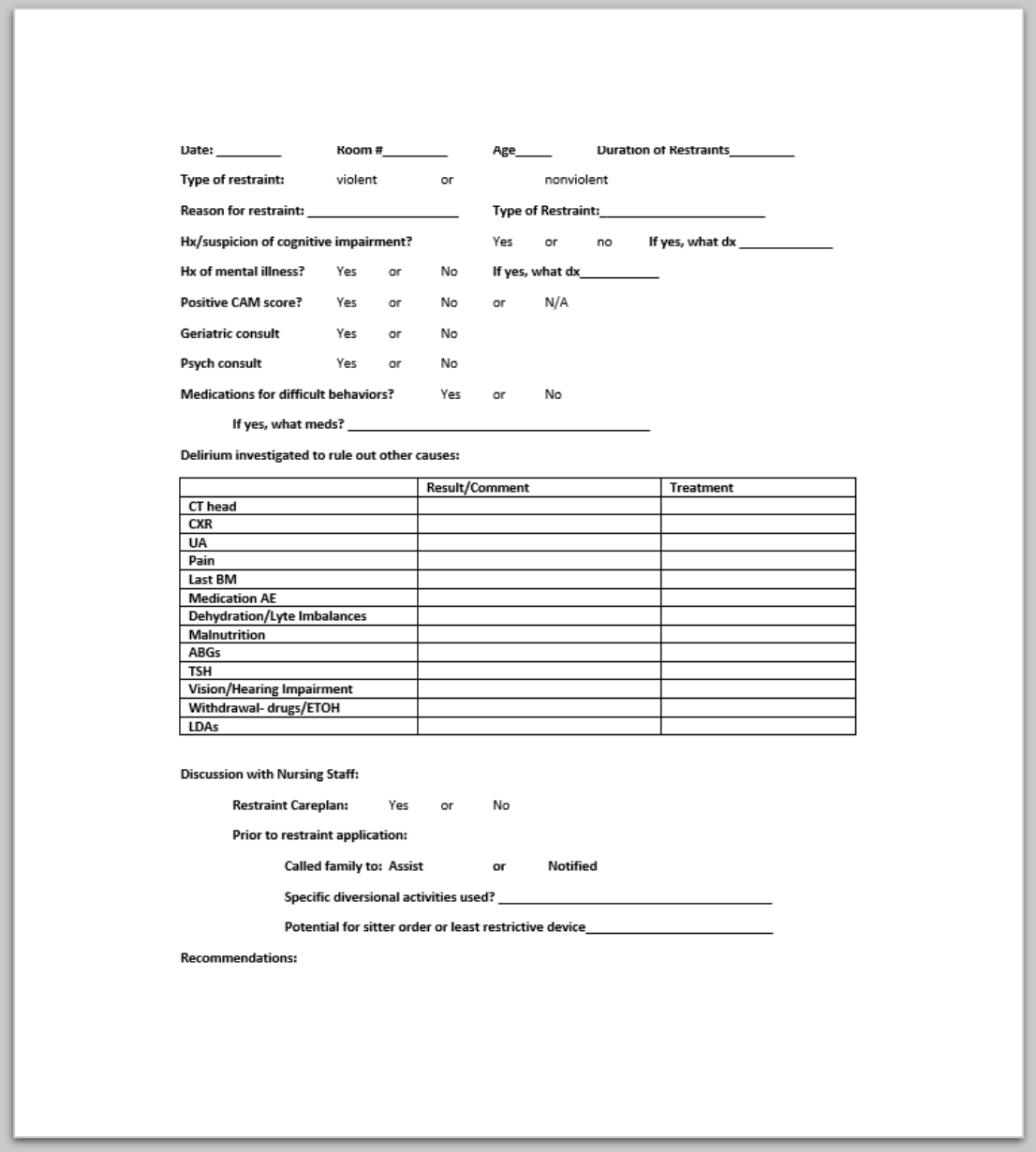
- The learner will be able to describe the patterns related to the initiation of physical restraints.
- The learner will be able to explain characteristics of patients who require the use of physical restraints on General Practice Units.
- The learner will be able to apply elements of bedside rounding to impact physical restraint use or other quality initiatives.

Background

- Facilities utilize restraints to prevent falls, self-harm, and to protect invasive medical devices despite known complications from restraint use.
- Henry Ford Macomb Hospital (HFMH) has seen an increase in physical restraint use on General Practice Units thus prompting the implementation of bedside rounding by Clinical Nurse Specialists (CNS) to decrease restraint use and support nursing staff.

Purpose

- The purpose of this project was to identify patterns of physical restraint use, patient characteristics, and evaluate the impact of bedside restraint rounding by CNSs.



Date: _____ Room #_____ Age____ Duration of Restraints_____

Type of restraint: violent or nonviolent

Reason for restraint: _____ Type of Restraint:_____

Hx/suspicion of cognitive impairment? Yes or no If yes, what dx _____

Hx of mental illness? Yes or No If yes, what dx_____

Positive CAM score? Yes or No or N/A

Geriatric consult Yes or No

Psych consult Yes or No

Medications for difficult behaviors? Yes or No

If yes, what meds? _____

Delirium investigated to rule out other causes:

	Result/Comment	Treatment
CT head		
CXR		
UA		
Pain		
Last BM		
Medication AE		
Dehydration/Lyte Imbalances		
Malnutrition		
ABGs		
TSH		
Vision/Hearing Impairment		
Withdrawal- drugs/ETOH		
LDAs		

Discussion with Nursing Staff:

Restraint Careplan: Yes or No

Prior to restraint application:

Called family to: Assist or Notified

Specific diversional activities used? _____

Potential for sitter order or least restrictive device_____

Recommendations:

Methods

- Retrospective chart review
- Pre/post-test design

  February 1st, 2018 to January 31st 2019 and February 1st, 2019 to January 31st 2020.
- Inclusion Criteria:
  - Individuals admitted to HFMH GPUs
  - Had orders for physical restraints
- The total number of charts reviewed was 637.

Data Analysis

- Continuous variables were evaluated for normality using Shapiro-Wilk tests, histograms, and QQ plots. If normality assumptions were met, continuous variables were compared between time points using independent two-group t-tests, and if normality assumptions were violated, they were compared using Wilcoxon rank-sum tests
- Categorical variables were compared using chi-square tests or Fisher's exact tests
- Statistical significance was set at $p<0.05$ and all tests were two sided

Methods cont.

Patterns and Characteristics:

- General Practice Unit
- Shift
- Day of the week
- Month
- Reasons for restraints
- Gender
- Age
- Diagnosis
- Family status
- Housing
- Medical tubing
- Psychiatric/neurological health history

Impact of CNSs rounding:

- Number of restraint orders
- Length of time in restraints
- Device type

Results

- Most restraints were initiated in the ICU
- Neurology/Stroke GPU had the highest number of restraint orders overall
- ↑ medical tubing/devices (1.56 vs. 1.79, p=0.837)
- ↑ history of developmental disability (1.44% vs. 5.23%, p=0.013)
- ↑ restraint orders (2.84 vs. 3.34, p=0.004)
- ↑ length of time in restraints (1744.40 vs. 1802.46, p=0.870) (by one hour)
- ↑ side rails (0.35 vs. 0.75, p <.001) and a ↓ use of left (0.47 vs 0.36, p=0.018) and right (0.48 vs. 0.25, p=0.017) nonviolent soft ankle restraints
- ↑ nonviolent reasons for restraints (2.31 vs. 2.86, p= 0.010) and ↓ violent reasons (0.43 vs. 0.32, p=0.428)

Impact on Nursing Care

- CNS rounding improved the utilization of least restrictive devices and influenced a reduction of violent restraint orders demonstrating the impact of CNS rounding.
- Restraint rounding in the ICU can help prioritize and implement early intervention methods for patients being transferred to the GPUs.
- The night shift had the highest number of restraint orders. Delirium and "sun downing" that occurs on the night shift, combined with fewer experienced nurses and reduced supportive staff could be a reason for the increased restraint use.
- The Neurology/Stroke unit had the most frequent orders for restraints. This could be due to the closure of the nearby psychiatric ED services in Sept 2018. This prompts the need for additional education for nurses on behaviors of patients with neurological and psychiatric diagnoses.
- Day of the week (Thursday and Friday) and month (April and August) were collected to identify if rounding and resources need to be increased and targeted during these times.

Limitations and Areas for Future Research

Limitations

- Nurse's perceptions of restraints and receptiveness of rounding
- Time/availability to round for sustainability
- Documentation
- New restraint order process in June 2018

Areas for Future Research

- CNS-led rounding on other quality initiatives
- Utilization of an alternative research design
- Continued study after tailored and proactive rounding strategies have been implemented
- Study effectiveness of rounding tool

Implications for Practice

- Understanding the patterns of restraints use and patient characteristics allows for tailored approaches to reduce restraints.
- CNS presence at the bedside can lead to improved outcomes.
- Futures efforts will be focused on reducing the length of time in restraints.
- Modify rounding to impact length of time in restraints?
- Modify rounding tool based on study findings.