Changing Professional Practice in Health Care:
An Annotated Bibliography of
Studies of Perceptions
in Guideline Implementation

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PREFACE

This report was written as part of the Changing Professional Practice (CPP) project financed by the European Commission under the BIOMED II programme (contract no. BMH4-CT96-0697). Changing Professional Practice was a collaboration conducted between March 1996 and February 1999 among ten European health care research institutions. CPP aimed at studying how best to implement clinical guidelines in different European settings. The present work is an annotated bibliography (through February 1999) of survey and other instruments aimed at understanding the subjectively experienced facilitators and barriers to implementing evidence-based changes in professional practice, as perceived by health care deliverers.

We wish to thank our CPP colleagues for supplying many of the items included in this bibliography and for constructively reviewing earlier drafts of this report.

For more information about CPP and descriptions of the concerted work and individual partner projects, the reader is referred to T. Thorsen and M. Mäkelä (eds.), Changing professional practice: theory and practice of clinical guidelines implementation, Copenhagen: DSI-Danish Institute for Health Services Research and Development, Report 99.05, 1999. More information about CPP may also be obtained by consulting the following website: http://www.dsi.dk/projects/CPP/cpp.htm

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INTRODUCTION

Aims

Despite attempts to improve the quality of clinical practice guidelines (for example, by promoting rigorous development methods), their adoption and use by health professionals has been less than optimal. Several authors on the subject have suggested that to improve this situation, steps should be taken to identify general and specific barriers to implementation so that interventions can be tailored in such a way as to best address them. This annotated bibliography focuses on studies which have used structured survey methods to examine perceived or attitudinal barriers and facilitators to implementation and is designed to enable implementation researchers to quickly identify appropriate measurement tools for the purposes of informing their interventions. The annotated bibliography is a direct outcome of our work to develop the CPP ‘Perceptions Library’ – an Internet website containing examples of questionnaire items pertinent to this issue. (Website address: http://www.dsi.dk/projects/CPP/cpp.htm)

The studies reported here and the items reproduced on the CPP website are particularly concerned with assessing individuals’ judgements or opinions about aspects of a health technology or change, or of their environment, which they believe to be a help or a hindrance to implementation. Barriers rooted in people’s subjective beliefs or attitudes (e.g. belief that one’s organisation does not support the change) can be just as influential in determining their behaviour as genuine barriers (e.g. resource constraints). Moreover, they can be difficult to anticipate since they may not relate to directly observable or quantifiable features of the environment. It is for this reason that the ‘Perceptions Library’ was originally envisaged.

Search Strategy

We conducted a comprehensive literature search using several computerised databases, including Medline, Embase, Cinahl and Psychlit. This was supplemented by soliciting information on other relevant studies from colleagues in the field. We also contacted all CPP partners in order to obtain details of unpublished studies or those published in languages other than English. The following search terms were used singly, or in various combinations, to reveal the maximum number of pertinent abstracts: perceived/perception; barrier/barriers; facilitator/facilitators; practice guideline/guideline; implement/implementation; professional behaviour change; attitude/attitudes; survey/questionnaire.

Abstracts appearing to meet the aims of the study were selected and the full-text article examined for relevant items. Where suitable items were alluded to but not reproduced in the article, authors were contacted for further details.

We focused our search on studies dealing with the implementation of new health technologies or examining professional behaviour change amongst health care workers. Although we examined a number of review articles, we paid particular attention to studies which had used structured survey/interview methods to investigate perceived facilitators and barriers (including attitudinal barriers and explicit barriers). While our search focused on questionnaire/survey research, studies using less structured methods were included if it was felt that their methods or findings could be used to produce structured items for future research (e.g. semi-structured interview protocols, coding frames derived from qualitative analysis).
Structure of the Annotated Bibliography

Each item in the annotated bibliography contains a summary description, often the abstract of the journal article cited. Review articles are identified as such, and the main points of the review presented. For articles with survey items, we identify the following study characteristics:

- **Country:** Where the study was conducted.
- **Targets:** Which health care professionals were queried. Here, we distinguish among primary care providers, several classes of specialists, and various other care providers.
- **Focus:** The type of health care addressed.
- **Methods:** The types of instruments (type of survey, focus group, etc.) employed.
- **Object:** Whether general knowledge, attitudes and practice or particular aspects of facilitators and barriers to change were addressed.

We then describe the measurement methods of the study, providing details as to how many items were employed and what they measured. Finally, we provide information on the availability (if relevant) of the items—especially noting if they are on the CPP website and/or included in the published article.

Conclusion

Our literature search has revealed a large number of studies that have investigated perceived or attitudinal barriers to the implementation of health care technologies. Relatively few of these have focused specifically on clinical guidelines, although many have examined comparable innovations and changes or the broader issues of research utilisation and evidence-based medicine. Across those studies which have employed structured measures, there has been considerable variation in the instruments used. No single instrument can be recommended as a general measure of perceived or attitudinal barriers or facilitators and the investigator’s choice of measurement tool should be guided by the specific focus and context of their research questions.
ANOTATED BIBLIOGRAPHY


Study characteristics:
- **Summary**: Survey and in-depth interviews used to explore practitioners’ experiences and perceptions regarding the Integrated Mental Health Care (IMHC) model and its implementation.
- **Country**: New Zealand
- **Targets**: Mental health practitioners (N=35)
- **Focus**: Implementation of “Integrated Mental Health Care” model.
- **Methods**: Questionnaire survey + in-depth interview.
- **Object**: Actual practice, Barriers and facilitators.

**Measurement methods:**
Questionnaire used a mixture of open-ended questions and Likert-scale items, with room for comments. Section one “Uses and Outcomes” asked about the extent to which respondents were using IMHC, the effects of the model, how much they wanted to be using the model, whether they would recommend training to others, and the disadvantages and advantages of IMHCM. Section two “Beliefs and Commitment” asked about whether training in IMHCM had changed respondents’ beliefs concerning mental disorder and about the relevance of culture, gender, socio-economic background and child abuse. Also asked how committed the respondent’s organisation is to implementing IMHCM.

**Questionnaire availability:** Questionnaire is not fully reproduced in the published article, although some items may be abstracted from the descriptions given.


Study characteristics:
- **Summary**: Semi-structured interviews with GPs and consultants “to identify and categorise the complete range of factors that doctors recognise as changing their clinical practice and to describe the place of continuing education within this context.” Analysis revealed 12 categories & 50 sub-categories of reasons for change. The most frequently mentioned categories were organisational factors, education and contact with professionals. Consultants were more influenced by medical journals & scientific conferences, GPs more by medical newspapers & postgraduate meetings. Audit & guidelines were infrequently mentioned as a reason for change. GPs reported being influenced by consultants but consultants were rarely influenced by GPs. Implications/messages:
  - Reasons for change complex. Education providers should use multifaceted strategies.
- **Country**: England
- **Targets**: General practitioners and hospital consultants
- **Focus**: Changing clinical practice, CME.
- **Methods**: Semi-structured interviews using critical incident technique
- **Object**: Facilitators

**Measurement methods:**
Semi-structured interviews using critical incident technique. Doctors were asked to describe a change they had made in four key areas of their clinical practice: management of a common clinical condition, prescribing, use of investigations and referral. Interview schedule developed on basis of pilot study. Reasons for change categorised (listed in tables).

**Study characteristics:**
- **Summary:** Postal survey to determine UK consultant cardiac anaesthetists’ views and attitudes regarding guidelines. Key results: “The majority of cardiac anaesthetists, although believing them to be valuable, do not want guidelines for cardiac anaesthesia because they are concerned that guidelines would be inflexible and would neither reduce variation in, nor improve the quality of, cardiac anaesthesia”.
- **Country:** England
- **Targets:** Consultant anaesthetists (N=140)
- **Focus:** Clinical practice guidelines on cardiac anaesthesia
- **Methods:** Postal survey
- **Object:** Attitudes, actual barriers

**Measurement methods:**
- 16 item survey instrument containing 15 items on attitudes towards guidelines and 1 on actual barriers.
- Attitudes: 4 items answered categorically (yes/no/don’t know), e.g. “Do you believe that there should be national guidelines for cardiac anaesthesia?” and 12 items rated on a 5-point Likert scale (‘strongly agree’ to ‘strongly disagree’). Example: “Cardiac anaesthesia is too complex for guidelines”.
- Barriers: 1 item answered categorically: ‘Is there a protocol for cardiac anaesthesia in your institution?’ (yes/no/don’t know).

**Questionnaire availability:** Questionnaire reproduced in article and on CPP website

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**Study characteristics:**
- **Summary:** Surveyed Californian nurse practitioners to elicit their experiences regarding legal or social barriers in their practice. Perceived barriers to practice included lack of prescriptive authority, lack of support from physicians, reimbursement difficulties, and lack of public awareness.
- **Country:** USA
- **Targets:** Nurse practitioners (N=2741 of 3895)
- **Focus:** Nurse practitioner role/practice
- **Methods:** Postal survey
- **Object:** Perceived and actual barriers, demographics

**Measurement methods:**
- Survey containing closed and open-ended questions.
- Focused primarily on current demographics of nurse practitioners and nurse practitioner practice characteristics. (N items)
- **Barriers:** Single open-ended question asking respondents whether they had experienced social or legal barriers to practice and if so, to describe them.

**Questionnaire availability:** Full questionnaire is not reproduced in the article, although key ‘barriers’ question is shown above.

Study characteristics:
Summary: Semistructured interviews explored general practitioners’ reasons for recent changes in their prescribing behaviour. GPs in 18 London practices were asked to identify recent changes in prescribing behaviour and to reflect on how and why the changes occurred. “The results suggested three models of change: In the accumulation model, change depends on the weight of pressure in a certain direction (articles, talks etc.) and on the authority of the various sources. The challenge model of change refers to immediate challenges caused by a dramatic or conflictual clinical event. The continuity model of change refers to changes that have been based on pre-existing preparedness to change, which depends largely on congruence between the possible change and general practitioners’ approach to change.”

Country: England
Targets: General practitioners (N= 19)
Focus: Change in prescribing behaviour
Methods: Semistructured interview
Object: Reasons for change
Measurement methods:
Semi-structured interviews. “GPs in 18 London practices were asked to identify recent changes in prescribing behaviour and to reflect on how and why the changes occurred.”


Study characteristics:
Summary: Surveyed GPs to assess their views on the value of clinical guidelines for the management of asthma. GPs rated 26 guideline recommendations as either ‘obvious’, ‘useful’ or ‘controversial. Results: Wide variation between GPs both for individual items and overall scores. “The average GP thought that 11.5 items were obvious, 8.5 useful and 5.7 controversial, but these views showed no relationship to the GPs age, sex, ethnicity or partnership size. Conclusion: Clinical guidelines are usually written to be of value to a wide number of clinicians, but it appears that GPs at least have more individual needs on issues of clinical management. This may explain the reported limited impact of guidelines on clinical practice.”

Country: England
Targets: General practitioners (N = 94 of 160)
Focus: Guideline on asthma
Methods: Structured survey
Object: Attitudes, demographics
Measurement methods:
Structured questionnaire survey. 26 items relating to each of the guideline recommendations e.g. “In children, cyanosis during an asthma attack is indication for hospitalisation”. Each item was rated as either ‘obvious’ (i.e. it hardly warranted repeating), ‘useful’, or ‘controversial’ (i.e. there is some disagreement about its correctness).
Questionnaire availability: All items (i.e., recommendations) are reproduced in the published article.

**Study characteristics:**

**Summary:** Looked at health care providers’ perceptions of barriers to cancer screening in Hispanic women, using focus groups and a mailed questionnaire. Focus group participants were generally familiar with and attempted to follow cancer screening guidelines, recognised their role in educating patients about cancer screening and recognised key motivating factors (family history of cancer, requirement for having a Pap smear prior to birth control prescription renewal) and barriers (resources, education, culture, gender issues – see p.97). Responses to the open-ended question in the survey suggested the following perceived barriers to screening: cost, fear of diagnosis of cancer, patients considering the test unnecessary, discomfort and embarrassment, lack of transportation, release from work, child care.

**Country:** USA

**Targets:** Primary care physicians, nurses, and allied health

**Focus:** Screening for breast and cervical cancer personnel (N=520, or 34 for focus groups)

**Methods:** Postal survey + focus groups

**Object:** Knowledge (e.g. familiarity with guidelines), practice, perceived barriers and facilitators

**Measurement methods:**

Practice, demographics: 26 items: “Two questionnaires were designed to assess breast and cervical cancer screening practices; one for physicians and one for nurses, physician assistants and allied health personnel. Each had 26 questions, with most questions similar in each questionnaire. There was somewhat more emphasis in the physicians’ questionnaire on factors influencing the physicians to order mammography or perform Pap smears, while the nurses’ questionnaire had several questions on patient education materials. Both questionnaires included a series of demographic questions”

Perceived barriers (1 item): An open-ended question sought to reveal “any problems of cancer screening particularly associated with your patients of Hispanic origin”.

**Questionnaire availability:** Full questionnaire is not reproduced in the published article, although the one key question on barriers is (see above).


**Study characteristics:**

**Summary:** Postal questionnaire assessing primary care physicians’ attitudes towards their abilities to detect and treat depression in the elderly. Survey instrument included items on knowledge, practice, use of screening tools, perceived ability to detect and treat depression, perceived barriers, perceived adequacy of training & needs for CME.

“Despite positive attitudes about their skills for detecting and treating depression in the elderly, only one quarter routinely used a screening tool in practice. 41% were not aware of depression practice guidelines. Family physicians were more confident about their treatment skills than were general internists. Male physicians more often endorsed pharmacologic treatment, while female physicians more frequently used counseling and exercise techniques. Half of all physicians felt knowledgeable about community resources to treat older depressed patients.”

**Country:** USA

**Targets:** Primary care physicians (N=604 of 1000)

**Focus:** Detection and treatment of depression in primary care

**Methods:** Postal survey
Object: Knowledge, attitudes, practice, self-efficacy, perceived barriers, perceived needs, demographics.

Measurement method: 29 item instrument designed by the author through synthesis of previously existing surveys and informal discussions with colleagues. "The survey consisted of initial physician demographics, including practice specialty, experience with elderly patients, practice duration and location. Subjects were asked to endorse one of four responses: "strongly agree", "agree", "disagree" or "strongly disagree" to a series of statements. Initial statements focused on depression detection and included information about depression detection skill level, degree of practice burden, and knowledge and use of instruments to diagnose depression. Further items inquired about depression treatment practices, knowledge of practice guidelines, antidepressant use, psychiatric referral, treatment skills, and continuing medical education (CME) intervention need." (Respondents were also asked to rate potential barriers to treating depressed elderly patients).

Questionnaire availability: Ambiguous description of survey instrument given in the published article. Barriers are specified on p. 165 (fig 1.) Contact author for questionnaire.


Study characteristics:
Summary: Surveyed Pediatric Nurse Educators to assess perceived usefulness of different sources of information, self-reported level of research utilization, perceived barriers to research utilization, and the relationship between sources of information and level of research utilization. (Theoretical framework: Rogers’ diffusion of innovation model)

Country: USA
Targets: Pediatric Nurse Educators (N= 213 of 409)
Focus: Evidence-based medicine/Research utilization
Method: Structured survey
Object: Knowledge, practice, perceived barriers, demographics

Measurement methods:
Four instrument battery assessing "information-seeking, research utilization, perceived barriers to research utilization, and general information about the subjects and their work environment."

Information-Seeking: Instrument based on Means (1979/80). 39 items on sources of information falling into the following categories: print media (10 sources), non-print media (9 sources), interpersonal communications (8 sources), formal educational activities (12 sources). Each category included an "other" option, for additional sources of information not on the list. Respondents were required to rank the top three sources of information in each of the four categories according to their perceived usefulness in updating instruction of nursing students. Respondents were also asked to rank the top three sources from the total list of 39.

Research Utilization: ‘Nursing Practice Questionnaire – Education (NPQ-E)’ adapted from a measure by Brett (1986). Questions correspond with Rogers’ stages of the innovation-decision process. 8 items

Perceived barriers to research utilization: Funk’s BARRIERS scale (28 items)

Questionnaire availability: Questionnaire is not reproduced in the published article, although some items are. Funk’s BARRIERS scale may be found on the CPP website.

Study characteristics:

Summary: “We surveyed attitudes of US neurologists about the ethical dimensions of managed care by administering a written instrument containing paradigmatic cases portraying conflicts of physicians, patients, and managed care organizations (MCOs). After each case, we assessed neurologists’ attitudes by asking them their degree of agreement with a series of statements. We found that neurologists (1) generally were willing to follow clinical practice guidelines if they were created by medical societies; (2) experienced frequent conflicts of interest or conflicts of obligation in the care of their MCO patients; (3) feared legal ramifications of their clinical decisions on MCO patients; (4) were unwilling to employ deception or gaming to achieve what they perceived to be good patient care; (5) believed that their professional prerogatives and autonomy were under attack by MCOs; and (6) felt that the good of their patients should not be sacrificed for the good of society.”

Country: USA
Targets: Neurologists (N= 412 of 550)
Focus: Ethical dimensions of managed care
Methods: Postal survey, reference to cases
Object: Attitudes, demographics.

Measurement methods;
Survey instrument designed to assess attitudes toward ethical conflicts in managed care.

Attitudes addressed:
Willingness to follow CPGs
Experienced conflict of interest or obligation in the care of MCO patients
Fear of legal ramifications of MCO clinical decisions
Willingness to employ deception or gaming to achieve good patient care
Belief that professional autonomy is under attack by MCOs
Belief that the good of patients should sometimes be sacrificed for the good of society

Questions about attitudes were presented in conjunction with hypothetical scenarios for which the respondent was asked to imagine s/he was the acting physician. Three scenarios are used to activate responses to 34 attitude statements. e.g. “I am concerned that the BVC will drop me from the health plan’s provider list and that I need to try to follow their recommendations”, “Physicians need to adopt more cost-saving measures even if such measures sometimes reduce quality”.

(Demographic data on age, gender, board certification, practice type and geographic region were obtained from the AAN membership database.)

Questionnaire availability: All scenarios and items are reproduced in the published article.


Study characteristics:

Summary: Objectives – To describe the relation between research evidence and local obstetric unit policy for specific areas of care and to explore clinicians’ views about the reason for any discrepancies identified. Methods: Combination of qualitative methods including documentary analysis, non-participant observation, semi-structured interviews and self-completed open-ended questionnaires. Main measures: Congruence between unit policies and research evidence in specific areas of care. Views expressed by unit staff concerning the reasons for any discrepancies identified. Consistency between staff views within and between units. Unit attitudes to modification of discrepant policies and details of any subsequent changes made.
Results: Of the 12 unit policies considered, seven were consistent with the research evidence. In all cases in which unit policy did not reflect the evidence, provider unit staff thought that the differences were justified. There were three different types of concern about the research evidence and the problems of using it as a basis for deciding unit policy: Concerns about the adequacy or completeness of the evidence, concerns about the applicability of the evidence in the local setting, and concerns about local capacity to act on the evidence.

Country: England
Targets: Obstetricians (N=?)
Focus: Evidence based medicine (Evidence-policy gap)
Methods: Documentary analysis, non-participant observation, semi-structured interviews, open-ended questionnaire.

Measurement methods:
Involved a combination of qualitative methods including documentary analysis, non-participant observation, semi-structured interviews and self completed open-ended questionnaires.

Questionnaire availability: Not reproduced in the article.


Study characteristics:
Summary: Quasi-experimental study to test a model pain management program to implement the American Pain Society quality assurance standards for the management of acute and chronic cancer pain. "Used a continuous quality improvement (CQI) approach to improve professionals' knowledge and skills, patient satisfaction, and to identify areas needing improvement. Outcome measures included a patient evaluation questionnaire and concerns checklist; nurse knowledge, attitude and barriers questionnaire; and focus groups to identify areas needing improvement. Significant improvements were found in patients' satisfaction, nurses' knowledge and attitude scores, and reductions in nurses' perceptions of barriers. Focus groups revealed the need for improved communication among disciplines about pain and better assessment of patients unable to self-report. The program met its goal of implementing the APS standards, educating nurses, and identifying "system" problems, and improving overall patient satisfaction".

Country: USA
Focus: Pain management program
Targets: Nurses (N=1210) + 698 patients
Methods: Questionnaire and focus groups
Objects: Knowledge, attitude, perceived barriers, needs

Measurement methods:
14 items on attitudes and knowledge, rated on a 4-point Likert scale ("strongly agree" to "strongly disagree") e.g. "Lack of pain expression does not mean lack of pain".
(Reproduced on page 341)
11 items on perceived barriers to optimal pain management, rated on a 4-point scale ("of no importance" to "of major importance") e.g. "Patient's reluctance to report pain".
(Reproduced on page 342)

Questionnaire availability: Some items are reproduced in the published article (see above).

Study characteristics:
Summary: Survey assessing current practice, perceived desirable practice, confidence, and barriers related to the promotion of physical activity in family practice.
Country: Australia
Focus: Promotion of physical activity
Targets: General Practitioners (N=789 of 1228)
Methods: Postal questionnaire (mostly structured)
Object: Actual practice, perceived desirable practice, confidence, perceived barriers.

Measurement methods:
2 equivalent questionnaires assessing (A) Current practice (e.g. “How often do you...?”) (B) Perceived desirable practice (e.g. “How often should...?”). Items addressed the following areas: Use of various strategies for the promotion of exercise, confidence in advising patients on exercise (self-efficacy), details and type of physical activity recommended by the doctor, doctor’s knowledge of the barriers to participation by patients in physical activity, what methods were being used/should be used for the promotion of exercise in family practice, frequency of use of verbal advice, written material, videos, referral systems to e.g. fitness centres, specialists. Items were scored on a 5-point Likert scale from “almost never” to “almost always” (questionnaire A) and “strongly disagree” to “strongly agree” (questionnaire B). One additional open-ended item asked to which staff doctors might refer patients.

Questionnaire availability: Some items are reproduced in the published article, although not the full questionnaire.


Study characteristics:
Summary: Survey to explore nurses’ perceptions of the barriers and facilitators to using research findings in nursing practice. “The greatest barriers were insufficient time on the job to implement new ideas, lack of knowledge of nursing research findings, and inaccessibility of relevant literature.”
Country: USA
Targets: Nurses (N=356)
Focus: Evidence based medicine (Using research findings in nursing practice)
Method: Structured survey
Object: Perceived barriers and facilitators

Measurement methods:
Used Funk et al’s BARRIERS scale, which covers barriers related to the adopter, the organization and the communication. (9 items, rated on a 4-point scale reflecting the degree to which each item is perceived to be a barrier to research utilization (“to no extent” - “to a great extent”))
Also developed a scale based on Funk et al’s answers to an open-ended question on perceived facilitators. This included 7 items, rated on a 4-point scale reflecting the degree to which each item is perceived to be a facilitator to research utilization (“to no extent” - “to a great extent”)

Questionnaire availability: Items reproduced in tables appearing in the published articles. Funk’s BARRIERS scale may be found on the CPP website.

Study characteristics:

**Summary:** "The organising committee of a workshop on clinical practice guidelines surveyed invited organizations on their attitudes and activities related to five topics to be covered during the session: organizational roles, priority setting, guidelines implementation, guidelines evaluation, development of a network of those active in the CPG field... All of the respondents felt that specialty societies should have the most involvement in guidelines activities and that industry should have the least... Respondents saw little role for consumers in any CPG-related activities... Several barriers to collaboration were identified (see p. 903) and the main solutions proposed included better communication, a set of national principles for CPGs, clearer role identification, more stable funding and a clear focus on evidence-based development... We found no meaningful differences between the priorities of different stakeholders. All groups identified the health burden on the population as a very important criterion for setting priorities for CPG activities and the costs of guidelines development and practitioner interest as less important... The most common barrier to evaluation of CPGs was lack of money or resources... Major supports for evaluation included organizational priority for evaluation... and integration with quality assurance activities."

**Country:** Canada

**Targets:** Participants in a workshop on guidelines

**Focus:** Clinical practice guidelines

**Methods:** Survey

**Object:** Attitudes, practice, perceived barriers and facilitators

**Measurement methods:**

Questionnaire examined views about the appropriate role of different organisations in guideline development and guideline evaluation, barriers to collaboration, dissemination, implementation and guideline evaluation. Also addressed views about the best methods of forming and maintaining a CPG network.

Opinions about the appropriate level of involvement of various types of organization in each aspect of CPG activity, from funding to research were rated as follows: 2 = “Essential”, 1 = “Desirable”, 0 = “Should not participate”.

Barriers and facilitators to collaboration: Open question

Priority setting: 7 items relating to criteria for setting priorities for CPG activities: e.g., “the economic burden of disease on society”. (5-point scale 1 = “very important” to 5 = “not at all important”)

Methods for setting priorities: Free-response item.

Dissemination & implementation activities: N items on CPGs disseminated by own or other organizations, dissemination & implementation processes/strategies. (Mixed response options)

Evaluation of guidelines: Process, perceived purpose

Barriers and facilitators to guideline evaluation: (open question)

Communications mechanisms: open question

Structure of CPG network: open question

Functions of CPG network: open question

Role of the network: open question

Resources your organisation would be willing to contribute to the CPG network: open question

Awareness of other networks: open question.

**Questionnaire availability:** Full questionnaire is not reproduced in the published article, although essential items can be abstracted.

**Study characteristics:**

**Summary:** National survey of pediatricians to examine their knowledge and impressions of four well-publicised CPGs. Key research questions: What percentage of practicing pediatricians is aware of these guidelines? How helpful do they find them? What are practitioners’ perceived limitations of these guidelines? Have these guidelines affected provider behaviour? Are there features of a provider’s training or practice that are associated with changing practice as a result of guidelines?

**Country:** USA  
**Targets:** Pediatricians (N=300 of 600)  
**Focus:** Four well-publicised clinical practice guidelines.  
**Methods:** Postal survey  
**Objects:** Knowledge and use of guidelines, attitudes/perceived barriers, practitioner & practice demographics.

**Measurement methods:**

Four page questionnaire including items assessing demographics, awareness of the guidelines, guideline use, behaviour change as a result of the guidelines, perceived problems with the guidelines.

Demographics: 9 items assessing practice type, practice location, year of graduation, percentage of time devoted to clinical duties + explicit CPGs available in respondents practice location. (Categorical responses)

Awareness of guidelines: 5 items relating to the four guidelines of interest and a dummy item. Categorical answering (Categorical responses)

Attitude (perceived helpfulness): 4 items, rated on a 10-point scale from ‘Not at all helpful’ to ‘Extremely helpful’.

Behaviour change: 4 items relating to each guideline. (Categorical answering Yes/No)

Perceived barriers: 7 items relating to specific barriers (answered categorically - Agree/Disagree). + 1 item relating to ‘other’ barriers with free-response section for description:

```
"Too time consuming"
"Too cumbersome"
"Not applicable to my patients"
"Too cookbook"
"Too confusing"
"Too difficult"
"Don’t believe in guidelines"
"Other"
```

**Questionnaire availability:** Reproduced on CPP website


**Study characteristics:**

**Summary:** Survey of primary care physicians assessing their attitudes, beliefs and practices with regard to breast cancer screening.
"...Strongly associated with ordering annual mammograms were beliefs in the benefit of mammography and the perception of community consensus regarding breast cancer screening. A strong positive association of practicing in a group setting and mammography compliance was noted.... The three most important determinants of annual screening suggest ways to improve physician compliance: Improve physician attitudes about the benefits of mammography, build further on the medical community's consensus regarding the appropriateness and importance of annual guidelines, target the poorest compliers with special messages or programs."

**Country:** USA

**Targets:** Primary Care Physicians in New England (N= 116)

**Focus:** Breast cancer screening

**Methods:** Mailed survey.

**Object:** Attitudes and beliefs about breast cancer screening perceived barriers & facilitators (including prevailing social norms), actual screening practices, demographics.

**Measurement methods:**

Survey instrument based around Health Belief Model.

*Screening-related beliefs and attitudes:* 6 items rated on a 7-point scale (1= strongly disagree, 7 =strongly agree)

*Perceived barriers to ordering mammograms:* 9 items rated on a 7-point scale (1= affects not at all, 7 = affects ordering a great deal)

*Practice Experience* (Frequency of certain events in past year e.g. having a patent with breast cancer) 3 items (YES/no)

*Physician characteristics/demographics:* 5 items (categorical)

Factor analysis of responses yielded 4 key dimensions

"**Mammography Barriers**" 9 items (concerns about price, cost to the patient, patient pain, radiation exposure, difficulty in mammogram interpretation, equivocal mammography reports, unnecessary biopsies, patient at low risk for breast cancer). Cronbach’s alpha = .084

"**Mammography Benefits**" 3 items (mammography reduces mortality, mammography improves breast cancer prognosis, ordering mammography protects physicians legally) Cronbach’s alpha = .69

"**Norm Perceptions**": 4 items (physicians’ perceptions of whether there was a community consensus regarding screening guidelines, belief about the proportion of primary care physicians who order routine screening mammograms, agreement that expert guidelines regarding mammography are helpful. Cronbach’s alpha = 0.63.

"**Negative Mammography Experience**" 3 items (the physician’s experience in receiving an inappropriately ambiguous mammography report, spending a long time explaining mammography results, patient resistance to mammography)

**Questionnaire availability:** Questionnaire not reproduced in article, but items listed in results section.

**CPP Taxonomy (1996, revised 1999) See CPP volume.**

**REVIEW/TAXONOMY**

Divides barriers and facilitators into the following categories:

Factors related to the guideline
Factors related to the clinicians
Factors related to the social setting
Factors related to the structural setting

**Study characteristics:**

**Summary:** Objective: To look at actual practices + to elicit perceptions of barriers to the delivery of optimal mental health care. Method: Focus groups with standardized questions used to elicit descriptive data, opinions, attitudes, and terminology.

"Difficulties in the relationship with local psychiatric services, accessing psychiatric care, poor communication with mental health providers and cumbersome intake procedures were consistently identified as barriers to the delivery of optimal mental health."

**Country:** Canada (Ontario)

**Targets:** Family Physicians (N=10-12 in each of 7 regions)

**Focus:** Mental health practices

**Methods:** Focus group discussions around standardized questions

**Object:** Opinions, attitudes, experiences

**Measurement methods:**

Focus group; questions were:

- What kinds of psychosocial and mental health problems do family physicians see in the course of their work?
- Once they have identified a problem, how do family physicians decide whether to intervene?
- What kinds of mental health services do family physicians deliver? How do they describe and define what they do?
- How do they deliver these services?
- What kinds of things make it difficult for family physicians to deal optimally with the psychosocial and mental health problems of their patients?

**Questionnaire availability:** Focus group questions are reproduced in the article.


REVIEW


**Study characteristics:**

**Summary:** Aimed to assess the ways in which CME can be used to disseminate consensus statements. Survey (+ follow-up telephone interviews) of CME directors and chairs of departments of family medicine, neurology, and oncology at all U.S. medical schools. Addressed general familiarity with the Consensus Program, awareness of specific statements, use of consensus information in continuing education activities, and opinions about the program. Also asked what materials relevant to the CDP would be useful for CME. Key area: Opinions about the program (methods and products etc.)

**Country:** USA

**Targets:** CME directors and chairs of departments

**Focus:** NIH Consensus Development Program

**Methods:** Survey, follow-up telephone interview

**Object:** Awareness, use, perceived facilitators
Measurement methods:
Key scale: Comments on (attitudes towards) the Consensus Development Program: Statements rated on a 4 point scale: Very much, Somewhat, A Little, Not at all.
The topics addressed in the NIH conferences are timely
the issues addressed by the CDP are appropriate for resolution through the group
judgement method of consensus development
the Consensus Statements usefully distil large bodies of information
the 2 ½ day format of the NIH Consensus Conferences allows sufficient time to examine and
consider the issues in question
the recommendations of the consensus panels are practical
the Consensus Statements are sufficiently directive
the recommendations are directed towards clinical, not just research audiences
NIH sponsorship of CDP enhances the credibility of the Program’s findings
The topics addressed by the CDP are appropriate for incorporation into CME
The format in which the findings of Consensus panels are presented are useful for CME activities
Please rate your overall degree of respect for the findings of NIH Consensus Development
Conferences

Questionnaire availability: See published paper.


Study characteristics:
Summary: Aimed “to identify using Funk’s BARRIERS scale, those things which present barriers to the use of research by nurses in the UK, and to compare the findings from the UK with those from the USA”.
Country: England
Targets: Nurses, nurse specialists (N=316)
Focus: Evidence-based medicine
Methods: Survey
Object: Barriers

Measurement methods:

Questionnaire availability: See CPP website for BARRIERS scale.


Study characteristics:
Summary: Primary aim: To develop a valid and reliable survey scale to measure attitudes towards guidelines (including perceived barriers and facilitators). Secondary aim: to examine impact of job characteristics and team climate on use of guidelines. Main outcome: 14 item ‘attitudes towards guidelines’ scale developed from factor analysis of larger scale.
Country: Finland
Targets: Health care workers
Focus: Guidelines
Methods: Structured questionnaires
Object: Attitudes, organisational mediators
Measurement methods:
Perceived factors or attitudes affecting the use of guidelines were assessed with a 39-item scale, based on scales developed at RAND & STAKES. (Attitudes towards guidelines Scale, AGS). Some items based on questions asked by Mansfield (1995) and Tunis et al (1994). Attitude statements rated on 7 point scales ranging from ‘strongly agree’ to ‘strongly disagree’ Perceived lack of need to use guidelines (used as a dependent variable) was assessed using 5 items. The use of guidelines was indicated by one item: “I use guidelines regularly at my work”. (7 point – strongly agree-strongly disagree).

Task A – to develop a shortened version of attitudes towards guidelines scale (AGS):
Original 39 items subjected to exploratory factor analysis. Numbers of items reduced to 27. (6 factors explained 55 % of the variance in the 39 item version and 63% in the 27 item version.

6 sub-scales of the 27 item version:
Usefulness of guideline (6 items)
Reliability of guidelines (4 items)
Lack of individual competence to use guidelines (4 items)
Lack of organisational competence to use guidelines (4 items)
Impracticality of guidelines (4 items)
Availability of guidelines (5 items)
(+5 items on ‘lack on need to use guidelines)
27 items subjected to LISREL confirmatory factor analysis to produce short form.
Final 14-item scale included two questions in each of seven domains (six relating to underlying factors and one to general attitude). Internal reliability assessed for all scales.

Task B – Tested hypothesised moderating effects of job demands and team climate for innovation on attitudes. Job motivation was related to reported use of guidelines but team climate wasn’t. Job demands measured by Job Diagnostic Survey (Hackman & Oldham, 1975): 12 items, 3 each on skill variety, task identity, task significance, autonomy, feedback from others and feedback from work. Team Climate and innovation measured using Finnish version of 38-item Team Climate inventory. Respondents were asked to determine how encouraging their organisation was in doing things in a new and innovative way. Sub scales = experienced safety of participants (12 items), support for innovation (8 items), vision (shared and accepted goals) (11 items), Task orientation (8 items).

Questionnaire availability: 27-item version and 14 item version of the Attitudes Towards Guidelines Scale can be found on the CPP website.


Study characteristics:
Summary: Postal survey of family practitioners and internal medicine residents to identify physician characteristics and attitudes related to self-reported compliance with adult prevention guidelines.

“Compliance with history-taking recommendations was independently associated with high knowledge scores, female physician gender, and high self-perceived effectiveness in changing patient behaviour. The only factor that was independently associated with counseling efforts was self-perceived effectiveness in changing patient behaviour”

Country: USA
Targets: Family practitioners, internal medicine residents (N=209)
Focus: Guidelines (on preventive care for adults)
Methods: Postal survey
Object: Knowledge, attitudes, practice, perceived barriers, demographics.
Measurement methods:

Modified version of an instrument developed by Griffith et al (1993).
78 items in seven categories:

Physician demographics (9 items, categorical responses)
History-taking practices (14 items, rated on a 7 point scale including descriptions and corresponding percent estimates: 1 = never (9%), 2 = rarely (1% - 20%), 3 = sometimes (21% - 40%), 4 = about half the time (41% - 60%), 5 = often (61% - 80%), 6 = usually (81% - 99%) and 7 = always (100%).
Counseling practices (18 items, rated as history-taking practices)
Self perceived effectiveness in changing patient behaviour (6 items, rated on a 4-point scale from 1 = “minimally effective” to 4 = “extremely effective”)
Attitudes about preventive care (3 items, answering scale unknown)
Knowledge about recommended preventive care (22 items, answering scale unknown)
Perceived barriers to the delivery of preventive care (6 items, answering scale unknown).

Questionnaire availability: Contact author. Questionnaire is not reproduced in the published article. Some items are described, but answering scales are not clearly reported for all variables.


REVIEW/THEORY.

Summary of a larger report. Addresses the various issues associated with translating new health technologies into action & assessing impact of health technologies. Lots on barriers and facilitators. Differentiates the following:

Diffusion – passive process by which information is spread to an audience
Dissemination – active process of spreading a message to defined target groups
Implementation – more active process, including interventions to reduce or eliminate barriers to behaviour change and/or activities to promote behaviour change

“In general, technology assessment organisations have given little attention to dissemination or implementation activities...however...dissemination has moved onto the agenda...” Goal of report: to provide guidance to technology assessment programs in Europe on: a) the effective dissemination of the products of health care technology assessments programs b) the evaluation of the effects of such dissemination.

Barriers to behaviour change categorised:
Environmental barriers (e.g. political climate, lobbying by special interest groups, professional practice characteristics, financial disincentives, cultural characteristics)
Personal characteristic barriers (e.g. perception of risk, clinical uncertainty, information overload
Prevailing opinion barriers (e.g. difficulty dealing with acceptance of uncertainly or risk, standards of professional practice, opinion leaders, social standards)
Most relevant – Chapter 2 – reviews scientific literature on dissemination & implementation of findings from research. Outlines theories of professional behaviour change - much psychology (good summary table on p. 240). Outlines various barriers to change emanating form different theories.

Study characteristics:

Summary: Surveyed members of New York State Academy of Family Physicians to assess their awareness and attitudes concerning AHCPR guidelines on depression in primary care. Questionnaire included items on demographics, awareness of 3 AHCPR guidelines (depression in primary care, urinary incontinence, pressure ulcers in adults); knowledge of the diagnosis and treatment of depression, and general attitudes about guidelines.

Country: USA
Targets: Family physicians (N=992)
Focus: Guidelines (AHCPR guidelines on depression in primary care)
Methods: Postal survey
Object: Attitudes, awareness, knowledge, practice, demographics

Measurement methods:

Survey instrument developed by the authors. Focuses on attitudes towards and awareness and knowledge of the content of the AHCPR guideline on depression in primary care. Contains items on demographics, awareness of AHCPR guidelines for depression in primary care, urinary incontinence, and pressure ulcers in adults; knowledge of the diagnosis and treatment of depression, and general attitudes about guidelines.

Demographics: 10 items (categorical responses)
Awareness: 3 items (categorical responses)
Practice: 3 items (categorical responses)
Knowledge: N items (rated on a 6-point scale from ‘strongly agree’ to ‘strongly disagree’)
Attitudes: 8 items (rated on a 6-point scale from ‘strongly agree’ to ‘strongly disagree’)

Questionnaire availability: Some items may be extracted from the published article. The eight attitude statements are reproduced on the CPP website.


Study characteristics:

Summary: "survey of 506 doctors that sets out to examine attitudes to the evidence base itself, its communication and how EBM may be applied in practice... The key objective of the survey was to evaluate the attitudes of two groups of doctors – fundholding GPs and hospital doctors involved in management –, examine how EBM is perceived, how its uptake in clinical practice may be enhanced, and to share lessons from current best practice. (p.14) ... Although both groups saw improvement in patient outcomes as the most important reason for change, half of the general practitioners and none of the BAMM members thought that financial incentives would help persuade them. ”

Country: England
Targets: General practitioners and hospital doctors (N=506)
Focus: Evidence-based medicine
Methods: Postal survey
Object: Attitudes, sources of information, barriers and facilitators

Measurement methods:

Questionnaire developed “to test attitudes to the use of evidence in medicine, sources of evidence, how effectively evidence was communicated and how it is put into practice.”(p.4)

Practice: 8 items on aspects of EBM applied in your organisation. (e.g. “Communication of guidelines”, “Outcomes measurement”. Categorical responses. Yes/No). 7 items on areas in which EBM is best developed in the organization (e.g. “Pediatrics”. Rated ‘Well advanced’, ‘Some work done’, ‘Undeveloped’.)
Sources of knowledge: 10 items (e.g. “Medical journals”, rated ‘Frequently’, ‘Sometimes’, ‘Rarely/Never’)
Sources of information: 3 items (e.g. “Cochrane Collaboration” rated ‘Sometimes’, ‘Rarely’, ‘Never’.)
Facilitators (factors that would influence the organisation to promote EBM) 6 items (categorical responses Yes/No)
Use of computer systems: 5 items. (e.g. “Record patient feedback”, Yes/No)
Initiatives to improve EBM: 4 items. (e.g. “Systematically reading the literature” rated either ‘Actively involved’, ‘Intending to’, ‘Not intending to’)
Attitudes to EBM: 10 items (e.g. “An EBM approach provides greater confidence in the treatment of patients”. Rated ‘Strongly agree’, ‘Agree’, ‘Disagree’.)

Questionnaire availability: Reproduced on the CPP website.


Study characteristics:
Summary: Survey of new physicians asking about their career development, practice organization, practice activities, and attitudes toward issues related to patient care and the politics of health care delivery.
Country: Canada.
Targets: New family physicians (n=395).
Focus: Guidelines in general
Method: Mailed questionnaire survey
Object: Attitudes towards guidelines

Measurement methods:
Item source: Tunis (1994)

“The survey asked about physicians’ career development, practice organization, practice activities, and attitudes toward issues related to patient care and the politics of health care delivery. The component on attitudes to practice guidelines used ten descriptors ... adopted from the work of Tunis et al.”

10 items on attitudes towards guidelines (5 point agree-disagree). Example: ‘Too rigid to apply to individual patients’.

Questionnaire availability: Attitude items reproduced in the published article and on CPP website (Tunis’ items)


REVIEW
Theories of behaviour change.


Study characteristics:
Summary: Series of 5 studies investigating the implementation of guidelines on imminent miscarriage produced by the Dutch College of Family Physicians. Conducted for a PhD.
Country: Holland
Study 1: Postal questionnaire to GPs and midwives examining current practice, knowledge and acceptance of guideline recommendations, problems for implementation.
Targets: GPs (N=313 of 495) and Midwives (N=241 of 278)
Focus: Guidelines for (threatened) miscarriage.
Methods: Postal questionnaire
Object: Knowledge, attitudes, practice, barriers

Study 2: 75 GPs who accepted the guideline were asked to adhere to it and to record details of all patients with symptoms of imminent miscarriage. After every contact the patient was also asked to record the care received, whether it met expectations and whether they were satisfied. After one year, compliance with guidelines for each patient was assessed and in-depth telephone interviews, supported by patient records, were conducted with the GPs to discuss each case. For recommendations the GPs had not complied with, they were asked why they hadn’t complied, whether they agreed with the recommendation and if they didn’t agree with it, why. 488 reasons for non-adherence at the first appointment were mentioned. These fell into 4 categories: The GP himself (lack of knowledge or skills, general attitude, criticism of recommendation, specific patient situation), Other care providers (GP colleagues, midwives/obstetricians), Patients (wishes, compliance), Organizational setting.

Targets: GPs (N=75)
Focus: Guidelines for (threatened) miscarriage.
Methods: Record analysis, semi-structured interview
Object: Practice, attitude, barriers

Study 3: As study 2, but conducted with midwives.

Targets: Midwives (N=56)
Focus: Guidelines for (threatened) miscarriage.
Methods: Record analysis, semi-structured interview
Object: Practice, attitude, barriers

Study 4. (Not relevant) Record study examining reasons for referral to either an obstetrician or simply for an ultrasound scan. GPs and midwives were asked about diagnostics and diagnosis for each case and reasons for referral.

Targets: GPs (N=27) & Midwives (N=11)
Focus: Guidelines for (threatened) miscarriage.
Methods: Diary (recording case, care and reasons for referral)
Object: Practice, reasons for referral.

Study 5: Postal questionnaire asking obstetricians and gynaecologists about their partnership’s practice with respect to guidelines and inviting comments about the medical aspects of the recommendations.

Targets: Obstetricians and gynaecologists. (N=122)
Focus: Guidelines for (threatened) miscarriage.
Methods: Diary (recording case, care and reasons for referral)
Object: Practice, agreement with recommendations

Measurement methods:

Study 1: First section of the questionnaire examined current practice (routine management of imminent miscarriage). Second section addressed knowledge and acceptance of the most important guideline recommendations. Also an open-ended question asking for comments on the recommendations, problems encountered in caring for imminent miscarriage in general, and problems resulting from implementation of the guidelines.

Study 2: Diary recording details of each patient presenting with symptoms of imminent miscarriage. (Recorded diagnosis, treatment etc)
Semi-structures interview supported by case records (patient-specific questionnaire) asking about recommendations the GPs had not complied with, why they hadn’t complied, whether they agreed with the recommendation and if they didn’t agree with it, why.

Study 3: Diary recording details of each patient presenting with symptoms of imminent miscarriage. (Recorded diagnosis, treatment etc)
Semi-structured interview supported by case records (patient-specific questionnaire) asking about recommendations the midwives had not complied with, why they hadn’t complied, whether they agreed with the recommendation and if they didn’t agree with it, why

**Study 4:** Diary recording details of case, care and reasons for referral.

**Study 5:** Semi-structured questionnaire containing questions on current agreements with GPs and midwives, current practice routines and attitudes towards the guideline.

**Questionnaire availability:** Instruments reproduced in thesis appendix.


**Study characteristics:**

**Summary:** Focus groups and interviews examining GPs’ perceived barriers to appropriate test ordering. “Clinical uncertainty, lack of knowledge, lack of good guidelines, the need to do something, old habits, the influence of specialists, patient expectations, the perceived risk of liability and practical circumstances were all identified as important barriers by participants in focus group discussions. Inappropriate use of tests in patients with vague complaints or symptoms is the most important problem according to the perceptions of the Norwegian GPs. Financial incentives or disincentives were considered to be relatively unimportant. There was large variation in the scoring of possible barriers by respondents to the mailed survey. Only 21% of respondents correctly answered a question about the predictive value of a positive test given a low pre-test probability.”

**Country:** Norway.

**Targets:** GPs (5 focus groups n=29 & a random sample of 91 GPs)

**Focus:** Test ordering

**Methods:** Focus groups and postal survey

**Object:** Barriers

**Measurement methods:**

Focus groups and postal survey. A priori list of (10) potential barriers identified from the literature and personal experience (reproduced in article) & used to guide focus group discussions. Focus group data supported hypothesised list and informed questionnaire development.

Barriers: 10 items relating to the 10 key barriers identified in focus groups, rated on a scale of 0-6. + 1 open-ended question about other important factors that could lead to inappropriate test use

Demographics: N items

Knowledge/ability: 1 item

**Questionnaire availability:** Some items reproduced in the report. Full questionnaire available from the authors.


**Study characteristics:**

**Summary:** Survey of Texan primary care physicians, measuring interest in and attitudes about cancer genetics. “Although most of the physicians accurately perceived a number of major obstacles to referring patients for genetic testing, barriers such as difficulty in interpreting test results, potential for false-positive results, and concern about patients’ reactions to test results were reported less frequently.”

**Country:** USA
Focus: Cancer genetic screening
Targets: Primary care physicians (N=101 of 350)
Methods: Mailed survey
Object: Attitudes, practices, perceived barriers and facilitators.

Measurement methods:
One-page questionnaire with categorical (Yes/No) response options.
Respondent characteristics (6 items)
Discussion of genetic screening: "Have you ever discussed with a patient the subject of
genetic screening for susceptibility to any of the following cancers?" (10 options)
Consideration of genetic screening: "Would you consider genetic screening for any of the
following disorders which predispose to cancer?" (8 options)
Referral for genetic evaluation: 2 items, several response options e.g. "place".
Continuing education development: "I would like more continuing education programs and
educational materials on genetic testing for cancer risk covering the following..." (9
options)

Barriers to Genetic Testing: "Which of the following would you consider to be major
obstacles to adopting greater use of genetic testing for cancer risks on your practice?"
10 options:
Cost of genetic testing
Lack of guidelines for patient with positive test results
Concern about impact of testing in patients' insurability
Availability of genetic testing
Availability of genetic consultation
Potential for false-positive results
Concern about patients' reaction to test results
Difficulty in interpretation of test results
Potential for false-negative results
Other

Questionnaire availability: Most items can be discerned from the published article.

Funk SG, Champagne MT, Wiese RS, Toraquist EM. BARRIERS: the barriers to

Study characteristics:
Summary: Describes the development of a now widely cited survey instrument assessing
barriers to the utilization of research findings in practice. 29-item instrument, based
around Rogers' diffusion of innovations model, sent to 5000 registered nurses. Factor
analysis of responses revealed four factors corresponding to the key dimensions of
Rogers' model: the adopter, the innovation itself, how it is communicated, and the social
system or organization in which the individual works. In addition to the structured items,
respondents were asked to identify key barriers and facilitators to research
implementation.
Country: USA
Targets: Nurses (N=5000, classified as clinicians, administrators or academics)
Focus: Evidence-based medicine (research utilization)
Methods: Postal questionnaire
Object: Perceived barriers and facilitators
Measurement methods:
Key scale: 29-items relating to potential barriers to research utilization, developed from
the literature on research utilization, existing questionnaires, and informal data from
nurses + rigorous psychometric evaluation. Rated according to perceived impact (1 =
Item is not a barrier to any extent; 2 = Item is a barrier to a little extent; 3 = Item is a
barrier to a moderate extent; 4 = Item is a barrier to a great extent; 5 = No opinion).
The questionnaire also contained an open-ended section, asking respondents to specify and rate any additional barriers which they believed might be missing from the tool. A further open-ended section asked respondents to write down factors they thought would most facilitate research implementation.

Factor analysis of responses to the structured items revealed four factors, relating to the adopter (8 items, alpha = .80), the organization (8 items, alpha = .80) the innovation or research (6 items, alpha = .72) and characteristics of the communication of the research (6 items, alpha = .65). One item ("the amount of research information is overwhelming") did not load on any of the four factors and was dropped from the instrument, to leave 28 items in the scale. Responses to the open question on barriers did not reveal any additional factors. Content analysis of responses to the open question on facilitators led to the development of seven themes which were seen as the principal facilitators to research and which could be ranked according to the support they received from the respondents (See Funk et al., 1991b).

**Questionnaire availability:** Reproduced in the published article and on the CPP website.

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**Study characteristics:**

**Summary:** Further analysis of data reported in Funk et al 1991a. Goes into more detail with respect to the relative perceived importance of each barrier and the facilitators identified. “The two greatest barriers were the nurse's not feeling that she/he had “enough authority to change patient care procedures” and “insufficient time on the job to implement new ideas”, both of which are barriers of the setting. When asked to think about all of the potential barriers and to identify the three greatest, respondents again pointed to the setting-related barriers. Insufficient time on the job to implement ideas was cited most frequently, with lack of support from administration and physicians following closely behind. ...Only weak relationships were found between respondents’ scores and their demographic characteristics.... Over 600 respondents suggested ways in which the use of research findings might be facilitated (see below). Clinicians ...identified administrative support and encouragement as the best way to facilitate the use of research-based innovations in practice."

**Country:** USA  
**Targets:** Nurses  
**Focus:** Evidence-based medicine (research utilization)  
**Methods:** Survey  
**Object:** Barriers and facilitators  

**Measurement methods:**

As for Funk et al 1991a.  

**Facilitators to research utilization, as reported by < 10% of the sample (1991b p. 93).**

- Enhancing administrative support and encouragement  
- Improving availability and accessibility of research reports  
- Advanced education/increasing research knowledge base  
- Providing colleague support networks/mechanisms  
- Conducting more clinically focused and relevant research  
- Increasing time available for reviewing and implementing research findings  
- Improving understandability of research reports  

**Questionnaire availability:** See CPP website for original questionnaire.

**REVIEW**

"Abstract: For over 20 years, nursing literature has discussed the gap between the conduct of research and the use of its findings to improve practice. Factors relating to the nurse, the setting, the research, and the way research is presented have been identified as barriers to research utilization. A combined approach that includes specialty organizations that take the lead in knowledge synthesis and dissemination, the creation of national on-line databases, and enhanced institutional supports and educational efforts is recommended."

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**Study characteristics:**

**Summary:** Survey examining needs and barriers to dental care as perceived by private dental practitioners in South Africa. (Items were part of a larger National Oral Health Survey conducted in an earlier study). Looked at GDPs perceptions of the shortage of dentists for black, coloured and white persons and the services provided for the different population groups. Most importantly, from the point of view of this review, looked at "barriers to utilization of service as perceived by dentists". Barriers were grouped into 3 categories: "dentist related, structural and attitudinal ... patient attitudes were seen as the most serious barrier to the utilization of services, structural factors constituted the second largest obstacle, while dentist related barriers were considered the least important"

**Country:** South Africa

**Focus:** Dental care services

**Targets:** Private dental practitioners (N=2224 of 3200)

**Methods:** Postal survey

**Object:** Perceived population needs and barriers to care, attitudes (+nature of services provided for different groups).

**Measurement methods:**

Categories of items or self-generated responses (unclear which from paper):

- Dentist-related barriers: "patients are afraid of the dentist", "patients don't like the dentist"
- Structural barriers: "cost of treatment, no money for care, transport"
- Attitudinal barriers: "patients are too busy to seek treatment", "patients claim that there is nothing wrong", "patients don't seem to be interested in obtaining dental care"

(Item type and response categories unspecified)

**Questionnaire availability:** Contact author. Questionnaire not reproduced in the published article.

**Study characteristics:**

**Summary:** Postal survey to examine primary care physicians’ practices relating to the diagnosis and management of geriatric depression, attitudes regarding responsibilities for and barriers to management, self-assessments of their needs in providing this care, and physician characteristics that correlate with attitudes and practices. “…Although 98.6% of respondents agreed that treatment of depression in elderly patients was important, 29.0% reported that depressed elderly patients frustrated them, and 24.2% were too pressed for time to routinely investigate depression in the elderly. The most frequently identified needs in caring for these patients were increased time with patients (97.1%); increased reimbursement for counseling (87.8%); greater emphasis in medical training on the link between physical and mental health (85.6%); improved patient compliance with treatment (84.3%); and more training and attention to depression in residency (82.1%). In general, family physicians were more active and positive in their approach toward geriatric depression.”

**Country:** USA

**Targets:** Primary care physicians (N= 140)

**Focus:** Diagnosis and management of depression

**Methods:** Postal survey

**Objects:** Attitudes, perceived facilitators, practice, demographics

**Measurement methods:**

5-page self-administered survey consisting mainly of close-ended, Likert scale questions. 4 content areas: *current practices, attitudes and perceptions, needs and directions.*

Statements derived from an instrument developed by Callahan et al (1992).

**Practices:** 4 items. (Multi-option categorical responses)

**Attitudes (“Attitudes and perceptions”):** 27 items (e.g. “Helping depressed patients is important to me” Rated on a 4-point scale from 1=’strongly disagree’ to 4=’strongly agree’)

**Perceived facilitators:** 13 items (e.g. “Increased time to spend with each patient”. Rated on a 4-point scale from 1=not at all helpful, to 4= very helpful)

**Demographics & practice characteristics:** 9 items (categorical responses).

**Questionnaire availability:** Most items can be abstracted, from the details given in the published article. Attitude statements and their perceived facilitators are all reproduced in full (tables 3 and 4 respectively, p.436)

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**Study characteristics:**

**Summary:** Questionnaire sent to Midwest dieticians during the development of a program to train dieticians in patient counselling strategies. Dieticians rated 45 specific strategies, divided into 5 categories: Instructional, motivational, behavioural, educational diagnosis, and assessment of compliance. For each of the named strategies, subjects were asked about their use of the strategy, the perceived benefits of the strategy and how difficult they thought it would be to implement. (i.e. only one repeated question relating to perceived barriers in general)

**Country:** USA

**Focus:** Nutritional counselling strategies

**Targets:** Public health nutritionists

**Methods:** Structured questionnaire

**Objects:** Actual use, perceived ease of implementation (barriers), perceived benefits of strategy.
Measurement methods:
For each of 45 named strategies for nutritional counselling, respondents were asked:
*To what extent have you used this strategy? [Practice]*
*If you have used it, how successful do you think it has been in increasing compliance? [Attitude]*
*How highly would you rate this strategy, if you were able to use it? [Attitude]*
*How hard do you think it would be to adapt and implement this strategy into nutritional care in general? [Attitude]*

Questionnaire availability: List of strategies is reproduced in the published article.


Study characteristics:
**Summary:** Telephone survey of family practitioners to assess their attitudes toward the practice of cardiovascular disease prevention. “37 questions evaluated attitudes toward the practice of cardiovascular disease prevention, including: personal health practices and scientific activity (11 questions), the importance, effectiveness of treatment, and intervention management of individual risk factors (10 questions), the educational and organizational factors affecting overall effectiveness and policy of risk factor management (8 items), practice organization (8 items)... Physicians knew important risk factors... but differed in attitudes toward efficacy of treatment. ... Confidence in managing risk factors varied... A few practitioners acknowledged practice guidelines as an important source of information on which to base preventive interventions. Only 14.7% included remuneration as contributing to their implementation of prevention activities in practice. Conclusions: “Variations in physician attitudes could influence risk factor intervention. Interventions to change lifestyle are associated with uncertainty about patient compliance, efficacy of treatment, and ability to effect lifestyle changes.”

**Country:** Canada  
**Targets:** GPs (N=156 of 200)  
**Focus:** Cardiovascular disease prevention  
**Methods:** Telephone survey  
**Object:** Attitudes, perceived barriers/facilitators, practice, self-efficacy, sources of information, demographics.

Measurement methods:
Physician characteristics: N items including demographics and knowledge of own risk factors for heart disease (categorical responses)
Attitudes:
9 items on perceived importance of various risk factors (e.g. “High blood pressure”).  
Response options: ‘large effect’, ‘moderate effect’, ‘little or no effect’, ‘don’t know’.
8 items on perceived efficacy of risk factor treatments (e.g. “Blood pressure reduction and control”). Response options: ‘very effective’, ‘effective’, ‘ineffective’, ‘don’t know’.
8 items on perceived importance of various lipid tests (e.g. “total cholesterol”). Response options: ‘very important’, ‘moderately important’, ‘not very important’, ‘don’t know’.
Perceived barriers/facilitators: 10 items on factors influencing the effectiveness of preventive practices: (e.g. “Relationship with patients”, “adequacy of remuneration”). Categorical (Yes/No) responses.
Practice (thresholds for intervention or treatment): 3 items? (Yes/No)
Self-evaluation of personal skills: 4 items (e.g. “Screening”). Response options: ‘very skilled’, ‘moderately skilled’, ‘unskilled’, ‘don’t know’.
Sources of information: 9 items (e.g. “Professional meetings”) Categorical responses.

Review

Review of methods for changing physician behaviour: Education (CME/guidelines), feedback, participation by physicians in efforts to bring about change, administrative interventions, financial incentives & penalties, multifaceted interventions. Quite a lot on guidelines: primarily educational, in that they attempt to inform practitioners about optimal strategies for diagnosis and management... Why are most physicians not influenced by practice guidelines? Several explanations: 1. Guidelines are not written for physicians but focus on scientific evidence 2. May be difficult to apply to specific patients 3. General reliance on own experience or colleagues' recommendations 4. Non-clinical factors e.g. financial incentives/fear of malpractice litigation. Discusses dissemination of guidelines via opinion leaders, academic detailing, and feedback. Discusses theories of change (e.g. Klein, 1976) which suggest that physicians will oppose changes they perceive as threatening to their livelihood, self-esteem, sense of competence or autonomy. Future directions: "No particular type of intervention is inherently effective, particularly when it is used in isolation. Whether an intervention succeeds depends on the circumstances in which it is used. In general, combinations of methods are superior to single methods of intervention." Suggests asking the following questions before attempting to implement: 1. Is the intervention appropriate for the desired change? 2. Do physicians support the proposed change? 3. How will the intervention itself be perceived?


Study characteristics:

Summary: Survey of nurse practitioners to explore perceived facilitators and barriers to prescriptive authority. "The number one reason given for not utilizing prescriptive authority was legal restrictions and ambiguity of state statute. The number one facilitator effecting prescriptive practice was the opportunity to provide total patient care."

Country: USA

Targets: Nurse practitioners (N=615)

Focus: 'Prescriptive authority'

Methods: Postal survey

Object: Barriers and facilitators

Measurement methods:

54-item questionnaire divided into two parts, the first of which asked for demographic, licensure, educational and professional characteristics and the second which focused on the barriers and facilitators to prescriptive authority.

Questionnaire availability: Contact author.

REVIEW

Review/opinion paper. Addresses some of the key factors that can play a role as determinants of the acceptability of recommendations in clinical practice by the targeted health care providers. "...it is important to acknowledge – from the development stage of the recommendations – the complexity and the role of non-scientific key determinants (i.e. beliefs, values, vested interests) of clinical behaviour."


Study characteristics:

Summary: Surveyed Italian physicians (oncologists) to determine their opinions and attitudes towards practice guidelines, including their view of the role of practice guidelines & perceived need to involve others in guideline development. "More than 80% stated that improvement of quality of care and reduction of variation in clinical and practice styles should be the aim of guidelines, without representatives from outside the medical profession being involved (61%, 79%, & 86% disagreed with a possible involvement, respectively, of patients, health care administrators and representatives of the public at large). Overall, 38% of physicians had a positive attitude towards guidelines viewed as a quality assurance tool for the medical profession. Overall, physicians seem to ignore the need to rationalize health care calls for input from other professions and members of society."

Country: Italy
Focus: Clinical practice guidelines
Targets: 300 Physicians dealing with cancer care (oncologists)
Methods: Mailed survey
Object: Attitudes, demographics

Measurement methods:

Physician characteristics: 5 items (categorical)
Aims of guidelines: 1 open-ended question
Attitudes towards guidelines: 8 statements (listed below) rated on a 5-point scale ranging from ‘strongly disagree’ to ‘strongly agree’.

Practice guidelines ensure that patients get good quality care
Because each case is so different practice guidelines are not very useful for individual care decisions
Practice guidelines should be based primarily on relevant and methodologically sound research
Physicians’ clinical experience should be the basis for developing practice guidelines
Practice guidelines make patient-physician relationships impersonal
Practice guidelines are helpful to clinicians in making difficult decisions
Practice guidelines can hamper physicians’ autonomy
Practice guidelines can improve physicians' knowledge

Views on appropriate guideline development organisations: "The most appropriate organization to produce practice guidelines is". 6 items/options e.g. 'Ministry of Health', answered on a 5-point scale from 'strongly disagree' to 'strongly agree'.

Views on appropriate composition of guideline development panels ('Panels convened to produce practice guidelines should include'). 5 items e.g. 'patients' answered on a 5-point scale from 'strongly disagree' to 'strongly agree'.

Questionnaire availability: Items reproduced in published article and on CPP website.

REVIEW.

Review/secondary data analysis exploring features of guideline recommendations associated with greater or lesser rates of compliance. Specifically aimed to look at "key aspects of the clinical messages in practice guidelines". Focused on 23 studies that had reported compliance rates (assessed by self-report, administrative data, or chart audit data). Examined affect of area of clinical practice (e.g. cardiovascular management, dental care), type of procedure (e.g. diagnosis, surgical treatment), diffusion characteristics of the recommendations (complexity, trialability, observability).

Main findings: Self reported compliance higher than compliance assessed by other methods. Recommendations on cardiovascular and cancer patients' management had significantly higher compliance rates than those for preventive care, dental care or obstetrics & gynaecology. Type of procedure had no effect.

Diffusion characteristics: Complexity was related to lower compliance, trialability to higher compliance, observability had no effect. Concludes that the main influences on compliance are complexity and clinical practice area.


Study characteristics:

**Summary:** Surveyed Italian physicians to explore their knowledge of and agreement with guidelines on the care of breast, colorectal and ovarian cancer patients. Compliance with guideline recommendations over the past year was assessed by reviewing patients’ medical records to assess the care provided. These data were used to determine whether 1) the guidelines reached the target population of physicians, 2) they were effective in shaping doctors’ opinions, and 3) care patterns conformed with the guidelines.

**Country:** Italy
**Focus:** Guidelines on cancer care
**Targets:** Hospital physicians involved in cancer care (N=770)
**Methods:** Structured survey
**Object:** Knowledge, attitudes, practice.

**Measurement methods:**

"Physicians’ Survey" consisted of two sections exploring awareness of guidelines and acceptance of recommendations. Part 1 asked respondents whether and how they knew of the activities of the Italian task forces on cancer and the guidelines developed by them. Part 2 assessed knowledge and agreement with guideline recommendations using "clinical scenarios" (four on breast cancer and two each for colorectal and ovarian cancer) dealing with controversial aspects of surgical and medical treatment of the three diseases and for which the guideline made a recommendation.

**Studies of patterns of care.** Compliance with guidelines was assessed by looking at care rendered to all newly diagnosed breast, colorectal, and ovarian cancer patients consecutively seen at one of the 45 hospitals in one year, using abstraction from medical records.

**Questionnaire availability:** Broad details of the survey instrument are given in the published article, but not the full questionnaire.

**Study characteristics:**
- **Summary:** Survey of Dutch GPs to assess attitudes towards national standards for quality of care produced by the Dutch College of General Practitioners. Looked at attitudes to standard setting in general and in regard to the first set of standards produced (diabetes care).
- **Country:** Holland
- **Focus:** National standards for quality of care (guidelines)
- **Targets:** General practitioners (N=453)
- **Methods:** Postal survey
- **Object:** Attitudes, knowledge, perceived barriers, demographics.

**Measurement methods:**
- 28 items in total. Mixture of open and closed questions
- 3 items on **knowledge/recall of guidelines**, including knowledge of the national campaign and the content of the first two sets of standards produced (4-point scale: “very well informed” to “not at all informed”). Example: “Well-informed about the national standard setting campaign.”
- 6 items on **attitudes towards national standard setting**: e.g. “National guidelines make the tasks of the family doctor clear to the community”, + 3 items on **attitudes to the body setting the standards** (NHG) e.g. “The NHG is representative enough to set standards”, (5-point response scale from “agree” to “disagree”).
- 8 items on **agreement with specific elements of the diabetes guideline** (Categorical response options, Yes/No). Example: “Blood glucose check every 3 months.”
- 9 items on **perceived barriers** – specifically, problems with adherence to diabetes guideline e.g. “Every patient is different”. (3-point response scale: “Yes, this is a problem” “this is somewhat a problem” “no, this is not a problem”).
- 6 **demographics** questions (open & closed)

**Questionnaire availability:** See article and CPP website.


**REVIEW**

Describes theories of behaviour change relevant to guideline implementation and differentiating the range of barriers to implementation. Also describes practical approaches to implementation.

Focus of the paper is on targeting interventions towards the barriers characterising each stage of the stepwise change process involving (a) orientation on the guideline or change (b) insight into the change proposal and into current routines (c) development of a positive attitude towards change (d) actual change and maintenance of this change.

**REVIEW/THEORY**

Differentiates between different approaches to inducing change (educational, epidemiological, marketing, behavioural, social interaction, organizational, coercive). Also proposes a five-step model for implementing guidelines or innovations in clinical practice: 1) Develop a concrete proposal for changing clinical practice 2) Identify obstacles to change 3) Link interventions to obstacles 4) Develop a plan, 5) Carry out plan and evaluate progress


**Study characteristics:**

**Summary:** Aimed to assess which attributes of clinical practice guidelines influence their use. Focused on 47 recommendations included in 10 different Dutch national guidelines for general practice. (Covering acute and chronic diseases and diagnosis, treatment, advice and follow up). 4 researchers independently rated each recommendation as to the presence or absence of 16 key attributes suggested on the basis of a literature review (3-point scale: present, partly present, not present). Attributes covered the following domains: scientific validity of guidelines; their relevance and applicability in practice; the formulation and style of the recommendations; their compatibility with existing opinions and values; their complexity; their consequences for care providers, patients, doctors, and practice management; the risks of applying the recommendations; and the attention given to the guideline in the dissemination process (see below for attribute descriptions). 4 of the original 16 attributes had poor discriminatory power and were removed from further analyses, to leave 12 attributes. Attribute presence was then related to compliance with the relevant recommendation in practice as revealed by clinical audit data.

**Country:** Holland

**Targets:** General practice

**Focus:** Guidelines

**Methods:** Observational study

**Object:** Compliance

**Measurement methods:**

Not a survey, although attributes may be useful for designing scales to assess barriers to implementation.

Original list of 16 attributes. (Starred attributes are those remaining after items with poor discriminatory power were discarded)

1) The recommendation is based on sound scientific evidence - an explicit description of the scientific evidence for the recommendation is available; the research evidence is straightforward and not conflicting; the recommendation is based on the results of well designed clinical trials or meta-analyses

2) The recommendation is based on clear and convincing arguments that are based on extensive clinical skills and experience

3) The recommendation is concerned with a relevant aspect of care in daily practice

4) The recommendation helps doctors to solve patients’ problems in daily care - it is concerned with difficult decisions or choices in daily care and it makes work easier

5) The recommendation is one of the key features of the guideline - it is a central element in the guideline and represents the central aim
*6) The recommendation provides a concrete and precise description if desired performance - it gives detailed advice on which performance is appropriate in which situation and in what patient group and determines which factors or conditions should be taken into account.

*7) The recommendation is vague and not specific

*8) The recommendation is complex - it is composed of many different elements and contains a complex decision tree or many different conditional factors influencing performance.

*9) The recommendation is not compatible with existing norms and values in practice - it is controversial and provokes discussion

*10) The recommendation demands the acquisition of new competence (knowledge, skills) - it can be followed only when a doctor has specific knowledge and skills

*11) The recommendation has specific consequences for practice management - it requires adaptations in the organisation of care processes or demands extra resources, staff, equipment, etc.

*12) The recommendation demands changing existing routines and habits and leaving what is seen as common practice in the target group

*13) The recommendation will provoke negative reactions in patients because it does not fit their common expectations - it may lead to a conflict of interest between patient and doctor

*14) The recommendation will provoke negative reactions among colleagues because it is not compatible with their views, position, or tasks

*15) The recommendation can be tried without any risks of possible damage for patients - experimenting with the proposed performance will not have negative effects in the health of patients

*16) The recommendation has been mentioned in the media and in implementation programmes


Study characteristics:

Summary: Telephone interviews with Dutch general practitioners to assess their views on guidelines and other aspects of quality assurance/medical audit. Perceived obstacles and requirements to implementing systematic quality assurance in the work setting were identified using open and closed questions.

Country: Holland
Targets: General practitioners (N=120)
Focus: Quality assurance (including guidelines)
Methods: Telephone interviews
Object: Perceived barriers, needs

Measurement methods:

Telephone interviews comprising mostly structured questions, but also some semi-structured (open response) questions.

Interview protocol

Section 1 asked about familiarity with, use of, and perceived meaningfulness of 24 activities focused on quality improvement. (Closed. Three response options for each dimension i.e. familiarity, use and meaningfulness). 6 items on “guidelines, agreements and objectives”, 9 items on supply and evaluation of information, 6 items on activities to improve functioning and 3 items where respondents rate familiarity, use and meaningfulness of other activities identified by the respondent.
Section 2 dealt with respondents’ attitudes towards quality improvement in general (9 items). 8 items with five response options (totally disagree to totally agree). Followed by an open-ended question asking which statement is closest to the respondent’s own view on quality improvement and why.

Section 3 contained 32 items dealing with perceived barriers and facilitators to implementation. 10 open-ended questions, asking about perceived barriers and facilitators to five QA activities, followed by 1 open question asking, “Which problems do you expect when the mentioned activities will be obligatory for each general practitioner?”. Next, are 10 statements representing negative beliefs (attitudinal barriers) about QA, in which respondents are asked to indicate how much each applies to them (Closed, four response options: “very much” to “not at all”). These are followed by 12 items on perceived facilitators, where respondents are asked “To which degree do the following means support the implementation of activities related to quality improvement?” (Closed, four response options: “very much” to “not at all”).

Section 4 contains 16 demographics items, followed by a final, open-ended question asking for final comments.

**Questionnaire availability:** Interview protocol may be found on the CPP website.


**Study characteristics:**

**Summary:** Postal survey of Australian GPs examining recall, attitudes and perceived barriers & facilitators in regard to 9 clinical practice guidelines (Survey instrument contained items used by Tunis et al. + others) “GPs recall of each of nine guidelines ranged from 52% to 94%. 49% felt that their practice had changed as a result of a guideline. While 92% agreed that guidelines were “good educational tools”, 83% indicated that guidelines were “developed by experts who don’t understand general practice…” Factors most frequently identified as important in deciding whether to follow the guideline recommendations were whether the guideline was based on evidence and credible endorsement.”

**Country:** Australia

**Targets:** General practitioners (N=286)

**Focus:** Clinical practice guidelines

**Methods:** Postal survey

**Object:** Knowledge, attitudes, practice, barriers and facilitators, demographics.

**Measurement methods:**

11 page, self-administered questionnaire developed using Tunis et al’s (1994) instrument as a basis and with “input from GPs and policymakers to ensure local relevance”.

Six sections:

1. **Recall and usefulness of guidelines** (10 items, 7 point scale, 1-6 = ‘useful’ to ‘not useful’, 7 = ‘not aware of this guideline’) e.g. ‘antibiotic guidelines’.

2. **Effect of guidelines on clinical practice** (1 item – Yes/no/unsure + if ‘Yes’, name)

3. **Relative influence of named information sources on practice** (10 items, 6 point – ‘extremely influential’ to ‘not at all influential’) e.g. ‘Clinical practice guidelines’.

4. **Attitudes about guidelines** (13 items 5 point, strongly agree-strongly disagree) e.g. ‘In general, clinical practice guidelines are unbiased summaries of expert opinion.’

5. **Factors influencing use of guidelines/Barriers and facilitators** (13 items, 5-point scale extremely important-not at all important) e.g. ‘Easy-to-read format’.


**Questionnaire availability:** Questionnaire reproduced in the published article and on CPP website.

**Study characteristics:**
- **Summary:** Used postal questionnaires and face-to-face interviews to assess dentists’ knowledge of appropriate management methods and perceived barriers to treatment of children with dental injuries. Key perceived barriers: fees too low, treatment occupies too much time, treatment is not target’s responsibility.
- **Country:** England
- **Focus:** Treatment of dental injuries
- **Targets:** General Dental Practitioners (N=153) and community dental officers (N=53)
- **Methods:** Postal questionnaire and personal interview
- **Object:** Knowledge, perceived barriers, demographics

**Measurement methods:**
- Details of questionnaire:
  - Section 1: Personal details/demographics
  - Section 2: Presented 17 imaginary dental injuries requesting that respondents select the advice or treatment option they would offer, form a list of alternatives supplied.
  - Section 3: Assessed perceived barriers to care by asking respondents to rate the following statements on a 5-point scale from “strongly agree” to “Strongly disagree”:
    - Children with dental trauma should be referred to specialist centres for treatment
    - The long-term care of traumatised teeth requires specialist knowledge
    - The fees for the treatment of trauma in children are inadequate (GDPs only)
    - The treatment of trauma in normal children is no longer a responsibility of the Community Dental Service (CDOs only)
    - The endodontic treatment of teeth with open apices takes up too much clinical time (CDOs only)
- **Questionnaire availability:** Perceived barriers items are reproduced in the published article.


**Study characteristics:**
- **Summary:** Questionnaire administered to hospital-based acute care nurses to determine their attitudes and beliefs about incontinence associated with the perceived opportunity to help the patient with the problem and knowledge of the causes and interventions relevant to incontinence.
- **Country:** USA
- **Focus:** Incontinence care
- **Targets:** Hospital-based acute care nurses (N=150)
- **Methods:** Questionnaire
- **Object:** Attitudes, knowledge.

**Measurement methods:**
- Attitudes: Two vignettes describing patients with stress and urge incontinence, each accompanied by 8 statements answered on a 7-point Likert scale with appropriate anchors. Statement were related to help giving and attitudes and focused on the following dimensions: attributions, client information, role orientations, and opportunity. Example: Item: “Do you believe the patient’s urinary incontinence is due to... “ Anchors: “Not trying hard enough to control her leakage” ---- “Patient’s inability to control her leakage”.
- Demographics
- Items on knowledge & beliefs about causes of incontinence

Study characteristics:

**Summary:** Surveyed faculty members in a school of Allied Health to determine their perceptions of current barriers to research. Respondents were asked to rate the importance of 61 potential ‘needs’ for their research and the extent to which these needs were being met in their institution. The ‘needs’ most frequently identified as major barriers to research fell into the following categories: additional personnel, research philosophy, funds, in-service education, information, and space. "Results emphasized the fact that allied health faculty have time already heavily committed to clinical and teaching responsibilities, and that more time for research was desired than was presently available."

**Country:** USA

**Targets:** Allied health staff

**Focus:** Research (EBM)

**Methods:** Postal survey (‘needs assessment’)

**Object:** Perceived barriers (‘needs’), demographics

**Measurement methods:**

“Faculty Research Needs Assessment instrument” listed 61 ‘needs’ identified from previous Delphi group work. These fell into the following categories: research philosophy, information, in-service education, computer equipment, equipment and supplies, space, funds, personnel.

For each of the 61 needs respondents were asked to indicate a) *How important is this need to you personally in your research?* (8-point scale, “not important” to “very important”) and b) *To what extent is this need satisfied for you in your institution?* (8-point scale, “not at all satisfied” to “completely satisfied”).

9 items assessing demographic data.

**Questionnaire availability:** All items are reproduced in the published article.


Study characteristics:

**Summary:** Survey of emergency nurse practitioners to examine factors that facilitate or inhibit implementation their role. "Respondents were motivated to enter an ENP program by greater role credibility, autonomy, job advancement, learning new skills and dissatisfaction with their jobs. Similarly, ENPs accepted their jobs because of the opportunity to use their new skills, available medical backup, and the location of employment. Nurses reported leaving ENP practice because of resistance from other health care providers. ENPs experienced resistance in their practice, although they believed the role was accepted by consumers and health care colleagues. They tended to perform tasks they believed appropriate to the role and not to perform tasks inappropriate to the role. Most ENPs reported role autonomy and a collaborative or independent practice. While 42% reported no barrier to practice, the majority of ENPs reported greater than on barrier. Resistance and legal status was the most frequently reported barriers.”

**Country:** USA

**Targets:** Emergency nurse practitioners

**Focus:** ENP role

**Methods:** Postal questionnaire
Object: Barriers and facilitators, job motivation, role concept, performance and autonomy, demographics

Measurement methods:
Questionnaire taps motivating factors influencing the decision to seek ENP education and subsequent job acceptance, current employment status, role concept, performance and autonomy and barriers to practice.

Questionnaire availability: See published article.

Hayward, RSA; Guyatt, GH; Moore, KA; McKibben, A; Carter, AO. Canadian physicians’ attitudes about and preferences regarding clinical practice guidelines. Canadian Medical Association Journal. 1997; 156(12): 1715-1723.

Study characteristics:
Summary: Mailed survey addressing Canadian physicians’ familiarity and use of, confidence in, attitudes about and preferences regarding clinical practice guidelines. Used modified version of Tunis et al.’s attitudes towards guidelines scale. The Canadian instrument addressed the broader interests and needs of all physicians and referred to Canadian health organizations and guidelines developers. Asked physicians about their use of various information sources and the impact of those sources on their decisions; their familiarity with and confidence in guidelines issued by various organizations; their attitudes about guidelines and their effect on medical care; the importance of guidelines and other sources of information in clinical decision-making; the importance of various considerations in deciding whether to adopt a set of guidelines; and the usefulness of different formats for presenting guidelines. “The respondents were generally positive about guidelines (e.g. over [half] strongly agreed that they are a convenient source of advice and good educational tools); however [some] had concerns about loss of autonomy, the rigidity of guidelines and decreased satisfaction with medical practice. Endorsement by respected colleagues or major organizations was identified as very important by [most] of the respondents in deciding whether to adopt a set of guidelines in their practice. User friendliness of the guidelines format was thought to be very important; short pamphlets, manuals summarizing a number of guidelines, journal articles and pocket cards summarizing guidelines were the preferred format.”

Country: Canada

Targets: Physicians from 8 specialities (N=1878 of 3000)

Focus: Clinical practice guidelines produced by organizations

Methods: Postal survey

Object: Information sources and impact, familiarity, attitudes, usefulness of formats.

Measurement methods:
Sources of information (use & impact)
11 items on frequency of use (rated on a 5-point scale by frequency of use: Never, Yearly, Monthly, Weekly, Daily)
11 items on the impact of these sources on clinical decision making (5 points, ranging from no impact, to major impact),
Level of confidence in CPGs issued or developed by various organizations (12 items, 5 point rating scale)

Items on attitudes about guidelines (based on Tunis et al, 1994)
10 on general attitudes about clinical practice guidelines.
(5-point scale from strongly disagree to strongly agree.)

1. 6 on opinions about the likely effect of CPGs on various aspects of clinical practice (5-point scale: very likely to decrease to very likely to increase)
2. Importance of various factors in deciding whether to adopt a set of guidelines (perceived facilitators/barriers)
(Also from Tunis. 10 items, 5-point response scale from not important to very important).
Perceived usefulness of various formats in which to present CPGs in order to make them more accessible (perceived facilitators)
(10 items. 5 response options – not at all useful to very useful indeed).

**Questionnaire availability:** See ‘Perceptions’ website for full questionnaire.


**Study characteristics:**

**Summary:** Survey of family practice residents to determine use, attitudes, and curricular needs for practice guidelines.
Survey developed to measure exposure to, frequency of use, attitudes, access, and knowledge about use of CPGs.

“The residents reported positive attitudes towards CPGs; 75% thought they were easy to use, 80% thought they improved their efficiency, 78% thought they improved their residency education, and 75% thought they improved patient care. Barriers to effective use of practice guidelines were also identified, 20% knew where to find guidelines in their clinic, 35% had faculty modelling and 22% knew how to evaluate the validity of a guideline. 89% of respondents desired instruction of CPG use and interpretation. … Barriers that prevent effective use of CPGs in training environments include lack of critical appraisal abilities and faculty role modelling.”

**Country:** USA

**Targets:** Family practice residents (N=85 of 114)

**Focus:** Clinical practice guidelines

**Methods:** Survey

**Object:** Familiarity, practice, attitudes, perceived barriers, self-efficacy.

**Measurement methods:**

“A two-page survey was developed to assess residents’ attitudes towards clinical practice guidelines, exposure, frequency of use, and perceived barriers to use of CPGs; perceived ability to evaluate and apply guidelines; and desire for a CPG curriculum. The survey included questions from national surveys of internists and family physicians on physicians’ attitudes and exposure to CPGs (Tunis et al., 1994; Wolff et al., 1998). Questions about residents’ ability to critically appraise CPGs were taken from an instrument for evaluation of an evidence-based medicine curriculum (Flynn & Helwig, 1997).”

Familiarity: Have you seen a guideline on any of these problems from either a national or a local source? (14 items/topics e.g. “Hyperlipidemia”. Categorical responses)

Frequency of use: How often do you refer to these guidelines when managing your patients? (14 items/topics, rated “never, one to two times per year, monthly, one to two times per month, three or more times per month.)

Attitudes: Statements rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree) e.g. “I think practice guidelines are easy to use”

Barriers to CPG use: Statements rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree) e.g. “My clinical schedule permits me to incorporate practice guidelines into patient encounters”.

Perceived needs for a curriculum addressing CPGs: Statements rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree)

Perceived abilities to critically appraise and validate CPGs. Statements rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree)

**Questionnaire availability:** Items reproduced in published article and on CPP website.

**Study characteristics:**

**Summary:** Postal survey to determine physician practices, beliefs and perceived barriers for implementation with respect to preventive medicine. "When identifying barriers to practicing preventive medicine, respondents overwhelmingly selected lack of patient motivation more than any other factor."

**Country:** USA

**Focus:** Preventive medicine

**Targets:** Family physicians (N=324 of 430)

**Method:** Postal survey

**Object:** Practice, attitudes, perceived barriers, demographics.

**Measurement methods:**

"The questionnaire consisted of multiple choice items designed to yield scaled responses. Items were categorised into five major themes focused on answering the research questions (see below). For each of 15 specific preventive medicine activities, respondents were asked to report how frequently they incorporate them in their practice, how important is for family physicians, if they believe it is the family physician’s responsibility, if they personally practice the activity, and what do they perceive as barriers for physicians to professionally practice the activity."

( + N demographics items)

What are physicians’ professional practices and beliefs concerning preventive medicine?

What are the personal health-promoting behaviours of physicians? What reasons do physicians cite for not practicing preventive medicine professionally?

Is there a relationship between physicians’ personal health behaviours and their professional practice of preventive medicine?

**Questionnaire availability:** Most items can be discerned from the published article, although the response options are not clear from the information given.


**Study characteristics:**

**Summary:** Survey to determine the counselling and referral practices of primary care physicians in North Carolina with respect to cancer screening and perceived barriers to cervical cancer screening. "A majority of physicians responded that women find having a pelvic examination unpleasant (69.1%) and believed that women do not understand cervical cancer risk factors (59.7%). Other perceived barriers, including cost, busy schedules and fear were reported less frequently. Only 7% of physicians perceived transportation to be a barrier to obtaining screening."

**Country:** USA

**Focus:** Cancer screening

**Targets:** Physicians specialising in general practice, family practice, internal medicine, or obstetrics/gynecology.

**Methods:** Postal survey

**Objects:** Demographics, practice, perceived barriers

**Measurement methods:**

Demographic and practice information

Actual practice

Perceived barriers: 1 open-ended question asking respondents to report what they believed were the barriers to cervical cancer screening.

**Study characteristics:**

**Summary:** Pilot phase of a larger project aimed at developing an instrument for identifying research training needs within primary care groups (PCG). Semi-structured interviews + repertory grid technique used to elicit views of various members of PCG. Topics covered included facilitators and inhibitors to research and development, need for research training, perceptions of enabling/disabling factors, contribution of research to current role activities. “Development work yielded some interesting unexpected results from the respondents which suggested that despite overt statements to the contrary the majority of the primary health care professionals perceived research as being unimportant and peripheral to their jobs, and the responsibility of other health care professionals, moreover, the subjects’ understanding of research and its methodologies was discordant both within and across professional groups. The implications of these results from this pilot phase suggest that fundamental and deep-seated attitudes which are resistant to research may be a contributory factor to the persistence of ritualistic, non-evidence-based care.”

**Country:** England

**Focus:** Research/EBM

**Targets:** Primary Care Groups (multidisciplinary)

**Methods:** Semi-structured interview + repertory grid

**Object:** Facilitators and barriers.

**Measurement methods:**

Semi-structured interviews + repertory grid. Topics covered included facilitators and inhibitors to research and development, need for research training, perceptions of enabling/disabling factors, contribution of research to current role activities.

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**Study characteristics:**

**Summary:** Postal survey examining the activities of Dutch general practitioners in nutritional matters and the factors that influence their attitudes, knowledge and behaviour, especially perceived barriers. “GPs perceive strong barriers of being involved in nutrition issues during their practice, including not being trained in nutrition, lack of time to address nutrition issues and the perception that patients lack motivation to change lifestyle and/or dietary patterns.”

**Country:** Holland

**Targets:** General practitioners (N=633 of 1000)

**Focus:** Nutrition guidance

**Methods:** Postal questionnaire

**Object:** Knowledge, attitude, practice, perceived barriers.

**Measurement methods:**

Methods: postal questionnaires (result of focus group discussions and in-depth interviews) sent to 1000 Dutch
Nutritional Practices Questionnaire was derived from qualitative analysis of interviews and focus group discussions and covered the following domains: personal and practice characteristics, task perception as primary care physicians, sources of information on nutrition; dealing with nutrition education in practice; barriers to be coped with. "Special attention was given to two typical examples of nutrition-relevant behaviour: treatment and prevention of overweight and treatment of coronary heart disease. Barriers to treatment of these conditions were scored on a 2-point scale (yes/no). The items which were posed as possible barriers came from the literature and from previous qualitative research. In addition the three most important barriers were required to be specified. Attitudinal questions were scored on a 5-point Likert scale."

**Questionnaire availability:** Ambiguous description of items and response scales in the published paper, but full questionnaire is available from the first author.

**Hughes, RM.** *Exploratory study of factors influencing nurses’ participation in continuing education in public and private health care settings.* Georgia State University, PhD thesis. 1993.

**Study characteristics:**

**Summary:** Survey examining factors that influence registered nurses’ participation in continuing education. "Standardised and validated survey instruments identified barriers to education participation. Respondents were also asked to respond to questions concerning the organizational variables describing their work organization. ...The major conclusion ...was that perceived benefits or lack thereof was the ruling reason for non-participation..."

**Country:** USA

**Targets:** Nurses

**Focus:** Participation in continuing medical education

**Methods:** Postal survey

**Object:** Perceived barriers, organizational characteristics

**Measurement methods:**

Survey of “Standardised and validated survey instruments identified barriers to education participation. Respondents were also asked to respond to questions concerning the organizational variables describing their work organization.”

**Questionnaire availability:** Contact author

**Hulscher MEJL, Van Drenth BB, Mokkink, HGA, Van der Wouden, JC, Grol RPTM.**


**Study characteristics:**

**Summary:** Examined barriers to preventive care, focusing on barriers related to the organization of preventive services and to general practitioners’ attitudes and self-efficacy expectations. Data on the organization of cardiovascular services were gathered via questionnaire and observation. Preventive attitudes and self-efficacy expectations were examined via a structured questionnaire

**Country:** Holland

**Targets:** General practitioners (N=182 of 195)

**Focus:** implementation of measures for cardiovascular disease prevention

**Methods:** Questionnaire + observation

**Object:** Attitudes, self efficacy, organization of services

**Measurement methods:**

Key preventive attitudes and self-efficacy expectations:
Opinions on the acceptability of (cardiovascular) prevention (i.e. perceived acceptability from the patients’ viewpoint).

Opinions on the feasibility of prevention (i.e. the availability of proper practical means to carry out preventive activities)

Opinions on the responsibility of general practice for prevention, and

Self-efficacy expectations (i.e. whether general practice is capable of realizing preventive behaviour in patients).

Original questionnaire on these subjects contained 36 items derived from validated Dutch instruments (Kluver, 1986; Verhaak & de Vries, 1987). Principal component analysis revealed four factors, corresponding to each of the dimensions of acceptability, feasibility, responsibility and self-efficacy. Items not clearly loading on any factor were discarded to leave a 24-item scale. Internal reliability of each sub-scale was assessed using Cronbach’s alpha.

**Questionnaire availability:** 24-item questionnaire available on CPP website.

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**Study characteristics:**

**Summary:** Survey to assess how adequately family physicians think they are delivering preventive care and to examine barriers to providing preventive care. Survey instrument included items on perceived reasons for lack of success in providing recommended preventive care.

Barriers suggested/perceived: patient is healthy and does not visit; patient refuses, is not interested, or does not comply; no effective systems to remind patients to come in for preventive care; and priority given to presenting problems.

**Country:** Canada

**Targets:** Family physicians (N=480 of 1236)

**Focus:** Preventive care

**Methods:** Postal survey

**Object:** Demographics, practice, attitudes, perceived barriers

**Measurement methods:**

The questionnaire solicited information on physician and practice characteristics, attitudes toward preventive care, perceptions of the importance of a range of manoeuvres, self-assessed performance of preventive interventions, and barriers to providing preventive care.

Physician and practice characteristics (N items, categorical)

**Level of performance perceived to be satisfactory:** 15 items (e.g. “Pap smear at regular intervals for women who are sexually active”) Rated in terms of percentages of patients covered (<10, 25, 50, 75, >90)

**Own practice in delivery of preventive interventions:** 15 items (e.g. “Pap smear at regular intervals for women who are sexually active”)

Rated in terms of percentages of patients covered (<10, 25, 50, 75, >90)

**Perceived importance of a range of manoeuvres:** 15 items (e.g. “Pap smear at regular intervals for women who are sexually active”)

Rated on a 5-point scale from 1=not important to 5=very important.

**Perceived barriers to providing preventive care:** 12 items rated on a 5-point scale from 1=“strongly disagree” to 5=“strongly agree”. (e.g. “Patient refuses, is not interested or does not comply”, “Intervention is not clearly effective”, “Preventive care guidelines too complex to apply”)

**Questionnaire availability:** Items and answering scales are reproduced in the published article. (Except demographics items)

Study characteristics:
Summary: Survey of HMO primary care physicians at a managed care medical group that was experiencing intense price competition. Aimed to measure the change in physicians’ attitudes toward preventive care guidelines over a 2-year period. “Physicians increasingly believed that clinical guidelines were being used for cost containment and less for quality improvement, over time. These findings may create a barrier to physicians’ adoption of practice guidelines.”
Country: USA
Targets: Primary care physicians (N=62)
Focus: Clinical practice guidelines
Methods: Survey
Object: Attitudes
Measurement methods:
Used Tunis et al’s scale to measure attitudes towards guidelines.
See ‘perceptions library’ website for attitudes towards guidelines questionnaire (Tunis et al., 1994)


Study characteristics:
Summary: Survey assessing New York family physicians’ confidence in clinical guidelines developed or endorsed by various organisations and the perceived usefulness of such guidelines in practice. “Most respondents perceived clinical guidelines as effective educational tools that should improve the quality of patient care, but were concerned about their potential regulatory intrusion into practice. Solo practitioners expressed more negative attitudes regarding clinical guidelines than physicians in non-solo practices. Respondents had greater confidence in guidelines developed or endorsed by their professional society, the Centers for Disease Control and Prevention, the United States Preventive Services Task Force, and the National Institutes of Health, but less in those by insurance companies or state health departments. The reported adoption rate of clinical guidelines was low. The most preferred methods for adoption were continuing medical education and practice interventions.”
Country: USA
Focus: Clinical guidelines
Targets: Family physicians (N=420 of 978)
Methods: Postal questionnaire
Object: Attitudes, familiarity, actual change, perceived facilitators, demographics.
Measurement methods:
6-page self-administered survey.
Part 1
8 items assessing attitudes towards guidelines (4-point response scale indicating level of agreement with descriptions of guidelines as educational tools and patient management guides)
6 items assessing predicted impact of guidelines on six characteristics of the health care environment (“increase”, “no effect”, “decrease”)
9 items assessing confidence in guidelines issues by various organisations (5-point scale, “very confident” to “not at all confident”)
Part 2
1 item on actual change. (Open question asking whether any of the respondent’s practices had changed in the past year as a result of adopting a published guideline.)

1 item on awareness of guidelines. (Open question asking whether respondents were aware of the AHCPR guideline on heart failure and if so how they had learned about it.

1 item on facilitators to guideline implementation. Respondents asked to rank six activities in order of their effectiveness in helping to adopt guidelines (e.g. “Completing CME meetings or home study programs”, “Reading guidelines in books or journals”).

5 items on demographics/practice characteristics (open and closed)

Questionnaire availability: Most items can be abstracted from the details given in the published article. Attitude items are derived from Tunis et al (1994) and can be found on the ‘Perceptions library’ website.


REVIEW
Review/discussion paper. Points out that dissemination doesn’t necessarily lead to change. Reviews & critiques traditional diffusion model (recognizes complexity + person factors & source factors, but ultimately assumes that provision of good information will lead to change). “only if we understand the conditions under whichinformation transfer is most likely to result in behavioural change can (we) focus our efforts...and shape our dissemination strategy for maximum effect.” Behaviour change is more than knowledge acquisition. Characteristics of the information: Needs to be repackaged to make it useful. Summarisation & synthesis may not be enough. Unless a recommendation prescribes defined actions to be taken in defined circumstances for specific groups of patients, it is unlikely to have a uniform or measurable effect on practice. Practitioner motivation: habitual/routinised behaviour is only likely to be changed in the presence of a motivational trigger. Information transfer may be insufficient trigger. Characteristics of the clinical context: e.g. whether facilities needed to change are within the control if the practitioner.


Study characteristics:
Summary: Key chapter 6: Physicians’ Attitudes and Information Habits. (p.87-) Reports survey examining physicians’ attitudes which might be important in predicting their attentiveness to and willingness to accept consensus recommendations. Also looks at information sources & efforts to identify opinion leaders.

Country: USA
Focus: NIH consensus recommendations (guidelines)
Targets: Physicians
Methods: Survey
Object: Attitudes, information sources, facilitators.
Physicians who had indicated awareness of the Consensus Development Program were asked to rate program recommendations according to five key attitude variables.

Measurement methods:
“Based on the Consensus Conferences you’ve heard about, how would you rate the Consensus Development Program recommendations?”
(4 response alternatives: Usually, Sometimes, Rarely, Don’t Know).
Realistic for clinical practice
Tend to restrict physicians’ freedom in selecting treatment
Are useful in helping to control health care costs
Resolve medical controversies
Show the results of political compromises

**Questionnaire availability:** See report.


**Study characteristics:**

**Summary:** Survey to evaluate guideline dissemination via small group consensus process. Attitudes about preventive medicine and knowledge about influenza vaccination measured before and after dissemination. Key results: Intervention increased vaccination rates by 34%. Attitudes and knowledge did not change and were unrelated to increased vaccination rates.

**Country:** USA  
**Focus:** Guidelines on influenza vaccination  
**Targets:** Primary care physicians  
**Methods:** Postal questionnaire + chart review.  
**Object:** Attitudes, practice

**Measurement methods:**
Postal questionnaire before and after intervention (facilitation versus control condition). Practice/compliance determined by chart review.
The questionnaire tested physician knowledge about influenza vaccination and measured attitudes about preventive medicine.

**Knowledge:** 27 closed-ended questions covering topics specifically presented in the intervention, e.g. familiarity with influenza vaccine guidelines and the vaccine’s effectiveness.

**Attitudes:** Seven items asking the physician to rate how important they feel particular prevention practices are in their practice (e.g. influenza vaccination; mammography). Responses on a five point Likert scale 1 = not at all; 2 = slightly; 3 = moderately; 4 = quite a bit; 5 = very much.

Internal consistency above .7 (Cronbach’s alpha)

**Questionnaire availability:** Questionnaire is not reproduced in the published article.


**Study characteristics:**

**Summary:** Survey to examine physicians’ knowledge, attitudes and practice preferences with regard to pressure ulcers and to assess the impact on family physicians of AHCPR clinical guidelines on pressure ulcers. Key results: Taking care of more elderly patients, completing a residency, being board certified, and being aware of the AHCPR guidelines were independently associated with higher knowledge scores. Virtually all of the respondents (99%) felt that it was the family physician’s role to provide pressure ulcer care, whereas 70% felt that they had not been adequately trained to do so. There was a wide variety of practice preferences. Approximately 70% of physicians were not aware of the AHCPR guidelines.

**Country:** USA  
**Focus:** AHCPR guideline on pressure ulcers.  
**Targets:** Family physicians (N=153)
Methods: Structured questionnaire.
Object: Respondent demographics, practice characteristics, training, awareness of AHCPR guidelines, knowledge about pressure ulcers, attitudes about pressure ulcer treatment and preferences.

Measurement methods:
Four part questionnaire containing 62 independent questions + four hypothetical scenarios.
Knowledge: 43 items on knowledge of pressure ulcers.
Attitudes: 4 questions focusing on (1) respondents' attitudes about adequacy of their training for managing pressure ulcers; (2) their perceived effectiveness in treating pressure ulcers; (3) importance of pressure ulcers in primary care practice; and (4) the role of family physicians in managing pressure ulcers. (Attitudes rated on a 4-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree").
Preferences: 4 case studies/scenarios presented. Respondents asked to indicate, from a set of possible interventions, which they would order for each scenario.
Responder characteristics: 15 items
Questionnaire availability: See published article and CPP website.


Study characteristics:
Summary: Examined primary care physicians' knowledge of and attitudes towards the National Cancer Institute’s (NCI) ‘Statement of Evidence on Breast Cancer Screening’ which replaced its earlier mammography screening guidelines. Also examined the extent to which physicians changed their individual clinical policies in response to the Statement of Evidence.
Country: USA
Focus: Guidelines (National Cancer Institute Statement of Evidence on Breast Screening)
Targets: Primary care physicians (N= 545 of 1292)
Methods: Postal survey
Object: Knowledge, attitudes, practice
Measurement methods:
18 page multipurpose questionnaire. Presented the National Cancer Institute’s Statement of Evidence on Breast Cancer Screening and then asked physicians about their knowledge of and attitudes towards it, as well as whether they had changed their individual clinical policies on mammography in response to it. Knowledge and practice change questions were posed in a YES/NO format, while attitudinal questions were measured using a four-point Likert scale anchored by “strongly agree” and “strongly disagree”. Physicians were also asked to report the frequency with which they recommended breast cancer screening with mammography to their asymptomatic women patients with no personal or significant family history of breast cancer.
Demographics: 8 items (categorical responses)
Awareness of Statement of Evidence: 1 item (YES/No)
Actual Practice (i.e. screening): 5 items (YES/No)
Change in practice following the new guideline: 2 items? - Have you changed.. If no, would your consider changing (YES/No)
Attitudes (All answered on a 4-point scale ranging from “strongly agree” to “strongly disagree”)
Attitudes towards the NCI Statement of Evidence: 4 items (e.g. “Physicians’ confusion will reduce screening”)
Attitude toward screening women 40-49: 3 items e.g. “Evidence does not support screening”
Attitude toward screening women 50 and over: 1 item “Women over 50 should be screened annually”

**Questionnaire availability:** Full questionnaire is not reproduced in the published article, although the attitude statements are. The latter are reproduced on the CPP website.


**Study characteristics:**

**Summary:** Survey of physicians from 6 specialities to investigate beliefs, attitudes, and practices regarding obesity in relation to medical risk, management, and interest in training and other resources. “Specialty groups shared high concern for the health risks of moderate and morbid obesity, but distinct attitudes and patterns of practice emerged. For example, family practitioners, internists, and endocrinologists reported treating obesity themselves in about 50% of obese patients, which correlated with reported use of more active treatment approaches (r = 0.62, P < 0.0001). Other groups reported intervening with 5 to 29% of patients, but expressed greater interest in making referrals. Physicians reporting ‘any specialty training related to obesity’ ranged from 4.3% of family practitioners to 36.4% of endocrinologists. Conclusions: Physicians express high concern with management of obesity but variable interest in assuming this role themselves. Mild obesity may be particularly undertreated. Research is critically needed to assess effective physician roles in weight management and to support the development of physician guidelines.”

**Country:** USA

**Focus:** Managing obesity

**Targets:** Physicians from 6 specialties (family practice, internal medicine, gynecology, endocrinology, cardiology, and orthopedics). [N=1222]

**Methods:** Mailed survey (structures)

**Object:** Beliefs, attitudes, practices

**Measurement methods:** 8-page questionnaire based on previous literature, focus groups and pilot telephone survey. Covered 5 major areas: obesity as a medical risk factor, general attitudes towards obesity, the physician’s own intervention approaches, attitudes and practices related to referral, experience and interest in training and other resources (also demographics/practice characteristics) Some items had categorical response options, others ratings on a 5- or 7-point Likert scales and others rank ordering of responses.

**Questionnaire availability:** Full questionnaire not reproduced in paper, but 11 ‘attitude’ items are given on p.545.


**Study characteristics:**

**Summary:** Mailed survey of family care practitioner to assess current attitudes, practice behaviour, and barriers to the delivery of nutrition counseling. Key results: Most respondents felt that dietary counseling is important and is the responsibility of the physician. Ranking of perceived barriers to the delivery of dietary counseling were lack of time, patient non-compliance, inadequate teaching materials, lack of counseling training, lack of knowledge, inadequate reimbursement, and low physician confidence. Conclusion: Multiple barriers exist, so a multifaceted intervention strategy is required.

**Country:** USA
Focus: Nutrition counselling
Targets: Primary care physicians (1103 of 2250)
Methods: Postal questionnaire
Object: Perceived barriers and facilitators, attitudes

Measurement methods:
Survey instrument assessed:
Demographics [categorical response options]
Previous nutrition education and current sources of nutrition information [categorical response options]
Current provision of nutrition training by physician and staff [categorical response options]
Perceived barriers and opinions regarding the delivery of nutrition counselling [7 potential barriers e.g. “lack of time” and 3 statements relating to perceived importance of counseling and dieticians and roles e.g. “Counseling is a high priority” (i.e. attitudes), rated on a 5-point Likert scale from “strongly agree” to “strongly disagree”]
Attitudes regarding interest and effectiveness of six potential strategies to improve nutrition counseling (i.e. perceived facilitators) [6 items rated on a 5-point Likert scale with appropriate anchors e.g. “very effective” to “very ineffective”]

Questionnaire availability: Survey instrument is not reproduced in full in the published article, although barriers and facilitators items are summarised on pp. 549-550.


Study characteristics:
Summary: Surveyed primary care physicians about their knowledge, practice, attitudes and perceived barriers with respect to regarding cancer pain management and morphine prescribing.
Country: France
Targets: Primary care physicians
Focus: Pain control
Methods: Postal survey
Object: Knowledge, attitudes, practice, perceived barriers

Measurement methods:
Questionnaire designed to assess physicians’ estimates of the prevalence of pain among patients with cancer, their practice in prescribing analgesics, their training in cancer pain management, and the quality of care received by cancer patients in their own practice and in France.

Barriers addressed include: satisfaction with own ability to manage cancer pain, willingness to prescribe morphine for cancer pain, fear of side-effects, concerns about risks of tolerance, perceptions that other effective drugs are available, perceptions that morphine has a poor image in public opinion, constraints of prescription forms.

Questionnaire availability: See published article for further details.

**Study characteristics:**

**Summary:** Questionnaire to certified nursing assistants. Examined their perceptions of incontinence etiologies as well as perceived barriers to prompted voiding implementation. “CNAs perceived prompted voiding as helpful; however, inadequate staffing, workload, and turnover/absenteeism hindered implementation. CAN recommendations for long-term success included increased staff, staff support, improved communication, ongoing education, and alternative delivery models of care.”

**Country:** USA

**Focus:** Prompted voiding

**Targets:** Certified Nursing Assistants (CNAs, N=165)

**Methods:** Structured survey

**Object:** Perceptions of incontinence etiologies, perceived barriers and facilitators to prompted voiding implementation.

**Measurement methods:**

The questionnaire consisted of 11 multiple-choice items assessing knowledge, attitudes and skills related to urinary incontinence care and an optional, open-ended question designed to elicit suggestions for long-term program implementation (“What do you think would be helpful in keeping the prompted voiding program successful for a long time?”). The multiple-choice questions addressed reasons for starting a prompted voiding program, major causes of incontinence, benefits and effectiveness of prompted voiding, and problems associated with implementation.

**Questionnaire availability:** Questionnaire is not fully reproduced in the published article.


**Study characteristics:**

**Summary:** Questionnaire exploring Australian GPs perceptions of the barriers and solutions to providing health care to people with intellectual disability. Barriers identified/perceived: Communication difficulties with patients and other health professionals, problems in obtaining patient histories, GPs lack of training and experience, patients’ poor compliance with management plans, consultation time constraints, difficulties in problem determination, examination difficulties, poor continuity of care, GPs inadequate knowledge of the services and resources available. Perceived solutions included: increasing opportunities for GP education and training in intellectual disability, increasing consultation duration or frequency, proactive involvement of families and carers in patients’ health care, increasing remuneration.

**Country:** Australia

**Focus:** General practice care of people with intellectual disability

**Targets:** General practitioners (N=528 of 912)

**Methods:** Postal questionnaire

**Object:** Barriers and facilitators

**Measurement methods:**

Questionnaire developed from focus groups and individual interviews with practicing GPs.
Final questionnaire has 24 items relating to potential barriers to care, accompanied by a six-point response scale from “agree strongly” to “disagree strongly”. Also contains questions covering respondents’ demographic details and actual practice (67 questions). In addition, GPs were asked to list the three most significant barriers to providing health care for people with intellectual disability, and ways in which these barriers could be overcome or minimized.

Questionnaire availability: The 24 structured barriers and facilitators items are reproduced on p.384/5 of the original article.


Study characteristics:
Summary: Study aimed to see which of three levels of communication about a practice innovation led to the most change. Included a questionnaire designed to yield a work-related propensity to change score, a research utilization attitude score, and a perceived organizational support score (administered before the innovation was introduced and one month after its introduction). Also assessed participation in research activities, number and type of journals read, and identified barriers and facilitators. “The greatest perceived barrier to research utilization was time. Suggestions for journal clubs, newsletters, clinical specialist support and money for research led the list of facilitating factors.”

Country: USA
Targets: Nurses
Focus: Evidence-based medicine (Research utilization)
Methods: Questionnaire
Object: Propensity to change, practice, attitude, perceived organizational support, information sources, barriers and facilitators.

Measurement methods:
Questionnaire designed to yield a work-related propensity to change score, a research utilization attitude score, and a perceived organizational support score (administered before the innovation was introduced and one month after its introduction). Also assessed participation in research activities, number and type of journals read, and identified barriers and facilitators.

Questionnaire availability: Contact author or consult original thesis.


Study characteristics:
Summary: Surveyed psychiatrists to determine their attitudes towards preventive activities with high-risk children in clinical practice and their perceptions of the barriers to preventive care in such cases.

Country: USA
Focus: Psychiatric preventive intervention
Targets: Psychiatrists (N=189)
Methods: Postal survey
Object: Attitudes, barriers and facilitators, health beliefs, demographics
Measurement methods:

**Attitudes** towards preventive intervention in routine clinical practice: 15 items, rated on a 5-point Likert scale from “Strongly agree” to “Strongly disagree”. (Reproduced in the article p. 639) Covered appropriateness, efficacy, ethics, financial barriers, educational barriers and time constraints (e.g. “Preventive psychiatric interventions are generally worth the amount of time they take”, “Psychiatrists often find it difficult to initiate many preventive measures because they are not trained to do so.”)

**Perceived barriers** inhibiting preventive care in routine clinical practice: 7 statements rated on a 5-point Likert scale from “Strongly agree” to “Strongly disagree”. (Reproduced on p. 641). E.g. “Families of hospitalised schizophrenic patients are not willing to pay for psychiatric care for themselves”.

**Health beliefs** (locus of control in health matters): 19 items in three scales addressing the role of chance, threat of serious disease, role of self-control and self care. (Scales developed by Lau & Ware 1981)

**Demographics, education** (11 questions on age etc. + 1 item asking respondents to estimate the likelihood of their pursuing eight career options on a scale of 0 to 100)

**Questionnaire availability:** Attitude and perceived barriers items are reproduced in the published article.


Study characteristics:

**Summary:** Compared severity of illness & length of hospital stay for patients admitted with one of three conditions at hospitals in Italy, Japan and the US. Also aimed to compare physician attitudes concerning factors that influence patient care. “Physicians caring for patients ... were surveyed to assess their opinions of the adequacy of resources available at their hospital, perceived administrative pressures concerning resource use, and interactions with patients and their families that relate to admission and discharge decisions.”

**Country:** USA, Italy, Japan

**Targets:** Hospital physicians

**Methods:** Postal survey, case vignettes, data abstraction from hospital discharge records)

**Objects:** Attitudes, barriers (+differences in care patterns between hospitals)

**Measurement methods:**

Summary details of questionnaire dealing with perceived barriers. (Developed by the authors and translated into Italian and Japanese.)

“The goals of the questionnaire were to assess the physicians’ opinions of the adequacy of resources such as nurses and ancillary services available, perceived administrative pressures concerning the use of resources, and interactions with patients and their families that may relate to admission and discharge decisions.”

**Actual barriers:** 5 items relating to resources, rated on a 3-point scale for quantity/availability (“Not enough to provide quality care”, “About the right number”, “More than necessary to provide quality care”). Items: “Hospital nurses”, “Inpatient ancillary services”, “Hospital beds”, “Operating rooms”, “Outpatient office/clinic facilities”.

**Perceived and actual barriers/facilitators:** 6 items relating to hospital administration (Categorical responses, Agree/Disagree)

“Administrative requirements interfere with how I care for patients”

“I feel pressure to not admit certain patients”

“I feel pressure to not use certain ancillary tests/services”

“I feel pressure to discharge patients early”
"I usually get the help I need from nurses and technicians"
"A full range of in-patient ancillary services are available 7 days per week"

Questionnaire availability: Items from the barriers sub-scale are reproduced in the published article. Copies of the full questionnaire are available from the authors.


REVIEW


Study characteristics;
Summary: Survey of hospitals and obstetricians in Ontario before and after the release of a nationally endorsed consensus statement on recommending decreases in the use of caesarian section. Assessed compliance with guideline recommendations, self-reported change in practice following guideline release, awareness of guidelines, agreement with guidelines, attitudes toward caesarian section, knowledge of the content of the recommendations. Results: Most obstetricians were aware of the guidelines and agreed with them. Attitudes toward the use of caesarian section were congruent with the recommendations even before their release. A third of respondents reported changing their practice as a result of the guidelines. Knowledge of the content of the recommendations was poor and actual practice was poorer than reported practice.
Country: Canada
Focus: Clinical practice guidelines
Targets: Hospitals and obstetricians
Methods: Postal survey + abstraction from discharge data
Objects: Awareness and use of guidelines, agreement with guidelines, knowledge of guideline recommendations, attitudes towards use of caesarian section, practice changes as a result of guidelines.
Measurement methods:
[Few attitude items. No perceived barrier/facilitator items. Attitudes towards C-section were assessed from answers to the question of whether C-section would be indicated in 2 hypothetical cases i.e. 2 items only].

Questionnaire availability: Questionnaire not reproduced in article.


Study characteristics:
Summary: 40 nurse managers were surveyed about barriers to utilization of research. The highest rated barriers were related to the acquisition and understanding of research; the lowest rated barriers pertained to the need for research as a basis for nursing practice.
Country: USA
Focus: Evidence-based medicine/Research utilization
Targets: Nurse managers (N=40)
Methods: Structured survey
Object: Barriers
Measurement methods;
Used a modified version of Funk’s BARRIERS scale (29 items)
**Questionnaire availability:** Questionnaire items are reproduced in the published article. See CPP website for Funk’s BARRIERS scale.


**Study characteristics:**

- **Summary:** Survey to look at attitudes of hospital doctors towards “the culture of” clinical guidelines; to ascertain perceived knowledge and use of guidelines, and to investigate why hospital doctors think that clinical guidelines may not be used (barriers) and how they think that the use of guidelines can be encouraged (facilitators). Perceived barriers: guidelines impractical, guidelines poorly developed; unaware of guidelines. Perceived facilitators: encouragement from senior doctors, encouragement from peers; monitoring behaviour and providing feedback. Conclusions: “The decision to use a guideline was based on the perceived value of each guideline and was influenced by other clinicians’ behaviour. The results provide an insight into aspects of dissemination which are perceived as influential by the recipients of guidelines.”
- **Country:** England
- **Targets:** Hospital doctors (N=268)
- **Focus:** Guidelines in general.
- **Methods:** Structured survey
- **Object:** Attitudes, knowledge, use, barriers & facilitators.

**Measurement methods:**

“The questionnaire was developed as a result of an examination of published work and exploratory interviews carried out with a randomly chosen subset of the population. Salient factors concerning guidelines were elicited during the interviews and an outline questionnaire was drawn up and subsequently monitored as a result of each interview. The questionnaire was divided into three sections: personal details, current situation, and attitudes towards clinical practice guidelines. Questions about current situation offered a series of fixed choice responses; attitudes were rated on an 8 point Likert scale. A stepwise multiple regression analysis was carried out to isolate factors explaining the variance in scores for the percentage of guidelines used. Attitudes were compared by specialty and grade of doctor after reducing the attitude scale so that the first four scores (1-4) were combined to form a category termed welcoming and the last four scores (5-8) to form a category termed resentful”

**Knowledge:** 1 item on knowledge of guideline (answering scale unknown)

**Attitudes:** 2 items on own and colleagues’ attitude towards guidelines (8 point scale, extremely welcoming-extremely resenting).

**Barriers and Facilitators:** XX items on purpose of guidelines (answering scale unknown). Example: ‘Aid decision making’. XX items on source of guidelines (answering scale unknown). Example: ‘Doctors are unaware of them’. * +XX methods to encourage use of guidelines (answering scale unknown). Example: ‘Monitor performance and provide feedback’.

**Questionnaire availability:** Many items appear in the appendix of the published article., and these are in the CPP website.

**Study characteristics:**

**Summary:** Surveyed GPs with paediatric patients to discover their knowledge about fluoride and dental caries, attitudes about the effectiveness of fluoride supplementation, prescribing of fluoride supplementation and adherence to current guidelines for appropriate use of fluoride supplements. Results from this survey, conducted in 1981, were compared to those obtained in an earlier survey, conducted in 1978, prior to an intensive, multifaceted educational program on fluoride and childhood dental carries. Knowledge, attitudes and practice had improved since the first survey.

**Country:** USA  
**Focus:** Fluoride supplements  
**Targets:** Primary care physicians with pediatric patients (N=1122)  
**Methods:** Survey  
**Objects:** Knowledge/sources of information, attitudes, practice, change.

**Measurement methods:**

Survey instrument  
Knowledge/familiarity/sources of information: X items: Percentage of patients having municipally fluoridated water in their homes, amount learned about fluoride in medical school, influence of continuing medical education on knowledge about fluoride, sources of information about fluoride, familiarity with professional education program on fluoride and dental caries.  
Practice: X items on practice now and change in practice since 1978.  
Attitude/perceived change: 1 item. Respondents were simply asked whether/by how much their attitude towards fluoride supplementation had changed since the previous survey.  
Response options: Much more positive, More positive, No change, More negative, Much more negative, No response.  
**Questionnaire availability:** Full questionnaire not reproduced in published article, but most items can be abstracted from tables. Attitude item shown in adjacent column.


**Study characteristics:**

**Summary:** Survey of Hispanic primary care physicians to assess their educational needs in the area of HIV/AIDS. Looked at clinician characteristics, actual practice, knowledge, and barriers to caring for HIV patients. "The greatest barriers to caring for HIV patients were lack of clinical knowledge and fear of infection."  
**Country:** USA (Texas) and Mexico  
**Focus:** Care of HIV/AIDS patients  
**Targets:** Hispanic clinicians (mostly primary care physicians. N=178  
**Methods:** Individual face-to-face interviews using a structured questionnaire  
**Objects:** Knowledge, attitudes, practice, barriers

**Measurement methods:**

*Personal & practice characteristics* (6 items, categorical)  
*HIV/AIDS prevalence & practice* (5 items, categorical)  
*Knowledge* (5 items, two on self-assessment of knowledge on the condition and its treatment [below average, average, above average] two on familiarity with key clinical trail, guideline [familiar/unfamiliar], one on most common sources of information [5 response options]).
Attitudes/Willingness to treat: 1 item (Not willing, somewhat willing, very willing, no response)
Barriers: 2 items? Perceived barriers to care? If so, what?
Perceived Hispanics' needs with respect to HIV/AIDS: X items: e.g. structured – Do Hispanics have special needs (YES/no) & unstructured.

Questionnaire availability: See published article.


Study characteristics:
Summary: Descriptive pilot study “exploring the role determinants that facilitate or cause barriers to the implementation of the school nurse practitioner (SNP) role”. Conducted individual interviews with SNPs, school health administrators and school physicians. Questions focused on organizational structure of the school health services, indicators of administrative support for SNPs and the assigned function of the SNP. The major facilitator of SNP role implementation was if the idea had originated with the administrator or physician decision maker. Role change and boundary encroachment were the main barriers identified.”

Country: USA
Focus: School nurse practitioner role
Targets: School nurse practitioner, school health administrators and school physicians.
(N=18)
Methods: Individual structured interview/questionnaire
Object: Barriers, organizational features

Measurement methods:
“...A questionnaire was developed for a personal structured interview to last approximately one hour. ... There were 38 objective and open-ended questions focusing on three major areas: the organizational structure of the school health services, indicators of administrative support, and the assigned functions of the SNP.”

Questionnaire availability: Interview protocol is not reproduced in the published article.


Study characteristics:
Summary: Survey of GPs to determine their attitudes towards evidence based medicine and their related educational needs. Questionnaire examined: attitudes towards evidence-based medicine, ability to access and interpret evidence, perceived barriers to practising evidence based medicine, and best method of moving from opinion based to evidence based medicine. “Respondents mainly welcomed evidence-based medicine and agreed that its practice improves patient care. ... The major perceived barrier to practising evidence-based medicine was lack of personal time. Respondents thought the most appropriate way to move towards evidence-based general practice was by using evidence based guidelines or proposals developed by colleagues.”

Barriers identified
Lack of personal time
Context of primary care
Personal and organisational inertia
Morale in general practice
Lack of investment by health authorities and trusts
Difficulties in involving whole practice
No financial gain in using evidence-based medicine
Closed lists
The evidence itself
Lack of hard evidence
Evidence not related to context of primary care
Too much evidence
Availability and access to information
Attitudes of patients
Patients’ expectations
Patients demanding ineffective treatment
The need for lengthy discussions with patients
An ignorant media
General practitioners themselves
Attitudes of colleagues
Lack of critical appraisal skills
Evidence based medicine seen as a threat

Country: England
Targets: General Practitioners
Focus: Evidence-based medicine
Methods: Survey
Object: attitudes, barriers and facilitators, sources and use of evidence, knowledge, demographics

Measurement methods:
Questionnaire in three parts:
ATTITUDES
Visual analogue scales to determine GPs’ attitudes towards evidence-based medicine 7 items
Own attitude towards current promotion of EBM (extremely welcoming -- extremely unwelcoming).
Perceived attitude of colleagues towards EBM (extremely welcoming -- extremely unwelcoming).
Perceived usefulness of evidence-based medicine in day to day management of patients (extremely useful -- totally useless).
Practicing EBM improves patient care (strongly agree -- strongly disagree).
Evidence-based medicine is of limited value in general practice because much of primary care lacks a scientific base.
The adoption of EBM, however worthwhile as an ideal, places another demand on already overloaded GPs (strongly agree -- strongly disagree).
The estimated percentage of respondent’s clinical practice that is evidence based (100% -- 0%).
FACILITATORS
3 closed questions referring to potential methods for moving from opinion based to evidence based practice (3 response options, relating to each specified method) used
interested in using in future
most appropriate to general practice
One open item asking how EBM could be further facilitated in respondent’s practice.
BARRIERS
One open item asking what the respondent perceives to be the major barriers to practicing EBM in general practice.

SOURCES OF/USE OF EVIDENCE
14 Items (mixture of closed and open-ended questions) on evidence: frequency of use, sources, access, influence on practice, training received.

TECHNICAL TERMS
10 closed items on understanding of technical terms
DEMographics

Practice details: 6 closed questions
Personal details: 4 closed questions
Nearest postgraduate centre: 1 item

Questionnaire availability: Full questionnaire available on BMJ website and CPP website.


Study characteristics:

Summary: Focus group interviews to explore midwives’ views about research and their perceived barriers to research utilisation. Findings: Positive general attitudes. Barriers: Poor access to research (physical location + complexity), inadequate knowledge and skills to appraise research, confidence in judging when research should be implemented.

Country: England
Focus: Evidence-based medicine/Research utilisation
Targets: Midwives (N=32)
Method: Focus group
Object: Attitudes/beliefs, perceived barriers.

Measurement methods:

Discussion themes: How do midwives view the relevance of research to midwifery care? What constraints do they feel prevents them from delivering research-based care? Existing and potential methods of disseminating research.

Questionnaire availability: See published article for further information.


Study characteristics:

Summary: Surveyed American primary care physicians to assess their awareness of and agreement with consensus guidelines on preventive medicine.

Country: USA
Targets: Primary care physicians (n=326)
Focus: Focus: Guidelines on prevention.
Method: Survey
Object: Knowledge, attitudes, demographics

Measurement methods:

Demographics: 14 items
Knowledge: 8 items on acquaintance with published sources of national consensus recommendations (answering scale unknown).
Attitude: 11 items asking about agreement with 11 specialty-specific recommendations

Questionnaire availability: See published article.

**Study characteristics:**

**Summary:** Forerunner of Funk’s BARRIERS scale. According to Funk et al (1991) this was, to that date, the only formal survey of practicing nurses’ perceptions of the frequency with which they encountered problems related to using research findings. Summary: "We undertook a systematic survey to elicit information about the specific problems practicing nurses encounter as they attempt to use research findings. The purpose of our descriptive study was to identify the problems as well as solutions that might increase use of research findings.” The most frequently reported barrier was inability to obtain research findings in the area of interest. The remaining seven barriers about which subjects were queried (time constraints, cost, resistance, relevance, rewards, understanding, and agreement with conclusions of the research) were not reported to occur with great frequency.

**Country:** USA  
**Focus:** Applying nursing research/EBM  
**Targets:** Nurses (N=177)  
**Method:** Postal survey  
**Object:** Barriers and facilitators, demographics  

**Measurement methods:**

Demographics: 6 items  
Barriers: 8 items. How frequently do you encounter difficulty with the following potential problems related to using research findings? “unable to obtain research findings in one’s area of interest”, “suggestions for practice too time consuming”, “resistance to change in the work setting”, “relevance of the findings for practical situations”, “rewards for using research results not worthwhile”, “agreement with the conclusions of the report”, “reading and understanding the report”. Rated on a 4-point scale “seldom/never”, “occasionally”, “frequently”, “nearly always/always”.  
Facilitators: 4 items (1 item?). Respondents were asked to choose from a list of possible alternatives for improving the dissemination of research information: “a greater number of clear articles”, “wider distribution of summaries of research”, “more conferences and demonstrations describing the use of research findings for the improvement of nursing practice” + Open ended “other suggestions for improving research dissemination”

**Questionnaire availability:** Items and broad details of administration are given in the published article.


**Study characteristics:**

**Summary:** Survey of family physicians examining barriers encountered when providing hospice care. Main result: Respondents felt comfortable with hospice care but felt that they did not receive adequate education in this area.

**Country:** USA  
**Targets:** Family physicians (N = 482 of 1013)  
**Focus:** Hospice care  
**Methods:** Questionnaire  
**Object:** Barriers, attitudes  

**Measurement methods:**

Questionnaire based on a review of the literature and discussions with key informants and reviewers.

Demographics/practice characteristics: 7 items, categorical responses
Barriers, attitudes. N items, rated on a 5-point scale (1 = strongly disagree”, 5 = “strongly agree”)

**Questionnaire availability:** Contact author. Questionnaire not reproduced in the published article.


**Study characteristics:**

- **Summary:** Survey of practicing internists examining their attitudes and experiences with guideline development and evaluation. “These physicians had prior interest in and knowledge of guidelines in general. Their reservations are an example of the obstacles confronting guideline implementation.” IMCARE = Special interest group of internists interested in evaluating guidelines. Results: Quantitative data: reveal significant degree of dissatisfaction with guideline language, even in cases where the guideline is favourably received. Comment section/open-ended responses: Perceived problems: “Crucial information should be presented up-front and not buried under reams of paper”. Guidelines criticised if they appeared to repeat common knowledge, employ ambiguous language, address ill defined patient populations, are too wordy and are poorly focused.
- **Country:** France
- **Targets:** Internists (n=471)
- **Focus:** 17 specific guidelines.
- **Methods:** Questionnaire
- **Object:** Attitude, practice, barriers, facilitators

**Measurement methods:**

- Contains 18 questions. Some yield purely quantitative answers; some require a combination of qualitative and quantitative responses. Question 18 solicits specific suggestions on how a given guideline could be adapted for better use. Apart from questions concerning the quality and clarity of the guideline, questions of usability and practice receive paramount attention. These range from perceived familiarity with the guideline’s recommendation, its applicability to patient populations, to questions about ambiguity of language and treatment rationale. The guideline’s validity is only tangentially explored.

**Questionnaire availability:** Questionnaire is reproduced in the published paper (table 1, p.34 and on CPP website.


**Study characteristics:**

- **Summary:** Survey of Canadian practitioners involved in coronary care to assess knowledge, attitudes and practice regarding use of thrombolysis.

- **Country:** Canada
- **Targets:** Cardiologists and non-cardiologists (n=392)
- **Focus:** Guidelines for intravenous thrombolysis in acute myocardial infarction.
- **Methods:** Questionnaire
- **Object:** Knowledge, attitude, practice

**Measurement methods:**

- Short questionnaire
Use: Respondents asked to estimate how many times they had administered a thrombolytic agent to a patient with acute MI in the previous 12 months.

Knowledge: Does your hospital have a defined written protocol on thrombolysis use in MI? + items on awareness and responses to 3 different guidelines (helpful/not helpful). 1 question on awareness of cost differences.

Attitudes: Questions on impact of government’s funding policy on prescribing. Views on involvement of different bodies in developing and circulating guidelines (3 bodies).

B & F: No explicit barriers and facilitators items

Questionnaire availability: Contact author. Questionnaire not reproduced in paper.


Study characteristics:

Summary: Surveyed general practitioners to investigate how familiar they were with a range of published guidelines, whether they had used them and their attitudes to the guidelines and the methods of implementing them. “Knowledge and use of three selected guidelines varied but was generally towards the ‘high’ end of the scale. Doctors showed a high degree of homogeneity in their attitudes to guidelines, which were generally positive. … Most of the pressure to use guidelines was felt to come from the Department of Health, and the least pressure from patients. Doctors felt that the methods of implementation that involved them in educational events and discussion with colleagues were most likely to have an impact on them.”

Country: England

Targets: General Practitioners (N=300 of 559)

Focus: 3 Clinical Practice Guidelines

Methods: Postal questionnaire

Object: Knowledge, practice, change, barriers and facilitators, attitudes

Measurement methods:

Questionnaire in 5 sections (37 items in total.)

“Questions were organised around the topics of knowledge; use; practice change; beliefs; pressure felt to use the guidelines; and methods of implementation. Basic classificatory data on gender; year of qualification; partnership and fundholding status were also collected.”

Knowledge: 3 items on knowledge of the content of three guidelines (5 point scale, ‘never heard of’-‘very familiar with’).

Use: 3 items on usage of 3 guidelines

Perceived change in practice as a result of guidelines: 3 items

Attitudes: 13 items on guidelines in general (5 point agree-disagree). Example: ‘narrow clinical freedom’.

Barriers and Facilitators:

7 items on feeling that a range of persons or agencies pressure to use guidelines (5 point scale, ‘strong pressure’ – ‘no pressure at all’). Example MAAG.

8 items on likely impact of methods used to facilitate the uptake of guidelines (5 point scalps, ‘very likely to make me use the guidelines’ to ‘not at all likely’). Example: ‘Reminders from source’.

Questionnaire availability: Questionnaire reproduced on CPP website

**Study characteristics:**

**Summary:** Survey to describe Swedish registered nurses’ perceptions of the barriers to and facilitators of research utilization. Instrument: Funk et al.’s Barriers and Facilitators to Using Research in Practice scale. Major barriers identified: Research is not readily available, inadequate facilities for implementation of research findings, lack of competent colleagues with whom to discuss research, lack of time for reading an implementing research findings, nurses lack of authority in the organization. Major perceived facilitators identified: Diverse models of education to increase nurses’ knowledge of research methods and to develop skill in evaluating research findings. Also suggested: Allocation of resources for education an implementation + special positions for nurses with scientific qualifications.

**Country:** Sweden  
**Targets:** Registered nurses (N = 237)  
**Focus:** Evidence-based medicine (research utilization)  
**Methods:** Survey  
**Object:** Perceived barriers and facilitators

**Measurement methods:**

Funk’s BARRIERS scale.  
**Questionnaire availability:** See CPP website for Funk’s BARRIERS scale.


**Study characteristics:**

**Summary:** Two studies to assess general practitioners’ attitudes towards guidelines. Danish GPs reported a very positive attitude towards the presented well-known guidelines on Pap testing and diabetes Type 2, and a fairly positive attitude towards hypothetical questions on guidelines in general.

**Country:** Denmark  
**Study 1:** Randomised study among all GPs in one county comparing their attitudes towards guidelines in general and towards regional multidisciplinary developed guidelines on Pap-testing for cervical cancer  
Questionnaire examined acceptance of guidelines, acceptance of multidisciplinary involvement, especially from the administrative staff, perceived effect on the consultation and the quality of care.

**Focus:** Guidelines in general and regionally developed guidelines on Pap smear testing  
**Targets:** General practitioners (N=186 & 184 in the two groups).  
**Methods:** Questionnaire survey  
**Object:** Attitudes

**Study 2:** Short questionnaire sent to GPs with an updated version of a guideline on Type 2 diabetes. Asked about familiarity, use, attitude.

**Focus:** Guidelines on Type 2 diabetes, guidelines in general  
**Targets:** General practitioners (370 in one county & 3471 across Denmark)  
**Methods:** Structured postal survey  
**Object:** Familiarity, use, attitude.
Measurement methods:
Questionnaires

**Study 1.** (GPs within Aarhus county) Two versions of a 10-item questionnaire. Version 1 elicited opinions about regional guidelines in general and version 2 about the specific regional guidelines on Pap testing. (Either one or other sent to cluster randomised GPs)
e.g. Statement 5:
I: Guidelines from the county will lead to longer and more difficult consultations
II: The guidelines on Pap smear have led to longer and more difficult consultations
Rated on a 5-point Likert scale from Strongly Agree to Strongly Disagree.

**Study 2.** Short questionnaire to all Danish GPs as part of the covering letter with a new edition of the diabetes guideline. 4 items. YES/No responses
e.g. "I have earlier received guidelines on care for diabetes."

**Questionnaire availability:** Questionnaire reproduced on CPP website.


**REVIEW/ THEORY**
"This article described three categories of psychological behaviour change: those that prevent the admission of a problem, those that interfere with initial attempts to change behaviour, and those that make long-term change difficult. Strategies are identified that family physicians can use to overcome the barriers."

Barriers to perception/admission of the problem: Distinguishes 4 factors: Trivialization or denial; Perceived invulnerability, faulty conceptualizations, debilitating emotions.

Barriers to initial attempts to change: Lack of knowledge, low self-efficacy, dysfunctional attitudes.

Barriers to long-term change: Cognitive and motivational drift, lack of perceived improvement, lack of social support, lapses.


**REVIEW**
Systematic review of interventions to improve professional practice. Reviews studies assessing the outcomes of several types of interventions designed to change/improve health provider behaviour/health outcomes. Educational materials (including guidelines); Conferences; Outreach visits; Local opinion leaders; Patient-mediated interventions; Audit & feedback; Reminders; Marketing; Multifaceted interventions; Local consensus processes.

Findings: Mixed benefits of each type. Change processes complex. Multiple methods best of all.


**Study characteristics:**

**Summary:** Survey of Spanish GPs, looking at attitudes and practices with regard to hypertension. "Responses showed almost complete use of diagnostic criteria adhering to WHO recommendations and guidelines ... and a non-compliance rate of 25% attributed to inadequate information and bureaucracy."

**Country:** Spain

**Targets:** General practitioners (N = 2500)
Focus: Hypertension management
Methods: Questionnaire distributed by hand
Object: Practice, attitude.

Measurement methods:
28 items, 5 dealing with professional affiliations, 8 with blood pressure measurement, 4 with hypertension diagnosis, 4 with treatment procedures, and 7 with the management and follow-up of hypertensive patients. Included are questions on reasons why patients don’t comply with treatment (e.g. “inadequate information”).

Questionnaire availability: Contact author. Questionnaire is not reproduced in the published article.


Study characteristics:
Summary: Surveyed obstetric nurses to determine their attitudes and behaviours toward breastfeeding. “Time factors, including shortened length of stay, and lack of knowledge were perceived to be the primary barriers for nurses in assisting mothers to breastfeed. ... nurses perceived breast feeding support as too time consuming.”

Country: USA
Targets: Nurse managers of hospital-based obstetrics unity (N=38)
Focus: Breastfeeding
Methods: Survey
Object: Attitude, practice, information sources, demographics.

Measurement methods:
19 item questionnaire based on the literature and expert review. Four components:
- Attitude and behaviours regarding the nurse’s role in the promotion of breastfeeding (6 items, rated on a 4-point Likert scale. Anchors not specified)
- Nurses and mothers’ barriers to the initiation of successful lactation (open-ended item asking for a list of barriers)
- Percentage of mothers breastfeeding upon discharge from the respondent’s hospital (open-ended)
- Nurses sociodemographic characteristics (9 items)

Questionnaire availability: Some items are given in the published article, but not the full questionnaire.


Study characteristics:
Summary: In a structured interview, family practitioners were asked to rate and comment upon a list of 10 needs for CME in the field of geriatrics, identified from a previous survey of patients and community informants. “Physicians agreed with community informants that they needed more education about medication for the elderly, medical management, and mental health issues. Physicians did not perceive pressing needs for education in communication skills, compassion or health promotion. Physicians identified many barriers to meeting needs identified by the community, including lack of time, inadequate remuneration, lack of accessible community resources.”

Country: Canada
Focus: Geriatric care/CME
Targets: Family physicians (N= 60)
Methods: Structured interview
Objects: Perceived needs, behaviour, intentions, perceived barriers, demographics.

Measurement methods:
Structured interviews lasting about 30 minutes, surrounding a list of 10 'needs' identified from a previous survey of community informants and patients. e.g.
"Communication with patients and other health care or social service professionals"
"Ageism (distinguishing between what is caused by aging and what is caused by disease)"
Doctors were asked to rate each of the ten items in terms of their own personal need for education on a scale of 1 to 5. (1 = not a need, 5 = an urgent need). For each 'need' interviewees were also asked to say whether they had participated in CME in the previous 2 years, whether they intended to participate in such CME in the future, and what barriers they perceived to taking action. Finally, subjects were asked to rank the 10 items in terms of their own learning priorities (1=highest priority).

Questionnaire availability: Full list of ten 'needs' reproduced in the article.


Study characteristics:
Summary: Evaluation of new distance learning pack on coronary heart disease sent to a select group of Welsh GPs invited to a 'special study day'. Aims: To describe the sample of GPs and their practices, to assess the GPs' general attitudes to health promotion/education, to describe the level of GPs' commitment to screening and counselling in the area of coronary heart disease and to assess the GPs' reactions to the new coronary heart disease pack.
Country: Wales
Focus: Coronary disease prevention via educational pack
Targets: Selected GPs [N=30]
Methods: Postal questionnaire, followed by questionnaire distributed on 'study day'
Object: Demographics, attitudes, responses to new tool, intentions to implement.

Measurement methods:
Postal questionnaire on demographics, attitudes to health promotion and CHD prevention and previous knowledge/experience of the OU pack, sent out before the study day.
Second questionnaire given on the day, assessed perceptions of the pack and intentions to introduce it into practice.

Questionnaire availability: Details of questionnaires given in article.


Study characteristics:
Summary: Survey of GPs to describe their awareness of sources of rigorous research evidence and use of evidence-based clinical guidelines; to assess the views of fundholding GPs on their ability to use this information to inform their commissioning and to examine whether fundholding status influences their awareness of high quality research evidence, such as the Cochrane Database of Systematic Reviews. Key results: Limited use of electronic sources of clinical effectiveness. Greater awareness of published sources of research evidence. Fundholding GPs were significantly more likely to have referred to publications summarising research evidence. 72% of fundholders and 63% of non-fundholders said they used clinical guidelines. Most frequently used: British Thoracic Society guidelines on asthma, British Hypertension Society guidelines & various guidelines for diabetes management.
Country: England
Focus: Use of evidence for practice
Targets: General practitioners (62% of 360)
Methods: Postal survey
Objects: Awareness of sources of research evidence (including guidelines) and its influence on purchasing plans.

Measurement methods:
Self-administered postal survey. “The sources of research evidence listed in the questionnaires were publications and databases of systematic reviews, as well as more general sources of research evidence to which GPs might refer and which may not reach the rigid standard set by systematic reviews. The questionnaire asked how often respondents thought they referred to these sources. In addition, all GPs were asked if they used clinical guidelines in their practice and, if so, which ones”

Survey items are not reproduced in the article, but tables suggest responses on 4 point Likert scale: How often do you use the following information sources: Cochrane database, Drug & Therapeutics Bulletin; Refereed journals (Br. Med. Jn. etc.); General Practitioner Press (e.g. Pulse, GP); NHS Centre for Reviews and Dissemination databases; Centre for Reviews and Dissemination journals (e.g. Effective Health Care Bulletin); Bandolier.

Questionnaire availability: Full questionnaire not reproduced in the published article but some items can be abstracted form the details given.


Study characteristics:
Summary: Surveyed GPs to ascertain the most useful strategies for local implementation of a guideline on urinary tract symptoms in men. 30 structured items asked respondents to rate the importance of nine dissemination strategies in gaining their initial attention, the importance of six features of the formatting and marketing of the guidelines in encouraging their use and the usefulness of 15 implementation strategies. An open-ended question asked for other comments and perceived needs for guidelines in general and specific guidelines on UT symptoms. “Respondents placed high value upon endorsement by eminent individuals and organizations other than the organisation developing the guidelines; this was likely to gain their initial attention. One hundred percent of respondents would be encouraged to use the guidelines if they were promoted as improving quality of care. Implementation strategies preferred by respondents included small group continuing education with a urologist and a general practitioner as a facilitator, lectures and patient education materials. Internet access, interactive computer systems, ‘academic detailing’ and distance education modules were of least interest.”

Country: Australia
Focus: Evidence-based guidelines
Targets: General practitioners (N=83 of 108)
Methods: Postal survey
Objects: Perceived barriers and facilitators, attitudes.

Measurement methods:
Four-page questionnaire containing 30 structured items and 1 open-ended question.
Part 1. Dissemination strategies: Importance of nine characteristics of guidelines in gaining respondent’s initial attention rated on a 5-point response scale: (extremely, very, somewhat, a little, not at all). Items related to the organization sponsoring the development of the guidelines (1 item), endorsement by specific professional or government organizations (5 items), endorsement by a respected urologist (1 item) or by a respected professor of general practice (1 item), membership of the group developing the guideline (1 item). + Six items relating to the format and marketing of the guidelines were rated for their importance in encouraging respondents to use the guidelines.

Part 2. Implementation strategies: Usefulness of 15 strategies rated on a five point scale. Conventional educational activities (six items: lecture, small group meetings, localadaptation with colleagues, visit from GP peer, visit from a nurse, visit from pharmaceutical representative). Innovative educational strategies (four items: Internet access, interactive computer program, video, distance learning module); strategies based on a quality improvement approach (two items: feedback on quality of care from the RACGP or peer review groups) and patient-based approaches (three items: public campaign about the guidelines, written consumer information, a video for men). An open-ended question asked for additional comments about guidelines in general or the need for guidelines on urinary tract symptoms in men.

Questionnaire availability: Survey instrument not reproduced in paper. Original questionnaire received from author. Reproduced on the CPP website, with permission.


Study characteristics:

Summary: Survey. Aims: to assess the attitudes of senior hospital staff towards clinical guidelines, and to ascertain the perceived extent and benefits of their local use; to identify those hospitals with current or planned future written strategies for the systematic development of clinical guidelines, and the staff responsible for leading them; and to establish the essential elements of existing strategies, and the methods used to ensure the proper development, dissemination, implementation and evaluation of local guidelines.

Conclusions: Most senior staff thought that clinical guidelines were a good idea, and thought that development of local guidelines could improve patient care. (more in text)

Country: England

Targets: Senior staff of 270 acute hospitals in the United Kingdom

Focus: Clinical practice guidelines

Methods: Survey

Object: Attitudes, perceived barriers and facilitators.

Measurement methods:

Postal survey with 34 items divided into five sections, each containing closed and open-ended questions.

Section E (most useful): Respondents asked if they think guidelines are a good idea (and other questions) Section A asked respondents about guidelines activity within their hospital. Section B asked respondents to rank the three main influences on their hospital’s interest in guideline development from a list of possible influences etc.) Section C dealt with the evidence base of the guidelines used and Section D with methods used to disseminate, implement and evaluate local guidelines.

Questionnaire availability: Questionnaire available from authors and reproduced on CPP website.


Study characteristics:
- **Summary**: Qualitative study, using focus groups and semi-structured interviews, which aimed to elucidate London GPs' motivations concerning early intervention for alcohol use and their perceived barriers to such an intervention (N=12)
- **Country**: England
- **Focus**: Early intervention for alcohol use
- **Targets**: General practitioners (12 + 12)
- **Methods**: Focus group + Semistructured interviews
- **Object**: Motivations, perceived barriers

Measurement methods:
- Focus group/interview

Questionnaire availability: Focus group and interview questions are described loosely in the article, but the explicit protocols are not supplied.


Study characteristics:
- **Summary**: Survey of oncology staff nurses and nurse managers/clinical nurse specialists to describe and compare perceived barriers to research utilization.
- **Country**: USA
- **Focus**: Research utilization/Evidence-based medicine
- **Targets**: Oncology staff nurses (N=769), nurse managers/clinical nurse specialists (N=407)
- **Methods**: Postal survey
- **Objects**: Barriers, demographics

Measurement methods:
- Demographic questionnaire (c.15 items) +
- Funk’s BARRIERS scale (28-item version).

Questionnaire availability: Items reproduced in published article and Funk’s scale on CPP website.


Study characteristics:
- **Summary**: Survey of health care professionals to assess current practices in the areas of breast and cervical cancer screening, practitioner beliefs about screening, barriers to access for women and needs for continuing education. “Cost was cited as a major barrier to access to screening mammography. Some discrepancies between provider and currently accepted guidelines were identified.”
- **Country**: USA
Focus: Screening for breast and cervical cancer
Targets: ‘Health care practitioners’ (N=382 of 1700)
Methods: Survey
Object: Practice, attitudes, barriers

Measurement methods:
Survey instrument:
“The questionnaire consisted of 35 items, designed to elicit practitioner beliefs concerning mammographic screening and cervical cytology, barriers to access for Mississippi women, as well as needs for continuing education in these areas.” (Paper implies that perceived barriers question was open-ended.)

Questionnaire availability: Contact author. Questionnaire not reproduced in the published article.


Study characteristics:
Summary: Survey to determine obstacles to HIV care in South Carolina. Focus on primary care physicians.
Key finding: Level of knowledge was the best predictor of actual experience with HIV patients, overriding financial and structural barriers.
Country: USA
Targets: Primary care physicians
Methods: Survey
Object: Barriers, attitudes
Measurement methods:
43 items on seven topics
- willingness to treat people with HIV/AIDS (1 item, 5-point scale “I accept new patients who are known to be HIV positive)
- Experience in treating these people (1 item “how many persons with HIV/AIDS have you provided services to in the last 12 months”)
- Personal characteristics (single items on age, gender, ethnic group, hrs per week practicing clinical medicine, ethnic characteristics of patient population.
- Self-reported knowledge level scale (9 items – Three point scale 1 = v. knowledgeable, 3= little knowledge. Examples: ‘when to refer HIV/AIDS cases to appropriate specialists’, ‘treatment protocols (based on patients’ symptoms etc)
- Financial barriers (2 items: ‘Estimate in total dollars the amount of uncompensated care you provided to HIV/AIDS patients last year’ & significance of the ‘lack of financial reimbursement’ (6 point scale ‘most significant’ to ‘least significant’)’
- Structural barriers: 1 item on physicians’ practice location (metro vs nonmetro) and 4 items on structural barriers e.g. ‘lack of community non-medical social services’, ‘staff resistance’
- Attitudinal barriers scale: 5 items with a 6-point scale (‘most important’ – ‘least important’) e.g. ‘Uncomfortable with gay patients’, ‘fear of becoming infected’.

Questionnaire availability: Most items can be abstracted from tables given in the published article.

**Study characteristics:**

**Summary:** Study aimed to assess primary care clinicians' opinions about the principle goals that national guideline developers foresee for clinical practice guidelines and about possible effect of guideline implementation that are known to concern practicing clinicians. Pre-intervention survey of attitudes conducted as part of a larger study to evaluate alternative strategies for implementing clinical practice guidelines. “Guidelines information synthesising and consensus-building functions are likely to be welcomed. Increased guideline implementation is apparently not perceived as a threat to professional autonomy.”

**Country:** USA

**Targets:** Primary care HMO clinicians

**Focus:** Clinical practice guidelines

**Methods:** Survey

**Object:** Attitudes

**Measurement methods:**
Instrument measuring attitudes towards clinical guidelines, especially constructed for this study. Addresses the question of whether the clinicians’ general expectations about the possible effects of guidelines would affect their acceptance of and adherence to the specific guideline being implemented. The measure includes 9 items that describe possible effects of guideline implementation. Some items describe general effects while others describe possible positive and negative effects. Asks two questions about each effect: 1) How likely is it to happen? And 2) If it did happen, how desirable would that be? Demographics/practice characteristics also assessed.

**Questionnaire availability:** Items are reproduced in the published article and on the CPP website.


**Study characteristics:**

**Summary:** Survey to investigate UK GPs’ attitudes to and behaviour concerning clinical guidelines. “Most respondents reported having been involve in writing in-house guidelines and/or clinical audit. Respondents were generally in favour of clinical guidelines...Most felt that guidelines were effective in improving patient care. Members of the Royal College of GPs had a more positive attitude than non-members towards guidelines. ... A substantial minority (over a quarter) of GPs were concerned that guidelines may be used for setting performance related pay, or that they might lead to 'cookbook' medicine, reduce clinical freedom or stifle innovation. There was also concern that guidelines should be scientifically valid.”

**Country:** England

**Targets:** General practitioners (213 of 326)

**Focus:** Clinical guidelines in general

**Methods:** Postal questionnaire

**Object:** Attitudes, practice, demographics

**Measurement methods:**

Details of postal questionnaire.

Section 1 contained factual questions on the respondents' characteristics and behaviour. This included age, sex, membership (or fellowship) of the RCGP and trainer status. GPs were also asked whether they had written guidelines or carried out clinical audit in their practice either individually or with other members of the practice team.
Section 2 comprised a series of twenty attitude statements on guidelines relating to ten broader areas of concern (e.g. ‘Adopting guidelines will increase risk of litigation’).
Rated on a five-point Likert scale from ‘strongly agree’ (=1) to ‘strongly disagree’ (=5).
(Items were “identified by a search of the literature and by unstructured informal interviews with a general practitioner colleague of the author”)

An open question asking for other comments was also included at the end of the questionnaire.

Questionnaire availability: Attitude section reproduced on the CPP website.


Study characteristics:

Summary: Survey of Egyptian GPs to test knowledge of, attitudes toward, and perceived barriers to cancer control and screening. Perceived barriers to screening included lack of information about certain, lack of knowledge/familiarity with approaches to cancer prevention.

Country: Egypt

Targets: Primary care physicians (N=177 of 180)

Focus: Cancer control & screening

Methods: Structured questionnaire

Objects: Knowledge, attitudes & perceived barriers, demographics.

Measurement methods:

Questionnaire in three sections: demographic background information, knowledge of cancer control and risk factors, and cancer prevention screening attitudes and barriers.

Demographics: 8 items

Knowledge: 17 items. 6 related to specific factors (e.g. smoking, genetic factors) which respondents were asked to rate as to the level of risk they contribute to cancer causation (5 response options – ‘none, low, medium, high, very high’) + 11 statements (e.g. ‘Primary prevention is early detection of disease’) rated on a 5-point scale (true, false, and I don’t know or uncertain).

Attitudes and perceived barriers to cancer control and screening: 20 statements reflecting attitudes to screening (e.g. ‘Pap smear is the patient’s responsibility’) and barriers related to deficient undergraduate or postgraduate education, work environments and patient related factors. Rated on a five-point scale (agree, somewhat agree, neutral, disagree somewhat, disagree).

Questionnaire availability: Contact authors. Questionnaire is not reproduced in the article.


REVIEW/THEORY

Review article, examining theories and principles of communication and behaviour change which may be applied to the problem of changing physicians’ drug prescribing behaviours. Outlines procedures involved in the use of ‘educational outreach’ or ‘academic detailing’ to encourage and evaluate change.

**Study characteristics:**

**Summary:** Investigated the types of obstacles that were perceived to inhibit health promotion activities in hospitals.” Questionnaire sent to hospital superintendents in Queensland. Barriers reported: lack of finance; lack of interest by relevant others, and needs (for appropriate programs, training and patient receptivity)

**Country:** Australia  
**Focus:** Health promotion activities  
**Targets:** Hospital superintendents (N=112)  
**Methods:** Postal survey  
**Object:** Barriers

**Measurement methods:**
The questionnaire included items related to nine health promotion activities (e.g. breast cancer screening), and a section that required superintendents to rate the importance of 10 potential obstacles and write down obstacles that were missing.  
Factor analysis used to identify underlying dimensions. 3 dimensions identified: Finances (Lack of resources, adequate staffing, facilities, funding)  
Interest (Lack of staff enthusiasm, leadership, administrative or board support)  
Needs (Lack of appropriate training, appropriate programs, patient receptivity)

**Questionnaire availability:** See published article.


**Study characteristics:**

**Summary:** Surveyed family physicians to assess their agreement with the recommendations of the US Preventive Services Task Force. “The average physician agreed with 88% of the recommendations. For a number of recommendations, however, particularly those in which the Task Force differed with the American Cancer Society, there was a high level of disagreement. Physician disagreement with the recommendations was associated with older age, not having completed a residency, less prior exposure to the guidelines, and greater perception of the impracticality of applying them.”

**Country:** USA  
**Focus:** US Preventive Services Task Force (USPSTF) recommendations  
**Targets:** Family physicians (898 of 1784)  
**Methods:** Postal survey  
**Object:** Attitude, demographics

**Measurement methods:**
153 items in total, excluding demographics items.  
150 items on specific recommendations – Respondents are asked to indicate whether they agree or disagree with the recommendation (discrete choice)  
1 item on overall practicality of the Task Force’s recommendations “*Overall, how practical do you think the Task Force’s guidelines are for implementing in your practice?*” (7 point Likert scale ranging from “very practical” to “very impractical”.)  
1 item to be answered by respondents if they had previously indicated that they generally disagreed with the Task Force’s recommendations: “*Would you prefer more or less intervention than is recommended?*” (More should be done/Less should be done).  
1 item on prior exposure to the Task Force recommendations (Never read/read some)
1 item asking “do you believe that you are more or less prevention oriented than other family physicians?” (More than peers/less than peers).
Demographics items: age, sex, race, completion of residency training, type of practice, size of practice.

**Questionnaire availability:** The 38 recommendations with the greatest disagreement are reproduced in the published article (p.412). Other items can be abstracted form the information given, although the full questionnaire is not reproduced.


**Study characteristics:**

**Summary:** Surveyed Sevillian primary care physicians to assess attitudes, knowledge and self-perceived risks concerning HIV/AIDS and to detect attitude problems and structural barriers affecting doctors’ predisposition towards patients with HIV/AIDS infection.

“The perception of risk of contagion is high and higher than the real risk. Important attitude and structural barriers to care provision were detected”

**Country:** Spain

**Targets:** Primary care physicians

**Focus:** HIV/AIDS care

**Methods:** Survey

**Object:** Attitudes, knowledge, barriers

**Measurement methods:**
Survey. Examined current/past practice, general attitudes towards AIDS patients etc.

**Questionnaire availability:** Contact authors.


**Study characteristics:**

**Summary:** Qualitative study based on focus groups with 37 New Zealand GPs to assess their experience and attitudes to prescribing exercise. “They preferred giving green prescriptions to giving verbal advice alone, and felt they were a valuable tool to formalise and document mutually agreed exercise goals. Time constraints were identified as a major barrier to the widespread implementation of green prescriptions. Appropriate training, resource materials and patient follow-up mechanisms were identified as important elements for successful implementation of the strategy.”

**Country:** New Zealand

**Targets:** General Practitioners (N = 37)

**Focus:** Prescribing exercise

**Methods:** Focus groups

**Object:** Attitudes, perceived barriers and facilitators

**Measurement methods:** Qualitative study using focus groups.

**Study characteristics:**

**Summary:** Reports on qualitative (focus group) and quantitative (telephone survey) studies of rural and remote Australian health professionals to determine present use of information technology and telecommunications, barriers to the use of IT & T and expected future uses. Focus groups identified lack of training and technical support, lack of user-friendly software, and poor planning for the introduction of IT as the major barriers. Barriers identified via the survey included lack of training, access to technical support and lack of information to meet the needs of technologically illiterate consumers. Survey respondents believed that IT&T would help to reduce professional isolation, help provide a better professional service, improve productivity and make travel time more efficient.

- **Country:** Australia
- **Focus:** Information technology and telecommunications
- **Targets:** Rural health professionals (medical practitioners, allied health professionals, nurses, N=404 interviewed)
- **Methods:** Focus groups + structured telephone interviews.
- **Object:** Attitudes, perceived barriers, needs

**Measurement methods:**

Survey instrument: Limited details given in published article, although appears to have assessed the following:

- **Attitudes:** Perceived professional isolation and feeling that IT&T will reduce this isolation, whether IT&T will provide better professional service, improve productivity, make travel time more efficient.
- **Needs, expectations, anticipated demand**
- **Perceived barriers (open-ended question implied)**


**Study characteristics:**

**Summary:** Assessed quality of diabetes management provided by a community teaching hospital by reviewing patients’ medical records. Physicians’ knowledge and attitudes towards diabetes management were assessed by questionnaire. “Factors such as physicians’ knowledge and attitudes, medical insurance, high patient loads and educational levels of patients influenced medical behaviour in this study.”

- **Country:** Taiwan
- **Focus:** Medical care for noninsulin-dependent diabetic patients
- **Targets:** Physicians in a department of internal medicine (N=13 of 20)
- **Methods:** Case note review + questionnaire
- **Object:** Quality of care, knowledge, attitudes, patient characteristics.

**Measurement methods:**

The questionnaire:

**Questionnaire availability:** Few details given in the published article, although it would appear that the ‘attitudes’ assessed in the study relate to opinions about the necessity and appropriateness of different interventions, follow-up times etc.

**Study characteristics:**

**Summary:** Survey assessing internists’ familiarity with, confidence in, and attitudes about practice guidelines issued by various organizations. *Key* paper. Tunis’ questionnaire seems to have been the precursor for many others, including the CPP 18.

**Country:** USA

**Focus:** Clinical practice guidelines

**Targets:** Internists (N= 1513 of 2600)

**Methods:** Structured postal questionnaire

**Objects:** Attitudes, familiarity and use, attitudes, behaviour change, demographics.

**Measurement methods:**

Questionnaire sought information about demographics /professional characteristics (10 items, categorical responses)

familiarity with selected guidelines (10 items relating to 9 real and 1 fictitious guideline.

Rated on a 5-point scale from 5 = “very familiar” to 1 = “not familiar”.

**confidence** in practice guidelines issued by (various) organisations (9 items relating to different organisations, rated on a five-point scale from 5 = “great confidence” to 1 = “no confidence”).

**attitudes** regarding guidelines and their effects on medical care (16 items, rated on a 5-point scale from 5 = “strongly agree” to 1 = “strongly disagree”)

reported change in clinical practice during the last year as a result of guidelines (6 items, rated on a 5-point scale from 1 = “no effect” to 5 = “major effect”)

**impact** of practice guidelines and other sources of information on clinical decision making. 1(?) item, rated on a 3-point scale as “likely to increase”, “to have no effect” or “likely to increase”.

**Questions on attitudes towards guidelines**

In general, guidelines are:

Good educational tools

A convenient source of advice

Unbiased synthesis of expert opinion

Oversimplified or ‘cookbook’ medicine

Too rigid to apply to individual patients

Intended to improve quality of care

Likely to be used in quality assurance

Intended to decrease health care costs

Likely to decrease health care costs

Likely to decrease physician reimbursement

Likely to decrease malpractice suits

Likely to decrease defensive practices

Likely to be used in physician discipline

A challenge to physician autonomy

**Questionnaire availability:** Key items reproduced in published article and on CPP website.

**Study characteristics:**

**Summary:** Survey to assess GPs' perceptions of barriers in the health care system that hinder provision of effective adolescent health care and to identify the training needs of GPs. 77% favoured individual Medicare cards for adolescents, 38% were less willing to charge for longer consultations because they feared Health Insurance Commission investigation. Most indicated that their undergraduate training in adolescent mental health issues was inadequate, 64% found it difficult to obtain advice about complex mental health problems, 82% expressed an interest in continuing medical education.

**Country:** Australia

**Targets:** General Practitioners

**Focus:** Adolescent health care

**Methods:** Survey

**Object:** Perceived barriers and facilitators

**Measurement methods:**

66-items covering a number of domains.

**Questionnaire availability:** See published article.


**Study characteristics:**

**Summary:** Survey to determine barriers and facilitators to the practice of Veterans Administration (VA) nurse practitioners (NPs). "On the whole, VA NPs appeared to experience more facilitation than constraint. Areas that seemed to be especially positive for VA NPs were related to the direct delivery of care, and areas that interfered with their practice were related to administrative issues. NP practice is facilitated if there is a feeling of status, opportunity for professional growth, and NP personal satisfaction. Status can be influenced by independence in practice, support from top nurse administrators, and enough clerical support. Professional growth can be enhanced by providing opportunities for continuing education, research, physician back-up, and medical center committee membership. Personal satisfaction may be promoted through job security, independence in practice, fringe benefits, continuity of caseload, and opportunity for promotion. Throughout the analyses, independence repeatedly surfaced as an important criterion in the facilitation of NP practice."

**Country:** USA

**Focus:** Nurse Practitioner practice

**Targets:** Nurse practitioners (N=257)

**Methods:** Survey

**Object:** Perceived barriers and facilitators, demographics

**Measurement methods:**

Survey Instrument.

Item generation based on the literature on barriers to NP practice and barriers specified by a sample of 50 NPs contacted by mail.

Preliminary draft containing 85 items pretested. Questionnaire increased to 98 items.

Demographics

27 Closed questions

Constraining/Facilitating Factors

71 items relating to specific conditions which might facilitate or constrain practice e.g. "The INDEPENDENCE associated with my NP role", "The RESPONSIBILITY I have for patient care" Answered on two Likert scales:
Scale 1: "Extent item affects my practice": 7-point scale ranging from −3 = strongly constrains, to +3 = strongly facilitates, 0=no effect on practice.
Scale 2: Designed to help clarify the reasons for facilitation/constraint. "Because it is/Clarification": 5 options: None, Too little, Enough, Too much, Other (specify).

**Questionnaire availability:** Abbreviated barriers and facilitators items (item names) are reproduced in the article.


**Study characteristics:**
- **Summary:** Questionnaire study to investigate staff nurses’ perceptions of barriers to pain management including lack of educational preparation; inadequacy of clinical practice skills; and certain legal/political, financial, and ethical problems.
- **Country:** USA
- **Focus:** Pain management
- **Targets:** Staff nurses (N=125)
- **Methods:** Survey
- **Objects:** Perceived barriers, demographics

**Measurement methods:**
"Staff Nurse Survey of Barriers to Effective Pain Management" assessed nurses’ knowledge and perceptions about selected issues related to pain management. Contained 36 items in five sub-scales dealing with adequacy of educational preparation, practice skills, knowledge of financial, legal, political, and ethical issues related to pain management.
In each case, subjects rated the item on two four-point Likert scales, one of which related to the adequacy of their knowledge ("very inadequate" to "very adequate") and the other to the degree of importance the respondent attributed to the skill ("Very unimportant" to "Very important).
Nurses were also asked to list the most important pain management problems in their institutions.
5 items on demographics (age, etc)

**Questionnaire availability:** Most items reproduced in tables within the article.


**Study characteristics:**
- **Summary:** Surveyed community nurses to assess their perceptions of barriers to the implementation of research findings in practice, using Funk’s BARRIERS scale. Results compared with those from Funk et al.’s 1991 study. “UK nurses considered lack of authority and the inaccessibility of research reports to be the major barriers to implementing research findings.”
- **Country:** England
- **Focus:** Evidence-based practice/implementing research
- **Targets:** Community nurse students (N=82)
- **Methods:** Questionnaire (Funk & Champagne, 1991)
- **Object:** Barriers, facilitators.

**Measurement methods:**

**Questionnaire availability:** See CPP website for Funk et al’s. scale.

**Study characteristics:**

**Summary:** Very much as above (Walsh, 1997a). Follow-up from study of community nurses’ perceived barriers to implementing research. Here the author examines the perceived barriers to research use among a sample of 63 hospital and 78 community nurses. The major barriers identified relate to the clinical setting and understanding research reports. (Also examines perceived facilitators as in Walsh 1997a).

**Country:** England

**Targets:** Hospital and community nurses (N=63)

**Focus:** Evidence-based medicine (research implementation)

**Methods:** Survey

**Object:** Perceived barriers and facilitators

**Measurement methods:**

Funk et al’s barriers scale.

**Questionnaire availability:** See CPP website for Funk et al’s scale.

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**Study characteristics:**

**Summary:** Surveyed GPs to examine how they gain access to and use guidelines, including computer-based guidelines, in day to day consultations with their patients, and to identify the perceived problems and barriers to the use of guidelines in general practice.

Categories of responses to the statement: “The one thing most likely to make me turn to a guideline is...” (Derived from content analysis)

- Quality; clarity, simplicity, short format
- Knowing that I’ve got it; easy to look up
- Uncertainty; complexity of the problem
- Knowing it’s good quality; improves outcome; reputability of guideline
- Easy to use
- Sense of ownership
- Common condition; new advice
- Needing a reminder
- Local consultant advice
- Computer related
- Specific conditions; long term treatment regime
- Peer pressure; other GPs use it
- Use with patient; patient anxiety
- Fear of litigation

**Country:** England

**Targets:** General practitioners (N=391)

**Focus:** Clinical practice guidelines

**Method:** Postal questionnaires

**Object:** Attitudes, perceived facilitators, computer use, demographics

**Measurement methods:**

Details: Questionnaire was developed from “analysis of the views and perceptions expressed by GPs interviewed in an earlier, qualitative phase of the study” (separately referenced).
Questionnaire in three sections: Section 1 asked GPs to indicate their agreement with a series of statements about guidelines (attitudes towards guidelines) on a four-point Likert scale (strongly agree/agree/disagree/strongly disagree). Responders were also asked to complete the statement "The one thing most likely to make me turn to a guideline is..." (i.e. perceived facilitators). The second section asked about the responders' use of computers in general practice and at home. The third section elicited demographic about the responder.

Open-ended questions content analysed. Sample split into 'computer 'limited' users & computer 'extended' users, based on responses to computer use questions. Attitude item responses factor analysed (with group discussion to decide on factor naming).

Reliability: Cronbach's alpha calculated.

**Questionnaire availability:** Attitude scale can be found on the CPP website.


**Study characteristics:**

**Summary:** Survey of primary care physicians assessing attitudes, practice, barriers and facilitators with respect to implementation of preventive care practice guidelines.

**Country:** Canada.

**Targets:** Physicians employed by HMO (n=48).

**Focus:** Focus: Preventive care guidelines.

**Methods:** Survey

**Object:** Attitude, practice, barriers and facilitators, demographics

**Measurement methods:** Questionnaire based on Tunis et al. (1994).

**Attitudes:** 10 items on perceptions of guidelines (5-point scale). Example: 'Likely to be used for quality assurance review'. 6 items on confidence in organisations producing guidelines (5 point scale). Example: 'American College of Physicians'. 13 items on perceptions of the importance of specific practice guidelines (5 point scale). Example: 'Pap testing'.

**Barriers and Facilitators:** 9 times on factors related to whether physicians adopt a practice guideline into clinical practice (5 point scale). Example: Endorsement by respected colleagues.

**Practice:** Physician's self-reported compliance with guidelines (compared to actual use later)

**Demographics**

**Questionnaire availability:** No direct availability, but the instrument is derived from Tunis, which may be found on the CPP website.


**Study characteristics:**

**Summary:** Survey examining hospital employees' attitudes towards and compliance with recommendations to be immunised against influenza if in contact with high-risk patients, and perceived barriers and facilitators. Barriers suggested include fear of adverse reactions, avoidance of medications, inconvenience of vaccination administration. Potential facilitators suggested include improved accessibility of vaccine administration, being informed that immunization is a national health care policy.

**Country:** USA
Focus: Recommendations on influenza vaccination for hospital employees
Targets: Hospital nursing personnel and physicians (N=193)
Methods: Postal survey
Object: Attitudes, barriers.

Measurement methods:
Survey covered seven areas:
Demography
Occurrence of influenza-like illness
Influenza vaccine compliance
Amantadine use
Reasons for working with an influenza-like illness
Reasons for refusing the influenza vaccine
Suggestions for improving future immunization compliance
Items on attitudes/barriers (e.g. "Vaccine administration is inconvenient", "Concerned about pain"), behaviour (e.g. "Received monovalent vaccine"), reasons for working while sick (e.g. "Had important work to be done that day") and facilitators (e.g. "If it were a national health care policy") are given on pages 204 and 205 of the article.

Questionnaire availability: See published article


REVIEW
Structure:
Ch. 1 Introduction
Ch. 2 Survey methods
Ch. 3 Group methods
Ch. 4 Observational methods
Ch. 5. Methods for analysing and presenting data

Table 1 (pp.15-20) examples of structured questionnaires for measuring perceptions and opinions on guidelines. Categorised by focus, type of b&f, and type of questions
Focus (Clinical practice guidelines in general, a limited set of concrete guidelines, one particular guideline
Type of barrier and facilitator (Firstly b&f can be in different areas: lack of knowledge, negative attitudes, structural problems etc. Secondly, different factors can be studied:
Recall or knowledge of the guideline: knowledge on existence of the guideline, detailed knowledge of elements of the guideline
Attitudes towards guidelines: existence, content, source or development procedure
Perceived barriers and facilitators for implementation: influences on clinical decision-making, factors that inhibit or facilitate the implementation.
Type of questions (e.g. 5-point Likert scale, YES/no categories, hypothetical scenarios/patient cases/vignettes)

Table 2 focuses on factors related to the clinician e.g.
Questionnaires on use of information sources,
Questionnaires on learning needs (topics for education, motivation to learn, desired organisation and format of CME)
Self-efficacy

**Study characteristics:**

**Summary:** Structured survey mailed to a national sample of US family physicians. Questionnaire asked about factors that affect their adoption and use of practice guidelines. “Most respondents (69%) reported a positive attitude about practice guidelines, but only 44% reported using any guidelines. More younger physicians thought that guidelines could be useful tools. Most preferred guidelines that could be modified (87%) and that were no longer than two pages. Only 27% of respondents knew where to locate a guideline on a particular topic. 43% reported that is would be useful if guidelines were a component of an electronic medical record.”

**Country:** USA

**Targets:** Family physicians (N=400, 51% response rate).

**Focus:** Practice guidelines

**Methods:** Structured postal survey

**Object:** Facilitators and barriers, attitudes, practice

**Measurement methods:**

5-page, 54 item questionnaire. (Mixture of open and closed items) Derived in part from work by Tunis and Mottur-Pilson (see above).

“The first section of the questionnaire asked about the respondent’s demographic and descriptive characteristics…. The (main) survey collected information about familiarity with guidelines and attitudes about the utility, comprehensiveness, and efficacy of guidelines in the clinician’s own clinical practice. Also questioned respondents regarding information needed to evaluate guidelines’ validity, applicability to patient variability, potential role in medical malpractice, litigation, and preferences regarding guideline format and dissemination, including the ideal source of guidelines.”

**Questionnaire availability:** Many items are reproduced in the text. Questionnaires from which this one was derived are to be found on the CPP website. The full survey instrument is available from the authors.


**Study characteristics:**

**Summary:** Survey of GPs to assess their perceptions of factors that influence their referral behaviour and ideas about what might help their decisions. “Uncertainty of diagnosis/management and patient pressure were the two most commonly agreed factors that were suggested as influencing referral behaviour. Training in procedures and use of clinical guidelines were the most popular changes chosen as being helpful in referral decision making.”

**Country:** England

**Focus:** Referral behaviour

**Targets:** General practitioners (N = 68 of 114)

**Methods:** Postal questionnaire developed from semi-structured interviews

**Object:** Perceived barriers and facilitators

**Measurement methods:**

Questionnaire included statements in the following domains, rated on a five-point Likert scale from ‘strongly agree’ to ‘strongly disagree’:

- Accuracy of the referral data supplied by the practice. Whether the feedback of the collated referral data was useful or would influence future referral patterns.
- Factors thought to influence referral behaviour
- Changes to current hospital services that would aid referral decision making
2 open-ended questions were also included, asking respondents to identify other changes to services that would be helpful and areas of disease for which the introduction of referral guidelines would be useful.

**Questionnaire availability:** Questionnaire is not reproduced in the article, but some items can be abstracted from the tables supplied.


**Study characteristics:**

**Summary:** Survey of pediatric critical care doctors to assess their attitudes concerning the use of ribavirin in children with respiratory syncytial virus lung disease in light of new American Academy of Pediatrics practice guidelines. Key findings: Most respondents believed that the literature does not support the guideline recommendations. Most do not usually prescribe ribavirin for such patients but may be persuaded to by colleagues. A small proportion claimed to prescribe ribavirin not because they believe it will be efficacious but because they believe the Academy guidelines compel them to do so. Respondents were frequently concerned that critical care physicians had not been involved in the development of the guidelines, the guidelines were based on a paucity of reliable data, and that guidelines could put them at risk of malpractice litigation. Conclusions: It is important that appropriate experts be included in the development of guidelines and that they be based on valid scientific data. Critical care physicians are unconvincing about the safety and efficacy of the drug recommended in the guideline and are concerned about the legal implications.

**Country:** USA

**Focus:** Use of ribavirin (as recommended in a new clinical practice guideline)

**Targets:** Critical care physicians (N=143)

**Methods:** Postal survey

**Object:** Knowledge, attitudes, practice.

**Measurement methods:**

One-page questionnaire addressing use of ribavirin in practice, knowledge about ribavirin and the research evidence to support its use, whether staffing problems would prevent use, opinions about ribavirin and AAP guidelines on its use.

Relevant items relating to attitude are shown below:

**Question 8:** Check the *ONE* statement that now most closely reflects your opinion:

I will use ribavirin since I believe that the new AAP recommendations define a “standard of care” AND I think the drug is effective.

I will use ribavirin because I believe that it is effective, although I DON’T believe that the new AAP recommendations define a standard of care

I will use ribavirin because I believe that the new AAP guidelines define a standard of care, although I DON’T personally believe ribavirin is effective.

I won’t usually use ribavirin, but colleagues/consultant may persuade me to use it in individual cases

I won’t use ribavirin because I believe that the risks of treatment outweigh potential benefits

I won’t use ribavirin because the costs outweigh the benefits.

**Question 9:** Regardless of your answer to question 8, please answer the following:

Given your understanding of the available research literature and the new AAP guidelines, do you think that a physician choosing *not* to use ribavirin in a patient who subsequently dies from RSV lung disease has violated the standard of care?

If you answered “NO”, can you articulate reasons why practice which deviates from any published guidelines is *not* a violation of the standard of care?

**Questionnaire availability:** Full questionnaire reproduced in article appendix (p.772).