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# Attitudes and knowledge of primary care professionals towards evidence-based practice: a postal survey

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## Abstract

**Objectives** To describe the attitudes, awareness and use of evidence across key professional groups working in primary care. **Methods** A postal questionnaire was sent to all lead/chairs, general managers, clinical governance leads, lead nurses, lead pharmacists and public health practitioners working in local health care cooperatives in Scotland. **Results** 289 (66.1%) health care professionals responded, ranging from 51% of general managers to 80% of lead nurses. All professional groups supported evidence-based practice. General practitioners (GPs) were less likely to agree that they had the skills to carry out literature reviews or appraise evidence compared to nurses and public health facilitators (36% vs. 75% vs. 80%; 51% vs. 64% vs. 70%). Access to the internet and bibliographic databases was good for all groups but GPs used a narrower spectrum of evidence-based journals, relying mainly on medical literature. Only nurses and public health practitioners appeared to have any understanding of qualitative research terms. Public health practitioners were also least likely to view guidelines or protocols developed by others as the best source of evidence for primary care. The major perceived barrier to practising evidence-based practice was time. Consequently the most important facilitator was protected time, but increased resources (financial and staff) and training were also cited. Professional groups other than GPs perceived inter-professional boundaries as a barrier and suggested multi-professional teamworking and learning as potential supports for evidence-based practice. **Conclusions** While all professional groups welcome and support evidence-based practice, there are clear differences in the starting point and perspectives across the groups. These need to recognized and addressed to ensure that learning the skills of evidence-based practice and implementing evidence are effective. This will also enhance the ability of primary care organizations to develop robust mechanisms for supporting key aspects of clinical governance.

## Introduction

Clinical governance encompasses a range of activities required to improve standards of care, including evidence-based practice, audit and risk management (Rosen 2000). Delivery of effective clinical governance implies a move from uni-professional working and education to multi-professional approaches (Pringle 2000). This is particularly true for effective evidence-based practice, which requires framing searchable questions from areas of clinical and policy uncertainty, finding and appraising relevant research

evidence and acting on that evidence (Sackett *et al*. 2000). These skills are increasingly taught as part of multi-professional workshops and developments such as the National Health Service Electronic Library for Health are enabling professional groups to access evidence more easily. However, for the final step of evidence-based practice, implementation, to be successful, all relevant stakeholders need to be involved.

This raises questions about the attitudes and skills of different professional groups towards evidence. To date, most work within primary care has examined the views and attitudes of general practitioners (GPs) to evidence-based practice (Fairhurst & Huby 1998; McColl *et al*. 1998; Mayer & Piterman 1999; Oswald & Bateman 2000; Young & Ward 2001; Putnam *et al*. 2002; Young *et al*. 2002). In general, GPs were supportive and felt that it improved patient care (McColl *et al.* 1998; Mayer & Piterman 1999; Young & Ward 2001). However, barriers to practising in an evidence-based way included a lack of time (McColl *et al*. 1998; Young & Ward 2001), the application of population-derived evidence to individual patients (Fairhurst & Huby 1998; Mayer & Piterman 1999; Oswald & Bateman 2000) and a lack of understanding of the terminology reported in papers (McColl *et al*. 1998; Young & Ward 2001; Young *et al*. 2002).

Much less is known about the views and attitudes of other professional groups. Work by Thompson *et al.* in an acute care setting demonstrated that nurses valued human sources of information as much as technology-based information (Thompson *et al*. 2001). Problems associated with using research included interpreting very statistical papers and a lack of skills to use research themselves (McCaughan *et al*. 2002). This lack of confidence in statistical and numerical issues was also reported in a study of the experiences of GPs and practice nurses on evidence-based practice training courses (Greenhalgh & Douglas 1999). In addition, these two professional groups assigned different meanings to the term 'research evidence': GPs thinking in terms of clinical trials; nurses having a broader and more holistic view of evidence, including qualitative research and local findings. This has important implications for multidisciplinary approaches to evidence-based practice. Awareness and access to evidence also varied across professional groups, with GPs reporting easier access to internet-based evidence than nurses and other community-based professionals (Hagdrup *et al*. 1998; Wilson *et al*. 2001).

The development of locally successful education and implementation strategies will require that these differences in awareness and philosophical stance to evidence be identified and addressed. This study sought to describe the attitudes, awareness and use of evidence across key professional groups working within primary care in Scotland using a questionnaire survey. This was carried out at the level of local health care cooperatives (LHCCs), which bring together all providers of primary care services within a defined locality (Hopton & Heaney 1999).

## Methods

### Identification of key informants

A database of key informants was constructed for every LHCC in Scotland in 2002 ($n = 80$). Key informants were defined as the named person in six posts within the LHCC: chair/lead; general manager; clinical governance lead; lead nurse; lead pharmacist; and public health practitioner. These posts were chosen as it was likely that all LHCCs would have such people in post and because it represented a range of professional groups.

After removal of individuals carrying out two jobs within the one LHCC, individuals carrying out the same post across LHCCs or posts that were currently vacant, questionnaires were sent to 437 individuals. One reminder was sent to non-responders approximately 6 weeks after the initial questionnaire.

### Questionnaire

The questionnaire used was based on that of McColl *et al*. (1998). Areas covered were attitudes and beliefs towards evidence-based practice; access to and awareness of key sources of evidence; understanding of a range of quantitative and qualitative terms associated with evidence-based practice; and experience of evidence-based practice training and ways of giving evidence-based summaries to primary care professionals. As well as closed questions, several open questions gave participants the opportunity to state their views of the major barriers and supports to

  

practising evidence-based practice within primary care.

Data were entered into Microsoft Excel. Responses to closed questions were imported into SPPS for Windows version 9 for subsequent statistical analyses. Responses to questions about attitudes and beliefs towards evidence-based practice (questions 1a–1l) were categorized on a 1–5 scale, with 1 being 'strongly agree' and 5 being 'strongly disagree'. Responses to questions about awareness and use of different evidence-based journals were categorized on a 1–4 scale: 1 being 'never heard of it'; 4 being 'used and has influenced my practice'. Understanding of terms associated with evidence-based medicine were also categorized on a 1–5 scale, with 1 being 'unaware of the term' and 5 being 'understand the term and could explain it to others'. In each case, the distribution of responses to these questions across the professional groups were compared using the Kruskall-Wallis test, with $P < 0.05$ considered significant. Free text comments on the barriers and facilitators to evidence-based practice were reviewed and categorized in Excel.

## Results

Completed questionnaires were received from 289 individuals out of a total of 437 (66.1% response rate). The response rate varied by professional group: 45/79 leads/chairs (57.0%); 38/75 general managers (50.7%); 37/62 clinical governance leads (59.7%); 58/73 lead nurses (79.5%); 57/77 pharmacy leads (74.0%); 54/71 public health practitioners (76.1%). With one exception, the LHCC leads were GPs, as were most clinical governance leads. Public health practitioners came from a variety of professional backgrounds, including nursing, health visiting and health promotion. No demographic data were available with which to further characterize responders and non-responders.

### Beliefs and attitudes towards evidence-based practice

Differences were apparent in the beliefs and attitudes amongst the professional groups to evidence-based practice (Table 1). Most welcomed evidence-based practice (Question 1k), agreeing that it improved patient care (Question 1b) and that it was their duty to keep up-to-date with current best evidence (Question 1d). However, while almost one third of LHCC leads, clinical governance leads and public health practitioners agreed that primary care lacked a scientific base on which to base practice (Question 1a), only 15% of lead nurses and pharmacists agreed with this statement. Many individuals also felt that it was impossible to keep up to date with current evidence, ranging from 34% for the public health practitioners to 58% for the LHCC leads (Question 1c).

Access to evidence and the skills required accessing and appraising that evidence was variable. Less than half of the LHCC leads agreed that they had the facilities to undertake a literature review, whereas approximately 80% of lead nurses and public health practitioners agreed (Question 1f). Only one-third of LHCC leads and clinical governance leads agreed that they had the skills to carry out a literature review (Question 1e) and approximately half of them felt that they had critical appraisal skills (Question 1h). Again, the professional groups most likely to agree with both of these statements were the lead nurses and public health practitioners.

Adoption of evidence-based practice (Question 1l) was perceived to be 'another demand on already overloaded primary care professionals' by two-thirds of LHCC and clinical governance leads, half of the pharmacy leads and 40% of the lead nurses and general managers. Only public health practitioners predominately disagreed with this statement.

### Access to and use of evidence

The majority of primary care professionals reported access to the internet in their workplace or in the workplace and home (84.1% LHCC leads; 73.5% general managers; 91.7% clinical governance leads; 79.3% lead nurses; 75.5% pharmacy leads; 83.3% public health practitioners). Access to electronic bibliographic databases was also good (79.5% LHCC leads; 65.2% general managers; 91.1% clinical governance leads; 67.3% lead nurses; 77.5% pharmacy leads; 82.9% public health practitioners) and to professional journals. When asked what percentage of their practice was evidence based, the median values were: LHCC leads, general managers and clinical

**Table 1 Beliefs and attitudes of professional groups to evidence-based practice. Numbers (percentages) of individuals who 'agreed' or 'strongly agreed' with the following statements**

| | *Leads/chairs* | *General managers* | *Clinical governance leads* | *Lead nurses* | *Pharmacy leads* | *Public health practitioners* | P-*value** |
|---|---|---|---|---|---|---|---|
| a. Primary care lacks scientific base on which to base my practice | 14/45 (31.1) | 7/30 (23.3) | 11/35 (31.4) | 9/57 (15.8) | 8/54 (14.8) | 16/50 (32.0) | 0.263 |
| b. Evidence-based practice improves patient care | 38/45 (84.4) | 32/35 (91.4) | 35/37 (94.6) | 57/59 (96.6) | 51/56 (91.1) | 50/53 (94.3) | <0.0001 |
| c. The practical demands of work make it impossible for me to keep up-to-date with current best evidence relating to practice | 26/45 (57.8) | 18/34 (52.9) | 18/37 (48.6) | 24/59 (40.7) | 21/55 (38.2) | 18/53 (34.0) | 0.136 |
| d. It is the duty of every practitioner to keep up-to-date with current best evidence relating to practice | 42/45 (93.3) | 33/36 (91.7) | 32/37 (86.5) | 58/59 (98.3) | 52/56 (92.9) | 52/54 (96.3) | 0.002 |
| e. I have skills to undertake a comprehensive literature review | 16/45 (35.6) | 16/35 (45.7) | 13/37 (35.1) | 44/59 (74.6) | 28/56 (50.0) | 43/54 (79.6) | <0.0001 |
| f. I have facilities to undertake literature review | 21/44 (47.4) | 23/34 (67.6) | 23/37 (62.2) | 45/58 (77.6) | 28/56 (50.0) | 45/54 (83.3) | <0.0001 |
| g. I have no difficulty obtaining copies of published research papers/reports relating to my clinical practice | 18/45 (40.0) | 18/29 (62.1) | 16/36 (44.4) | 43/59 (72.9) | 23/56 (41.1) | 34/54 (63.0) | 0.003 |
| h. I have skills to critically appraise research papers/reports relating to my clinical practice | 23/45 (51.1) | 11/30 (36.7) | 17/37 (45.9) | 38/59 (64.4) | 32/56 (57.1) | 37/53 (69.8) | 0.015 |
| i. Research influences my daily work | 28/45 (62.2) | 20/34 (58.8) | 21/37 (56.8) | 46/59 (78.0) | 31/56 (55.4) | 43/53 (81.1) | 0.001 |
| j. I would like to access current best evidence more often than I currently do | 33/45 (73.3) | 28/34 (82.4) | 30/37 (81.1) | 54/59 (91.5) | 41/56 (73.2) | 45/54 (83.3) | 0.146 |
| k. Evidence-based practice is welcome development in primary care | 35/44 (79.5) | 32/36 (88.9) | 25/37 (67.6) | 59/59 (100.0) | 54/57 (94.7) | 51/54 (94.4) | <0.0001 |
| l. Adoption of evidence-based practice is another demand on already overloaded primary care professionals | 30/44 (68.2) | 16/36 (44.4) | 24/36 (66.7) | 22/59 (37.3) | 29/56 (51.8) | 5/54 (9.3) | <0.0001 |

*Kruskall-Wallis test *P*-value comparing differences in the five response categories (from 'strongly agree' to 'strongly disagree') between the six professional groups.

 

**Table 2 Awareness and use of sources of evidence. Numbers (percentages) of individuals who stated that the source of evidence has been 'used and has influenced my practice'**

| | *Leads/chairs* | *General managers* | *Clinical governance leads* | *Lead nurses* | *Pharmacy leads* | *Public health practitioners* | P-*value** |
|---|---|---|---|---|---|---|---|
| Bandolier | 11/44 (25.0) | 4/32 (12.5) | 12/36 (33.3) | 3/59 (5.1) | 35/56 (62.5) | 9/54 (16.7) | <0.0001 |
| Clinical Evidence | 21/42 (50.0) | 14/32 (43.8) | 20/35 (57.1) | 44/57 (77.2) | 34/55 (61.8) | 25/53 (47.2) | 0.018 |
| Cochrane Library | 16/43 (37.2) | 8/32 (25.0) | 14/37 (37.8) | 25/60 (41.7) | 27/55 (49.1) | 34/54 (63.0) | 0.006 |
| Effective Health Care Bulletin | 11/43 (25.6) | 7/31 (22.6) | 10/33 (30.3) | 16/60 (26.7) | 9/55 (16.4) | 22/54 (40.7) | 0.026 |
| Evidence-based Medicine | 17/43 (39.5) | 11/30 (36.7) | 14/37 (37.8) | 24/57 (42.1) | 17/55 (30.9) | 18/51 (35.3) | 0.619 |
| Evidence-based Nursing | 4/42 (9.5) | 12/30 (40.0) | 2/34 (5.9) | 49/59 (83.1) | 1/55 (1.8) | 29/54 (53.7) | <0.0001 |
| MeReC Bulletin, National Prescribing Centre | 8/42 (19.0) | 2/30 (6.7) | 2/36 (5.6) | 9/59 (15.3) | 46/56 (82.1) | 3/53 (5.7) | <0.0001 |
| SIGN | 42/44 (95.5) | 26/32 (81.3) | 34/37 (91.9) | 59/59 (100.0) | 51/56 (91.1) | 41/54 (75.9) | <0.0001 |

SIGN, Scottish Intercollegiate Guidelines Network.
*Kruskall-Wallis test *P*-value comparing differences in the four response categories (from 'never heard of it' to 'used and has influenced my practice') between the six professional groups.

governance leads 50.0%; lead pharmacists 60.0%; lead nurses and public health practitioners 70.0%. The median number of literature searches performed in the previous year was reported as: LHCC leads, general managers and clinical governance leads 2.0; lead nurses 6.0; pharmacy leads 3.0; public health practitioners 4.5.

Table 2 shows the percentage of respondents in each group who reported being aware of certain sources of evidence and using those sources to influence their practice. All professional groups were aware of and had used evidence from the Scottish Intercollegiate Guidelines Network (SIGN). Other sources of evidence were used much less frequently and there was clear evidence of professional boundaries in the evidence used. Clinical Evidence was the next most recognized source of evidence, with at least half of each professional group using it. The exceptions were general managers [14/32 (43.8%)] and public health practitioners [25/53 (47.2%)]. Use of Evidence-based Medicine was poor, with approximately one-third of each of the professional groups surveyed using it. Evidence-based Nursing was used by most lead nurses [49/59 (83.1%)] and half of the public health practitioners [29/54 (53.7%)], but not by the other professional groups. The bulletin of the National Prescribing Centre was used most by the pharmacy leads [46/56 (82.1%)], but little used by any other group. In general, there appeared to be a low level of use of other secondary sources of evidence such as Bandolier, the Cochrane Library and Effective Health Care Bulletin.

### Understanding of terms associated with evidence-based practice

Respondents were asked to rate their awareness and understanding of a range of terms associated with research papers (Table 3). The majority appeared to understand terms associated with randomized controlled trials (randomization, relative and absolute risk, and number needed to treat) and the term systematic review, although a substantial minority did not. Fewer appeared to understand more statistical terms, such as odds ratio, confidence interval or heterogeneity. The percentage understanding the term intention-to-treat analysis ranged from 8.3% (general managers) to 36.4% (pharmacy leads). Understanding of terms associated with qualitative research (purposive sampling, grounded theory and triangulation) was poor, with only the lead nurses and public health practitioners reporting levels of understanding greater than 25%. Understanding of the term publication bias was variable, with only one-third of LHCC leads, clinical governance leads and pharmacy leads reporting understanding of this term.

Overall, 150 (51.5%) of respondents had attended some sort of critical appraisal training. This varied by

**Table 3 Understanding of terms associated with evidence-based practice. Numbers (percentages) of individuals reporting that they 'Understand the term and might use it myself' or 'Understand the term and could explain it to others now'**

| | *Leads/Chairs* | *General managers* | *Clinical governance leads* | *Lead nurses* | *Pharmacy leads* | *Public health practitioners* | P-*value** |
|---|---|---|---|---|---|---|---|
| Randomization | 38/45 (84.4) | 24/36 (66.7) | 30/36 (83.3) | 49/58 (84.5) | 42/55 (76.4) | 40/52 (76.9) | 0.258 |
| Relative risk | 32/45 (71.1) | 24/36 (66.7) | 24/36 (66.7) | 40/58 (69.0) | 34/55 (61.8) | 36/53 (67.9) | 0.751 |
| Absolute risk | 30/45 (66.7) | 21/35 (60.0) | 24/36 (66.7) | 36/58 (62.1) | 33/55 (60.0) | 34/53 (64.2) | 0.583 |
| Systematic review | 30/45 (66.7) | 29/35 (82.9) | 28/36 (77.8) | 56/58 (96.6) | 44/55 (80.0) | 45/53 (84.9) | <0.0001 |
| Odds ratio | 12/45 (26.7) | 7/36 (19.4) | 13/36 (36.1) | 20/58 (34.5) | 13/55 (23.6) | 23/53 (43.4) | 0.113 |
| Meta-analysis | 31/45 (68.9) | 13/36 (36.1) | 23/36 (63.9) | 23/58 (39.7) | 33/54 (61.1) | 27/53 (50.9) | <0.0001 |
| Clinical effectiveness | 39/45 (86.7) | 33/35 (94.3) | 29/36 (80.6) | 57/58 (98.3) | 39/55 (70.9) | 47/53 (88.7) | <0.0001 |
| Number needed to treat | 35/45 (77.8) | 20/36 (55.6) | 29/36 (80.6) | 36/58 (62.1) | 42/55 (76.4) | 30/52 (57.7) | 0.010 |
| Confidence interval | 16/45 (35.6) | 15/36 (41.7) | 18/36 (50.0) | 22/58 (37.9) | 27/55 (49.1) | 27/53 (50.9) | 0.141 |
| Heterogeneity | 17/45 (37.8) | 12/36 (33.3) | 10/36 (27.8) | 13/58 (22.4) | 15/55 (27.3) | 22/53 (41.5) | 0.071 |
| Purposive sampling | 5/45 (11.1) | 6/35 (17.1) | 3/36 (8.3) | 15/58 (25.9) | 4/55 (7.3) | 19/53 (35.9) | <0.0001 |
| Intention-to-treat analysis | 6/45 (13.3) | 3/36 (8.3) | 8/36 (22.2) | 15/58 (25.9) | 20/55 (36.4) | 17/53 (32.1) | 0.017 |
| Grounded theory | 2/45 (4.4) | 6/35 (17.1) | 2/36 (5.6) | 25/58 (43.1) | 0/55 (0) | 25/53 (47.2) | <0.0001 |
| Triangulation | 5/45 (11.1) | 7/36 (19.4) | 4/36 (11.1) | 20/58 (34.5) | 3/55 (5.5) | 27/53 (50.9) | <0.0001 |
| Publication bias | 16/45 (35.6) | 21/36 (58.3) | 14/36 (38.9) | 35/58 (60.4) | 20/55 (36.4) | 35/53 (66.0) | <0.0001 |

*Kruskall-Wallis test *P*-value comparing differences in the five response categories (from 'unaware of the term' to 'understand the term and could explain it to others') between the six professional groups.

professional group: LHCC leads 23 (51.1%); general managers 14 (36.8%); clinical governance leads 20 (54.1%); lead nurses 33 (55.9%); pharmacy leads 34 (59.6%); public health practitioners 26 (47.3%). The type of training accessed varied from one-off workshops organized by Primary Care Trusts, health boards or university departments; as part of taught Masters and Continuing Professional Development courses; and national courses such as the Scottish and Oxford evidence-based practice courses.

## Moving from opinion to evidence

Respondents were asked about the methods currently employed within primary care to promote evidence. The majority within each professional group favoured using either evidence-based summaries or professional guidelines and protocols developed by someone else or a combination of these approaches (Table 4). However, almost no one thought that the best current method was to appraise the evidence themselves.

Evidence-based summaries were perceived as the best future option for primary care to move from opinion to evidence. An increasing proportion of professionals in each group selected this as their preferred option. However, use of guidelines and protocols remained popular, as did a combination of these methods. Again, appraising evidence oneself was the least popular option.

## Barriers and facilitators to evidence-based practice in primary care

Respondents were asked to list what they perceived to be the main barriers and facilitators to evidence-based practice in primary care. The major barrier was time, with 72.4% (184 of the 254 who included comments) citing time as a barrier. This was a problem for all professional groups. Other structural barriers included lack of skills [37/254 (14.6%)], access to IT facilities and information [32/254 (12.6%)], and resources [25/254 (9.8%)]. The applicability of evidence to primary care was cited as a barrier by 16/254 (6.3%) respondents, most of whom were GPs. Interprofessional boundaries were also cited as a barrier by all professional groups [18/254 (7.1%)], except the GPs.

A wide range of facilitators to evidence-based practice was suggested. The most important was pro-


 

**Table 4 Moving from opinion to evidence. Numbers (percentages) of individuals responding to each method (respondents could tick more than one statement)**

| | *Leads/chairs* | *General managers* | *Clinical governance leads* | *Lead nurses* | *Pharmacy leads* | *Public health practitioners* |
|---|---|---|---|---|---|---|
| *Current methods* | | | | | | |
| Method a | 1/45 (2.2) | 1/37 (2.7) | 0/37 (0) | 3/58 (5.2) | 1/56 (1.8) | 8/55 (14.5) |
| Method b | 1/45 (2.2) | 0/37 (0) | 2/37 (5.4) | 1/58 (1.7) | 3/56 (5.4) | 1/55 (1.8) |
| Method c | 16/45 (35.6) | 13/37 (35.1) | 12/37 (32.4) | 19/58 (32.8) | 13/56 (23.2) | 9/55 (16.4) |
| Methods a & b | 0/45 (0) | 0/37 (0) | 0/37 (0) | 0/58 (0) | 3/56 (5.4) | 0/55 (0) |
| Methods a & c | 1/45 (2.2) | 3/37 (8.1) | 1/37 (2.7) | 11/58 (19.0) | 2/56 (3.6) | 13/55 (23.6) |
| Methods b & c | 14/45 (31.1) | 4/37 (10.8) | 15/37 (40.5) | 11/58 (19.0) | 14/56 (25.0) | 9/55 (16.4) |
| All methods | 11/45 (24.4) | 6/37 (16.2) | 6/37 (16.2) | 13/58 (22.4) | 17/56 (30.4) | 11/55 (20.0) |
| None of these | 1/45 (2.2) | 0/37 (0) | 1/37 (2.7) | 0/58 (0) | 0/56 (0) | 0/55 (0) |
| Inappropriate/not applicable | 0/45 (0) | 10/37 (27.0) | 0/37 (0) | 0/58 (0) | 3/56 (5.4) | 4/55 (7.3) |
| *Future methods* | | | | | | |
| Method a | 2/43 (4.7) | 1/37 (2.7) | 2/35 (5.7) | 3/56 (5.4) | 9/54 (16.7) | 11/52 (21.2) |
| Method b | 5/43 (11.6) | 5/37 (13.5) | 1/35 (2.9) | 7/56 (12.5) | 4/54 (7.4) | 2/52 (3.8) |
| Method c | 11/43 (25.6) | 5/37 (13.5) | 10/35 (28.6) | 10/56 (17.9) | 6/54 (11.1) | 2/52 (3.8) |
| Methods a & b | 0/43 (0) | 0/37 (0) | 1/35 (2.9) | 4/56 (7.1) | 4/54 (7.4) | 2/52 (3.8) |
| Methods a & c | 1/43 (2.3) | 1/37 (2.7) | 2/35 (5.7) | 5/56 (8.9) | 1/54 (1.9) | 6/52 (11.5) |
| Methods b & c | 14/43 (32.6) | 4/37 (10.8) | 14/35 (40.0) | 6/56 (10.7) | 10/54 (18.5) | 6/52 (11.5) |
| All methods | 9/43 (20.9) | 10/37 (27.0) | 5/35 (14.3) | 21/56 (37.5) | 19/54 (35.2) | 20/52 (38.5) |
| None of these | 1/43 (2.3) | 0/37 (0) | 0/35 (0) | 0/56 (0) | 0/54 (0) | 1/52 (1.9) |
| Inappropriate/not applicable | 0/43 (0) | 11/37 (29.7) | 0/35 (0) | 0/56 (0) | 1/54 (1.9) | 2/52 (3.8) |

Method a: by learning the skills of evidence-based practice, that is, learning to identify and appraise primary literature and/or systematic reviews oneself; method b: by seeking and applying evidence-based summaries that give a clinical 'bottom line'; method c: by using evidence-based guidelines or protocols developed by others.

tected time [86/235 (36.6%) responding to this question], although it was more important to the GPs and general managers than to other groups. Training was the next most important for all professional groups [69/235 (29.4%)], with workshops and local seminars cited, then resources [37/235 (15.8%)]. These included financial and staff resources. Multidisciplinary learning and working were cited by 19 (8.1%) respondents, mainly lead nurses, pharmacists and public health practitioners.

## Discussion

This is the first study to systematically elicit the views of six different key professional groups working within primary care about evidence-based practice. While all the professional groups were generally supportive of evidence-based practice, some key differences became apparent. GPs were less likely to agree that they had the skills to carry out literature reviews or appraise evidence compared to nurses and public health facilitators. GPs also accessed a narrower spectrum of evidence-based journals than other groups, relying mainly on medical literature. Nurses and public health practitioners were the only groups to have any understanding of terms associated with qualitative research. Public health practitioners were also least likely to view guidelines or protocols developed by other as the best source of evidence for primary care.

There are some limitations with this study. A self-completion questionnaire is not the best way to gather the views of individual professionals about such a complex subject, with respondents' verbal explanations of key terms often differing from their written responses (Young *et al*. 2002). However, there was no other reliable way of collecting such data from over 400 individuals across Scotland. Comparison of the results obtained here for GPs with other surveys show general agreement (McColl *et al*. 1998; Young & Ward 2001), although access to the

internet and bibliographic databases and use of evidence-based journals have all increased.

A second limitation was using a clinically focused questionnaire with a range of professional groups. LHCC general managers had particular difficulty responding to the questionnaire. While supportive of evidence-based practice, they felt that many of the questions were not applicable to them, generally because the questions were related to using evidence to answer questions of clinical uncertainty. With no clinical caseload to refer to, they felt unable to respond. However, they are clearly a key group within LHCCs with responsibility for all managerial aspects of the LHCC, including supporting the clinical governance and educational activities of the LHCC. Thus, ways must be found to engage with this group in the process of developing evidence-based practice educational strategies within LHCCs.

LHCC leads and clinical governance leads were rather less positive about the incorporation of evidence into daily practice than other professional groups, notably lead nurses and public health practitioners. One explanation for this may be that LHCC leads and clinical governance leads are not dedicated posts within the LHCC. So, GPs are generally carrying out this role part time, with ongoing clinical commitments to their practice. In contrast, lead nurses and public health practitioners are dedicated posts within the LHCC. So, it is possible that GPs appear less enthusiastic because they are juggling multiple commitments to both the LHCC and their practice, with resultant demands on their time. These GPs also have to use evidence in two contexts: at an individual level within the consultation; and at a population level within the LHCC. This dichotomy may also present them with particular challenges and difficulties and needs to be explored further.

The difference between professional groups in their awareness of terms associated with evidence-based practice is not new. Greenhalgh reported that nurses were more aware of the terms associated with qualitative research than GPs and took a more holistic view of research evidence (Greenhalgh & Douglas 1999). Similar results were reported here. Public health practitioners had a very similar response to those of the nurses. This is unsurprising. Many come from a nursing or health visiting background. In addition, they have a population-based public health focus to their work, requiring them to utilize evidence from a range of sources and study designs including patient participation research and community-based initiatives. In contrast, pharmacists had a much more quantitative view of research evidence, mirroring that of the GPs. Again, this is not surprising. Much of the research evidence pertinent to the work of pharmacists will come from pharmaceutical industry-sponsored drug trials. Thus, they will have to be familiar with the quantitative research terms employed in the reporting of such studies and able to interpret such results for other health care professionals.

A significant minority of health care professionals have continued difficulty understanding and explaining terms associated with randomized controlled trials, such as absolute risk, number needed to treat and odds ratio. This is important, as the way in which evidence is presented is known to influence practitioners' decision-making (Bobbio *et al*. 1994; Bucher *et al*. 1994; Cranney & Walley 1996; Elting *et al*. 1999; Wyatt 1999). Thus, there is a clear need for all health care professionals to at least understand such terms, even if these are reported within evidence-based summaries.

This study has important implications for the implementation of evidence and the delivery of evidence-based practice teaching in locality settings. In order for evidence to be fully implemented at a local level, it will be necessary to engage with a variety of professional groups. However, effective team working and learning in a multidisciplinary forum will require explicit recognition of the starting point and perspectives of each of the professional groups involved. Only then can the 'greater mutual knowledge and understanding' referred to by Finch be achieved (Finch 2000). This will require a supportive atmosphere and expert facilitation. It is also clear that few health care professionals within primary care have either the time or the inclination to appraise the research evidence themselves. Thus, ways must be found to ensure that evidence is delivered to them in an accessible format, which allows them to understand the findings. The results of this survey can help to inform where the starting point for such initiatives should be and assist primary care in developing multiprofessional educational initiatives, which can underpin the requirements for clinical governance.

  

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