NZHTA REPORT
30 May 2002

Suicide prevention topic 9:

What evidence is there about the use of seclusion or containment for patients presenting with suicidal behaviours at emergency departments, tertiary mental health services or inpatient units?

A critical appraisal of the literature

Carolyn Doughty

New Zealand
Health Technology Assessment

Department of Public Health and General Practice
Christchurch School of Medicine
Christchurch, NZ.

Division of Health Sciences, University of Otago

NEW ZEALAND HEALTH TECHNOLOGY ASSESSMENT (NZHTA)
THE CLEARING HOUSE FOR HEALTH OUTCOMES AND
HEALTH TECHNOLOGY ASSESSMENT

Department of Public Health and General Practice
Christchurch School of Medicine and Health Sciences
Christchurch, New Zealand

Suicide prevention topic 9:

What evidence is there about the use of seclusion or containment for patients presenting with suicidal behaviours at emergency departments, tertiary mental health services or inpatient units?

A critical appraisal of the literature

Carolyn Doughty

NZHTA REPORT
30 May 2002

This report should be referenced as follows:

Doughty C. Suicide prevention topic 9: What evidence is there about the use of seclusion or containment for patients presenting with suicidal behaviours at emergency departments, tertiary mental health services or inpatient units? *NZHTA Report 2002.*

2002 New Zealand Health Technology Assessment (NZHTA)
ISBN 1-877235-35-0

ACKNOWLEDGEMENTS

This review was commissioned by the Suicide Working Group of the New Zealand Guidelines Group (NZGG).

The staff of NZHTA developed this review. It was prepared by Dr Carolyn Doughty (Researcher) who critically appraised the evidence. Mr Peter Day assisted with scoping the topic and identifying abstracts of papers eligible for retrieval. The literature search strategy was developed and undertaken by Ms Margaret Paterson (Information Specialist). Ms Philippa Monkman and Miss Becky Mogridge assisted with the retrieval of articles. Mrs Ally Reid (Secretary/Word Processor) provided document formatting. Internal peer review was provided by Ms Marita Broadstock and Dr Ray Kirk.

Dr Annette Beautrais (Consultant) provided invaluable input on technical and methodological issues, assistance with article selection and peer review. Ms Emma Suttich (NZGG) provided helpful guidance with the topic development, article selection and facilitated liaison with the NZGG.

The Canterbury Medical Library provided invaluable assistance with the retrieval of articles used in this report.

NZHTA is a Research Unit of the University of Otago funded under contract to the Ministry of Health.

DISCLAIMER

COPYRIGHT

CONTACT DETAILS

New Zealand Health Technology Assessment
The Clearing House for Health Outcomes and Health Technology Assessment
Department of Public Health and General Practice
Christchurch School of Medicine and Health Sciences
P O Box 4345
Christchurch
New Zealand
Tel: +64 3 364 1152 Fax: +64 3 364 1152

E-mail: nzhta@chmeds.ac.nz

Web Site: http://nzhta.chmeds.ac.nz

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

CO	–	Continuous Observation
c.f.	–	compared with
ED	–	Emergency Department
NZ	–	New Zealand
NZGG	–	New Zealand Guidelines Group
NZHTA	–	New Zealand Health Technology Assessment
SIGN	–	Scottish Intercollegiate Guidelines Network

Methods

This topic considered the use of seclusion/containment for crisis management for patients presenting with suicidal behaviours at emergency departments, tertiary mental health services or inpatient units. The topic dealt with four sub-questions in this context:

(a) is there any evidence about the optimal duration of seclusion/containment?
(b) are there any protocols about observation practices?
(c) are there any protocols about the design of seclusion/containment rooms?
(d) what training do staff need in the use of seclusion/containment?

STUDY SELECTION

The development of this systematic review involved consultation between the NZHTA and the Suicide Working Group.

Publication type

Studies published between 1990 and 30 April 2002 inclusive in the English language including primary (original) research (published as full original reports) and secondary research (systematic reviews and meta-analyses) appearing in the published literature.

Population

Studies reporting on persons placed in seclusion and/or under observation following suicide attempt, expressing suicidal ideation, or suicide threat.

Setting

Studies set in emergency departments, tertiary mental health services or inpatient units[1].

Intervention

Studies which described and evaluated the use of seclusion, containment or constant observation; studies describing protocols about observation practices or the design of seclusion/containment rooms; and studies evaluating what training staff need in the use of seclusion/containment or the training of staff in the use of this intervention.

Study Design

Studies employing one of the following study designs:

- systematic review or meta-analysis
- randomised controlled trial (RCT)
- controlled clinical trial (CCT)
- cohort study
- case-control study
- quasi-experimental before and after study
- descriptive study.

[1] Inpatient units were included as an eligible study setting for this topic as seclusion, containment or constant observation interventions are more commonly applied in this setting.

Study inclusion criteria

The following criteria was used to **include** studies for appraisal:

- study population are persons presenting following suicide attempt, expressing suicidal ideation, suicide threat
- study set in emergency department
- study set in tertiary mental health service or inpatient unit
- study published in 1990 or later
- study written in English
- outcomes considered include:
  - repeat presentations for suicidality
  - repeat suicide attempts
  - mortality from suicide.

Study exclusion criteria

The following criteria was used to **exclude** studies from appraisal:

- study population concerned:
  - primarily (50% or more) those with deliberate self-harm in the absence of suicide intent
  - primarily (50% or more) those involved in assisted suicide
  - primarily (50% or more) presentations for self-mutilation
  - primarily (50% or more) children 12 years of age and under
  - homicidal people
  - criminal offenders

- studies concerned with:
  - primarily a population with underlying personality disorder or affective disorder (and therefore potential confounder of study results and treatments)
  - the treatment of people with drug/substance abuse or dependence, that is treatment directed to their addiction rather than any suicide attempt
  - suicide prevention interventions specifically for people with HIV/AIDS
  - school-based suicide prevention interventions
  - economic analyses

- citations which are letters to the editor, comments, editorials, abstract only
- studies with small numbers of case presentations (five or fewer cases)
- studies that did not clearly describe their methods and results, or had significant discrepancies.

SEARCH STRATEGY

A systematic method of literature searching and selection was employed in the preparation of this review.

Searches were limited to English language material published from 1990 onwards. The searches were completed on 30 April 2002.

Principal sources of information

The following databases were searched using the search strategy outlined in **Appendix 1: Search strategies.**

Bibliographic databases

Medline
Embase
Cinahl
Psychinfo
Current Contents
Science/Social Science Citation Index
Index New Zealand

Review databases

Evidence-based medicine reviews
Cochrane Database of Systematic Reviews
DARE
NHS Economic Evaluation Database
Health Technology Assessment Database

The search was restricted to information from 1990 in English. Hand searching of journals, or contacting of authors for unpublished research was not undertaken during the search process.

Search terms used

Medline subject terms (MeSH terms): suicide, suicide attempted, exp self-injurious behavior, exp facility design and construction, restraint physical, immobilization, safety management, exp mental disorders.

Psychinfo subject terms: self destructive behavior, attempted suicide, self inflicted wounds, self mutilation, suicide, suicidal ideation, suicide prevention, suicide prevention centers, patient seclusion, monitoring, observation methods, interior design, architecture, environmental planning.

Additional keywords: suicid*, parasuicid*, seclusion, patient observation, supervision, ((seclus$ or contain$ or observat$) adj5 (duration or length or time or practic$)), (design$ adj3 (seclus$ or contain$ or observat$)), ((design$ adj3 (seclus$ or contain$ or observat$)) and room).

STUDY SELECTION

Studies were selected for appraisal using a two-stage process. Initially, the titles and abstracts (where available) identified from the search strategy were scanned and excluded as appropriate. Two researchers, Dr Carolyn Doughty and Mr Peter Day, performed selection of the articles for retrieval. The full text articles were retrieved for the remaining studies and these were appraised by one researcher (Dr Doughty) if they fulfilled the study selection criteria outlined above.

EVIDENCE TABLE

The summary of appraisal results is shown in tabular form and includes:

- study reference and country
- study design
- study quality grading and evidence level
- study arm description of intervention, service, treatment
- patient inclusion and exclusion criteria
- number of patients included in study sample
- study outcomes and p-values and/or 95% confidence intervals
- comments on the study and its internal validity issues arising from the study appraisal.

P-values unless otherwise stated relate to between group comparisons.

APPRAISAL METHODOLOGY

Articles were formally appraised using the checklist schedules and hierarchy of evidence coding system developed by the Scottish Intercollegiate Guidelines Network (SIGN). Validated criteria were used to appraise the studies selected for review. Key facets of the selected studies (including limitations) were documented in the text. Conclusions were drawn based on the study design and the specific problems associated with individual studies. The evidence presented in the selected studies were assessed and classified according to the SIGN grades of guideline recommendation by the suicide prevention guideline group.

Study limitations

Seclusion or containment is a procedure used in a variety of settings to manage acute and escalating risk in suicidal patients. It may also involve the use of other forms of restraint and appropriate monitoring. This topic considered the use of seclusion/containment for crisis management. There were four specific subtopics: (a) is there any evidence about the optimal duration of seclusion/containment; (b) are there any protocols about observation practices; (c) are there any protocols about the design of seclusion/containment rooms; and (d) what training do staff need in the use of seclusion/containment.

Although the literature search did identify a reasonable number of articles on this subject, the vast majority of studies retrieved were based upon expert opinion or dealt with nursing staff or consumer perceptions of the interventions, and were therefore excluded as level 4 evidence. Studies rarely addressed the subtopics specifically. Although some studies did report the average length of time an individual spent in seclusion, they did not make any assessment of the optimal duration. There was very little literature on seclusion room design[2].

This review has been limited by restriction to English language studies. Restriction by language may result in study bias, but the direction of this bias cannot be determined. In addition this review has been limited to the published academic literature, and has not appraised unpublished work. Restriction to the published literature is likely to lead to bias since the unpublished literature tends to consist of studies not identifying a significant result.

Papers published pre-1990 were not considered. The NZGG will need to assess whether the new evidence presented in this review is sufficient to alter any recommendations included in previous evidence-based guidelines.

For this topic, the review scope was expanded from ED and tertiary mental health services to include inpatient units as seclusion/containment/observation is often utilised within an inpatient setting.

The studies were initially selected by examining the abstracts of these articles. Therefore, it is possible but unlikely that some studies were inappropriately excluded prior to examination of the full text article. Articles were retrieved where the abstract provided little information, but in general, articles did not consider any of the subtopics as their primary focus.

Critical appraisal was performed by one single reviewer.

The review scope was developed with the assistance of Mr Peter Day (NZHTA), Emma Suttich (NZGG) and Dr Annette Beautrais.

This review was conducted over a limited timeframe (April 2002 to May 2002).

[2] A document that was developed by an expert working group in New Zealand offers some direction on the minimum requirements for seclusion room or areas (Standards New Zealand and Ministry of Health 2001).

Results

There were 147 studies identified by the search strategy. Of these, 46 full text articles were eligible for retrieval after considering abstracts. A further reference by Shugar and Rehaluk (1990) was cited in one paper. Of these 47 retrieved papers, 46 did not fulfil the inclusion criteria and are presented in **Appendix 3**, with a brief description of their reason for exclusion. Papers were excluded for several reasons: providing Level 4 (expert opinion and/or narrative review) evidence only (n=21), no suicidality outcomes measured (n=12), study not conducted in ED, tertiary mental health, or inpatient setting (n=2), study not relevant to topic (n=9), case studies (n=1), correspondence (n=1).

Only one study was appraised for this topic (see **Appendix 2**). Its appraisal is summarised in **Table 1 (page 8)**. This study was of poor quality and did not use standard case-control methodology. Whilst of borderline eligibility, it was included given the paucity of data for this topic.

Table 1. Evidence table of appraised articles

Study; design type; evidence grading; country	Intervention/ comparison Outcome measure	Criteria for Inclusion/ Exclusion	Results/Outcome	Comments including methodological issues
(Shugar and Rehaluk, 1990) Case-Control Grade 2- Country: Canada	Use of continuous observation for psychiatric inpatients.	Inclusion criteria: All psychiatric inpatients who were placed on continuous observation in an eight month period. Exclusion criteria: Nil stated.	102 experimental subjects identified. More subjects requiring extended observation (7-89 days) c.f. short stay (1-3 days) were started due to risk of self-harm ($p<0.04$). Five clinical factors predicted use of continuous observation: History of self-harm ($p=0.0001$), involuntary status ($p=0.0001$), low social class ($p=0.0001$), history of violence to property ($p=0.007$), to others ($p=0.002$), gender ($p=0.04$). The continuous observation group had three times as many subjects with sub-diagnosis of affective psychosis. Cumulative Percent: 36% required continuous observation for under 24 hours (mean, 13 hrs); 49% required it for up to 48 hours (mean, 19 hours); and 63% for up to 72 hours (mean, 28 hours).	▪ patient who was admitted to the same unit immediately after case entered control group ▪ range of diagnoses included affective disorder, schizophrenia and personality disorder ▪ 33/102 subjects primary indication for continuous observation was potential self-harm but data on suicidality could not be separated ▪ used categorical approach to data analysis ▪ odds ratios/relative risk not computed ▪ no attempt to identify or adjust for confounding factors.

References

Standards New Zealand and Ministry of Health (2001). *Restraint minimization and safe practice: NZS 8141:2001*. Wellington: Standards New Zealand.

Appendix 1: Search strategies

CINAHL

1 suicide, attempted/ or suicide/ or "suicide prevention (iowa nic)"/ (1868)
2 Suicidal Ideation/ (215)
3 suicid$.tw. (2219)
4 parasuicid$.tw. (38)
5 Injuries, Self-Inflicted/ (224)
6 or/1-5 (3061)
7 Patient Seclusion/ (125)
8 seclusion.tw. (172)
9 (containment adj3 patient).tw. (23)
10 Restraint, Physical/ (1104)
11 Observation Units/ (155)
12 or/7-11 (1376)
13 exp "Facility Design and Construction"/ (1523)
14 12 and (6 or 13) (24)
15 from 14 keep [SELECTED REFERENCES] (5)
16 limit 7 to (english and yr=1990-2002) (124)
17 16 not 14 (121)
18 from 17 keep [SELECTED REFERENCES] (68)

CURRENT CONTENTS

1 (suicid$ or parasuicid$).mp. (13543)
2 self destruct$.mp. (474)
3 1 or 2 (13895)
4 (seclus$ or containment or patient isolation or patient observation).mp. (4007)
5 3 and 4 (42)
6 from 5 keep [SELECTED REFERENCES] (10)
7 ((isolation or seclusion or containment) adj room$).mp. (89)
8 7 not 5 (88)
9 from 8 keep [SELECTED REFERENCES] (2)

EMBASE

1 suicidal behavior/ or self poisoning/ or suicide/ or suicide attempt/ (12850)
2 Automutilation/ (1905)
3 suicid$.tw. (13829)
4 parasuicid$.tw. (276)
5 or/1-4 (18801)
6 seclusion/ (18)
7 seclusion.tw. (159)
8 patient monitoring/ (15207)
9 (containment adj3 patient).tw. (39)
10 observation/ (1981)
11 or/6-10 (17355)
12 exp furniture/ (2355)
13 (room adj3 design).tw. (84)
14 architecture/ (531)
15 building/ (1509)

16 hospital design/ (157)
17 or/12-16 (4494)
18 11 and 5 (80)
19 (11 and 17) not 18 (41)
20 6 or 18 or 19 (138)
21 limit 20 to (english language and yr=1990-2002) (107)
22 from 21 keep [SELECTED REFERENCES] (14)

MEDLINE

1 suicide/ or suicide, attempted/ (23216)
2 exp Self-Injurious Behavior/ (3521)
3 suicid$.tw. (22818)
4 parasuicid$.tw. (401)
5 or/1-4 (34340)
6 Patient Isolation/ (1514)
7 exp "Facility Design and Construction"/ (13256)
8 restraint, physical/ or immobilization/ (13326)
9 Safety Management/ (1860)
10 seclusion.tw. (375)
11 patient observation.tw. (177)
12 supervision.tw. (7594)
13 or/6-12 (37516)
14 5 and 13 (217)
15 limit 14 to (english language and yr=1990-2002) (115)
16 from 15 keep [SELECTED REFERENCES] (32)
17 exp mental disorders/ (469317)
18 17 and (6 or 10) (279)
19 limit 18 to (english language and yr=1990-2002) (130)
20 19 not 15 (119)
21 from 20 keep [SELECTED REFERENCES] (56)

PSYCHINFO

1 self destructive behavior/ or attempted suicide/ or self inflicted wounds/ or self mutilation/ or suicide/ (13899)
2 suicidal ideation/ (1496)
3 suicide prevention/ or suicide prevention centers/ (1409)
4 suicid$.tw. (19408)
5 parasuicid$.tw. (500)
6 or/1-5 (21646)
7 patient seclusion/ (87)
8 monitoring/ (1098)
9 containment.tw. (947)
10 seclusion.tw. (391)
11 observation methods/ (2645)
12 or/7-11 (5069)
13 6 and 12 (82)
14 interior design/ or architecture/ or environmental planning/ (1407)
15 14 and (7 or 8 or 11) (2)
16 from 13 keep [SELECTED REFERENCES] (13)
17 ((seclus$ or contain$ or observat$) adj5 (duration or length or time or practic$)).tw. (2531)
18 17 and 6 (36)
19 18 not 13 (29)

20 from 19 keep [SELECTED REFERENCES] (3)
21 (design$ adj3 (seclus$ or contain$ or observat$)).tw. (538)
22 ((design$ adj3 (seclus$ or contain$ or observat$)) and room).tw. (6)
23 from 22 keep [SELECTED REFERENCES] (2)
24 16 or 20 or 23 (18)
25 limit 24 to (english language and yr=1990-2002) (15)
26 from 25 keep [SELECTED REFERENCES] (15)

Appendix 2: Bibliography of included studies

INCLUDED, CRITICALLY APPRAISED STUDIES

Shugar, G., & Rehaluk, R. (1990). Continuous observation for psychiatric inpatients: a critical evaluation. *Comprehensive Psychiatry*, 30, 48-55.

Appendix 3: Bibliography of excluded studies

EXCLUDED, RETRIEVED STUDIES

The following papers were reviewed but rejected for inclusion in the analysis. These are presented in five categories, as relevant to the topic generally, and relevant to each subtopic:

General

Anonymous (2001a). Briefings. American Psychiatric Nurses Association position statement on the use of seclusion and restraint. *Journal of the American Psychiatric Nurses Association*, 7, 130-133.

No data on suicidality as outcome. Position statement.

Ashaye, O., Ikkos, G., & Rigby, E. (1997). Study of effects of constant observation of psychiatric in-patients. *Psychiatric Bulletin*, 21, 145-147.

No data on suicidality as outcome. Patient and staff perceptions of the use of constant observation.

Belanger, S. (2001). The 'S&R Challenge': reducing the use of seclusion and restraint in a state psychiatric hospital. *Journal for Healthcare Quality: Promoting Excellence in Healthcare*, 23, 19-24.

No data on suicidality as outcome.

Bongar, B., Maris, R. W., Berman, A. L., Litman, R. E., & Silverman, M. M. (1993). Inpatient standards of care and the suicidal patient. Part I: General clinical formulations and legal considerations. *Suicide & Life-Threatening Behavior*, 23, 245-256.

Expert opinion. No specific protocols discussed about patient supervision.

Busch, A. B., & Shore, M. F. (2000). Seclusion and restraint: a review of recent literature. *Harvard Review of Psychiatry*, 8, 261-270.

Narrative review. Covers several subtopics, particularly 9(d).

Cashin, A. (1996). Seclusion: the quest to determine effectiveness. *Journal of Psychosocial Nursing & Mental Health Services*, 34, 17-21.

No data on suicidality as outcome.

Cheung, P. (1992). Suicide precautions for psychiatric inpatients: A review. *Australian & New Zealand Journal of Psychiatry*, 26, 592-598.

Expert opinion. Comments of lack of evidence about practice of constant observation.

de Cangas, J. P. C. (1993). Nursing staff and unit characteristics: do they affect the use of seclusion? *Perspectives in Psychiatric Care*, 29, 15-22.

No data on suicidality as outcome. Conceptual model of variables affecting seclusion.

Delaney, K. R. (2001). Developing a restraint-reduction program for child/adolescent inpatient treatment. *Journal of Child & Adolescent Psychiatric Nursing*, 14, 128-140.

Expert opinion.

Fisher, W. A. (1994). Restraint and seclusion: a review of the literature. *American Journal of Psychiatry*, 151, 1584-1591.

Narrative (non-systematic) literature review which covers several subtopics, and particularly 9(d).

Francis, E., Marchand, W., Hart, M., Carter, A., Schinka, J., Feldman, A., & Ordorica, P. (2000). Utilization and outcome in an overnight psychiatric observation program at a Veterans Affairs medical center. *Psychiatric Services*, 51, 92-95.

Setting was Veterans Affairs medical centre for outpatient care.

Green, J. S., & Grindel, C. G. (1996). Supervision of suicidal patients in adult inpatient psychiatric units in general hospitals. *Psychiatric Services*, 47, 859-883.

No data on suicidality as outcome.

Jena, S. P. (1999). Treatment of self-injurious behaviour by differential reinforcement and physical restraint. *International Journal of Rehabilitation Research*, 22, 243-247.

No data on suicidality as outcome.

Lendemeijer, B., & Shortridge-Baggett, L. (1997). The use of seclusion in psychiatry: a literature review... including commentary by Mohr WK. *Scholarly Inquiry for Nursing Practice*, 11, 299-320.

Expert opinion.

McBride, S. (1996). Seclusion versus empowerment: a psychiatric care dilemma. *Canadian Nurse*, 92, 36-39.

Expert opinion.

Morris, B. T. (1996). Seclusion is often used when resources are short... "Seclusion: the use of a stress model to appraise the problem". *Nursing Times*, 92 (1), 3-9.

Expert opinion.

Muir-Cochrane, E. (1998). Time to review the practice of seclusion. *Australian Nursing Journal*, 6 (6), 5.

Expert opinion.

Neilson, T., Peet, M., Ledsham, R., & Poole, J. (1996). Does the Nursing Care Plan help in the management of psychiatric risk? *Journal of Advanced Nursing*, 24, 1201-1206.

No data on suicidality as outcome.

Sailas, E., & Fenton, M. (2001). Seclusion and restraint for people with serious mental illnesses. *The Cochrane Library*.

This Cochrane review focused on people with serious or chronic mental illness. However, no controlled trials were identified and all 24 identified studies were excluded. No recommendation could be made about the effectiveness, benefit or harmfulness of seclusion or restraint.

Yip, P. S. F., & Chiu, L. H. (1998). Teenage attempted suicide in Hong Kong. *Crisis*, 19, 67-72.

No relevant data. Descriptive study set in A&E Department.

(a) What evidence is there about optimal duration of seclusion/containment?

Angold, A., & Pickles, A. (1993). Seclusion on an adolescent unit. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 34, 975-989.

No relevant data on duration of seclusion.

Anonymous (2001c). Restraint and seclusion: enforcement of the 1-hour rule. *Journal of Psychosocial Nursing & Mental Health Services*, 39.

Expert opinion. Comment on 1-Hour rule.

Kozub, M. L., & Skidmore, R. (2001). Seclusion & restraint: understanding recent changes. *Journal of Psychosocial Nursing & Mental Health Services*, 39, 24-31.

Expert opinion. Comment on 1-Hour rule; seclusion policy and procedures discussed for US facilities (9b).

Mason, T. (1993). Seclusion theory reviewed – a benevolent or malevolent intervention? *Medicine, Science & the Law*, 33, 95-102.

Expert opinion. Discusses average duration of seclusion only.

Talley, S., Davis, D. S., Goicoechea, N., Brown, L., et al. (1990). Effect of psychiatric liaison nurse specialist consultation on the care of medical-surgical patients with sitters. *Archives of Psychiatric Nursing*, 4, 114-123.

RCT but setting is non-inpatient and therefore excluded. Looked at number of sitter shifts but not duration of individual shift.

(b) Are there any protocols about observation practices?

Anonymous (2001b). Checklist for using seclusion and restraint. *Journal of Psychosocial Nursing & Mental Health Services*, 39.

Expert opinion.

Bowers, L., Gournay, K., & Duffy, D. (2000). Suicide and self-harm in inpatient psychiatric units: a national survey of observation policies. *Journal of Advanced Nursing*, 32, 437-444.

No relevant data. Descriptive study that discusses the lack of written observation policy and recording procedures.

Cleary, M., Jordan, R., Horsfall, J., Mazoudier, P., & Delaney, J. (1999). Suicidal patients and special observation. *Journal of Psychiatric & Mental Health Nursing*, 6, 461-467.

No relevant data.

Langenbach, M., Junaid, O., Hodgson-Nwaefulu, C. M., Kennedy, J., Moorhead, S. R., & Ruiz, P. (1999). Observation levels in acute psychiatric admissions. *European Archives of Psychiatry & Clinical Neuroscience*, 249, 28-33.

Case series. Could not isolate relevant data for subjects expressing suicidality (n=28).

Pearson, J. L., Stanley, B., King, C. A., & Fisher, C. B. (2001). Intervention research with persons at high risk for suicidality: safety and ethical considerations. *Journal of Clinical Psychiatry*, 62, 17-26.

No relevant data.

Ryan, J., Clemmett, S., & Perez-Avila, C. (1996). Managing patients with deliberate self harm admitted to an accident and emergency observation ward. *Journal of Accident & Emergency Medicine*, 13, 31-33.

No relevant data. Does not explicitly evaluate protocol or observation practice.

Templeton, L., Gray, S., & Topping, J. (1998). Seclusion: changes in policy and practice on an acute psychiatric unit. *Journal of Mental Health*, 7, 199-202.

No data on suicidality as outcome Retrospective, before and after study of unit.

Ventura, M. R., Lenz, S., & Rizzo, J. (1992). Developing an appropriateness-of-care monitor to manage patients in seclusion or seclusion/restraints. *Journal of Nursing Care Quality*.

No data on suicidality as outcome.

(c) Are there any protocols about the design of seclusion/containment rooms?

Curry, J. L. (1993). The care of psychiatric patients in the emergency department. *Journal of Emergency Nursing*, 19, 396-407.

Expert opinion. Section on seclusion room design.

Dighe-Deo, D., & Shah, A. (1998). Video monitoring of dangerous behaviour. *Psychiatric Bulletin*, 22, 122-123.

Correspondence.

Dix, R. (2001). Physical environment. In M. D. Beer (Ed.), *Psychiatric intensive care* (pp. 277-291). London: Greenwich Medical Media Limited.

Expert opinion. Section on design of seclusion/de-escalation room.

Nestor, C. (2000). Suicide watch. Design your facility to protect troubled patients from self-harm. *Health Facilities Management*, 13, 24-26.

Expert opinion.

(d) What training do staff need in the use of seclusion/containment?

Anonymous (2000a). Front line. Making a good restraint and seclusion record even better – responding to staff concerns by instituting and maintaining a full staff training program. *Joint Commission Benchmark*, 2, 6-7.

Expert opinion.

Anonymous (2000b). Getting a handle on restraint: new behavioral health care standards spell out specifics of training. *Joint Commission Benchmark*, 2, 1-3.

Expert opinion.

Cannon, M. E., Sprivulis, P., & McCarthy, J. (2001). Restraint practices in Australasian emergency departments. *Australian & New Zealand Journal of Psychiatry*, 35, 464-467.

No data on suicidality as outcome.

Duffy, D. (1995). Out of the shadows: a study of the special observation of suicidal psychiatric in-patients. *Journal of Advanced Nursing*, 21, 944-950.

Expert opinion. Discusses need for policies and training programmes.

Forster, P. L., Cavness, C., & Phelps, M. A. (1999). Staff training decreases use of seclusion and restraint in an acute psychiatric hospital. *Archives of Psychiatric Nursing*, 13, 269-271.

No data on suicidality as outcome. Describes implementation of staff training programme.

Morrison, P., & Lehane, M. (1995a). Research in brief. The effect of staffing levels on the use of seclusion. *Journal of Psychiatric & Mental Health Nursing*, 2, 365-366.

No relevant data.

Morrison, P., & Lehane, M. (1995b). Staffing levels and seclusion use. *Journal of Advanced Nursing*, 22, 1193-1202.

Expert opinion.

Muir-Cochrane, E., & Harrison, B. (1996). Therapeutic interventions associated with seclusion of acutely disturbed individuals. *Journal of Psychiatric & Mental Health Nursing*, 3, 319-325.

No relevant data.

Reid, W., & Long, A. (1993). The role of the nurse providing therapeutic care for the suicidal patient. *Journal of Advanced Nursing*, 18, 1369-1376.

Expert opinion.