TITLE: The Use of Restraints During Acute Mental Health Interventions: A Review of the Clinical Evidence and Guidelines

DATE: 4 July 2013

CONTEXT AND POLICY ISSUES

Forensic psychiatric patients are a unique population requiring mental health services. Facility security policies and interests are connected with mental health treatments for these patients. In contrast to other psychiatric patients, these patients may be subjected to physical restraints by custody staff in order to control behavior unrelated to mental illness and subjected to restraints as required by the security requirements of the forensic care or correctional facility.1

Physical restraints refer to any handling, physical and mechanical methods to reduce patient freedom of movement or access to his or her own body. Examples of mechanical physical restraints include handcuffs, fetters, or straitjackets.2

Use of physical restraints has long been a controversial issue in managing the behavior of psychiatric inpatients.2,3 Physical restraints do not have a known function as a mental health treatment intervention and are used as a safety measure in anticipation or response to violent or challenging patient behavior.1,2 Physical restraint use attempts to reduce patient self-harm or harm to others.

There has been a trend towards policies that aim to reduce the frequency and duration of restraint use in other mental health treatment settings.4 Reasons for this trend include possible negative health consequences of physical restraints and interruption of treatment.2,3 The possible occurrence of negative health consequences resulting from the use of restraints necessitates an evidence-based approach to their use in response to an acute mental health intervention. Negative health consequences of the use of physical restraints include deep venous thrombosis, sudden death, accidental strangulation from vest restraints, brachial plexus injury, and staff injuries.2 Restraints also limit the opportunities to engage in a wider range of therapeutic activities.3 It is conceivable that various monitoring methods may decrease the associated health risks and decrease the unnecessary frequency and duration of restraint use that may undermine treatment.1

Disclaimer: The Rapid Response Service is an information service for those involved in planning and providing health care in Canada. Rapid responses are based on a limited literature search and are not comprehensive, systematic reviews. The intent is to provide a list of sources of the best evidence on the topic that CADTH could identify using all reasonable efforts within the time allowed. Rapid responses should be considered along with other types of information and health care considerations. The information included in this response is not intended to replace professional medical advice, nor should it be construed as a recommendation for or against the use of a particular health technology. Readers are also cautioned that a lack of good quality evidence does not necessarily mean a lack of effectiveness particularly in the case of new and emerging health technologies, for which little information can be found, but which may in future prove to be effective. While CADTH has taken care in the preparation of the report to ensure that its contents are accurate, complete and up to date, CADTH does not make any guarantee to that effect. CADTH is not liable for any loss or damages resulting from use of the information in the report.

Copyright: This report contains CADTH copyright material and may contain material in which a third party owns copyright. This report may be used for the purposes of research or private study only. It may not be copied, posted on a web site, redistributed by email or stored on an electronic system without the prior written permission of CADTH or applicable copyright owner.

Links: This report may contain links to other information available on the websites of third parties on the Internet. CADTH does not have control over the content of such sites. Use of third party sites is governed by the owners’ own terms and conditions.
Chemical and environmental restraints are alternative or complementary methods to physical restraints also used in settings with forensic psychiatric patients. Use of these different containment strategies and their frequency of use varies between countries. Appropriate usage of these containment strategies would ideally reduce the occurrence of health consequences and decrease treatment interruption, while not sacrificing patient and staff safety, and public security.

**RESEARCH QUESTIONS**

1. What is the clinical evidence regarding the use of physical restraints during the provision of acute mental health interventions for patients in forensic care or correctional facilities?

2. What is the clinical evidence regarding the use of physical restraints versus alternate forms of restraint during the provision of acute mental health interventions for patients in forensic care or correctional facilities?

3. What are the evidence-based guidelines regarding the use of physical restraints during the provision of acute mental health interventions for patients in forensic care or correctional facilities?

**KEY FINDINGS**

No research or best evidence was found to guide policies and practices with regard to safety or effectiveness for the use of physical restraints in forensic care or correctional facilities. The literature search strategy also did not identify any evidence comparing physical restraints to alternative forms of restraint and also did not identify evidence-based guidelines for the use of physical restraints.

**METHODS**

**Literature Search Strategy**

A limited literature search was conducted on key resources including PubMed, Ovid PsychINFO, The Cochrane Library (2013, Issue 5), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2008 and June 5, 2013.

**Selection Criteria and Methods**

One reviewer screened citations to identify literature on the use of restraints during the provision of acute mental health interventions for patients in forensic care or correctional facilities. Potentially relevant articles were ordered based on titles and abstracts, where available. One reviewer considered full-text articles for inclusion according to the selection criteria listed in Table 1.
Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Patients in forensic care or correctional facility requiring acute mental health interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Physical restraints</td>
</tr>
<tr>
<td>Comparator</td>
<td>No restraints</td>
</tr>
<tr>
<td></td>
<td>Other methods of restraint</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Evidence-based guidelines, appropriate application, safety and monitoring</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews/meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines</td>
</tr>
</tbody>
</table>

Exclusion Criteria

Studies and guidelines were excluded if they did not meet the selection criteria in Table 1 or were published prior to 2008 or in a language other than English.

SUMMARY OF EVIDENCE

Quantity of Research Available

The literature search strategy identified 399 articles and 6 articles were identified through searching grey literature. Of these, 26 full-text articles were retrieved for further examination following screening of titles and available abstracts. Review of retrieved full text articles revealed that none satisfied the selection criteria. Reasons for exclusion included an incorrect population (most commonly a psychiatric patients outside of a forensic or correctional setting), incorrect interventions (for example seclusion), or incorrect outcomes (for example patient interview responses to experiences with physical restraints). A PRISMA flowchart presented in Appendix 1 describes the selection procedure.

Summary of Findings

There was a lack of identified evidence to guide clinical practice in the use of physical restraints for psychiatric patients in forensic or correctional facilities. Widespread use of physical restraints lacks supporting evidence, however such studies are both ethical and possible.

CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING

No evidence was identified, therefore no conclusions regarding the use of physical restraints for patients in forensic or correctional facilities receiving mental health care can be drawn. The absence of identified evidence may be a reflection of the literature search strategy's limitations. It is possible relevant evidence exists beyond its scope. The literature search method found evidence-based guidelines for other populations specifically aimed at reducing the use of physical restraints but there is no evidence presented supporting the aim of restraint reduction and it is unclear whether these guidelines are generalizable/transferable to the population of interest. There are also guidelines and policies for the use of seclusion and restraint in correctional mental health facilities however these are not evidence-based and instead are guided by current community practice.
REFERENCES


APPENDIX 1: Selection of Included Studies

399 citations identified from electronic literature search and screened

379 citations excluded

20 potentially relevant articles retrieved for scrutiny (full text, if available)

6 potentially relevant reports retrieved from other sources (grey literature, hand search)

26 potentially relevant reports

26 reports excluded:
- irrelevant population (8)
- irrelevant intervention (4)
- irrelevant outcomes (8)
- other (review articles, editorials) (6)

No reports included in review