



**Australian and New Zealand Society for Geriatric Medicine
Position Statement No 2
Physical Restraint Use in Older People
Revised September 2012**

1. Physical restraint may be defined as any device, material or equipment attached to or near a person's body and which cannot be controlled or easily removed by the person, and which deliberately prevents or is intended to prevent a person's free body movement to a position of choice and/ or a person's normal access to their body.
2. The application of physical restraints has been commonplace in the management of a range of challenging behaviours in hospitals and residential care facilities. These include wandering, aggression, and interference with medical equipment.
3. The use of physical restraint in both acute and long term care settings is not supported by evidence of efficacy or safety. Thus, the decision to use an intervention of little proven benefit but which has the potential to cause harm has clear ethical, legal and clinical implications.
4. There is a growing body of evidence regarding the negative consequences of restraint use including physical, psychological and ethical problems.
5. Consideration of the use of restraint should be a stimulus for a thorough assessment of the individual, focusing on identifying the underlying cause(s) of the behaviour(s) of concern including physical, psychological, social and environmental considerations.
6. The decision to use restraints should be a collaborative decision involving the individual or their surrogate decision maker, nursing staff, medical practitioner, and other relevant healthcare providers.
 - a. The individual should be allowed to make a decision regarding treatment or an intervention after full explanation of the indications and potential risks.
 - b. In those who lack the capacity to make such a decision, an appropriate surrogate or proxy decision maker should be consulted.
7. The decision to use physical restraints should include:
 - a. Review of the individual by a medical practitioner and
 - b. Documentation of the rationale for restraint use and its intended duration
 - c. Documentation of alternatives to restraint use considered.
8. Medical practitioners should assume joint responsibility for the use of restraining devices on their patients. They should be involved in the decision to restrain, provision of relevant education, formulation of policies, and the development of procedures that promote alternatives to restraints.
9. Physical restraints may be used in emergency situations when a patient's behaviour poses a danger to themselves or others and no alternative is available.
 - a. Patients who are at risk to themselves or others because of agitated or aggressive behaviour, or through wandering, are best managed in specialised units with a locked area, rather than by physical restraints.
 - b. The use of physical restraints should not be a substitute for inadequate staffing, surveillance, or unsuitable environment for the individual's appropriate care.
10. Physical restraints must be used only by health care providers who are trained in its proper application and monitoring. Restraints must be used only on a time-limited basis, with regular monitoring of the individual throughout the period of usage.

- a. Physical restraints should be checked every 30 to 60 minutes, and each limb should be removed from the restraint at least once per hour.
 - b. The individual should be examined every 3 or 4 hours for the development of adverse effects (eg. pressure sores, abrasions) and attention to the need for hydration, elimination, comfort and social interaction must be assured.
11. Institutions must have written policies for physical restraint use.
- a. These should include guidelines for consent, permitted types of restraints, physician orders, monitoring requirements, and examination of all possible alternatives.
 - b. Management should be individualised within the policy framework of the institution.
12. Restraint minimisation and improved practice is encouraged by Australian accreditation requirements in health and aged care settings. Some progress toward this end may be occurring but studies based on quantitative data are needed to inform this process.
13. An effective culture of restraint minimisation requires education, attention to staff attitudes, expert consultation, a multidisciplinary approach, valid quality indicators, and appropriate architectural design. This is an evolutionary process that will be dependent on adequate resource allocation.

This Position Statement represents the views of the Australian and New Zealand Society for Geriatric Medicine. This Statement was approved by the Federal Council of the ANZSGM on 28 September 2012. The revision of this paper was coordinated by Dr Julie Dikiciyan. The original paper was coordinated by Drs Barbara Sabangan, Benny Katz and Prof Leon Flicker.

BACKGROUND

Physical restraint can be defined as “any device, material or equipment attached to or near a person’s body and which cannot be controlled or easily removed by the person and which deliberately prevents or is deliberately intended to prevent a person’s free body movement to a

position of choice and/or a person’s normal access to their body”.¹ Although the focus of this paper is on physical restraint, it is worth noting that restraint can be physical, chemical or environmental. The 2005 ANZSGM position statement on restraint in the elderly separated chemical and physical restraint due to the differences in the efficacy, risks, application and ethics. The entity of environmental restraint is sometimes merged in with physical restraint, but it too is emerging as a separate entity with its own ethical considerations and is not discussed further as it is beyond the scope of this project.

Physical restraints include, vests, hand mitts, lap belts, table overlays, restraining chairs, limb restraints, and bed rails. The commonest type of restraint used in acute and residential care settings is still the bed rail.²⁻⁷

Medical devices including urinary catheters, intravenous lines and cardiac monitors may restrain, or result in the need for physical restraint. The indication for these medical interventions should be documented and their use kept to a minimum.

Over the last few decades, the lack of evidence supporting the use of physical restraint in older people and the rising evidence of its potential for harm has led to regulatory reforms in Australia and around the world, resulting in a decline over the years in its utilization.⁸⁻¹³ Despite this, the use of physical restraint in older patients in acute and residential care settings is still high^{8, 14} and misconstrued ideas regarding its benefits persist.

Prevalence

It is difficult to draw conclusions about physical restraint use from prevalence studies as the results often vary widely. This is due to differences between study settings, restraint definitions, the population examined and presentation of this rate. Furthermore, studies in acute care settings are minimal and studies rarely comment on prevalence rates during periods of lower staffing (weekend, evening). There is little recent published data on prevalence rates of physical restraint use in Australia, but a recent study published in 2010 found rates of 1.5-6.9% in four Queensland nursing homes.¹⁵ This is lower than a national study of nursing homes published in 1998 where physical restraints use ranged from 15-30%.¹ Rates of use in older people in European

residential care facilities have been reported between 6-40%, higher than previous reports due to the abundance of studies focusing on residents with dementia.^{4, 9, 16-18} US rates appear to have fallen over the years, with reports of prevalence of around 5 % in acute settings and 9-30% in residential care settings.^{14,16,19}

The group at greatest risk of being physically restrained continues to be older, cognitively impaired adults, who due to frailty and impairment are likely to be at greatest risk of harm from restraint.^{6-8,11,20,21} Other characteristics associated with greater risk of physical restraint use include poorer health status, impaired functional ability, the presence of psychological and behavioural disturbances and nursing opinion of falls risk.^{6,7,12,22,23}

Perceived Benefits of Restraint Use

Health professionals cite multiple reasons for using physical restraint in hospitals and residential care facilities. The main reasons are to prevent falls, to protect medical devices and to manage behavioural disturbances associated with delirium and dementia, especially agitation, wandering and aggression.^{6,8,12,20,24-26,27} Fear of litigation has also been raised as a reason for restraint use as has inadequate staffing numbers.^{8,23,28} Families sometimes see physical restraint as a means of protecting their family member from falls and injury and without education and communication may not be able to accept the alternative.²³

Despite the rationale used by staff of both acute and residential care settings, no studies have ever confirmed these perceived benefits. In fact adverse outcomes with regards to restraint use continues to dominate the literature.

Physical restraint should therefore only be used once other options have been tried or deemed inappropriate and should only be applied by health care providers trained in its application. It may be justified when there is no alternative and it is required to prevent harm to the patient or others, or in the acute setting where physical restraint is required to secure a vital medical intervention and other non-restrictive interventions are unsuitable or have failed. Wherever possible consent should be sought, and it should only be used without consent where there is an imminent and serious threat. In these situations the restraint should be used

for the shortest time possible and its ongoing requirement regularly reassessed.

Risks of restraint use

The abundance of studies in the last two decades has ensured that the risks of physical restraint are now well recognised. Risk has been attributed directly to the use of the restraint or the attempt by the patient to free themselves from the restraint. A systematic review in 2003 and other more recent studies have continued to highlight these risks which include injuries from direct trauma, nerve injury, falls, asphyxiation, cardiac rhythm, and even death.^{8, 12,29, 30,31}

Risk profiles in acute and residential care settings have shown differences. In hospitalised patients physical restraint has been linked to prolonged hospitalisation, incontinence, pressure ulcers, nosocomial infection falls, increase severity of injury post fall and less likelihood of discharge home.^{8,12,20,29-32,31,33} However, no studies have been able to attribute direct causality, as those requiring physical restraint in acute care settings are also often severely ill.

In residential care settings the risk of physical restraint includes increased agitation psychological disturbance deconditioning, and worsening mobility.^{8,11,12, 31,30}

The view that the use of physical restraints reduce the risk of falls has been reconsidered over the years with a number of studies failing to show a difference in fall and injury rates between the physically restrained and unrestrained.^{4,9,19,34} For ethical reasons studies have been confined to the removal of restraint rather than their application, and limitations in methodology has led to varying results. Recent systematic reviews continue to find either no difference in falls and injury rates or find that patients fall more frequently and sustain more serious injuries following physical restraint use.^{8,24,30,35,36} This higher rate of falls and severe injury may be related to deconditioning associated with prolonged physical restraint use^{11, 31}

Bedrails may be not perceived as physical restraints by staff or family, but seen as a safety measure to ensure residents don't fall out of bed and injure themselves.⁶ However, serious adverse outcomes like severe injury, asphyxiation and death associated with entanglement in the bed rail or injury as a result

of a fall from greater height, has led to a push by regulators to have its use curtailed.^{8,12,30} Studies comparing fall rates between patients with and without bed rails had failed to show a difference.^{8,30} A more recent systematic review of the literature looked at the effect of bedrails on falls and injury, and although it had difficulty drawing firm conclusions due to methodological limitations of the studies identified, it too found little difference between having bedrails on or off.²⁴

In addition to the physical consequences there are also psychological consequences of physical restraint use. Feelings of anger, demoralization, humiliation and withdrawal have frequently been reported.^{8,22, 23, 31,37, 38} Physical restraint is often used to manage agitation but its application can actually be attributed to increased levels of agitation.^{12,26,27,29,31,36} The association with the development of delirium also continues to be shown, as does cognitive decline with restraint use.^{36, 39, 40}

Ethical and Legal Aspects

Those at greatest risk of injury from physical restraint use are the older, cognitively impaired, that is, some of society's most vulnerable.⁸ They may not recognise the restraint as a reminder to call for help, but instead see it as a barrier to get beyond. They may feel imprisoned and dehumanised.^{23,38} Whilst restrained they may not be able to ensure adequate hydration or request assistance if uncomfortable, further contributing to their distress. This has ethical implications.

AUTONOMY

Cognitive impairment can affect an individual's capacity for autonomy, but this does not mean that their preferences should not be respected, or even sought. Rarely is the view of cognitively impaired older adults regarding physical restraint reported in the literature.⁴¹ A single study that asked patients about their perceptions of physical restraint, focused on the cognitively intact.³⁷ People with cognitive impairment can have periods of lucidity and competence and where this is not the case a proxy decision maker should be involved in any decisions.⁴²

NON-MALEFICENCE AND BENEFICENCE

Non-maleficence and beneficence are reported as reasons for the application of physical restraints. However, there is little literary evidence of this, with physical restraint use contributing to both physical and psychological harm and little evidence of its efficacy. Perceived benefit towards other residents or staff members as a consequence of an individual's physical restraint should not play a pivotal role in the decision. Nor should inadequate staffing levels, or unsuitable care environments.

The decision to use physical restraint should involve more than just medical personnel. It should be a multidisciplinary team decision made after all other options have been considered. The individual and their proxy decision maker should be consulted and involved in a decision regarding any interventions, being informed of the indications and risk

LEGAL ISSUES

Increases in medical litigation are a source of distress to all caring for patients, especially the elderly and those with cognitive impairment who may be at greater risk of injury.⁴² Physical restraint is sometimes applied due to the fear of litigation.²⁸ However, hospitals have been found liable for both using and not using physical restraints.²¹ Using this as a reason for their application appears unjustifiable. Furthermore, the risk of litigation may actually be greater with the use of physical restraint, as there are risks associated with its improper application and monitoring and, as the literature suggests, a resident can be at greater risk of falls and injury with physical restraints.

Barriers to restraint minimisation

Many barriers exist when it comes to reducing physical restraint use and implementing restraint-free policies. Most of the studies have been in the residential care setting.

There are several recent Australian studies that have examined the barriers in establishing a restraint minimisation environment in residential care settings.^{5, 28, 43} The findings are presented in the following table.

Factors

Patient & Family 5, 28, 43	Staff 5, 28, 36, 43,	Environment 5, 28	Management 5, 28, 43
Fear of injury	Agency/inexperience	Not secure	Existing organisational culture
Family expectation	Fixed beliefs	Unsafe outdoors	Lack of support
Risk of litigation	Poor review processes	Limited supervision due to setup	Poor review processes
	Low staff ratios (weekend/nights)	Lack of restraint options	Lack of multidisciplinary team approach
	Lack of education re alternatives		
Inadequate communication between parties			

Table 1: Issues identified by staff, family and organisations as barriers to restraint minimisation

These studies have highlighted the need for further education of staff and families, access to alternatives to restraint, organisational support and open communication between parties in order to seriously address reducing physical restraint use in residential care.

Alternative approaches aiming to decrease restraint use

In residential care settings physical restraint use can be reduced without an increase in adverse effects³⁵. More recent studies have attempted to delineate what makes restraint minimisation successful, though limitations with study design continue to be an issue. There is still little evaluation in the literature of methods for reducing restraint use in acute care settings.

One of the keys to communicating a restraint minimisation culture starts with strong administrative support through the creation of a policy outlining physical restraint use.^{8,35} Restraint minimisation and improved practice is encouraged by the Australian Aged Care Standards and Accreditation Agency, with new draft guidelines promoting a restraint free environment but there is no Australia wide policy regarding physical restraint use in acute and residential care settings.⁵¹ Instead each hospital/facility is expected to have its own.⁴³ A recent Australian study found that 97% of the Melbourne hospitals involved in the study had a

physical restraint policy.² No study was found looking at rates in residential care facilities.

Multiple clinical intervention studies have focused on educating nursing staff on management of agitation and the alternatives to restraint use. However, few of these studies have been randomized and the results have often been contradictory.^{8,9}

Studies looking at restraint minimisation education have also shown varying results. The limitation's of earlier studies persists, with small sample sizes, non-equivalency of the intervention and control groups and few studies that are randomised. Some studies in residential care settings have showed decreased restraint use in the intervention groups during the education period without a subsequent rise in chemical restraint use or patient agitation.^{49,18,19,27} However, follow up studies either do not exist or show a return to usual practice once the intervention is ceased.^{4,9,18,27} The studies that showed ongoing reduced physical restraint use were those that focused on an individualised approach to each patient.^{9,19,44} Further still, there have been some studies that have been unable to show any difference in physical restraint use during or after education interventions.^{3,7}

A Cochrane review looked at interventions for preventing and reducing the use of physical restraints in residential care settings.⁴⁵ It found there was insufficient evidence to support the effectiveness of educational interventions as studies revealed both increases and decreases in physical restraint use in the intervention groups at follow up.

Another key to addressing reduced restraint use is understanding and managing the individual patient behaviours that result in the perceived need for physical restraint in the first place. Understanding of the behaviour in a bio/psycho/social context could lead to individualised interventions that may assist in ameliorating the behaviour and hence the need for the restraint.¹² Studies instituting this individualised approach often had more success in restraint minimization.^{4,19,44}

The type of care environment has also been thought to play a role in restraint minimisation, but studies have again shown variable results.^{8,46} A Cochrane review looking at special care residential units for individuals with dementia

and behavioural disturbance did not find any strong evidence of the benefit of these units in reducing physical restraint use.⁴⁷ A recent retrospective trial focusing on acute hospital admissions, looked at the difference between psychogeriatric unit admission compared with standard geriatric unit admission for elderly patients with delirium and found reduced rates of physical restraint use.⁴⁸ Again further trials are required in order to draw firm conclusions.

ALTERNATIVES TO RESTRAINT

There are multiple alternatives to physical restraint use, with most of the focus on environmental and behavioural approaches. These include:

- Interventions to reduce risk of falls and injury e.g. low beds, non-slip mats, hip protectors
- Education of family and staff to tolerate certain behaviours
- Optimisation of the environment e.g. secure environments to allow safe wandering, appropriate lighting
- Exercise, activities and socialisation
- Addressing individual needs e.g. sensory deficits, socialisation, physiological needs

Unfortunately, the efficacy of these alternatives has not been widely evaluated, with few studies in the literature.

The main problem, as evidenced in other areas of research relating to physical restraint use, appears to be a lack of studies looking at alternative interventions and a scarcity with sound methodology. Furthermore, studies focusing on single interventions were limited, making it difficult to determine the cause for success of the interventions.

A cluster randomised controlled trial in 45 German residential care settings combined nursing education and provision of alternatives to restraint (hip protectors, sensor mats and anti-slip socks).¹⁸ It found reduced restraint use without increases in falls, agitation or increase medication, suggesting a multifactorial approach works well.

One small study looked at safety net enclosures compared to standard restraints in an acute care setting.⁴⁹ This comprises a nylon net canopy that

surrounds the patient and the mattress, but does not restrict the patient's ability to move within the enclosure. Physicians and family members viewed them more positively than standard physical restraint yet there was no difference in degree of patient agitation. No significant difference was found in duration of restraint use, total length of stay, amount of antipsychotic use or injury rate. There were many limitations of this study. The small numbers meant that conclusions could not be drawn with regards to safety. The acceptability to patients of the safety net enclosure was not explored and the ethical dilemma's associated with physical restraints was not addressed. At present there is insufficient evidence to support its use.

A randomised controlled trial in Japan looked at whether bed-chair pressure sensors would reduce physical restraint use in a subacute setting. No difference in physical restraint use was found suggesting a single intervention alone was not enough to change embedded practices.⁵⁰

A systematic review looked at the effectiveness of alternative non-pharmacological interventions such as essential oils, massage/touch, music therapy, exercise therapy, distraction therapy, communication and electronic tagging on reducing wandering behavior.⁴¹ It concluded that there was no solid evidence to recommend any one of these interventions.⁴¹

Conclusion

The ongoing high rate of use of physical restraint in acute and residential care settings is of concern given the lack of evidence to support its efficacy and potential for harm.

The use of physical restraint may be justified in an acute or emergency situation to protect the safety of the patient, other people and staff, if no other less intrusive option is available or appropriate. Short duration physical restraint may be required to assist the assessment, investigation or treatment of an agitated person in this situation.

Apart from an emergency situation where there is no other option, physical restraint should generally not be implemented. The focus should be on alternative interventions. Difficulties in implementing a restraint minimisation culture continue to be identified in the literature.

Multifaceted, individualised approaches work better than single interventions. The approach to restraint minimisation should therefore address staff and family education, involve a multidisciplinary team and focus on the individual. Support at an organisational level increases the prospects of success of a restraint minimisation policy.

Medical practitioners should not delegate responsibility to the application of physical restraint to nursing staff. Restraint policies often dictate that it is a requirement for a medical practitioner to sign for the utilisation of a physical restraint. This should be done with a full understanding of the issues. Given this responsibility, it is surprising to find that the majority of the literature on this topic is found in nursing journals. A greater involvement by medical practitioners is necessary if restraint minimisation is to be successful.

The 2005 ANZSGM position statement on physical restraint use in the older person continues to stand true. Its focus on the individual and not on institutions fits with the findings in the literature. Further studies looking at the efficacy and applicability of alternatives to physical restraints and their acceptance by the residents is also required.

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