

## Physical Restraints: Annotated Guidelines

Guideline				
Guideline	Overview	Source	Address	Cost
<p>Restraints 1996 and updated 1997. 83 pages. As of July 2002 a revision is in progress.</p>	<p>This physical and chemical restraint protocol includes an initial section with definitions, information on patient risk factors for restraint use, assessment for restraint use with a decision tree, protocols, interventions, and outcomes of restraint use. This protocol features appendices containing assessment and documentation tools, a restraint knowledge test, outcome monitoring forms, process evaluation monitoring forms, and a model consent form. A section is dedicated to reducing restraints; among the topics covered are strategies for the care of persons at risk of falling, persons with agitated/restless behavior and persons who wander. Includes a laminated "Restraint Use Algorithm". The final section is a "Quick Reference Guide".</p>	<p>University of Iowa Gerontological Nursing Intervention Research Center.</p>	<p>University of Iowa, College of Nursing Research Dissemination Core 4118 Westlawn Iowa City, IA 52242 (319) 384-4429  <a href="http://www.nursing.uiowa.edu/gnirc">http://www.nursing.uiowa.edu/gnirc</a></p>	<p>\$9.00. These materials are copyrighted and permission must be obtained to duplicate. (A permission form accompanies the protocols)</p>
<p>Guidelines for Restraint Use. Last updated January 1, 1997. 3 pages.</p>	<p>A succinct guideline containing an introduction, background information emphasizing regulations, and guidelines for restraint use. Includes references.</p>	<p>American Geriatrics Society</p>	<p>American Geriatrics Society The Empire State Building 350 Fifth Avenue, Suite 801 New York, NY 10118 (212) 308-1414 <a href="http://www.americangeriatrics.org/products/positionpapers/restraintn.shtml">http://www.americangeriatrics.org/products/positionpapers/restraintn.shtml</a></p>	<p>Available online</p>
<p>Untie the Elderly, The Kendal Corporation: Steps to Restraint Reduction. December 1996; rev. 3/99.</p>	<p>Among the topics covered are letters to staff and residents/families/physicians with suggestions for content, and advice for selecting Restraint Reduction Committee members. Tasks of the Restraint Reduction Committee and the Committee process are outlined.</p>	<p>The Kendal Corporation</p>	<p>The Kendal Corporation P.O. Box 100 Kennett Square, PA 19348-0100 (610) 388-5580 <a href="http://www.ute.kendal.org/index6.htm">www.ute.kendal.org/index6.htm</a></p>	<p>Available online</p>

<b>Literature</b>	
<i>Literature</i>	<i>Synopsis</i>
<b>Risks Associated with Physical Restraint Use</b>	
Capezuti E, Evans L, Strumpf NE, Maislin G. <u>Physical Restraint Use and Falls in Nursing Home Residents</u> . <i>Journal of the American Geriatrics Society</i> . 1996;44:627-633.	The relationship between restraint use and falls was examined while controlling for the effect of psychoactive drug use among nursing home residents. There was no evidence that the effect of restraint use on fall risk depended upon the use of psychoactive drugs. Restraints were not associated with a significantly lower risk of falls or injuries in subgroups of residents likely to be restrained. These findings support individualized assessment of fall risk rather than routine use of physical restraints for fall prevention.
Miles SH, Irvine P. <u>Deaths Caused by Physical Restraints</u> . <i>Journal of the American Geriatrics Society</i> . 1997; July; 45 (7): 797-802.	This article provides information on 74 deaths identified from "files of the United Consumer Product Safety Commission Death Certificate File and its Reported Incidents File and its National Injury Information Clearinghouse Accident Investigations." The authors point out that "bedrails are an unvalidated treatment" and the article contains graphic depictions of how bedrails can cause deaths. Clinical and design recommendations to prevent bedrail-related deaths are provided.
Tinetti ME, Liu WL, Ginter SF. <u>Mechanical Restraint Use and Fall-Related Injuries Among Residents of Skilled Nursing Facilities</u> <i>Annals of Internal Medicine</i> . 1992;116(5):369-74.	These researchers performed a prospective observational cohort study involving 12 skilled nursing facilities and 397 nursing home residents. "Mechanical restraints were associated with continued, and perhaps increased, occurrence of serious fall-related injuries after controlling for other injury risk factors."
Williams CC, Finch CE. <u>Physical Restraints: Not Fit for Woman, Man, or Beast</u> . <i>Journal of the American Geriatrics Society</i> . 1997;45:773-775.	This article describes the conclusion found in both researching human and animals: "physical restraint places highly destructive, measurable stress on people and animals". The undesirable psychological and physical effects of stress are described. The author suggests three factors contributing to the continued use of physical restraints: the failure to appreciate the dangers and destructiveness of stress associated with restraint use; lack of comprehension of the paradigm shift necessary for restraint-free care; and failure of nursing home leadership at the facility level.

<b>Benefits of Restraint Reduction</b>	
Capezuti E, Strumpf NE, Evans LK, Grisso JA, Maislin G. <u>The Relationship Between Physical Restraint Removal and Falls and Injuries Among Nursing Home Residents.</u> <i>Journal of Gerontology: Medical Sciences</i> . 1998;53A(1):M47-M52.	This study represents an analysis of data collected in a clinical trial of interventions aimed at reducing the use of restraints in nursing homes. There was no indication of increased risk of falls or injuries with restraint removal. Moreover, restraint removal significantly decreased the chance of minor injuries due to falls. This study demonstrates that physical restraint removal does not lead to increases in falls or subsequent fall-related injury in older nursing home residents.
Neufeld RR, Libow LS, Foley WJ, Dunbar JM, Cohen C, Breuer B. <u>Restraint Reduction Reduces Serious Injuries Among Nursing Home Residents.</u> <i>Journal of the American Geriatrics Society</i> . 1999;47(10):1202-1207.	These researchers performed a 2 year prospective study involving 16 nursing homes in 4 states. All nursing homes participated in an educational program followed by quarterly consultation. Restraint use declined from 41% to 4% without a concomitant increase in serious injuries.
<b>Reducing restraints in nursing homes</b>	
Evans LK. <u>Knowing the Patient: The Route to Individualized Care.</u> <i>Journal of Gerontological Nursing</i> . 1996;22(3):15-9.	"Provision of individualized care is dependent on knowing the patient as a person. Three factors contributed to individualized care: congruent societal and health care values; commonalities of patient needs in all settings; and primacy of caring through knowing the patient. Role modeling by mature nurses appears to have been of prime importance in the transmission of this way of nursing."
Evans LK, Strumpf NE, Allen-Taylor SL, Capezuti E, Maislin G, Jacobsen B. <u>A Clinical Trial to Reduce Restraints in Nursing Homes.</u> <i>Journal of the American Geriatrics Society</i> . 1997;45(6):675-81.	These investigators performed a prospective 12 month clinical trial, involving 3 nursing homes and 643 residents. The 3 nursing homes were randomly assigned to restraint education, restraint education with 12 hours/week consultation, or control. A statistically significant reduction in restraint use was noted in the restraint education-with-consultation nursing home; restraint reduction occurred without increasing staff, serious fall-related injuries, or psychoactive drug use.
Happ MB, Williams CC, Strumpf NE, Burger SG. <u>Individualized Care for Frail Elders: Theory and Practice.</u> <i>Journal of Gerontological Nursing</i> . 1996;22(3):6-14.	"Individualized care for frail elders is defined as an interdisciplinary approach which acknowledges elders as unique persons and is practiced through consistent caring relationships. The four critical attributes of individualized care for frail elders are: 1) knowing the person, 2) relationship, 3) choice, and 4) participation in and direction of care. Cognitively impaired elders can direct their care through the staff's knowledge of individual past patterns and careful observation of behavior for what is pleasing and comfortable to each resident."

<p>Rantz MJ, Popejoy L, Petroski GF, Madsen RW, Mehr DR, Zwygart-Stauffacher M, Hicks LL, Grando V, Wipke-Tevis DD, Bostick J, Porter R, Conn VS, Maas M. <u>Randomized clinical trial of a quality improvement intervention in nursing homes.</u> <i>The Gerontologist</i>. 2001 Aug; 41 (4): 525-38</p>	<p>These investigators performed a 12-month randomized clinical trial involving 113 nursing facilities. The facilities were randomly assigned to 1) workshop and comparative performance feedback reports, or 2) workshop and comparative performance feedback reports with the availability of clinical consultation by a gerontological clinical nurse specialist, or 3) control group. A non-significant decrease in restraint use was seen in the two intervention groups.</p>
<p>Schnelle JF, Newman DR, White M, Volner TR, Burnett J, Cronqvist A, Ory M. <u>Reducing and Managing Restraints in Long-Term-Care Facilities</u> <i>Journal of the American Geriatrics Society</i> . 1992;40(4):381-85.</p>	<p>These investigators performed "a delayed intervention, controlled, cross-over design with 3 phases" involving 63 physically restrained residents in 2 long-term care facilities. A management system, using colored pads as an environmental cue, is described for improving staff adherence with federal regulations requiring restraint release every two hours. The intervention resulted in a significant reduction in the percentage of residents restrained for greater than 2 hours.</p>
<p>Siegler EL, Capezuti E, Maislin G, Baumgarten M, Evans L, Strumpf N. <u>Effects of a Restraint Reduction Intervention and OBRA '87 Regulations on Psychoactive Drug Use in Nursing Homes.</u> <i>Journal of the American Geriatrics Society</i> . 1997;45:791-796.</p>	<p>"The objective of this study was to describe the changes in psychoactive drug use in nursing homes after implementation of physical restraint reduction interventions and mandates of the Omnibus Budget Reconciliation Act of 1987 (OBRA '87)" and "Interventions to reduce physical restraint did not lead to an increase in psychoactive drug use; further, reduction in both can occur simultaneously. OBRA mandates regarding psychoactive drug use were not uniformly effective, but appear, at minimum, to have increased awareness of the indications for neuroleptics."</p>
<p>Sullivan-Marx EM. <u>Achieving Restraint-Free Care of Acutely Confused Older Adults</u> <i>Journal of Gerontological Nursing</i> . 2001;27(4):56-61.</p>	<p>"The purpose of this article is to report findings from a descriptive study of restrained hip fracture patients, and discuss approaches to achieving restraint-free care. Clinically, restrained patients had a diagnosis of dementia, were noted to be confused or disoriented by nursing staff, and were dependent in activities of daily living. An individualized approach to care is the best method to avoid use of physical restraints for patients with acute confusion and cognitive impairment."</p>
<p>Walker L, Porter M, Gruman C, Michalski M. <u>Developing Individualized Care in Nursing Homes: Integrating the Views of Nurses and Certified Nurse Aides.</u> <i>Journal of Gerontological Nursing</i>. 1999;25(3):30-5;quiz 54-5.</p>	<p>This study reports findings from a comparative analysis conducted on a data set including quantitative and qualitative data from 289 CNAs and 245 nurses in Connecticut. Measures of obstacles to individualized care and needs for future supports were explored. A number of significant differences in perceptions of obstacles to providing individualized care were found. The nurses were significantly more likely to identify the following impediments to change: cost, concepts not integrated into work, lack of administrative support, and staff attitudes. The CNAs were significantly more likely to report inadequate staffing, lack of interdisciplinary teams, and resident and family attitudes as problematic. Such disparate perceptions pose challenges to nursing homes committed to the implementation of individualized care alternatives. Successful approaches must consider the various vantage points of caregivers and administrators.</p>

<b>Alternatives to restraint use</b>	
Bryant H, Fernald L. <u>Nursing Knowledge and Use of Restraint Alternatives: Acute and Chronic Care</u> . <i>Geriatric Nursing</i> . 1997;18(2):57-60.	"This descriptive study compares the types of restraints and alternatives to restraints used by nurses in the acute and chronic care setting. Significant results showed that chronic care nurses used fewer restraints and more alternatives than nurses in acute care. It is suggested by the findings stated above that the need is significant for additional and continued education in the acute care setting regarding restraints and alternatives to restraints."
Cohen C, Neufeld R, Dunbar J, Pflug L, Breuer B. <u>Old Problem, Different Approach: Alternatives to Physical Restraints</u> . <i>Journal of Gerontological Nursing</i> . 1996;22(2):23-9.	This paper describes specific alternatives to physical restraints utilized in 16 high restraint-use nursing facilities in four states (see Neufeld reference).
<b>Risk factors/predictors of physical restraint use</b>	
Castle NG, Fogel B, Mor V. <u>Risk Factors for Physical Restraint Use in Nursing Homes: Pre- and Post-Implementation of the Nursing Home Reform Act</u> . <i>The Gerontologist</i> . 1997;37(6):737-47.	These investigators identified resident and facility risk factors for physical restraint use post-Nursing Home Reform Act (NHRA) implementation and compared these risk factors with pre-NHRA results, using data collected in 1990 and 1993. Age, more physical and cognitive impairment, taking anti-psychotic medications, a history of falls, and mobility problems were significantly associated with restraint use. They "propose that, to date, the NHRA may have been successful in reducing the use of physical restraints, but it appears to have had less impact on the types of residents who are restrained."
Sullivan-Marx EM, Strumpf NE, Evans LK, Baumgarten M, Maislin G. <u>Initiation of Physical Restraint in Nursing Home Residents Following Restraint Reduction Efforts</u> . <i>Research in Nursing &amp; Health</i> . 1999;22:369-379.	Predictors of restraint initiation for older adults were examined using secondary analysis of an existing data set of nursing home residents who were subjected to a federal mandate and significant restraint reduction efforts. Lower cognitive status and a higher ratio of licensed nursing personnel were predictive of restraint initiation. Key findings suggest that restraint initiation occurs, despite significant restraint reduction efforts, when a nursing home resident is cognitively impaired or when more licensed nursing personnel are available for resident care.
Sullivan-Marx EM, Strumpf NE, Evans LE, Baumgarten M, Maislin G. <u>Predictors of Continued Physical Restraint Use in Nursing Home Residents Following Restraint Reduction Efforts</u> . <i>Journal of the American Geriatrics Society</i> . 1999; 47(3):342-48.	These researchers performed a secondary analysis of data from a clinical trial involving 3 nursing homes and 201 physically restrained residents. 135 residents remained in physical restraints after study restraint reduction efforts. "Severe cognitive impairment" and/or "fall risk as staff rationale for restraint use" were significantly associated with continued physical restraint use following restraint reduction efforts.

<b>The role of nursing administrators</b>	
Dunbar JM, Neufeld RR, Libow LS, Cohen CE, Foley WJ. <u>Taking Charge. The Role of Nursing Administrators in Removing Restraints.</u> <i>The Journal of Nursing Administration</i> . 1997;27(3):42-8.	<p>“This article describes the role of nursing administrators in reducing the use of physical restraints as part of a 2-year, national nursing home restraint-reduction project.”</p> <p>Concerns and benefits relating to restraint-free care are addressed. Among the topics covered are legal liabilities, compliance with OBRA, costs of staff time, and family attitudes and concerns.</p>
Patterson JE, Strumpf NE, Evans LK. <u>Nursing Consultation to Reduce Restraints in a Nursing Home.</u> <i>Clinical Nurse Specialist</i> .1995;9(4):231-5.	<p>These researchers describe the 6 phase consulting process utilized by a clinical nurse specialist as part of a clinical trial to decrease restraint use. Activities and roles of the clinical nurse specialist during each phase are reported.</p>
<b>Review articles</b>	
Evans LK, Strumpf NE. <u>Myths about Elder Restraint.</u> <i>IMAGE: Journal of Nursing Scholarship</i> . 1990;22(2):124-128.	<p>The following beliefs are examined as myths: "The old should be restrained because they are more likely to fall and seriously injure themselves", "It is a moral duty to protect patients from harm", "Failure to restraint puts individuals and facilities at risk for legal liability", "It doesn't really bother old people to be restrained", "We have to restrain because of inadequate staffing", and lastly "Alternatives to physical restraint are unavailable". The author also recommends topics for future investigation.</p>
Guttman R, Altman RD, Karlan MS. <i>Report of the Council on Scientific Affairs. Use of Restraints for Patients in Nursing Homes</i> . Council on Scientific Affairs, American Medical Association. <i>Archives of Family Medicine</i> . 1999;8(2):101-5.	<p>A review of restraint use in nursing homes including information about regulations and the Interpretative Guidelines. This article updates information regarding restraint use in nursing homes since the publication of the 1989 AMA report “Guidelines for the Use of Restraints in Long-Term Care Facilities”.</p>
<b>Siderails</b>	
Capezuti E. <u>Preventing Falls and Injuries While Reducing Siderail Use</u> <i>Annals of Long-Term Care</i> . 2000;8:57-63.	<p>"This article describes a program of research that aims to prevent bed-related falls and injuries while minimizing use of both restraints and siderails." The authors conduct individualized interventions addressing problems often resulting in siderail use: impaired mobility, sleep disturbance, nocturia/incontinence, and injury risk. The author concludes that "there is no single solution to prevent bed-related falls. Use of siderails often replaces the assessment process of unraveling the complex etiology of a resident's fall risk. Effective fall reduction programs emphasize the importance of a comprehensive assessment process and often employ an individualized, multifactorial intervention".</p>

<p>Capezuti E, Maislin G, Strumpf N, Evans LE. <u>Side Rail Use and Bed-Related Fall Outcomes Among Nursing Home Residents</u>. <i>Journal of the American Geriatrics Society</i> . 2002;50(1):90-96.</p>	<p>This article analyzes the effects of "physical restraint reduction on nighttime side rail use" and examines "the relationship between bilateral side rail use and bed-related falls/injuries among nursing home residents". Three nursing homes were examined in the study with 463 residents. "Despite high usage of bilateral side rails, they do not appear to significantly reduce the likelihood of falls, recurrent falls, or serious injuries."</p>
<p>Capezuti E, Talerico KA, Cochran E, Becker H, Strumpf N, Evans L. <u>Individualized Interventions to Prevent Bed-Related Falls and Reduce Siderail Use</u>. <i>Journal of Gerontological Nursing</i> . 1999;25(11):26-34.</p>	<p>"Five categories of problems that often result in siderail use: memory disorder, impaired mobility, injury risk, nocturia/incontinence, and sleep disturbance. As nursing homes work toward meeting the Health Care Financing Administration's mandate to examine siderail use, administrators and staff need to implement interventions that support safety and individualize care for residents. While no one intervention represents a singular solution to siderail use, a range of interventions, tailored to individual needs, exist. This article describes the process of selecting individualized interventions to reduce bed-related falls."</p>
<p>Capezuti E, Talerico KA, Strumpf N, Evans L. <u>Individualized Assessment and Intervention in Bilateral Siderail Use</u>. <i>Geriatric Nursing</i> . 1998;19(6):322-330.</p>	<p>"The use of bilateral siderails, similar to physical restraints, can be safely reduced by a comprehensive assessment process. This article presents an individualized assessment for evaluating siderail use to guide nurses in managing resident characteristics for falling out of bed and intervening for high-risk residents. The individualized assessment is consistent with federal resident assessment instrument requirements and includes risk factors specific to falls from bed."</p>
<p>Miles SH. <u>Deaths Between Bedrails and Air Pressure Mattresses</u>. <i>Journal of the American Geriatrics Society</i> . 2002;50(6):1124-1125.</p>	<p>A retrospective review of all voluntary report of deaths in beds with air mattresses that can be found in the Food and Drug Administration's on-line databases from 1994 to 2001. There were 35 deaths involving many product lines. "Two patterns were seen. In one, the mattress bunched up behind a person who was lying on the side of the bed, pushing the neck against a bedrail. In the second type, a patient died after sliding off the bed and having the neck or chest compressed between the rail and bed. Manufacturers attributed the deaths to poor clinical decision-making or inadequate monitoring."</p>