

**Title** Means restriction for suicide prevention

**Agency** Provincial Health Technology Assessment Program  
Institute of Health Economics  
1200, 10405 Jasper Avenue  
Edmonton, Alberta T5J 3N4, Canada  
Tel: +1 780 448 4881, Fax: +1 780 448 0018; <http://www.ihe.ca/>

**Reference** January 2010 (English); ISBN 978-1-897443-64-4 (print); ISSN 978-1-897443-65-1 (online):  
<http://www.ihe.ca/documents/IO%20Final%20Feport%20Jan%202010.pdf>

### Aim

To provide an overview of national means restriction policies/strategies, and to identify and assess the effectiveness of national or provincial intentional overdose prevention policies/strategies. Strategies focussing on children (12 to 15 years of age), youth (16 to 19 years of age), and young adults (20 to 24 years of age) were of particular interest.

### Conclusions and results

*Overview of national means restriction strategies/policies*  
Eight national suicide prevention strategies were found that addressed means restriction. These varied in scope, comprehensiveness, and implementation and evaluation plans. The strategies generally targeted the restriction of means of suicide from self poisoning (e.g. drug overdose), vehicle exhaust gas, firearms, jumping from high places (e.g. bridges), and railway lines. However, prevention of hanging in public settings received little attention, even though hanging is the most commonly used suicide method worldwide.

Intentional overdose was addressed by four of the eight countries (Australia, Canada, the United Kingdom, and the United States). These strategies were usually targeted at the general population and covered various aspects, including: drug regulation/legislation; awareness/education; safe drug prescription, storage, and disposal; development of tracking and monitoring systems; development of new technologies for safe storage of medications; and establishment of partnerships among different governmental departments.

### *Effectiveness of intentional overdose prevention strategies*

Three systematic reviews and 10 primary studies were identified. The majority of these evaluated the effect of drug restriction on suicide deaths and suicide attempts. One study examined the effectiveness of parental education, while another examined the effectiveness of alcohol restriction policies for youth. The results were inconsistent; some studies indicated that drug restriction strategies were associated with decreased suicide deaths and attempted suicides, while others found no detectable effect. This discrepancy may be partially due to differences in the length of follow-up, the selection of before-and-after time periods for comparison, the data sources, and the size of the geographic areas selected for study.

### Recommendations

Alberta's future efforts on means restriction need to consider a broad range of strategies/activities that address commonly used methods for suicide in Alberta, such as hanging, firearms, intentional overdose, and carbon monoxide poisoning. However, the potential of means restriction strategies in reducing overall suicide rates from hanging, the most commonly used method for suicide, is limited.

A provincial intentional overdose prevention policy or strategy needs to be developed using a framework that includes the following phases: problem identification (baseline data collection), search for evidence (effectiveness of preventive interventions), selection from different options (decisions incorporating research evidence and local context), implementation (specification of the lead agencies or individuals, partners, funding, and resources), and evaluation (selection of evaluation model, indicators, and outcome measures).

### Methods

All relevant articles published in English from January 1998 to November 2008 were identified by systematically searching *The Cochrane Library*; the Centre for Reviews and Dissemination databases, MEDLINE, EMBASE, PubMed, and PsycINFO. The PubMed search was updated in April 2009. An internet search was also conducted, and the websites of various relevant organizations were searched for grey literature. The reference lists of retrieved articles were searched for relevant references. The data were synthesized qualitatively; a quality appraisal of the included studies was not conducted.

### Further research/reviews required

Evaluating the impact of national suicide prevention strategies and policies remains a methodological challenge. Future studies should control for confounders, taking into account prevalence, changes in predisposing vulnerability, and protective factors.

### Written by

Bing Guo, Christa Harstall, Patricia Chatterley; Institute of Health Economics, Canada