



# Identifying **Barriers** to evidence uptake



NATIONAL INSTITUTE  
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# Identifying **Barriers** to evidence uptake

## Foreword

This guide is for health professionals who want to increase evidence uptake in specific clinical areas. To do this they will need to change current practice. An important first step in planning for change is to identify the barriers that prevent best use of evidence, as choosing interventions that are most likely to overcome the identified barriers can improve the effectiveness and efficiency of implementation efforts. The guide aims to provide health care professionals with basic information about the techniques that can be used to identify barriers to change and to provide some ideas and tools to help identify barriers to change at a local level.

Part I outlines reasons for identifying barriers and the types of barriers that may exist. It describes the various techniques that may be used to investigate barriers and the factors to consider when selecting which technique to use. Part II provides a more detailed description of each of the investigation techniques. Users of the guide should refer to relevant sections as needed. Details of where to find further information about specific techniques and when to seek expert input are provided throughout.

The National Institute of Clinical Studies (NICS) is Australia's national agency for helping close important gaps between the best available evidence and current clinical practice in health care. This guide is the first of a series aimed at providing practical help to health professionals who want to improve evidence uptake. We would welcome feedback and suggestions for improvement on this guide or ideas for further guides.

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## Acknowledgements

This guide was commissioned by NICS. It was prepared by Kathy Rainbird in consultation with Rob Sanson-Fisher and Heather Buchan. Judith Stoelwinder prepared the suggested literature search strategy for identifying relevant research papers contained in Appendix A.

We would like to thank Nathan Hawkins who prepared an earlier paper on which this guide is based. We would also like to thank the following people for their review and helpful comments on drafts of this guide: Robyn Considine, Dave Davis, David Henderson-Smart, Brian McAvoy, Jane Munro, Penelope Schofield.

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ISBN: 0-9756964-6-7

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The National Institute of Clinical Studies (NICS) is Australia's national agency for improving health care by helping close important gaps between best available evidence and current clinical practice. NICS is funded by the Australian Government.

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## Why is it important to identify barriers when attempting to change clinical practice?

- Evidence-practice gaps = the difference between what we know from the best available research evidence and what actually happens in current practice.
- Within the Australian health care setting, and throughout the world, there are many gaps between best available evidence and current clinical practice.
- Changing practice can be difficult – some strategies to change the practice of health care professionals are successful in improving health care while others are not.
- There are often a number of barriers to change, with different barriers in different settings and at different times.
- Identifying the barriers to change is an important step in planning ways to close evidence-practice gaps as change may be more likely if strategies are specifically chosen to address the identified barriers (Shaw et al., 2005).

## Whose role is it to identify barriers?

- Any health care professional or group wanting to improve evidence uptake, for example, by closing a gap between evidence-based guideline recommendations and existing clinical care.
  - Government expert groups, medical colleges or non-government organisations that want to implement national guidelines
  - Managers who want to improve health care quality
  - Health care professionals wanting to change an aspect of care delivered in their specialist area

## What types of barriers might be encountered?

- Various barriers might be encountered when attempting to improve clinical practice. Barriers to change can occur across different levels of health care (Grol & Wensing, 2004). The table on the following page describes the types of barriers that may impede best practice across the different levels of health care and provides some examples of potential barriers.

# Identifying Barriers

to evidence uptake

The types of barriers that may impede best practice across different levels of health care.

Level at which the Barrier operates	Type of Barriers	Example/s
The innovation itself	<ul style="list-style-type: none"> <li>• Feasibility</li> <li>• Credibility</li> <li>• Accessibility</li> <li>• Attractiveness</li> </ul>	<p>Clinical practice guidelines may be perceived as inconvenient or difficult to use (Cabana et al., 1999).</p> <p>Guidelines recommending the elimination of an established clinical practice, such as screening for lung cancer with chest x-rays, may be more difficult to follow than guidelines that recommend adding a new behaviour (Cabana et al., 1999).</p>
Individual professional	<ul style="list-style-type: none"> <li>• Awareness</li> <li>• Knowledge</li> <li>• Attitude</li> <li>• Motivation to change</li> <li>• Behavioural routines</li> </ul>	<p>Clinicians may not agree with a specific guideline or the concept of guidelines in general (Cabana et al., 1999).</p> <p>Clinicians may not have the motivation to change (Cabana et al., 1999) or may not feel competent to provide specific services, such as counselling about exercise or diet (Oxman and Flottorp, 1998).</p>

# PART I [CONTINUED]

Level at which the Barrier operates	Type of Barriers	Example/s
Patient	<ul style="list-style-type: none"> <li>• Knowledge</li> <li>• Skills</li> <li>• Attitude</li> <li>• Compliance</li> </ul>	Patients may expect certain services, such as the prescription of antibiotics for upper respiratory infections (Oxman and Flottorp,1998).
Social context	<ul style="list-style-type: none"> <li>• Opinion of colleagues</li> <li>• Culture of the network</li> <li>• Collaboration</li> <li>• Leadership</li> </ul>	Local opinion leaders may encourage the use of forms of care that have not been shown to be effective, such as screening for ovarian or prostate cancer (Oxman and Flottorp,1998).
Organisational context	<ul style="list-style-type: none"> <li>• Care processes</li> <li>• Staff</li> <li>• Capacities</li> <li>• Resources</li> <li>• Structures</li> </ul>	Burdensome paperwork or poor communication may inhibit provision of effective care (Oxman and Flottorp,1998).
Economic and political context	<ul style="list-style-type: none"> <li>• Financial arrangements</li> <li>• Regulations</li> <li>• Policies</li> </ul>	Reimbursement systems may promote unnecessary services or discourage best practice (Oxman and Flottorp,1998).

- While change strategies may need to be multidimensional or multisectorial, a comprehensive approach that attempts to address all barriers in all sectors and in all settings is usually not feasible or affordable. A barriers analysis should help people planning implementation programs to decide where to focus their efforts with interventions tailored to address specific barriers (Hulscher MEJL, Wensing M, van der Weijden T, Grol R, 2005).

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## An Example from the Literature

(Tooher et al., 2005)

**The Problem:** Venous thromboembolism (VTE) is a significant problem for surgical and medical hospitalised patients, with the possibility of causing serious illness or death.

**The Evidence:** A number of clear evidence-based guidelines are available which outline the appropriate use of prophylaxis for VTE.

**The Barriers:** A study of the introduction of guidelines for VTE prophylaxis in Scotland (Walker et al., 1999) identified a number of barriers across a variety of levels – in relation to the guidelines themselves there was a lack of acceptance; at the individual health professional level there was a perceived lack of need in particular clinical areas and problems with staff responsible for implementation; while at the organisational level there was a lack of supportive systems, such as systems for data collection and audit.

**The Possible Solution:** Interventions designed to improve prophylaxis for VTE should include a process for demonstrating the importance and relevance of VTE prophylaxis to clinicians in their own clinical setting; a process for improving clinician knowledge about VTE risk assessment and prophylaxis practice; a method for reminding clinicians to assess patients for VTE risk; a process for assisting clinicians to prescribe the appropriate prophylaxis; and a method for assessing the effectiveness of any changes.

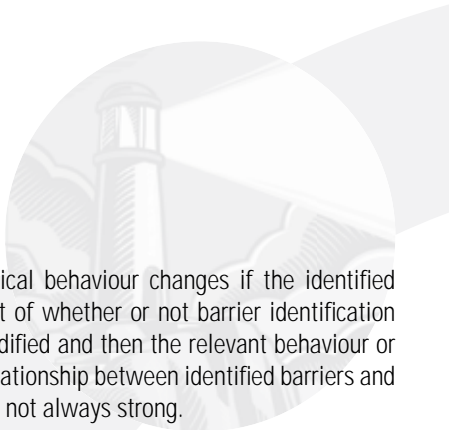
## What are the different techniques that can be used to investigate barriers?

- There are a variety of techniques available for examining barriers to best clinical practice (refer to Part II for further details about a specific technique).
  - **Brainstorming** – a group of people brought together to generate ideas about a specific topic.
  - **Case Studies** – a comprehensive description and analysis of a specific past situation, event or case – usually involving a variety of data collection techniques.
  - **Key Informants** – individuals who understand and have significant insight into a particular problem or situation – usually their views are sought through informal conversations.
  - **Interviews** – a face-to-face or telephone discussion where individual participants are asked specific questions by an interviewer.
  - **Focus Groups** – a facilitated discussion among a group of people in which a moderator uses open-ended questions to encourage discussion of a particular topic or issue.
  - **Direct Observation** – watching and listening to interpersonal interactions, events or activities in a given setting.
  - **Surveys** – a standardised set of questions assessing participants' knowledge, attitudes and/or self-reported behaviour – usually administered via mail.
  - **Nominal Group Technique** – a highly structured discussion among of a group of people where ideas are pooled and prioritised.
  - **Delphi Technique** – an iterative process in which information is collected from the same group of participants through a series of surveys.

# Identifying **Barriers** to evidence uptake

## How to select the most suitable technique?

- Most of the techniques listed above are suitable for application across a range of clinical practice settings or behaviours.
- A combination of techniques is often useful when examining barriers to adoption of best clinical practice. For instance, brainstorming or focus group sessions with relatively small groups of clinicians could be used to initially identify potential barriers to a specific evidence-based guideline. The outcomes from this process could then be tested in a large scale survey allowing the views of a greater number of clinicians to be canvassed.
- Decisions about which is the most suitable technique will depend upon the area of clinical practice under consideration, the amount of available funding, the time available for the investigation, how rigorous the process of identification of barriers is intended to be, and whether you have access to someone with relevant expertise. For example, a hospital manager who wishes to examine the barriers to introducing a new protocol in a ward may opt for a technique that is relatively quick and easy to use with minimal costs (eg key informants). In contrast, an organisation that wants to investigate barriers to the uptake of national evidence-based guidelines may choose a technique that is more rigorous (eg semi-structured interviews with a representative sample of surgeons).
- Regardless of the technique that is selected, some principles that should be taken into consideration include:
  - **Acceptability** – the degree to which the technique is acceptable to respondents. Individual's perception about the acceptability of the method used to identify barriers may partly determine whether or not they are prepared to engage in the change process which follows.
    - Acceptability can be increased by using a technique which allows participants to express their ideas, encourages a positive rapport and may effectively engage those who attend the sessions.
    - Questionnaires can also engage respondents but only if the items contained within the questionnaire clearly and sensitively reflect issues of concern to the participants.

- 
- **Accuracy** – the extent to which clinical behaviour changes if the identified barriers are modified. The ultimate test of whether or not barrier identification is well done is if these barriers are modified and then the relevant behaviour or clinical practice is also changed. The relationship between identified barriers and change in actual clinical performance is not always strong.
    - Factors that may influence accuracy include the quality of questions or surveys, whether participants are able to make independent judgements without undue influence by others, whether participants' responses are biased by social desirability or lack of anonymity, the skill of the interviewer/moderator/observer at recording data, and the skill of the investigator in interpreting the results.
  - **Generalisability** – the degree to which the identified barriers can be generalised to other contexts or clinical groups.
    - Factors that may influence generalisability include the representativeness of participants. For example, if the selection of respondents to take part in the barriers identification is biased in some way, then the findings may not be relevant to the wider clinical group.
  - **Reliability** – the extent to which the same or similar barriers to change are elicited from the same group of participants on two or more separate occasions.
    - Factors that may influence the reliability of the technique include the wording of questions or surveys and/or the skill of the interviewer/moderator at posing questions in a consistent and unbiased manner.

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- **Cost-effectiveness** – the cost of undertaking the investigation weighed against the potential benefits of obtaining accurate information regarding barriers to the adoption of best-evidence practice.
  - Factors that may influence the cost of the technique will depend upon the scale of the investigation and may include the investigator's time, participants' time, input from relevant experts, administrative resources, equipment, venue and providing feedback to participants. However, the scale of the investigation may also impact upon the strength of the findings. For instance, conducting extra interviews with a range of clinicians may incur greater costs but enable the findings to be more readily generalised across similar practice settings.
  - The cost-effectiveness of undertaking work examining barriers should be carefully considered. Barriers analysis is only worthwhile if the information obtained is used to both identify and then shape subsequent interventions aimed at improving evidence uptake.

## PART II

### Techniques to investigate barriers

- This section provides a more detailed description of the techniques referred to in the first part of the guide, designed for those who wish to undertake or commission their own investigation into barriers that may be occurring within their area of care delivery.
- This section is not a textbook, rather an overview of the essential components of each technique, what is involved, important considerations and key steps.
- For more detailed information about a specific technique refer to the articles, texts and websites listed at the end of each description.

### Where to start?

- A useful starting point for any barriers investigation is to undertake a quick review of the existing literature to determine whether or not the area of clinical interest has previously been examined and any potential barriers identified. A suggested search strategy that can be adapted to help identify relevant papers is provided in Appendix A.

### How to find relevant experts?

- Whichever technique is selected for examining barriers to best clinical practice, it is worth seeking input from relevant experts.
- Relevant experts may include:
  - social scientists
  - behavioural scientists
  - health researchers
  - psychologists
  - statisticians
  - other professional groups who have developed an interest in this field
- A good starting point for finding a relevant expert is to contact and seek advice from your local University, through the relevant department (eg Sociology, Social Sciences, Psychology, Medical Sciences or Health Research).

# Identifying **Barriers** to evidence uptake

## How to find relevant experts? [CONTINUED]

- Commercial firms undertaking this type of activity include those specialising in social marketing.
- Individuals with the above mentioned qualifications may not necessarily have expertise in the specific technique you wish to use – it is worth asking about their experience with the technique (eg how many focus groups have you conducted?) and for examples of their work (eg do you have a paper or report of the findings from your observational study?).

## PART II



### **Brainstorming**

#### **What is brainstorming?**

A group of people brought together to generate ideas about a specific topic.

#### **When might you use this technique?**

Brainstorming can be a useful technique for stimulating consideration of a particular issue among participants. It can be used to generate new ideas and novel solutions to problems.

#### **Who is involved?**

Ideally, participants should come from a range of areas and backgrounds relevant to the topic being discussed. For instance, if you were interested in exploring the barriers to promoting exclusive breastfeeding for the first six months of life, your brainstorming session might include women expecting their first baby, new mothers, new fathers, child-health nurses, general practitioners, breastfeeding counsellors and maternity hospital staff.

#### **How are brainstorming sessions conducted?**

The group is asked to generate as many different ideas as possible about a specific topic or question. The most important rule is that extreme or unpractical ideas be allowed and that no criticism is permitted during the session.

#### **What types of questions can be used?**

Participants may be given written background information and prompts (eg spend 15 minutes listing all the ways maternity hospital staff could promote exclusive breastfeeding for the first six months of life).

#### **How to collect the information?**

The ideas generated by the group can be listed on paper or a whiteboard as the session progresses.

# Identifying **Barriers** to evidence uptake

## How to analyse the data?

Generally brainstorming sessions are used to stimulate consideration of an issue and not to generate data or conclusive evidence. However, the lists of ideas generated during multiple brainstorming sessions may be examined for common themes.

## Other considerations

- Articulate or powerful members of the group may dominate discussion or affect input of other participants
- Organising a group discussion among busy health professionals can be difficult and/or leave resources within a given setting depleted

## What are the key steps involved in conducting a brainstorming session?

- Consider who should be involved
- Select a moderator
- Develop background information and prompts
- Recruit participants
- Arrange suitable venue and time for sessions
- Undertake and record sessions
- Analyse and interpret data

## What special expertise do you need?

- A skilled moderator

## PART II

# Brainstorming [CONTINUED]

### What are the advantages & disadvantages of this technique?

The advantages of brainstorming sessions are that they are relatively fast and easy to execute; a wide range of ideas can be generated in a short amount of time; they allow participants to express their own views and to be part of the change process.

The disadvantages of this technique are that a skilled moderator is required; participants lack anonymity and some may be inhibited; incentives may be needed to encourage people to attend; and the information gained does not provide conclusive data.

### What are the costs of this technique?

The cost of undertaking a brainstorming investigation will vary depending upon the number of sessions conducted. Key costs may include: moderator's fees, room or venue hire, refreshments, incentives, payments to relevant experts for input in planning and/or analysis.

### Are there times when you would not use brainstorming?

As with other group-based techniques, brainstorming is not suitable when organising a group session is impossible; or when powerful group members may inhibit others' responses.

### Where to get more information about conducting a brainstorming session?

#### Websites

- <http://www.brainstorming.co.uk>  
website of a UK based company dedicated to creative thinking and brainstorming, provides free online training in brainstorming including the rules of brainstorming and running a brainstorming session.
- <http://www.directedcreativity.com>  
website of a US based company that focuses on the use of creativity in business.

#### Sample tools

- the NICS barriers tool (version 2) – a tool designed for use in workshops to encourage the conceptualisation of barriers; copies are available from the NICS website: [www.nicsl.com.au](http://www.nicsl.com.au)

# Identifying **Barriers** to evidence uptake

## **Examples from the literature where brainstorming has been used to identify barriers to change in health care**

- Flottorp S & Oxman AD. (2003) Identifying barriers and tailoring interventions to improve the management of urinary tract infections and sore throat: a pragmatic study using qualitative methods. *BMC Health Services Research*. 3(1): 3.
- Khunti K. (1999) Use of multiple methods to determine factors affecting quality of care of patients with diabetes. *Family Practice*. 16(5): 489–94.

# Notes



# Identifying **Barriers** to evidence uptake

## Notes

# PART II



## Case Studies

### What is a case study?

A comprehensive description and analysis of a specific past situation, event or case – usually involving a variety of data collection techniques.

### When might you use this technique?

Case studies are useful when very detailed information about a past event may throw light on existing barriers. For example, you might wish to investigate why a woman with breast cancer was treated with breast conserving surgery alone when best available evidence recommends radiotherapy after lumpectomy (National Breast Cancer Centre, 2002).

### Who is involved?

All key individuals involved in the event should be included in the case study. In addition, anyone who manages or maintains relevant documentation or records should also be involved.

### How to collect the information?

A variety of techniques are usually used in case studies. These may include in-depth interviews with key individuals, review of internal documents and records and/or observation of interpersonal interactions.

### How to analyse the data?

Data analysis depends on the techniques used to collect the information. Usually multiple types of data are combined to give a detailed description of the event.

### Other considerations

- A wide variety of research skills are required
- Consent from relevant individuals and/or organisations may be required before records can be accessed
- The findings from one specific event may not be readily generalised to other cases
- Information gained may be open to subjective interpretation

# Identifying **Barriers** to evidence uptake

## What are the key steps involved in conducting a case study?

- Identify the specific situation, event or case to be investigated
- Identify all key individuals and record keepers
- Conduct in-depth interviews, review documentation etc
- Analyse and interpret data

## What special expertise do you need?

- A skilled and independent interviewer
- Input from experts with skills in the selected techniques and related data analysis

## What are the advantages & disadvantages of this technique?

The advantages of case studies are that they can provide very detailed information about an issue or event; and the investigator may gain insights from the interpretation of combined data that were previously unnoticed.

The disadvantages of this technique are that multiple forms of data collection and analysis are typically required; input from a variety of experts may be needed; the investigation can be time consuming and expensive; the findings are open to the subjective interpretation of the investigator; and findings from one case study may not be readily generalised to the wider population or target group.

## What are the costs of this technique?

The cost of undertaking a case study investigation depends upon the combination of techniques employed – the costs associated with each technique need to be considered. For instance if using in-depth interviews and a review of internal documents the key costs may include: interviewer's fees, photocopying and researcher's fees, as well as payments to relevant experts for input in planning and/or analysis.

## Are there times when you would not use a case study?

A case study may not be suitable when having an investigator asking questions may influence events, when significant variability exists among the group that is of interest or in a situation where legal action for negligence is involved.

## PART II

# Case Studies [CONTINUED]

### Where to get more information about conducting a case study?

#### Articles

- Keen J & Packwood T. (1995) Qualitative research: case study evaluation, *BMJ* 311: 444–446.
- Yin, R. K. (1999) Enhancing the Quality of Case Studies in Health Services Research, *Health Services Research* 34: 1209–1224.

#### Textbooks

- Hamel, J., Dufour, S., & Fortin, D. (1993). *Case study methods*. Newbury Park, CA: Sage Publications.
- Yin, R. K. *Case Study Research, Design and Methods, 3rd ed.* Newbury Park, Sage Publications, 2002.

#### Websites

- <http://bmj.bmjournals.com/cgi/content/full/311/7002/444>

a direct link to the article by Keen & Packwood (1995) listed above. This paper describes the features of case study evaluations and how they can be used to evaluate health services and policy.

# Identifying **Barriers** to evidence uptake

## Notes

# PART II



## Key Informants

### What is a key informant?

An individual who understands and has significant insight into a particular problem or situation – usually their views are sought through informal conversations.

### When might you use this technique?

Key informants can be particularly useful when initially formulating an idea and clarifying concepts.

### Who is involved?

The informant should be someone who not only understands a situation but also thinks about it. A good informant will be able to express their thoughts, feelings, opinions and perspective on a topic.

### What types of questions can be used?

Discussions with key informants are usually informal, free-flowing conversations. You may wish to think of some open-ended questions to include in the conversation. Key informants can also be consulted regularly to provide feedback and allow monitoring of a particular issue.

### How to collect the information?

You may wish to record the key informant's views and ideas as notes either during or following the conversation.

### How to analyse the data?

Generally discussions with key informants are used to develop ideas and not to generate data or conclusive findings.

### Other considerations

- Your relationship with the informant may influence the information you get
- It takes time to select good informants and build trust
- Informants' views may be biased

# Identifying **Barriers** to evidence uptake

## What are the key steps involved in using key informants?

- Identify area of investigation
- Approach relevant people within the area and ask who is “in the know”
- Select key informant and arrange to meet informally
- Take time to build rapport/trust
- Seek further feedback from your informant

## What special expertise do you need?

- None – apart from being able to engage your informant in the conversation

## What are the advantages & disadvantages of this technique?

The advantages of using key informants are that detailed, in-depth information can be obtained; the investigator is able to clarify ideas as the investigation progresses; and it is relatively fast and inexpensive to execute.

The disadvantages of this technique are that the relationship between the investigator and informant may influence the information obtained; it takes time to select good informants and build trust; informants' views may not be representative; the information gained does not provide conclusive data and may need to be corroborated using other techniques.

## What are the costs of this technique?

Due to the informal nature of most interactions with key informants, this technique generally requires little time and is low in cost.

## Are there times when you would not use a key informant?

While useful for gaining insight into a particular area or clarifying concepts, using key informants as the sole technique to identify barriers to change would not be suitable when strong, rigorous evidence is needed.

## PART II

# Key Informants [CONTINUED]

### Where to get more information about the key informants technique?

#### Articles

- Marshall M (1996) The key informant technique. *Family Practice*. 13: 92–97.

#### Examples from the literature where key informants have been used to identify barriers to change in health care

- Dawson W. Brown S. Gunn J. McNair R. Lumley J. (2000) Sharing obstetric care: barriers to integrated systems of care. *Australian & New Zealand Journal of Public Health*. 24(4): 401–6.
- Larme AC. Pugh JA. (2001) Evidence-based guidelines meet the real world: the case of diabetes care. *Diabetes Care*. 24(10): 1728–33.

# Identifying **Barriers** to evidence uptake

## Notes

# PART II



## Interviews

### What is an interview?

A face-to-face or telephone discussion where individual participants are asked specific questions by an interviewer.

### When might you use this technique?

Interviews are useful when you want to gain in-depth information about an issue from a specific target group.

### Who is involved?

Participants may be health care providers or patients. The number of participants may vary according to time and financial constraints, however you should try to select participants that adequately represent the wider population being studied (eg a randomly selected group of general practitioners from Queensland).

### What types of questions can be used?

Interviews can be unstructured – where one or two prepared questions are used and participants are encouraged to respond with as little guidance as possible (eg “Can you tell me about your experiences using clinical practice guidelines?”). Further questions or prompts can be used to explore or clarify ideas.

Interviews can be semi-structured – where a series of open-ended questions are used. The interviewer may use an interview guide that lists a pre-determined set of questions or issues that are to be explored during the interview. The order and actual working of the questions is not determined in advance and the interviewer is free to pursue questions in greater depth.

Or interviews can be structured – where a set of predetermined questions are administered in a standardised manner (eg “How much would you agree with the statement that my current work environment does not provide the resources I require to support changes to clinical practice?” – answered on a five-point scale from ‘strongly agree’ to ‘strongly disagree’). The same questions are used across all participants.

# Identifying **Barriers** to evidence uptake

## How to collect the information?

The interviewer usually records responses during the interview process. Interviews may also be video and/or audio taped.

## How to analyse the data?

Data analysis depends upon the type of questions used in the interviews. Open-ended questions may be summarised and systematically coded, while closed-response questions may be collated via computer database. Descriptive analyses may then be undertaken.

## Other considerations

- Quality of the data is dependent upon the quality of the questions used and the skills of the interviewer
- A set of predetermined questions ensures topics are not neglected or forgotten
- Interview questions need to be carefully developed

## What are the key steps involved in conducting interviews?

- Identify area of investigation and associated target group
- Develop interview questions
- Seek input about the questions from relevant experts
- Select a representative sample of the target group
- Pilot and revise the interview questions
- Conduct interviews
- Summarise and enter data
- Analyse data

## What special expertise do you need?

- An experienced interviewer
- Input from relevant experts when developing the questions
- Input from statistician or other health researchers when analysing data

## PART II

# Interviews [CONTINUED]

### **What are the advantages & disadvantages of this technique?**

The advantages of interviews are that detailed, in-depth information can be obtained; participants can express their own views; and complex or unanticipated issues can be explored.

The disadvantages of this technique are that conducting the interviews can be time consuming and expensive; the interviewer may introduce bias in the way questions are asked or recorded; some participants' responses may be inhibited; summarising and comparing responses to open-ended questions can be difficult.

### **What are the costs of this technique?**

The cost of this technique will vary depending upon the number of interviews conducted. Key costs may include: interviewer's fees, room or venue hire, or telephone call costs, participant incentives, and payments to relevant experts for input in question development, planning and/or analysis.

### **Are there times when you would not use interviews?**

Interviews may not be a suitable technique when anonymity is preferred – for instance when asking about a specific clinical practice that may not be considered legitimate.

# Identifying **Barriers** to evidence uptake

## An Example from the Literature where Interviews were used to identify Barriers to Change

(McKinlay et al., 2004)

**The Problem:** General practitioners in New Zealand did not regularly use guidelines to support decision-making regarding patient care.

**The Evidence:** A number of evidence-based guidelines were available to general practitioners in New Zealand.

**The Study:** In-depth, semi-structured interviews were conducted with a sample of currently practicing general practitioners. Interview schedules, developed in collaboration with stakeholders, included open-ended questions about knowledge and use of existing guidelines; the role and importance of guidelines; use of guidelines; perceived barriers and facilitators to the use of guidelines. Interviews were generally undertaken face-to-face and recorded by audio tape.

**The Barriers:** A variety of barriers to guideline use were reported by the general practitioners, these included: guideline formats not being recognisable or user-friendly; lack of involvement in development of guidelines; influence of stakeholders; information overload and recommendations not being accessible or relevant.

**The Possible Solution:** Several strategies have been initiated to address the barriers to guideline use among general practitioners, these include: developing a uniform and recognisable appearance for evidence-based guidelines; seeking endorsement from professional colleges or other GP networks; involving GP organisations in the planning of guideline strategies; incorporating practical guidance to readers where treatment or care options are not accessible.

## PART II

# Interviews [CONTINUED]

### Where to get more information about conducting interviews?

#### Articles

- Britten N (1995) Qualitative Research: Qualitative interviews in medical research. *BMJ* 311:251–253.

#### Textbooks

- Fontana A, Frey JH. Interviewing: the art of science. In: Denzin NK, Lincoln YS, eds. *Handbook of qualitative research*. London: Sage, 1994:361–76.
- Kvale S. (1996) *Interviews: An Introduction to Qualitative Research Interviewing*. London: Sage.

#### Examples from the literature where interviews have been used to identify barriers to change in health care

- McKinlay E, McLeod D, Dowell A & Marshall C. (2004) Clinical practice guidelines' development and use in New Zealand: an evolving process. *NZMJ* 117: 999–1009.

# Identifying **Barriers** to evidence uptake

## Notes

## PART II



### Focus Groups

#### What is a focus group?

A facilitated discussion among a group of people in which a moderator uses open-ended questions to encourage discussion of a particular topic or issue.

#### When might you use this technique?

Focus groups are a useful technique for gathering a wide range of information in a short amount of time. The group discussion can reveal areas of agreement and disagreement as well as different perspectives and unexpected ideas.

#### Who to involve?

Try to ensure that the individuals involved in your focus group have a common interest or characteristic relevant to the area in which you are trying to achieve practice change – they could be general practitioners, nurses, health care managers or a mixed group of health care professionals.

#### How many people per group and how many groups?

Groups of six to ten people are typically used – this allows all to have input into the discussion. Three to five groups are usually convened to ensure all possible issues are revealed.

#### What does the moderator do?

The moderator asks questions and stimulates discussion about the specific topic without restricting the spontaneity or richness of the discussion. It is important that the moderator creates a permissive and nurturing environment that encourages different perceptions and points of view from all members of the group.

#### How are focus group sessions conducted?

Usually the moderator will start by explaining the purpose of the discussion, the probable length of the session and how the session is being recorded. Participants will then be asked to introduce themselves to the group. Then the discussion is commenced, usually with some open-ended questions used to encourage discussion.

# Identifying **Barriers** to evidence uptake

## What types of questions should be used?

The questions should be open-ended to stimulate discussion. Of course, the specific questions used will be determined by the area in which you are trying to improve clinical practice.

Sample questions: "Can you tell the group about your experiences with using clinical practice guidelines?"; "In your experience, what are the main reasons for not vaccinating children and adults with chronic conditions against influenza?"; "What do you think hospital management could do to support changes to your clinical practice?"

## How to record the information?

Usually recorded by video or audio tape. In some cases audio taping is preferred as video cameras and lights may intimidate participants.

## How to analyse the data?

Summaries of the contents of the discussions are usual. Systematic coding or content analysis may also be undertaken.

## Other considerations

- Quality of the data is dependent upon the quality of the questions used
- The moderator may need to probe for underlying reasons rather than simple rationalisations
- Articulate or powerful members of the group may dominate discussion or affect input of other participants
- Organising a group discussion among busy health professionals can be difficult and/or leave resources within a given setting depleted
- Incentives may be used to recruit participants, but may also bias the sample

## PART II

# Focus Groups [CONTINUED]



### What are the key steps involved in conducting a focus group?

- Consider who should be involved
- Select a moderator
- Develop questions
- Recruit participants
- Arrange suitable venue and time for sessions
- Undertake and record sessions
- Analyse and interpret data

### What special expertise do you need?

- A skilled and experienced moderator
- Input from relevant experts when developing the questions
- Input from relevant experts when analysing and interpreting the data

### What are the advantages & disadvantages of this technique?

The advantages of focus groups are that they are relatively fast and easy to execute; a wide range of information can be gathered in a short amount of time; detailed, in-depth information can be obtained; they allow participants to express their own views and to be part of the change process.

The disadvantages of this technique are that respondents' lack anonymity and may be intimidated; a highly skilled moderator is required; incentives may be needed to encourage people to attend; and considerable time may be needed for planning and analysis.

### What are the costs of this technique?

The cost of undertaking a focus group investigation will vary depending upon the number of sessions conducted. Key costs may include: moderator's fees, room or venue hire, refreshments, incentives, payments to relevant experts for input in planning and/or analysis.

# Identifying **Barriers** to evidence uptake

## **Are there times when you would not use a focus group?**

Focus groups may not be a suitable technique when the group of interest is widely dispersed (eg general practitioners working in rural or remote areas); when organising a group session is not feasible (eg among Emergency Room staff at a busy hospital); or when powerful group members may inhibit others' responses (eg Head of Surgery and other clinic staff).

## PART II

# Focus Groups [CONTINUED]

### An Example from the Literature where Focus Groups were used to identify Barriers to Change

(Phillips, Marton & Tofler, 2004)

**The Problem:** Heart failure is a chronic and complex syndrome with high morbidity and mortality.

**The Evidence:** Clinical practice guidelines recommend the use of angiotensin-converting enzyme (ACE) inhibitor and beta-blocker therapies. There is evidence that ACE inhibitors improve symptoms of heart failure, improve heart function, decrease admissions to hospital and enable patients to live longer. Evidence also shows that beta-blocker therapy can improve survival, decrease hospitalisation and improve left ventricular function. However, in practice there is substantial undersue of each of these therapies.

**The Study:** Semi-structured focus groups or telephone interviews with 35 general practitioners were used to explore potential barriers to the optimal diagnosis and management of heart failure in primary care.

**The Barriers:** The most common barrier noted for why GPs might not prescribe ACE inhibitors in newly diagnosed cases was a concern about possible side effects. Another reason was that many GPs were unaware or unconvinced of the benefits of ACE inhibitors, or were more familiar with the use of other drugs. When asked to consider what might inhibit GPs from using beta-blockers, the most common barriers were concerns about the possible side effects of the drug, difficulties associated with comorbidities and polypharmacy, and contraindications. Other reasons for not prescribing beta-blockers were lack of awareness of the recommendation that they should be used; lack of familiarity with the findings of trials; lack of confidence in applying these findings; and no experience in beta-blocker use, particularly in a community setting.

**The Possible Solution:** Tailored strategies to meet the information needs and practical concerns of GPs, and to facilitate better links between GPs and specialists were recommended. Specific strategies could include: reinforcing the effectiveness of ACE inhibitors and beta-blockers in retarding disease progression, improving the patient's quality of life, and reducing the risk of rehospitalisation and death; providing GPs with clear schedules describing when and how to initiate and titrate medication; and encouraging closer collaboration between GPs and cardiologists.

# Identifying **Barriers** to evidence uptake

## Where to get more information about conducting a focus group?

### Articles

- Barbour RS. (2005) Making sense of focus groups. *Medical Education*. 39(7): 742–50.
- Kitzinger J. (1995) Introducing focus groups *British Medical Journal* 311: 299–302.

### Textbooks

- Krueger RA (1988) *Focus groups: A practical guide for applied research*. Newbury Park CA; Sage Publications.
- Morgan DL (1997) *Focus groups as qualitative research (2nd Ed)*. Newbury Park, CA; Sage Publications.

### Websites

- <http://bmj.bmjournals.com/cgi/content/full/311/7000/299>  
a direct link to the paper by Kitzinger J. (1995). The paper introduces focus group methodology, gives advice on group composition, running the groups, and analysing the results.
- <http://www.soc.surrey.ac.uk/sru/SRU19.html>  
an article by Gibbs A. called "Focus Groups" as published in Social Research Update. The article describes focus group methodology, the role of focus groups, their potential and limitations, the practical organisation of focus groups including ethical considerations.
- <http://www.tc.umn.edu/~rkrueger/focus.html>  
a website about focus group interviewing by Krueger RA. This site provides a variety of practical handouts that offer advice about focus group interviewing, such as tips on finding participants and getting them to attend; the task of guiding the focus group interview; and developing, sequencing and phrasing focus group questions.
- <http://www.scu.edu.au/schools/gcm/ar/arr/arow/rlewis.html>  
an overview of the literature on focus group interviews. Topics include the origin of focus groups, definitions, use of focus groups, participants, the interview guide, the moderator, collecting and analysing data. Includes a list of case studies where focus group interviews or discussion have been used in allied health research.

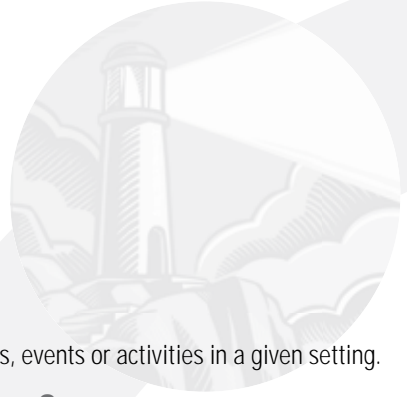
# Notes



# Identifying **Barriers** to evidence uptake

## Notes

## PART II



### Direct Observation

#### What is direct observation?

Watching and listening to interpersonal interactions, events or activities in a given setting.

#### When might you use this technique?

Direct observation is most useful when other techniques are not possible, in particular when participants are not aware of their behaviour.

#### Who is involved?

The number and type of people involved depends on the situation or practice under investigation. For example, you may wish to observe a general practitioner's consultation with patients or the interaction that occurs at a multidisciplinary meeting.

The observer may participate in the activity (participant observation) or remain 'outside' the activity (non-participant observation).

#### How to collect the information?

Detailed descriptions of observed behaviours and interactions are typically recorded in field notes or using a defined coding system. The notes may also include the observer's feelings, ideas, hunches and interpretation.

#### How to analyse the data?

Summaries of the observations are usually collated. Systematic coding or content analysis may then be applied.

#### Other considerations

- The presence of the observer may influence the activity or behaviour being observed
- It may be difficult to get clinicians to agree to be observed

# Identifying **Barriers** to evidence uptake

## What are the key steps involved in undertaking direct observations?

- Select activity to be observed
- Recruit a skilled, trained observer
- Obtain consent from relevant parties
- Develop coding system
- Undertake observations
- Collate and analyse data

## What special expertise do you need?

- A well-qualified, skilled observer
- Input from relevant experts when developing the coding system and interpreting the data

## What are the advantages & disadvantages of this technique?

The advantages of observations are that they can provide direct information about an individual's behaviour or practices; the observer is able to enter and understand the situational context; unanticipated outcomes may be revealed; and the practice or activity occurs in its natural setting.

The disadvantages of this technique are that it can be difficult to get clinicians to agree to be observed; undertaking the observations can be very time consuming; the presence of an observer may influence the activity or behaviour; and a well-trained, skilled observer is required.

## What are the costs of this technique?

The cost of undertaking a direct observation is primarily associated with the time consuming nature of this type of investigation. The main cost to be considered is that of the observer's fees as well as payments to relevant experts for input in planning and/or analysis.

## PART II

# Direct Observation [CONTINUED]

### Are there times when you would not use a direct observation?

Direct observation may not be appropriate when issues of patient privacy or confidentiality are concerned or when having an observer present may influence behaviour. Direct observation is only suitable (or at least practical) for events that occur frequently. For example, it might be appropriate with regard to the investigation of suspected skin cancer but not suspected thyroid cancer because you might have to wait months or years for one instance to arise.

### Where to get more information about undertaking direct observations?

#### Articles

- Mays N & Pope C. (1995) Qualitative research: observational methods in health care settings. *BMJ* 311: 182–184.

#### Websites

- <http://bmj.bmjournals.com/cgi/content/full/311/6998/182>  
a direct link to the paper by Mays & Pope (1995) listed above. This paper describes the observational method as a research tool, the role of the researcher in undertaking observations and other issues of sampling, recording and analysis.

# Identifying **Barriers** to evidence uptake

## Notes

## PART II

# Surveys

## What is a survey?

A standardised set of questions assessing participants' knowledge, attitudes and/or self-reported behaviour – usually administered via mail.

## When might you use this technique?

Surveys (or questionnaires) are useful when information is needed from a large number of participants.

## Who is involved?

Surveys are usually targeted at a specific group of health professionals (eg general practitioners, surgeons, nurses) or patients.

## What types of questions can be used?

Questions can be open ended – allowing participants to report their responses verbatim; closed response – where participants have to select an answer from a predetermined list; or a combination of open and close response style questions may be used.

## How to collect the information?

The completed surveys are returned to the investigator. The information is then coded and usually entered into a computer database.

## How to analyse the data?

Basic descriptive data analyses may involve determining the proportion of responses in a given category (eg the proportion of GPs who indicated they had never heard of guideline X). Further statistical data analyses may be used to examine the relationships between different responses and other demographic information.

# Identifying **Barriers** to evidence uptake

## Other considerations

- Questions must be carefully constructed so that they are clear and one-dimensional
- Quality of the data is dependent upon the quality of the questions used
- Steps may need to be taken to encourage participants to respond – include a reply-paid envelope with the survey, ensure the survey is easy to complete, follow-up non-respondents by telephone
- Be aware of the limitations of self-reported behaviour
- Opinions or attitudes may not directly reflect behaviour

## What are the key steps involved in conducting a survey?

- Identify area of investigation and associated target group
- Develop a set of questions
- Seek input about the questions from relevant experts
- Consider how contact details of the target group might be obtained (eg college lists)
- Pilot the survey with a small group
- Revise the questions
- Mail out survey
- Log returns and follow-up non-respondents
- Enter data
- Analyse data

## What special expertise do you need?

- Input from relevant experts when developing the questions
- Input from statistician or other experts when analysing data

## PART II

# Surveys [CONTINUED]

### What are the advantages & disadvantages of this technique?

The advantages of surveys are that they can be sent to health care professionals or patients anywhere in the country; data can be gathered from a large number of people in a relatively short amount of time; respondents can complete surveys at their convenience and can remain anonymous; and they are relatively inexpensive to execute.

The disadvantages of surveys are that considerable time may be needed for development of the questions and pilot-testing; it is not possible to ask follow-up questions; individuals may not accurately report their behaviour or the factors that influence their practices; and response rates may be low.

### What are the costs of this technique?

The main costs involved in undertaking a survey are payments to relevant experts for input during the development of the questions and/or subsequent analysis and interpretation of the data. Other costs associated with surveys include: photocopying or printing of the surveys; postage; follow-up of non-respondents and data entry.

### Are there times when you would not use a survey?

Surveys may not be a suitable technique when responses may be prone to social desirability. For example, what patients or doctors say they do is often not the same as what they actually do, especially when they think their lifestyle or clinical practice is being judged by others.

# Identifying **Barriers** to evidence uptake

## Where to get more information about conducting a survey?

### Articles

- Boynton PM. & Greenhalgh T. (2004) Selecting, designing, and developing your questionnaire. *BMJ*. 328(7451): 1312–5.
- Boynton PM (2004) Administering, analysing, and reporting your questionnaire. *BMJ*. 328(7452): 1372–5.

### Textbooks

- Bowling A. Constructing and evaluating questionnaires for health services research. In: *Research methods in health: investigating health and health services*. Buckingham: Open University Press, 1997.
- Frazer L & Lawley M (2000) *Questionnaire design and administration: a practical guide*. Brisbane, Wiley.

### Websites

- <http://bmj.com/cgi/content/full/328/7451/1312>  
a direct link to the paper by Boynton & Greenhalgh (2004) listed above. This paper describes key aspects of questionnaire design including whether a questionnaire is appropriate, using existing measures, how to present your questions and other issues to consider when conducting research via questionnaires.
- <http://bmj.com/cgi/content/full/328/7452/1372>  
a direct link to the paper by Boynton (2004) listed above. This paper details how to pilot your questionnaire, distribute and administer it; and get it returned, analysed, and written up for publication.

## PART II

# Surveys [CONTINUED]

### Sample tools

- Questionnaire of perceived barriers to change (Peters et al., 2003) – a validated questionnaire designed to identify perceived barriers to change, includes questions about the characteristics of the innovation, the care provider, the patient and the context; the questionnaire has been used in a number of implementation studies in the Netherlands; copies are available from <http://www.wokresearch.nl/default.asp?product=39>
- Evidence-Based Practice in Primary Care questionnaire (McKenna et al., 2004) – a questionnaire designed to examine barriers to the use of evidence-based practice, as well as the research and information resources available in primary care; the questionnaire is included in the paper by McKenna and colleagues.

### Examples from the literature where surveys have been used to identify barriers to change in health care

- Dorn RA, Swartz MS, Elbogen EB, Swanson JW, Kim M, Ferron J, McDaniel LA, Scheyett AM. (2005) Clinicians' attitudes regarding barriers to the implementation of psychiatric advance directives. *Adm Policy Ment Health* 1–12.

# Identifying **Barriers** to evidence uptake

## Notes

## PART II

### Nominal Group Technique

#### What is the nominal group technique?

A highly structured discussion among of a group of people where ideas are pooled and prioritised.

#### When might you use this technique?

The nominal group technique can be used to identify a problem, generate solutions and develop a plan of action, usually in relation to a single issue or topic. While similar to focus groups, the nominal group technique is more structured.

#### Who is involved?

Try to ensure that the individuals involved in your nominal group have a common interest or characteristic relevant to the area in which you are trying to achieve practice change.

#### What does the moderator do?

The moderator presents the topic for consideration and guides the process, ensuring all participants contribute. The moderator also ranks, tabulates and presents the ideas back to the group.

#### How are nominal group sessions conducted?

Participants are usually given several minutes to write down their ideas about a given topic. Each participant, in turn, presents one idea to the group. Responses are then discussed and pooled. Each participant then privately ranks each idea. Rankings are collected from all participants, aggregated and then presented to the group. The overall ranking is discussed and re-ranked if necessary. Final rankings are tabulated and presented to the participants.

#### What types of questions can be used?

The nominal group technique is usually best applied to a single issue or topic. It could be used to identify and prioritise potential barriers to a specific evidence-practice gap, for instance barriers to the assessment and treatment of pain in oncology patients.

# Identifying **Barriers** to evidence uptake

## How to collect the information and analyse the data?

Answers are noted as the session progresses. Analysis occurs throughout the session as the participants themselves identify and rank the important issues.

## Other considerations

- The skill of the moderator is important – it can be difficult to ensure that all members of a session have equal input and that the focus remains upon only one issue or topic of interest.
- While nominal groups have the potential to generate solutions to simple problems, more complex issues can be difficult to address.

## What are the key steps involved in organising a nominal group session?

- Consider who should be involved
- Select a moderator
- Develop questions
- Recruit participants
- Arrange suitable venue and time for sessions
- Undertake sessions and record outcome

## What special expertise do you need?

- A skilled and experienced moderator
- Input from relevant experts when developing the questions

## What are the advantages & disadvantages of this technique?

The advantages of the nominal group technique are that many ideas can be generated in a short amount of time; all participants have input; they are relatively fast and easy to execute; and they can be used to seek group consensus regarding prioritisation of issues or project planning.

The disadvantages of this technique are that a highly skilled moderator is required; incentives may be needed to encourage people to attend; and generally only a single issue or topic can be explored.

## PART II

# Nominal Group Technique [CONTINUED]

### What are the costs of this technique?

The cost of undertaking an investigation using the nominal group technique will vary depending upon the number of sessions conducted. Key costs may include: moderator's fees, room or venue hire, refreshments, incentives.

### Are there times when you would not use the nominal group technique?

The nominal group technique is not suitable when organising a group session is impractical; or when more than one topic or issue is being examined.

### Where to get more information about the nominal group technique?

#### Articles

- Allen J Dyas, J Jones M. (2004) Building consensus in health care: a guide to using the nominal group technique. *British Journal of Community Nursing*. 9(3): 110–4.
- Jones J & Hunter D (1995) Qualitative Research: Consensus methods for medical and health services research. *BMJ*: 311: 376–380.

#### Websites

- <http://bmj.bmjournals.com/cgi/content/full/311/7001/376>  
a direct link to the paper by Jones & Hunter (1995) which describes both the nominal group and Delphi techniques, it details key methodological issues and provides examples of applications of the techniques in health research

### Examples from the literature where the nominal group technique has been used to identify barriers to change in health care

- Goeman DP, Hogan CD, Aroni RA, Abramson MJ, Sawyer SM, Stewart K, Sancu LA & Douglass JA (2005) Barriers to delivering asthma care: a qualitative study of general practitioners. *Med J Aust* 183(9): 457–60.
- Hickling J, Rogers S & Nazareth I (2005) Barriers to detecting and treating hypercholesterolaemia in patients with ischaemic heart disease: primary care perceptions. *British Journal of General Practice*. 55(516): 534–8.

# Identifying **Barriers** to evidence uptake

## Notes

## PART II



### **Delphi Technique**

#### **What is the Delphi technique?**

An iterative process in which information is collected from the same group of participants through a series of surveys.

#### **When might you use this technique?**

The Delphi technique is useful when it is difficult to bring participants together for a face-to-face session (eg general practitioners working in remote areas). Sometimes referred to as a consensus method, the Delphi technique involves harnessing the insights of appropriate experts to enable decisions to be made.

#### **Who is involved?**

This technique can be used to examine the views of a specific target group (eg nurses) or across a mixed group of health care professionals (eg all those involved in caring for people with asthma).

#### **What types of questions can be used?**

Generally, closed-response style questions are used to assess participants' level of agreement with a number of ideas (eg "Improved access to the internet would help me to provide best evidence-based care" – answered on a 10-point scale from 'disagree' to 'agree').

#### **How to collect the information?**

The information is usually collected via a series of mailed surveys; however this technique can be adapted for electronic groups. Information collected from the first survey is used to generate feedback in subsequent rounds. Participants are given the opportunity to revise their judgements on the basis of this feedback. The number of rounds may range from two to four.

#### **How to analyse the data?**

Each round of surveys requires summaries to be collated and feedback generated. The respondents themselves help to develop and refine ideas as the rounds of surveys are completed.

# Identifying **Barriers** to evidence uptake

## Other considerations

- Participant cooperation and continued involvement over the course of the Delphi is critical
- Feedback based upon responses should be provided in a way that ensures anonymity for individual participants
- The revision of surveys according to the participants' responses can be difficult and time-consuming

## What are the key steps involved in the Delphi technique?

- Identify area of investigation and associated target group
- Develop initial set of questions
- Seek input about the questions from relevant experts
- Consider how contact details of the target group might be obtained (eg college lists)
- Contact potential participants and solicit their participation (be sure to explain the purpose and process of the technique)
- Mail out surveys and collect returns
- Follow-up non-respondents
- Summarise responses, prepare feedback and revise questions
- Repeat the last three steps until no further information is gained or consensus is reached

## What special expertise do you need?

- Input from relevant experts when developing the initial questions and revising later questions/feedback

## PART II

# Delphi Technique [CONTINUED]

### What are the advantages & disadvantages of this technique?

The advantages of the Delphi technique are that participants remain anonymous and surveys can be sent to health professionals or patients across the country.

The disadvantages of this technique are that considerable time may be needed for question development, revision and analysis; participants may not be willing to complete multiple surveys and response rates may be low.

### What are the costs of this technique?

The costs associated with the Delphi technique include: photocopying or printing of the surveys; postage; follow-up of non-respondents; possible incentives for participants; and payments to relevant experts for input during the development of the questions, subsequent revisions and analysis.

### Are there times when you would not use the Delphi technique?

The Delphi technique might not be suitable when the respondents' views might not be stable over time. For instance, patients might change their views as their individual circumstances change – they may be getting better or worse and with the passage of time the salience of a painful experience might diminish.

# Identifying **Barriers** to evidence uptake

## Where to get more information about the Delphi technique?

### Articles

- Jones J & Hunter D (1995) Qualitative Research: Consensus methods for medical and health services research. *BMJ*: 311: 376–380.

### Textbooks

- Linstone HA & Turoff M (eds). *The Delphi method: techniques and applications*. Reading, Mass: Addison-Wesley Publishing Company, 1975.

### Websites

- <http://bmj.bmjournals.com/cgi/content/full/311/7001/376>  
a direct link to the paper by Jones & Hunter (1995) which describes both the nominal group and Delphi techniques, it details key methodological issues and provides examples of applications of the techniques in health research
- <http://www.is.njit.edu/pubs/delphibook>  
a link to the electronic version of the text by Linstone & Turoff (1975) as listed above
- <http://www.uwex.edu/ces/pdande/resources/pdf/Tipsheet4.pdf>  
provides a brief overview of the Delphi technique, with sample documents to recruit participants and accompany surveys

## PART II

### MORE INFORMATION

- References about specific techniques for identifying barriers to practice change are listed in the relevant sections above
- Some general references that may be useful for those wanting to know more are provided below:

### For more information about research methods and data analysis

#### Articles

- Pope C, Ziebland S & Mays N (2000) Qualitative research in health care: analysing qualitative data. *BMJ* 320: 114–116

#### Textbooks

- Berg, BL (2003) *Qualitative Research Methods for the Social Sciences (5th edition)*. Allyn & Bacon
- Cassell, C & Symon G (2004) *Essential Guide to Qualitative Methods in Organizational Research*. Sage Publications
- Mays N & Pope C (1999) *Qualitative Research in Health Care (2nd edition)*. London, BMJ Books
- Morse JM & Richards L (2002) *Readme First for a User's Guide to Qualitative Methods*. Sage Publications

#### Websites

- <http://bmj.bmjournals.com/cgi/content/full/320/7227/114>  
a direct link to the article by Pope, Ziebland & Mays (2000) listed above

# Identifying **Barriers** to evidence uptake

## For more information about improving evidence uptake across the health care system

### Articles

- Groh R, Grimshaw J. (2003) From best evidence to best practice: effective implementation of change in patients' care. *Lancet* 362: 1225–30.

### Textbooks

- Groh R, Baker R & Moss F (2002) *Quality improvement research: understanding the science of change in health care*. London, BMJ Books.
- Groh R, Wensing M, Eccles M (2005) *Improving Patient Care. The Implementation of Change in Clinical Practice*. Elsevier Butterworth Heinemann.

### Websites

- <http://www.nhmrc.gov.au/publications/synopses/cp71syn.htm>  
a link to the National Health and Medical Research Council, download publication, *How to put the evidence into practice: implementation and dissemination strategies*. Canberra: NHMRC, 2000, with links to related publications.
- [http://www.mja.com.au/public/issues/180\\_06\\_150304/suppl\\_contents\\_150304.html](http://www.mja.com.au/public/issues/180_06_150304/suppl_contents_150304.html)  
a link to the Medical Journal of Australia supplement: 15 March 2004, "Adopting Best Evidence in Practice."
- <http://www.epoc.uottawa.ca/index.htm>  
a link to the Cochrane Effective Practice & Organisation of Care (EPOC) Group, which undertakes systematic reviews of interventions designed to improve health professional practice and the organisation of health care services.

## PART II

# MORE INFORMATION [CONTINUED]

### For more information about organisations involved in working to improve evidence uptake across the health care system

#### Websites

- <http://www.nicsl.com.au>  
website of the National Institute of Clinical Studies, Australia's national agency for improving health care by helping close important gaps between best available evidence and current clinical practice. NICS is funded by the Australian Government.
- <http://www.wokresearch.nl>  
website of the Centre for Quality of Care Research (WOK), a collaboration of the universities of Nijmegen and Maastricht in the Netherlands.
- <http://www.ktp.utoronto.ca>  
website of the Knowledge Transition Program at the University of Toronto in Canada.
- <http://www.g-i-n.net>  
website of the Guidelines International Network.

# Identifying **Barriers** to evidence uptake

## Notes

# REFERENCES

- Cabana MD, Rand CS, Powe NR, Wu AW, Wilson MH, Abbound PC and Rubin HR. (1999) Why don't physicians follow clinical practice guidelines? A framework for improvement. *JAMA* 282: 1458–1465
- Grol R & Wensing M. (2004) What drives change? Barriers to and incentives for achieving evidence-based practice. *MJA* 180: S57–S60
- Hulscher MEJL, Wensing M, van der Weijden T, Grol R, Interventions to implement prevention in primary care. *The Cochrane Database of Systematic Reviews* 2005, Issue 3
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# Identifying **Barriers** to evidence uptake

## Notes

# APPENDIX

## APPENDIX A – A suggested literature search strategy for identifying relevant research papers

This section is not intended as a comprehensive guide to searching the literature, but to give ideas about how to get started when looking for relevant journal articles and to provide a few hints on how to prepare a search strategy.

### How to find studies about barriers to the implementation of guidelines for specific health topics?

To identify studies examining the barriers to guideline implementation within a specific health area, you will need to conduct a search of the medical literature.

The strategy for searching includes the selection of databases to be searched, and the development of a list of subject terms and free text words to be applied when searching each of the possible databases.

### Which databases to search?

Will be dependent on the resources available to you for access to the various bibliographic databases, and whether the search is for a few key references or an extensive search of the medical literature.

Start with Medline and EMBASE as they contain bibliographic references from a wide range of medical, nursing and allied health journals published worldwide.

Medline covers biomedicine and health, and encompasses the sciences relevant to basic research and clinical care, public health, and the health care system. May be available via your institution as Ovid Medline or other database vendor, or may be accessed at the National Library of Medicine PubMed site for free at <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>

EMBASE covers pharmacology, biomedicine, and psychiatry, with particular coverage of European journals. May be available via your institution from a database vendor such as Ovid or Embase.com.

It may also be useful to search the more specialised content of databases such as CINAHL for nursing and allied health topics or PsycINFO for psychology and psychiatry topics.

# Identifying **Barriers** to evidence uptake

## What search terms to use?

Two groups of search terms are needed:

1. Terms covering the barriers to implementation of guidelines and,
2. Terms covering the specific health area or health condition of interest to you.

The results of searching the two groups of terms are then combined with the Boolean operator, AND.

Search terms are usually a combination of subject headings specific for each database, and free text words.

### **Subject Headings:**

Bibliographic databases use a list of subject headings for indexing the content of each journal article, and to indicate the main concepts discussed in the article.

Use of subject headings has the advantage of bringing together several expressions of the same concept under the one heading.

For example,

The Medline subject heading (MeSH) for *Guideline Adherence* is described as “Conformity in fulfilling or following official, recognized, or institutional requirements, guidelines, recommendations, protocols, pathways, or other standards.” (MeSH Scope Note 2005) *Guideline Adherence* is used in preference to the expressions “institutional adherence”, “policy compliance” or “protocol compliance”.

When searching in Ovid Medline, if you enter either of those phrases, your search will be directed or “mapped” to the appropriate MeSH heading, *Guideline Adherence*. For databases which have this mapping facility, after you enter a word or phrase in the search box, the most relevant subject heading will be retrieved.

Searching the list of subject headings for each database is usually offered as an option on the search screen. In Ovid Medline it is found at the Search Tools icon where a word or phrase can be entered. EMBASE offers an Emtree keyword icon for searching the thesaurus of preferred terms. A list of subject headings containing the word or phrase is presented so that the most relevant headings can be selected.

## APPENDIX [CONTINUED]

Be aware that a subject heading used in one database may not be available in another database. The term *Guideline Adherence* is available in Medline only. A similar heading may be used in different databases. Medline and CINAHL have the same term *Practice Guidelines*, whilst EMBASE has *Practice Guideline*, and PsycINFO uses the term *Treatment Guidelines*.

When a suitable subject heading is not available, then a search using free text words is the next option.

### **Free text terms:**

Free text searching is used to retrieve articles containing the word or phrase as part of the title of the article, or as part of a sentence within the abstract of the article. It is recommended that the Help or Search Hints provided for each database be checked for specific details on how to enter free text words or phrases. Words can be combined using the Boolean operators, AND, OR or NOT. Think of all the synonyms for the concept being searched, and combine them with OR. For example, *compliance OR adherence*.

Phrases may be simply entered or may need to be enclosed within quotation marks to obtain an exact match.

Words can be truncated using the truncation symbol appropriate for the database. In Ovid databases, use the symbol \$ to retrieve all suffix variations of the word in the indicated field of the record. For example, *adher\$.ti* retrieves references with the word *adher*, *adheres*, *adhered*, or *adherence* in the title.

Wildcards are used where there are variations in spelling of a word. The symbol for the wildcard option is specific for each database. In Ovid databases, use the symbol # to replace exactly one character. For example, *wom#n.ti* retrieves *woman* or *women* in the title.

Positional or proximity operators are used to retrieve phrases with the search terms within an indicated number of words of each other. In Ovid databases, use ADJx to retrieve such phrases. For example, *(guidelines adj3 adherence).tw* retrieves phrases in which "guidelines" and "adherence" are within 3 words of each other.

# Identifying **Barriers** to evidence uptake

## Suggested strategy for searching for studies about barriers to the implementation of guidelines?

The following is a strategy for Ovid Medline using a combination of MeSH and free text terms. This is a suggested strategy only – it is not a fully tested “gold standard” search filter. It may need to be adapted for conducting a search on other databases.

1. Guidelines/ OR Practice Guidelines/
2. Health Planning Guidelines/
3. 1 OR 2
4. (barrier\$ OR obstacle\$ OR difficult\$).tw.
5. 3 AND 4
6. Guideline Adherence/
7. (adher\$ OR implement\$ OR facilitat\$ OR complian\$).tw.
8. 3 AND 7
9. 5 OR 6 OR 8

[Strategy lines #1 to #9 are terms covering the barriers to implementation of guidelines. You would continue by searching on the terms covering the specific health area or health condition of interest to you. The results of searching the two groups of terms are then combined with AND.

The topic of “back pain” is used here as an example.]

10. Back Pain/ OR Low Back Pain/
11. 9 AND 10

## Where to get more information about conducting a search of the literature?

**Read the Help or Search Hints section provided by each database.** These give essential information specific to each database on how to search, print, download or save references or search strategies. Take note of the instructions on the use of Boolean operators, wildcards, truncation, and proximity searching.

**Ask a medical librarian for assistance** with determining the most appropriate subject headings for your search, how to broaden your search if the initial search retrieval is too low, or how to narrow the search if your initial search retrieval contains too many irrelevant references.

### Websites

- The New Zealand Guidelines Group website section on Developing Guidelines: Steps in Guideline Development: Current data acquisition and literature searching can be found at  
<http://www.nzgg.org.nz/index.cfm?fuseaction=evidence&fusesubaction=article&documentID=10&articleID=99>
- The chapter on Finding the Evidence – Literature Searching for Guideline Development provides information about relevant databases, how to refine the search strategy, hints on searching either Ovid Medline or PubMed, and links to websites of guideline clearinghouses.
- The NICS website: “Where’s the Evidence?” provides step by step information on how to search for the best available evidence on-line.  
<http://wherestheevidence.nicsl.com.au>