Criteria for assessment of the effectof preventive interventions

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English.

No. 24–2011

Systematic review

kunnskapssenteret

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Norwegian Knowledge Centre for the Health Services summarizes and disseminates evidence concerning the effect of treatments, methods, and interventions in health services, in addition to monitoring health service quality. Our goal is to support good decision making in order to provide patients in Norway with the best possible care. The Centre is organized under The Norwegian Directorate for Health, but is scientifically and professionally independent. The Centre has no authority to develop health policy or responsibility to implement policies.

We would like to thank all contributers for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, December 2011

Key messages (English)

The Norwegian Directorate of Health asked the Norwegian Knowledge Centre for the Health Services for an overview of national and international organizations that conduct systematic reviews of effects of prevention and health promotion interventions within public health or primary health care. The Directorate of Health wished information regarding which criteria are used to evaluate effects of interventions.

The results from the systematic mapping and assessment show that:

- there are many organisations internationally that conduct systematic reviews of effects of prevention and health promotion interventions within public health or primary health care
- controlled study designs are to a large extent an inclusion criteria in systematic reviews

Important public health issues such as tobacco, alcohol, physical activity, and diet were covered in the systematic reviews, along with other themes such as mental health, sexual health, and occupational health.

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Type of publication:

Systematic review

A review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies.

Publisher:

Norwegian Knowledge Centre for the Health Services

Updated:

Last search for studies: January, 2011.

Executive summary (English)

Background

The Norwegian Directorate of Health asked the Norwegian Knowledge Centre for the Health Services for an overview of national and international organizations that conduct systematic reviews of effects of prevention and health promotion interventions within public health or primary health care. The Directorate of Health wished information regarding which criteria are used to evaluate effects of interventions.

Objective

This review aims to answer the following questions:
Which national and international organizations conduct systematic reviews of effects of prevention and health promotion interventions within public health or primary health care?
Which criteria are used to evaluate effects of interventions?

Method

We identified organizations through a search for systematic reviews. We searched systematically for literature in the following electronic databases: The Cochrane Database of Systematic Reviews, DARE, Medline, EMBASE, Cinahl, PsycINFO, ISI, ERIC, SveMed+, BIBSYS, The New York Academy of Medicine Library, Grey Literature Report, Open Sigle.
The inclusion criteria were:
Study design: Systematic reviews
Population: Children, adults, and elderly people in the population.
Interventions: Preventive or health promotion interventions, including existing preventive health services, new interventions such as low-threshold services, primary health care services for the older, the role of the general practitioner, multi-professional public health work in childcare and schools, and also interventions conducted at leisure or place of work

Comparison: No intervention or any other preventive or health promoting intervention
Outcome: Health-related outcomes

The results of the literature searches were assessed by two independent researchers.

Results

The literature searches identified 7,850 unique references. Of these, 814 were read in full text while 7,036 were excluded based on title or abstract. After reading full text articles, 146 reviews were excluded by design. We used all 668 included systematic reviews to identify organizations that conduct systematic reviews in preventive and health promotion interventions within public health and primary health care. There were 139 organizations that had conducted two or more reviews during the last six years; the newest systematic review was included to answer our questions.

The included systematic reviews came from 139 organizations in 18 countries, of which the USA, United Kingdom, Canada, and Australia contributed most. The most productive organizations were Johns Hopkins Bloomberg School of Public Health, the Universities of Cincinnati and Pennsylvania, Centers for Disease Control and Prevention (USA), University of Oxford, London School of Hygiene and Tropical Medicine, and University of York (United Kingdom), the Universities of Melbourne, Queensland, and Sydney (Australia), and McMaster University and University of Toronto (Canada).

We found four main categories for inclusion of studies based on study design:

- Randomized controlled trials (individual or cluster; 27 %)
- Studies with a control group (both randomized, quasi-randomized or non-randomized; 37 %)
- No limits for study design (29 %)
- Unclear (11 %)

A method of critical appraisal of the quality of the included primary studies was used in 69 % of the included systematic reviews. Of these, 63 % used a checklist or an instrument (either original or adapted) that was published. The most commonly reported type of critical appraisal tool was *risk of bias*.

Common public health issues such as tobacco, alcohol, physical activity, and diet dominated the themes covered by the included systematic reviews.

We assessed the available information about interventions in the systematic reviews concerning what, how, by whom, where, how much, how often, and for how long a time period. The information was extracted both from text and tables. Our judgment of the description of each intervention is based on the assumption that a profes-

sional should be able to understand how the intervention would be carried out. We judged the descriptions to be sufficient to replicate the intervention in 71 % of the systematic reviews.

Discussion

The results in this report shows that there are a great number of systematic reviews about effects of preventive and health promotion interventions. The results also show that there are many primary studies – even among the 27 % of the systematic reviews that only included randomized controlled trials there was only one systematic review that did not find studies to include.

The result that we present in this report show that controlled studies (with or without randomization) was an inclusion criterion in more than 60 % of the systematic reviews. Moreover, critical appraisal of the quality of the included primary studies was carried out in more than 60 % of the reviews. These results stem from, and are in accordance with, the criteria that are used in established organisations where preventive and health promotion interventions are systematically reviewed, e. g. *The Cochrane Public Health Group, NICE Public Health Group* and *The Society for Prevention Research*. They are also in accordance with criteria that are used by The Norwegian Knowledge Centre for the Health Services.

Many of the included systematic reviews addressed effects of interventions within public health fields that are relevant in Norway. We assume that many interventions could be relevant for the Norwegian contexts given that the intervention is adapted to the current population and setting.

The Norwegian Knowledge Centre for the Health Services was the only organisation that was identified that conduct systematic reviews within preventive and health promotion interventions in Norway.

Conclusion

The results of this systematic mapping have shown that there are many international organisations that conduct systematic reviews of the effects of preventive and health promotion interventions. Controlled study designs are to a large extent required for primary studies to be included in systematic reviews, and published check lists or tools are used to assess the quality of the included primary studies. This is in concordance with criteria used by international organisations such as *The Cochrane Public Health Group, NICE Public Health Group* and *The Society for Prevention Research*.

The results further show that current and important issues such as tobacco, alcohol, physical activity, and diet are covered in the systematic reviews together with themes such as mental health, sexual health, and occupational health. Within several themes there are also systematic reviews on effects of interventions that have the potential to reach many people, such as interventions via the Internet. There are, however, fewer systematic reviews that address interventions that target structural factors such as policy and legislation.

We judged the interventions to be sufficiently described that it may be possible to replicate in 71 % of the systematic reviews. Many of the interventions may be relevant for Norwegian contexts within the areas of tobacco, alcohol, physical activity, and diet given they are adapted to the current population and setting.