



August 2016 – SUPPORT Summary of a systematic review

Are tailored strategies effective for changing healthcare professional practice?

Attempts to change the behaviour of health professionals may be impeded by a variety of different barriers. Change may be more likely if implementation strategies are specifically chosen to address potential obstacles. It is logical that strategies tailored to overcome identified barriers should be more effective than non-tailored ones.

Key messages

- Interventions tailored to address identified barriers are probably more likely to improve professional practice than no intervention or the dissemination of guidelines alone
- It is uncertain whether tailored interventions are more likely to improve professional practice than non-tailored interventions
- Little is not known about how best to identify barriers to improving professional practice and how to tailor interventions to address these barriers



Who is this summary for?

People making decisions about quality improvement

! This summary includes:

- Key findings from research based on a systematic review
- Considerations about the relevance of this research for low-income countries

X Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

Baker R, Camosso-Stefinovic J, Gillies C, et al. Tailored interventions to address determinants of practice. Cochrane Database of Systematic Reviews 2015, Issue 4. Art. No.: CD005470.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies

SUPPORT was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report:
www.supportsummaries.org/glossary-of-terms

Background references on this topic:
See back page

Background

Strategies to disseminate and implement change in the performance of healthcare professionals have had variable impacts. The level of effectiveness has varied not only between different strategies, but also when the same strategy has been used on different occasions.

Tailored implementation strategies require the identification of important barriers to change and the selection of implementation strategies most likely to be effective in addressing them. Tailoring strategies might help to maximise their potential impact. There are a variety of ways to identify barriers and to select ways to address them. Methods to identify barriers include: making informal judgements, brainstorming, surveys, interviews, focus groups and observations. Methods to select ways to address identified barriers include theory-based approaches and experimental modeling of potential interventions.

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here:

www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To assess the effectiveness of interventions tailored to address identified barriers to change on professional practice or patient outcomes

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	<p>Randomized trials of interventions tailored to address prospectively identified barriers to change.</p> <p>Studies had to involve a comparison group that did not receive a tailored intervention or a comparison between an intervention that was targeted at both individual and social or organisational barriers, compared with an intervention targeted at only individual barriers.</p>	<p>Thirty-two randomized trials. Interventions assessed were varied and included (among others): printed materials; educational outreach; clinical guidelines; audit and feedback; interactive workshops; teaching sessions/discussions of patients; facilitation/practice meetings; and individual/group academic detailing.</p>
Participants	<p>Healthcare professionals responsible for patient care.</p>	<p>Primarily physicians (14 studies), mixed professional groups (8), nurses (4); pharmacists (2), geriatric teams (1), gynaecology teams (1), and physicians (1).</p>
Settings	<p>Any setting</p>	<p>Primary care or community settings (17 studies), hospital settings (7), nursing homes (3), and one each in child health clinics, community pharmacies, a regional health system, and a Medicaid program. The studies were conducted in the United States of America (USA) (12), the Netherlands (5), the United Kingdom (UK) (4), Belgium (2), Indonesia (2), Norway (2), South Africa (2), and Canada (1), Ireland (1), and Portugal (1).</p>
Outcomes	<p>Objectively measured professional performance (excluding self-reporting) or patient outcomes in a healthcare setting or both.</p>	<p>Change in prescribing behaviour (12 studies), management of a disease (including diagnosis, assessment and treatment) (11), preventive care (6), influenza vaccination (2), reporting adverse drug reactions (1).</p>

Date of most recent search: December 2014

Limitations: This is a well-conducted systematic review with only minor limitations.

Baker R, Camosso-Stefinovic J, Gillies C, Shaw EJ, Cheater F, Flottorp S, Robertson N, Wensing M, Fiander M, Eccles MP, Godycki-Cwirko M, van Lieshout J, Jäger C. Tailored interventions to address determinants of practice. *Cochrane Database of Systematic Reviews* 2015, Issue 4. Art. No.: CD005470.

Summary of findings

The review included 32 studies. The studies used a variety of methods to identify barriers, including face-to-face interviews, focus groups with physicians or patients, surveys, workshop discussions, telephone interviews, literature reviews or brainstorming by opinion leaders.

The participants in the studies were mostly physicians and nurses. The interventions included the distribution of printed materials, educational outreach, workshop activities, small discussion groups, auditing and feedback. Most of the interventions were targeted at changing prescribing behaviour.

1) Tailored interventions compared to no intervention or guidelines alone

Mixed results were found both across and within the included studies. There was variation in the reporting of how barriers had influenced the design of the intervention. The selection of interventions often relied on the judgements of the investigators and was not informed by explicit theories of behavioural or organisational change.

Seventeen studies compared a tailored intervention to no intervention, of which it was possible to include seven in the main analysis. Fifteen studies compared a tailored intervention to a non-tailored intervention, of which it was possible to include eight in the main analysis. In all but one of the eight trials, the non-tailored intervention consisted of the dissemination of written educational materials or guidelines.

The odds ratio ranged from 1.08 to 10.59 for the 15 studies included in the main analysis. The 17 studies not included in the main analysis had findings showing variable effectiveness consistent with the studies included in the main analysis. The combined (average) odds ratio for these 15 studies was 1.56 (95% CI: 1.27 to 1.93), in favour of tailored interventions. In a situation where adherence with recommended practice was initially 60% this would correspond to an improvement to 70%. In a situation where adherence was initially 20% this would correspond to an improvement to 28%.

The authors investigated the following possible causes of variability in the effect of tailored interventions across the 15 studies: the type of control group (no intervention versus dissemination of written educational materials or guidelines), the risk of bias, explicit utilisation of a theory to select the interventions, adjustment to local factors, and the number of domains addressed by the determinants identified. None of these were found to be associated with the reported effectiveness of the tailored interventions.

About the certainty of the evidence (GRADE) *



High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.



Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.



Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.



Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

- Tailored interventions probably improve professional practice compared to no intervention or the dissemination of guidelines alone. The certainty of this evidence is moderate.
- It is uncertain whether tailored interventions are more likely to improve professional practice than non-tailored interventions.

Tailored interventions compared to no intervention or guidelines alone				
People	Healthcare professionals responsible for patient care			
Settings	Mostly primary care in the USA and Europe			
Intervention	Tailored interventions to implement practice guidelines			
Comparison	No intervention or dissemination of guidelines alone			
Outcomes	Absolute effect		Relative effect (95% CI)	Certainty of the evidence (GRADE)
	Without tailored intervention	With tailored intervention		
	Difference (Margin of error)			
Desired professional practice (adherence to guideline recommendations)	Moderate adherence*		OR 1.56 (1.27 to 1.93)	⊕⊕⊕○ Moderate [†]
	60	70		
	per 100 patients	per 100 patients		
	Difference: 10 more patients receiving recommended practice per 100 patient encounters (Margin of error: 6 to 14 more patients)			
	Low adherence*			
	20	28		
	per 100 patients	per 100 patients		
	Difference: 8 more patients receiving recommended practice per 100 patient encounters (Margin of error: 4 to 13 more patients)			

Margin of error = Confidence Interval (95% CI) OR: Odds Ratio
GRADE: GRADE Working Group grades of evidence (see above and last page)

* The assumed adherence WITHOUT the tailored intervention was selected to aid interpretation of the overall odds ratios in situations in which there was low adherence (20% desired practice) and moderate adherence (60% desired practice). The corresponding adherence WITH the intervention (and the 95% confidence interval for the difference) is based on the overall odds ratio (and its 95% confidence interval).

[†] The OR and confidence intervals shown are taken from a meta-regression. The results of 14 studies not included in the meta-regression indicated that, on average, tailored interventions improve professional practice. However, the effects were mixed.

Relevance of the review for low-income countries

→ Findings	▷ Interpretation*
APPLICABILITY	
→ Interventions tailored to barriers identified prospectively are more likely to improve professional practice than no intervention or the dissemination of guidelines or educational materials alone.	<i>▷ The barriers to changing health professional behaviour vary across and within health systems. This may limit the transferability of findings from one specific healthcare setting to other settings. However, tailored interventions are likely to be effective compared to no intervention or the dissemination of guidelines across health systems. The uncertainty about how best to identify barriers and tailor interventions to address them is also transferable.</i>
EQUITY	
→ The systematic review did not address equity issues	<i>▷ Tailored interventions might be more difficult to design and implement for disadvantaged populations due to a lack of available resources. In addition, there may be a greater need to address social or organisational barriers caused by inadequate infrastructure. Consequently, designing and implementing effective, tailored interventions for disadvantaged populations might require additional resources and technical support.</i>
ECONOMIC CONSIDERATIONS	
→ The review did not find evidence of the cost-effectiveness of tailored interventions or of the effectiveness of alternative methods of tailoring interventions.	<i>▷ It is reasonable to use low-cost methods to tailor interventions, particularly in low-resource settings, given the lack of evidence on the effectiveness of more expensive methods of tailoring interventions. ▷ Some implementation strategies (e.g. reminders and audit and feedback) may be costly in low-income settings. The benefit of using implementation strategies that are costly, including tailored interventions, needs to be balanced against the potential benefits, which remain uncertain.</i>
MONITORING & EVALUATION	
→ At present, there is no single, standard method for tailoring strategies to address identified barriers. Based on the available evidence, it is not possible to decide which approach is most effective. The relative costs of different approaches are also unclear.	<i>▷ Given the uncertainty about the costs and effectiveness of tailored interventions, and of implementation strategies in general, monitoring and evaluation should be done routinely when introducing tailored interventions to improve professional practice. More research is needed to evaluate the different methods to address barriers.</i>

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

Fretheim A, Munabi-Babigumira S, Oxman AD, et al. SUPPORT Tools for Evidence-informed policymaking in health 6: Using research evidence to address how an option will be implemented. *Health Res Policy Syst* 2009; 7 Suppl 1:S6.

Flottorp SA, Oxman AD, Krause J, et al. A checklist for identifying determinants of practice: a systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. *Implementation science* 2013; 8:35.

Krause J, Van Lieshout J, Klomp R, et al. Identifying determinants of care for tailoring implementation in chronic diseases: an evaluation of different methods. *Implementation science* 2014; 9:102.

Huntink E, Lieshout J van, Aakhus E, et al. Stakeholders' contributions to tailored implementation programs: an observational study of group interview methods. *Implementation Science* 2014; 9:185.

Wensing M, Huntink E, van Lieshout J, et al. Tailored implementation of evidence-based practice for patients with chronic diseases. *PloS One* 2014; 9(7):e101981.

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Conflict of interest

None declared. For details, see: www.supportsummaries.org/coi

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This summary has been peer reviewed by: Tomas Pantoja and Richard Baker

This review should be cited as

Baker R, Camosso-Stefinovic J, Gillies C, Shaw EJ, Cheater F, Flottorp S, Robertson N, Wensing M, Fiander M, Eccles MP, Godycki-Cwirko M, van Lieshout J, Jäger C. Tailored interventions to address determinants of practice. *Cochrane Database of Systematic Reviews* 2015, Issue 4. Art. No.: CD005470.

The summary should be cited as

García Martí S, Ciapponi A. Are tailored strategies effective for changing healthcare professional practice? A SUPPORT Summary of a systematic review. August 2016. www.supportsummaries.org

About certainty of the evidence (GRADE)

The “certainty of the evidence” is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By “substantially different” we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE: www.supportsummaries.org/grade

SUPPORT collaborators:

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the [Cochrane Collaboration](http://www.cochrane.org). The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries. www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries. www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries. www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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