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Academic-Practice Partnership Project



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Nebraska Methodist Hospital



- Part of 4-hospital Nebraska Health System in Nebraska & SW Iowa
 - > 30 clinics & Nebraska Methodist College.
- Magnet, 475-bed acute care nonprofit hospital serving the metropolitan Omaha area.
 - NICHE Exemplar Status
 - 5 Anchor Service Lines
 - > 50% of patients ages 65 years or older

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Objectives

1

Examine prevalence of violent events among patients in non-psychiatric units.

2

Evaluate feasibility of utilizing a violence risk screening tool in non-psychiatric inpatient units.

3

Discuss utility of the Aggressive Behavior Risk Assessment Tool for Hospitalized Patients in non-psychiatric inpatient units (ABRAT-H)

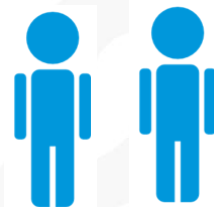
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Background



1 in 4 Nurses physically assaulted
(ANA, 2019)



Every hour, >2 nurses assaulted in US
Patients most common perpetrators
(NDNQI, 2022)

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Background

- **Under-reporting of Workplace Violence (WPV)**
 - *“Just part of the job”*
 - *“Event was not serious enough”*
 - Complex reporting procedures
 - Unclear WPV definitions
 - Poor perception of existing WPV prevention programs



(Arnetz, 2022; Byon et al., 2022; Phillips, 2016; Song et al., 2021)

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Regulatory Requirements from The Joint Commission

- **New & Revised WPV Prevention Standards**
 - Effective January 1, 2022
 - Applies to “all Joint Commission-accredited hospitals and critical access hospitals”
 - Requirements:
 - Implementation of the WPV prevention program
 - Annual evaluation of the WPV prevention program
 - Standardized data collection + reporting of WPV

The Joint Commission (2021)

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1st Step Toward WPV Prevention Program

- Screen patients at risk of violence to implement targeted preventive measures
- A validated violence risk assessment tool is needed.
 - Sensitivity and specificity



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Significance

Psychiatric units

- High prevalence of violent events
- Validated violence risk screening tools available

Non-psychiatric Inpatient Units

- Fewer violent events than psychiatric units
- Nurses suffer greater psychological distress and sleep disturbance
- ↑ Violence risk with co-existing psychiatric disorders, anxiety, or delirium
- Dearth of validated violence risk screening tools

(Leppla et al. 2023; Perkins et al. 2020; Pekurinen et al. 2017; van Niekerk et al. 2022)

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Violence Risk Assessment Tools

- Only two violence risk assessment tools tested in non-psychiatric units:
 - M55 Violence Risk Assessment Tool (M55) *(Kling et al., 2006)*
 - Aggressive Behavior Risk Assessment Tool (ABRAT)
 - Medical/Surgical Inpatient (ABRAT) *(Kim et al., 2011)*
 - Long-term Care (ABRAT-L) *(Kim et al., 2017; Kim et al., 2019)*
 - Emergency Department (ABRAT-ED) *(Kim et al., 2022; Kim et al., 2024)*
 - Prehospital (ABRAT-EMS) *(Kim et al., 2025)*

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Problem Description

- Underreporting of WPV events
- ↑Behavioral patients in acute care units
- ↑Staff turnover related to WPV
- Need for education on managing behavioral patients
- Need for structure and proactive preventative interventions
- Need for early identification of patients a risk for violence



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Aims of Study

Validate

An electronic version of the Aggressive Behavior Risk Assessment Tool (ABRAT) for identifying patients at risk for violence.

Determine

Sensitivity & Specificity of the ABRAT

Examine

The prevalence of violent events among patients in non-psychiatric inpatient units

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Study Design

Prospective Cohort Study

Educational Rollout X 2 weeks

Study duration: February 7 – April 9, 2023

Institutional Review Board approval (IRB # 1500)

Compliance with HIPAA Privacy Rule

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Setting and Sample

Inpatient Units

- Acute Care for Elders (ACE)
- Medical Surgical Unit
- Ortho/Neuro Unit

Inclusion Criteria

- 18 years and older
- Patients admitted or transferred to study units

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Implementation of ABRAT

10-item ABRAT integrated into Cerner EHR

- 2 items on past history of aggression and mental illness
- 8 items on behavioral indicators of violence risk

3 ABRAT assessments for all patients

- Upon admission/transfer to the study unit + daily X 2
- Nurse received a task notification

Violent events and severities documented each shift

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Violent Event Documentation in EHR

Violent Events captured with “Recording Aggression”:

- Every shift and as appropriate
- Absence of violence also documented

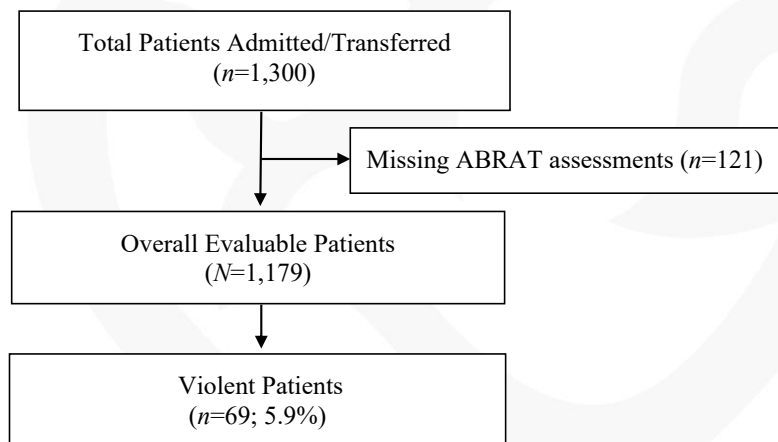
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Psychosocial-Coping	
Recording Aggression	
Physical Aggression Towards Others	Physical Aggression Towards Others
Physical Aggression Towards Property	Physical Aggression Towards Property
Verbal Intimidation/Threat Toward Others	Verbal Intimidation/Threat Toward Others
Coping Assessments/Interventions	
Learning Assessment	
Individual(s) Taught	
Barriers to Learning	
Physical Aggression Towards Others	Physical Aggression Towards Others
Physical Aggression Towards Property	Physical Aggression Towards Property
Verbal Intimidation/Threat Toward Others	Verbal Intimidation/Threat Toward Others
Coping Assessments/Interventions	
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Physical Aggression Towards Others	Physical Aggression Towards Others
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Verbal Intimidation/Threat Toward Others	Verbal Intimidation/Threat Toward Others
Coping Assessments/Interventions	
Learning Assessment	
Individual(s) Taught	
Barriers to Learning	

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Study Flowchart



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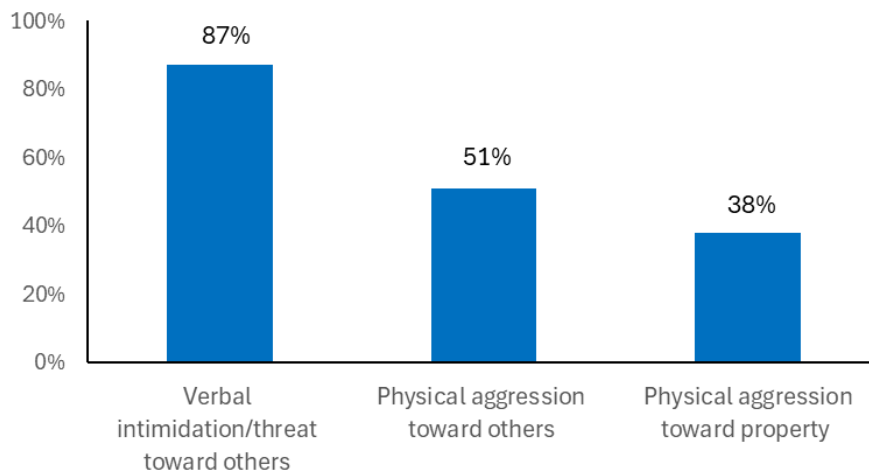
Demographic Characteristics (N=1,179)

	Overall patients (N=1,179)	Violent patients (n=69)
Age, yr, mean (range)	69 (18-90+)	70 (22-90+)
Gender male	518 (43.9)	36 (52.2)
Race		
Non-Hispanic White	1,042 (88.4)	62 (89.9)
African-American	67 (5.7)	6 (8.7)
Hispanic	32 (2.7)	1 (1.4)
Asian/Pacific Islander	7 (0.6)	0
Multiracial	7 (0.6)	0
American Indian	5 (0.4)	0
Other/Unknown	19 (1.6)	0
Length of Stay, days, median (range)	2.0 (0-58)	9.0 (0-58)

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Violent Event Types



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Results

- The ten ABRAT items had significant correlations with violent events
- Six items emerged as statistically significant predictors of violent events

TABLE 2 | Bivariate correlations with violent events (N=1179).

Predictors	r
History of aggression	0.22***
History of mental illness	0.11***
Aggressive/threatening	0.35***
Threatening to leave	0.22***
Agitated	0.29***
Starling	0.10***
Mumbling	0.26***
Confused	0.29***
Anxious	0.24***
Shouting	0.29***

Note: ***p<0.001 by bivariate correlation with Kendall's Tau test.

Table 3 Multivariate logistic regression model for predicting violent incidents (N= 1,179)

Predictors	OR	95% CI	p-value	Weight value
History of aggression	3.6	1.2-11	0.026	2
History of mental illness	1.9	1.0-3.5	0.053	1
Aggressive/threatening	11	2.0-65	0.006	5
Anxiety	2.4	1.3-4.6	0.007	1
Mumbling	3.4	1.4-8.2	0.007	2
Confusion	3.9	2.1-7.2	<0.001	2

Note. OR, Odds Ratio; CI, Confidence Interval

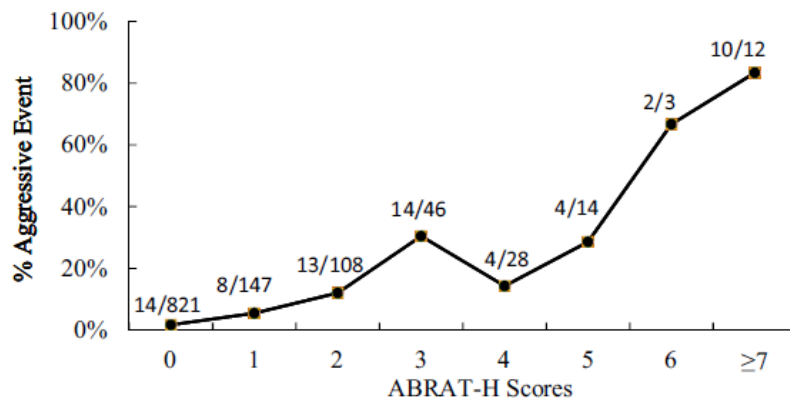
The revised 6-item tool with item weighting was named
ABRAT for Hospitalized Patients (ABRAT-H)

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Percentage of Violent Patients vs ABRAT-H Scores

- As ABRAT-H scores increased, the percentage of violent patients also increased
- Patients with scores ≥ 5 - 55.2% became violent



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Sensitivity vs Specificity of ABRAT-H

At a Cut Off Score of 2

- Sensitivity (68.1%) – true positive
- Specificity (85.2%) – true negative
- Positive Predictive Value (PPV) (22.3%)

Summary

- The ABRAT-H would correctly identify 68.1% of the violent patients and 85.2% of the nonviolent patients.
- 22% of patients with ABRAT-H scores of 2 or higher may become violent during the hospital stay

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Strengths & Limitations

- **Strengths:**
 - ABRAT assessments were performed before violent events
 - Prospective cohort study design
- **Limitations:**
 - Small sample size with only 69 violent events
 - Short study duration: potential seasonal bias
 - ABRAT assessments for 3 days only
 - Half the violent events occurred more than 24 hours after ABRAT assessments

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Implications for Nursing Practice

Simple 6-item screening tool for identifying potentially violent patients

Satisfactory sensitivity and specificity

Allows targeted preventive measures for high-risk patients

Satisfies regulatory requirements for WPV prevention

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Next Step: Interventional Study

- **Aim:** To examine the effects of targeted WPV prevention measures based on the ABRAT-H scores
- **Pretest-posttest design**
- **Study duration:** 11/2024 - 8/2025
- **Intervention:**
 - Signage Posting
 - Behavioral Health Response Nurse (BHRN) Rounding
- **Outcome measure:**
 - Violent Event Severity Tool (VEST) to measure violent event types and severities



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Dissemination of the Study

- Kim, S.C., Vejnovich, C., Hall, L., Rawlings, M., & Thompson, K. (2024). Aggressive Behavior Risk Assessment Tool for Hospitalized Patients in non-psychiatric inpatient units. *Journal of Advanced Nursing*. Oct 7, doi: 10.1111/jan.16418. Online ahead of print

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