Summary and Conclusions

Implementation of Psychiatric Guidelines and Evidence-Based Knowledge in the Primary Care Sector

A Systematic Review

The full report contains tables in English that present included studies

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Summary and Conclusions of the SBU Report:

Implementation of Psychiatric Guidelines and Evidence-Based Knowledge in the Primary Care Sector

A Systematic Review

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SBU's Conclusions

- An effective implementation strategy involves strengthening the primary care organisation with specially trained professionals, eg nurses (referred to as care managers in the studies) responsible for support and continual contact with patients suffering from depression; and combining this with other interventions, eg education of care teams and feedback of patient data to physicians. Physicians write more appropriate prescriptions for antidepressants, and patients' symptoms decrease. The effects last for at least 6 months after the completed intervention. We could not determine if the effects last longer since too few studies include repeated measurements. The interventions are cost-effective.

- Brief education as the sole intervention to promote adherence with guidelines and evidence on depression does not affect the diagnostic or communicative skills of general practitioners (GPs) or the symptoms of patients. Hence, education alone is not a cost-effective intervention.

- Brief education as the sole intervention to promote adherence with guidelines and evidence on managing at-risk use of alcohol does not affect patients' alcohol habits. The influence of education on physician practices could not be evaluated since the studies present conflicting results.

- Studies of sufficient quality are too few to determine the effects of other implementation strategies in primary care (eg academic detailing, feedback, reminders, and audits aimed at changing physician behaviour) to promote adherence with evidence and guidelines on depression, anxiety, at-risk use of alcohol, and long-term use of benzodiazepines.

conclusions

- No studies investigated the effects of using economic incentives in primary care to promote evidence and guidelines on depression, anxiety, at-risk use of alcohol, and long-term use of benzodiazepines.

- The effects of implementation depend on the context and nature of the change process. Hence, studies and systematic reviews should be complemented with methodology that illuminates contextual factors and the implementation process.

SBU's Summary

The demand for health services to be evidence-based is increasing. To support health services in this endeavour, agencies at the national and regional levels are working to compile evidence-based on the best available scientific information.

Concurrently, international research shows that the implementation of evidence and guidelines is slow or incomplete. Approximately 30% to 40% of the patients do not have access to a treatment that complies with the best available knowledge, and as many as 1 of 5 patients receives treatment that is unnecessary or harmful.

Hence, there is major interest in finding ways to improve the implementation of evidence and guidelines. Usual methods aim at changing the behaviour of individual carers and are based on findings from psychology or sociology. These involve education, feedback, and reminders.

In practice, implementation processes often involve a combination of several interventions encompassing, eg organisational changes in the workplace, behaviour-modifying interventions, and economic incentives.

Several systematic reviews have assessed the effects of different methods intended to support implementation. The reviews generally show relatively modest effects and wide variations between studies (Table 1).

Table 1 *Support for, and effects of, implementation methods aimed at carers. Systematic reviews irrespective of context (Source: Cochrane Library).*

Methods to change behaviour	Description	Effect size
Written material	Guidelines, brochures, journals, etc	ARR 4.3% (95% CI, –8.0; 9.6) for adherence, but –4.3% (95% CI, –0.4; –4.6) for patient outcome
Education	Includes lectures and interactive workshops	6% (interval 1.8; 15.9) for adherence. Patient outcome not investigated
Team education	Educational interventions involving all professions in a clinical department	Both positive and negative results
Academic detailing/ educational outreach	Personal visits to clinical departments by specially trained individuals, eg pharmacists or researchers	5.6% (interquartile 3.0 to 9.0) for adherence. Patient outcome not investigated
Support of local opinion leaders	Based on social learning theory	9% (interval –15; 72) for adherence. Patient outcome not investigated
Reminders	On paper in the patient record or electronic	4.2% (interquartile 0.8; 18.8) for adherence. Patient improvement relative to control 2.5% (interquartile 1.3; 4.2)
Auditing and feedback	Carer receives feedback data on performance, eg number of patients diagnosed	ARR 5% (interval –16; 70) for adherence. Patient outcome not investigated

The table continues on the next page

Table 1 *continued*

Methods to change behaviour	Description	Effect size
Targeted interventions		OR 1.52 (95% CI, 1.27; 1.82) for adherence. No information on patient outcome
Economic incentives	Payment per visit, per intervention, or per patient group	Appears to have positive effects on care processes, but reliability of the conclusions is low. No studies have investigated patient outcomes
Mass media	Communication via brochures, ad campaigns, etc	Positive effects, but cannot be calculated

ARR = Absolute risk reduction; CI = Confidence interval; OR = Odds ratio

A weakness of systematic reviews is that they seldom take into account the fact that the clinical studies have been conducted under different conditions, eg in different types of departments or in different countries. Several reviews noted that the effects of a method seem to depend on the context.

The review is limited to common psychiatric conditions treated in primary care

Our review aimed to investigate the effects of different implementation strategies when tested in a limited context. Our preconception was that we would achieve a more precise effect size if the strategies were evaluated under relatively similar conditions.

We limited our review to guidelines and evidence concerning the management of depression and anxiety, interventions to identify and manage at-risk use of alcohol and use of benzodiazepines. The context was limited to primary care.

The implementation strategies aimed either at influencing the behaviour of the individual carer, or at changing the organisation, or both. We were interested in knowing whether the strategies influenced adherence to guidelines (evidence) and the patients' health.

We identified 29 studies in 33 publications that met our inclusion criteria and had low or acceptable risk for study bias. Nearly two-thirds of them addressed guidelines and evidence for managing depression. None addressed management of anxiety syndrome. Likewise, we found no studies that investigated the effects of economic incentives.

Strategies that reinforce the organisation with a care manager for patients with depression are effective

- It is effective to strengthen the organisation with a professional care manager, eg a nurse, responsible for increased patient contact in combination with education and feedback. Physicians' prescriptions of antidepressants become more appropriate (RR >1.3%) (low quality of evidence ⊕⊕○○). The patients' symptom burden, measured on a depression rating scale, decrease (SMD −0.21; 95% CI, −0.31 to −0.11) (moderate quality of evidence ⊕⊕⊕○). The effects remain at least 6 months after completed intervention (moderate quality of evidence ⊕⊕⊕○). Whether or not the effects remain for a longer period cannot be determined since too few studies include repeated measurements (very low quality of evidence ⊕○○○).

- Since too few studies have adequate risk of bias we could not determine whether complex interventions without organisational changes, improve adherence to guidelines on depression (very low quality of evidence ⊕○○○).

- Since too few studies have adequate risk of bias we could not determine whether complex intervention are generally more effective in primary care than interventions with one component to support implementation of guidelines and evidence on depression, anxiety, at-risk use of alcohol, and use of benzodiazepines (very low quality of evidence ⊕○○○).

Seven studies investigated the effect of complex strategies. All addressed adherence with the evidence on depression.

Five American studies included a care manager designated to have continual contact with the patients with depression. Through follow-up contacts, patients received support for adequate and on-going medication as well as help with other interventions when they were unable to adhere to treatment or failed to improve. In all of the studies, the staff also received brief education based on current guidelines, and three of the studies used academic detailing and feedback.

All five studies measured symptoms of depression after 6 months and found that the patients with access to a care manager improved to a greater degree; between 8 and 12 percentage points. Three of the studies also followed up on physician prescriptions of antidepressants and found that the percentage of doctors writing an appropriate prescription increased by 34 percentage points. Three studies measured the effects of the implementation strategy on at least two occasions, and found that the effects were retained.

Two other studies assessed complex strategies that did not include a care manager. No effects were observed in these studies.

Interventions that include a care manager for depression are cost effective

- When implementing evidence on managing depression in primary care, interventions that involve strengthening the organisation with a care manager are cost effective when compared to usual practice (low quality of evidence ⊕⊕○○).

We included four health economic studies. The studies used different methods to calculate QALYs, but all arrived at cost-effectiveness ratios normally accepted as reasonable in Sweden. A weakness in the studies is that they were conducted in the United States approximately 10 years ago. Since health services in the United States are organised and financed differently, the cost situation also differs.

Implementation supported by short education alone does not affect adherence to guidelines and evidence

- Brief educational interventions to increase adherence with evidence and guidelines on depression, do not influence general practitioners' diagnostic or communicative skills or patients' symptoms (low quality of evidence ⊕⊕○○). Since too few studies had adequate risk of study bias, the effectiveness of education adapted to physicians' readiness to change could not be evaluated (very low quality of evidence ⊕○○○).

- Brief education to support implementation of brief alcohol interventions in primary care does not influence patients' alcohol habits (low quality of evidence ⊕⊕○○). Due to conflicting results from the studies, we could not determine whether education influences physicians' practices (very low quality of evidence ⊕○○○).

- No studies investigated the value of education as a means to increase adherence with the evidence on prescribing benzodiazepines in primary care.

We included ten studies conducted in the United States, Europe, and Asia. Five of them investigated the effects of education on adoption of guidelines and evidence concerning depression. Just over 400 physicians participated. The educational interventions were brief (2 to 12 hours) and were mainly designed to be interactive. Four of the studies showed no effects on either the physicians' behaviour (eg ability to diagnose or communicate with patients) or the patients' depression. Hence, there is a low quality of evidence that this type of education has no effect.

The fifth study differed from the others since it was based on a hypothesis that effects of education improve when it is adapted to the physicians' readiness to change. The study showed that adapted education enhanced both diagnostic ability and management practices. Since we found only a single study, the quality of the evidence is very low.

Three studies investigated whether brief educational interventions could improve the implementation of guidelines for screening and management of at-risk use of alcohol. The studies' results were difficult to interpret. One study, aimed at physicians and nurses respectively, found that the programme had been implemented, but the staff did not conduct counselling as intended. Two other studies showed that support for implementation did not influence the use of programmes by at-risk users. Therefore the quality of evidence that brief education has no effect is low.

We could not identify any studies addressing education as a means to support implementation of guidelines on benzodiazepines.

Studies on academic detailing are too few to determine its effect

- We could not assess whether academic detailing at the individual or group level affects the prescription of antidepressants. Studies are few and present conflicting results (very low quality of evidence ⊕○○○).

- We found no studies that investigated the effect of academic detailing to increase adherence to brief alcohol interventions.

Academic detailing refers to outreach activities where an expert visits the clinic and provides education and feedback, eg on current prescription practices and how they compare with the prescription guidelines.

Four studies investigated the value of academic detailing to increase adherence to guidelines on depression, primarily prescriptions of antidepressants. A pharmacist or physician visited the clinics and met with groups or individuals. All of the studies evaluated the effects on prescription of antidepressants at the group level, but arrived at conflicting results. One study also investigated academic detailing at the individual level and observed no effects. Hence, we could not determine if the method influenced prescriptions of antidepressants at either the group or individual levels. Only one study investigated the influence on the health status of patients, and therefore we found the evidence to be very low.

Two studies assessed the use of academic detailing in implementing guidelines for psychopharmaceuticals, eg benzodiazepines, but arrived at somewhat different results. Hence, we could not evaluate whether academic detailing improves adherence to guidelines for prescribing psychopharmaceuticals.

Feedback yields conflicting results in different studies

- We could not determine whether feedback improves adherence to guidelines for depression since the few available studies present conflicting results (very low quality of evidence ⊕○○○).

- We could not determine whether feedback improves adherence to guidelines for brief alcohol interventions or abuse of benzodiazepines since too few studies had adequate risk of study bias (very low quality of evidence ⊕○○○).

We included four studies. Two American studies investigated whether feedback improved adherence to guidelines for depression. In one of the studies, neither the prescription of drugs nor the number of return visits were influenced by physicians receiving feedback on their management of patients who had received prescriptions for antidepressants. In the other study, where patients were screened in the waiting room, informing the physicians about the screening results led to a higher degree of identifying depression and providing appropriate treatment.

Two other studies, conducted in the USA and Australia, addressed at-risk use of alcohol. In the first, a researcher gave the physicians in the intervention group individualised recommendations based on how the patients assessed their alcohol problems prior to the physician visit. To some extent, the intervention increased the physicians' tendency to discuss alcohol. The second study assessed a data-based system for feedback as part of continuing medical education for physicians. Patients used a computer in the waiting

room to fill in information on their consumption of alcohol and benzodiazepines. Feedback of the information improved the physicians' ability to identify at-risk use of alcohol and the use of benzodiazepines. No conclusions could be drawn regarding the method since the studies were relatively small and did not use the same measures of outcome.

Too few studies are available to determine the effects of reminders

- We could not determine whether reminders improve adherence to guidelines for depression since the few available studies present conflicting results (very low quality of evidence ⊕○○○).

- Whether reminders influence adherence with guidelines for managing at-risk use of alcohol or abuse of benzodiazepines could not be evaluated since too few studies present sufficient quality (very low quality of evidence ⊕○○○).

We included two studies, an American study on guidelines for depression and a UK study on evidence concerning the use of benzodiazepines. In the first study, the physicians received either a reminder on paper attached to the outside of the patient record in conjunction with the patient's visit, reminders complemented with treatment recommendations for the patient, or no reminder. After 6 months, no differences in recovery were found between the groups. In the second study, the intervention group received a reminder card with the criteria, which was attached to the patient record in conjunction with the patient's visit. The percentage of patients taken off the drug during the follow-up year increased, but differences between the groups were small.

Since there was only one study in each area, none of which showed any effects, we found that the evidence was insufficient to draw conclusions about the effectiveness of reminders.

Few studies have investigated initiatives targeted at patients

Two studies investigated whether physicians' behaviour and patients' well-being could be improved by engaging the patient. When visiting their physician at the primary care centre, patients were encouraged to raise problems concerning alcohol and depressed mood. Patients also received information about alcohol and depression. The effects were insignificant in both studies.

Our conclusions

More research needs to analyse obstacles facing implementation

We conclude that it is possible to improve our knowledge. First, implementation researchers emphasise the importance of analysing the barriers to change in an organisation and choosing methods that could theoretically reduce these barriers. Most of the studies in our review were over 10 years old, and only two of them analysed barriers. Ongoing studies are based on psychological theories or strategies tailored according to analyses of local barriers. Hopefully, such studies can contribute to more detailed knowledge concerning which implementation strategies are effective and their degree of effectiveness.

Research needs to consider contextual factors.

Qualitative studies and studies that focus on assessing the implementation process, so-called process assessments, can enhance our understanding of factors that influence implementation. Since the effects of implementation strategies depend on the context, it should be possible to gain further knowledge from studies already

published. Applying the methodology known as realist synthesis, where study results are related to descriptions of contextual factors, would probably contribute towards greater understanding of the interaction between context and various ways to promote implementation of the evidence.

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SBU Evaluates Health Care Technology

Below is a brief summary of the mission assigned to SBU by the Swedish Government:

- SBU shall assess healthcare methods by systematically and critically reviewing the underlying scientific evidence.
- SBU shall assess new methods as well as those that are already part of established clinical practice.
- SBU's assessments shall include medical, ethical, social and economic aspects, as well as a description of the potential impact of disseminating the assessed health technologies in clinical practice.
- SBU shall compile, present and disseminate its assessment results such that all parties concerned have the opportunity to take part of them.
- SBU shall conduct informational and educational efforts to promote the application of its assessments to the rational use of available resources in clinical practice, including dental care.
- SBU shall contribute to the development of international co-operation in the field of health technology assessment and serve as a national knowledge centre for the assessment of health technologies.

Implementation of Psychiatric Guidelines and Evidence-Based Knowledge in the Primary Care Sector

The report on implementation of psychiatric guidelines and evidence-based knowledge in the primary care sector from the Swedish Council on Health Technology Assessment (SBU) is a systematic review of the scientific literature in the field.

This document presents the summary and conclusions of the full report approved by SBU's Board and Scientific Advisory Committee.

The full report is available at www.sbu.se

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