

Seminar

Medical and Health Research Network

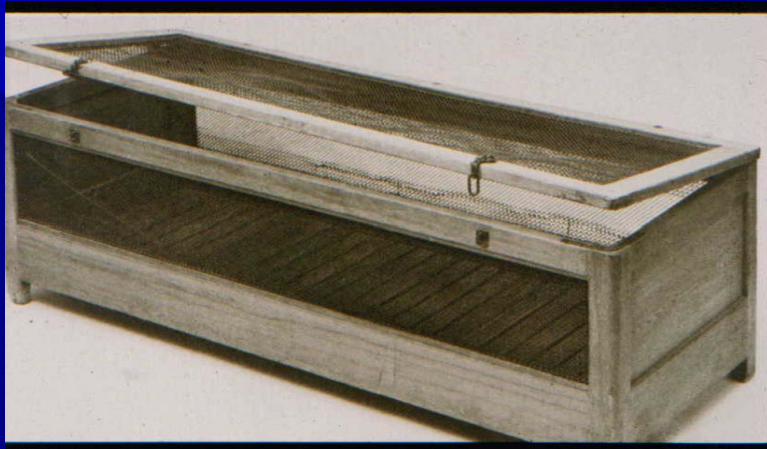
Shifting Policy and Practice in Acute Care: Restraint Free Care for Hospitalized Elders

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Why Discuss Restraint-Free Care in Hospitals in 2003?





Utica Crib, circa late 19th Century



Enclosed Bed, circa 2003



Hospital Concerns about Standards of Care for Restraint Use

- Safety – Self-termination of therapy
- Fears of patient harm
- Costs/constrained resources
- Conflicting standards
- Decreased LOS, greater acuity and severity of disease
- Systemic tensions from nursing shortages and organizational change
- Feasibility of NH “solutions” for acute care



Where We Began...

Physical restraint of the hospitalized elderly:
Perceptions of patients and nurses, 1988,
Nursing Research, 37, 132-137.



Purpose:

To describe perceptions of patients and nurses concerning hospital restraint use.

Instruments:

Physical Restraint Use Questionnaire (PRUQ)

Subjective Experience of Being Restrained (SEBR)

Primary Nurse Questionnaire (PNQ)



Findings: Voices of Restrained Patients

- "I have done nothing to deserve this! To think, you fought a war—now I am a POW!"
- "If there was a fire, I'd be caught. When someone is tied and chained in a fire, how will you save the person? How would I get out?"



Findings: Voices (cont'd)

- "I felt like a dog and cried all night. It hurt me to have to be tied up...The hospital is worse than a jail!"
- "After a while I gave up. I became a mouse."



Findings: Voices of Hospital Nurses

- "I'd rather use a restraint than have her fall."
- "Sometimes it bothers me when the patient can't understand the need for restraint. I wonder if it's really for his own good."
- "It drives me crazy to restrain so many patients. I feel like a jailer rather than a nurse."
- "I feel guilty at times because you take away the patient's freedom and that bothers me."



Conclusions:

- Restraint was profoundly troubling for patients.
- Nurses disliked using restraints but saw few alternatives.
- There existed little interdisciplinary dialogue, consultation, or assessment of underlying problems.



15 Year Program of Research

- Cross-Cultural Studies of US/European Hospitals/Nursing Homes
- Restraint Reduction in Nursing Homes
- Restraint Reduction in Hospitals
- Advancement of Individualized Restraint-Free Care for Older Adults Across all Settings



A Clinical Trial to Reduce Restraints in Nursing Homes

(Supported by the National Institute on Aging)

Purpose: To investigate the relative effects of two experimental interventions on the use of physical restraints with nursing home residents.

Results:

- Statistically significant reductions in restraint prevalence (56%) were observed in the nursing home receiving a Restraint Education with Consultation intervention by APN.
- Results were achieved without increased staff, psychoactive drugs, or serious fall-related injuries.



*(Journal of the American Geriatrics
Society, 1997)*



Observations During Nursing Home Clinical Trial

- Residents admitted to hospitals were often restrained during hospitalization.
- These residents were restraint-free prior to hospitalization.
- Residents returned to nursing home with declines in physical function or new clinical problems.



An Advanced Practice Nurse Implemented Restraint Reduction Intervention for Hospitalized Nursing Home Residents

Strumpf N., Evans, L, Sullivan-Marx, E., Capezuti,
E., and Maislin, G.

(Supported by the National Institute on Aging)



Purpose:

To test the effect of a restraint reduction protocol, implemented by an advanced practice nurse, on outcomes of hospitalized nursing home residents.



Design:

- Nonequivalent control group quasi-experimental design
- Two non-concurrent groups of residents from one nursing home admitted to a single hospital
 - Control: Usual Care
 - Intervention: Staff Education and Restraint Reduction Protocol (RRP) by APN



Sites:

Nursing Home: Jewish, 240 beds

**Hospital: Tertiary medical center
600 beds**



Sample Criteria:

- Age 70 or older
- Admitted to medical or surgical hospital unit
- Free from physical restraint 30 days prior to hospitalization





- 158 NH residents participated:
 - Control: 64
 - Intervention: 94
- Restraint prevalence at baseline:
 - NH: 28.4%
 - Hospital: 28% for persons ≥ 70 y.o.



Demographic Characteristics of Sample

Characteristic	Intervention (n=94)	Control (n=64)	p value
	Mean (SD)	Mean (SD)	
Age	84.6 (7.9)	85.2 (5.8)	.590*
Education (Years)	10.9 (2.6)	10.0 (3.4)	.101*
	Percentage (n)	Percentage (n)	
Female	70.0 (56)	62.9 (39)	.373+
Jewish	98.7 (79)	98.4 (61)	.857+
Widowed	62.5 (50)	69.4 (43)	.748+
Professional Work	77.5 (62)	65.0 (39)	.353+

* t-test
+ chi square

Key Outcome Variable: Physical Restraint Use

- Physical Restraint: Any device(s) limiting freedom of movement and free access to one's body, excluding side rails
- Any Restraint Use: Use of any PR in a 24 hour period and computed as present if the proportion was greater than 0
- Daily Restraint Use: Use of PR every day and computed as present if the proportion was equal to 1.0

Measures for Construction of Restraint Risk Profiles

- Fall Risk (Staff interview)
- Behavior (Nursing Home Behavior Problem Scale)
- Treatment Interference (Interviews with hospital staff and health records)



APN Intervention

- Staff Education
- Restraint Reduction Protocol
 - Initial Assessment (12-36 hours following hospital admission)
 - Development of Individualized Care Plan with Staff Nurse Assigned to Patient
 - Ongoing Reassessment and Monitoring
 - Enhanced Communication



Data Analysis

To estimate the relative risk of restraint use comparing the intervention to the control group, controlling for group differences in restraint risk.



Risk Profiles on Admission

- Treatment Interference
- Fall Risk
- Behavior



Group Differences in Patient Restraint Risk Profiles and Restraint Use Differences among Restraint Risk Profiles

Patient Profile			Prevalence of Profile		Restraint Use	
Treatment Interference	Fall Risk	Disruptive Behaviors	Intervention	Control	Any	Daily
			N=90	N=63		
Yes	Yes	Yes	6 (6.7%)	2 (3.2%)	7 (87.5%)	1 (12.5%)
Yes	Yes	No	13 (14.4%)	5 (7.9%)	13 (72.2%)	4 (22.2%)
Yes	No	Yes	---	---	---	---
Yes	No	No	10 (11.1%)	4 (6.3%)	9 (64.3%)	4 (28.6%)
No	Yes	Yes	3 (3.3%)	2 (3.2%)	2 (40.0%)	1 (20.0%)
No	Yes	No	31 (34.4%)	17 (27.0%)	7 (14.6%)	1 (2.1%)
No	No	Yes	1 (1.1%)	3 (4.8%)	1 (25.0%)	0 (0.0%)
No	No	No	28 (28.9%)	30 (47.6%)	2 (3.6%)	0 (0.0%)



Note: 4 intervention patients and 1 control patient had incomplete patient profile data.



Univariate Analysis of Physical Restraint Use by Group During Hospitalization

	APN Intervention	Control	OR (95% CI)*	p-value
Daily Restraint	2.2% (n=2)	15.6% (n=10)	8.1 (1.7, 38.6)	0.002
Any Restraint	24.4% (n=22)	31.3% (n=20)	1.4 (0.7, 2.9)	.352

* Odds ratio comparing Control to APN Intervention



Effect of APN Intervention on Any Restraint Use Controlling for Treatment Interference, Fall Risk & Behaviors Using Multiple Logistic Regression (N=158)

Variable	OR	95% C.I.	p-value
Control versus Experimental	5.5	(1.6, 18.5)	.006
Presence of Treatment Interference	41.2	(12.0, 141.0)	<.001
Presence of Fall Risk	3.1	(1.1, 8.6)	.027
Presence of Disruptive Behavior	3.8	(0.9, 16.1)	.054

Results:

- All 3 components of risk profile appeared to independently contribute to risk of any restraint use controlling for intervention group.
- Treatment interference was the risk factor with the largest effect (OR=41.2; 95 % CI=12.0, 141.0; $p<.001$)
- Intervention effect on reducing Daily Restraint Use during hospitalization remained significant when controlling risk profile (OR=11.3; 95% CI=2.3, 81.0; $p<.001$)

Conclusions:

- APN intervention was effective in reducing or eliminating physical restraint among a group of hospitalized nursing home residents at high risk for restraint.
- PR of hospitalized nursing home residents still occurred and remains a concern.
- Hospital redesign effort and organizational change had an impact on protocol implementation by the APN.
- Despite organizational upheaval, the APN experienced some success.
- Risk profiles are useful in targeting patients likely to be restrained.
- Restraint free care is increasingly the standard of practice; the APN appears critical for hospital staffing and quality of care.



Secondary Analyses from Hospital Study

- **Organizational Characteristics and Restraint Use for Hospitalized Nursing Home Residents (Bourbonniere, et al, *Journal of the American Geriatrics Society*, 2003).**
- **Advance Care Planning and End-of-Life Care for Hospitalized Nursing Home Residents (Happ, et al, *Journal of the American Geriatrics Society*, 2002)**
- Consequences of hospital restraint use for older nursing home residents (Strumpf, et al, *Gerontologist*, 1997)



Organizational Characteristics and Restraint Use for Hospitalized Nursing Home Residents

- Being in the hospital on a week-end day significantly increased the odds of restraint.
- Staff were most challenged by treatment interference, behavior, impaired mental state and communication barriers.



Advance Care Planning and E-O-L Care for Hospitalized NH Residents

Information transfer between agencies was imperfect, resulting in duplication of effort and the potential for nursing home residents to receive unwanted, life-sustaining interventions.



Consequences of Hospital Restraint for Older Nursing Home Residents

Post-discharge physical function was more than 3 times worse in those restrained, controlling for preadmission and hospital status.



Individualized Interventions Do Exist



Individualized Care

- Person-centered approach
- Interdisciplinary collaboration
- Careful assessment
- Tailored interventions
- Environmental milieu



Fall Risk

Depending on cause for fall risk:

- Medication review
- Bed in lowest position
- No side rails, or use half rails only
- Daily weight-bearing
- Mobility training
- Individualized schedules for elimination
- Consultation with APN, PT, OT
- Modifications in room, furniture, equipment, lighting



Behavioral

Depending on underlying cause/meaning of behavior:

- Identify unmet needs or note changes in health status
- Treat underlying problems
- Use interdisciplinary team approaches
- Evaluate and treat pain
- Consult experts
- Administer psychotropics and sedatives only as indicated



Therapy Devices

Depending on underlying causes of TI:

- Treatment modification/consolidation
- Verbal/guided exploration
- Visualization
- Distraction; activities
- Treatment disguise
- Watchful families/visitors
- Comfort measures
- Environmental changes



Achieving System Change Requires Multi-component Strategies

- Patient characteristics and needs – targeted interventions for high use units and populations
- Care providers – education, consultation, communication, interdisciplinary decision-making, nurse autonomy
- Organizational structures – mission, philosophy, stakeholders, models of care



Relationship of Restraint Use to Quality

- Restraint-free care is a nurse-sensitive marker of quality.
- Non-Restraint is a benchmark for quality of care in an organization.



What kind of care do we want...

for our parents...?

our "selves"... ?

and our children...?



"If the current movement toward non-restraint is not to become a casualty of limited institutional horizons as it did in the 19th century, beliefs will need to change. Fundamental assumptions about control are involved. This means nothing less than a shift from the longstanding paradigm emphasizing management of behavior to a model attuned to individual needs."

-Strumpf & Tomes, Nursing History Review, 1993





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Century



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