Access to the evidence base from general practice: a survey of general practice staff in Northern and Yorkshire Region

P Wilson, J Droogan, J Glanville, I Watt, G Hardman

Abstract

**Aim**—To identify and describe current methods of making health related research evidence accessible to general practice staff in the Northern and Yorkshire Region.

**Method**—A postal survey questionnaire of general practice staff in the Northern and Yorkshire Region.

**Results**—At least one completed questionnaire was obtained from 70% of the general practices surveyed, and the individual response rate to the survey was 45%. Just under 60% of all respondents reported having no access to the NHS internet and just under 50% also reported having no access to the internet. All respondents in this survey reported greater access to paper based information than to electronic databases. However, this research provides evidence of differential access to information resources between different professions in general practice with GPs clearly having easier access than other professions to both paper based resources and electronic databases. 70% of all respondents said that they would need to be trained to use either a computer, the internet, or to search databases if the opportunity for easy access to any of these information services was available.

**Conclusions**—At the time of this survey, general practices seemed to be struggling to set up the infrastructure and develop the skills that are necessary to make best use of available research evidence. In addition, there is a need for further investigation into the reasons why different professions working in the same practice setting have differential access to information resources available in primary care.

Key messages

- At the time of this survey, general practices seem to be struggling to set up the infrastructure and develop the skills that are necessary to make best use of available research evidence.
- There is a need for further investigation into the reasons why different professions working in the same practice setting have differential access to information resources available in primary care.
- An understanding of the barriers to increased and more effective use of the existing evidence base is an area that requires further investigation.

The new NHS: modern dependable, a major feature underlying the changes outlined was a commitment to deliver more consistent and higher quality care for all patients at every level of the National Health Service (NHS). This commitment emphasised the need for clinical practices deemed by good research evidence to be less effective or cost effective to be replaced by those shown to be more effective. A key feature of the drive to improve the quality of health care has been the introduction of clinical governance in the NHS. Clinical governance is a framework which encompasses continuous quality improvement, evidence based health care, and accountability; all health organisations now have a statutory duty to continuously improve the quality of the health care they deliver.

There is currently a large volume of research evidence and guidance relevant to clinical and cost effectiveness on which health professionals can draw to inform their everyday practice. Examples include publications such as the Effective Health Care bulletins (box 1) and electronic databases such as the Cochrane Library. These information resources are complemented by national developments such as the pilot National electronic Library for Health (NeLH) which provides online access to important research evidence, and the National Institute of Clinical Excellence (NICE) which is developing and producing guidance to support NHS decision makers in their use of new and existing healthcare technologies.

If health professionals working in general practice are to use such information to inform evidence based health care, then they need to be informed of important resources and provided with the training required to access and interpret these resources with maximum
research evidence accessible to general practice staff in the Northern and Yorkshire Region. The findings of this survey were intended to help inform the development of future information strategies for primary care groups (PCGs) within the Northern and Yorkshire Region.

**Method**

A postal survey questionnaire was designed using questions contained in existing survey instruments (appendix). Topic areas covered in the questionnaire included background information on the health professionals responding and their general practice; access to information resources; training and support mechanisms; self-reported use of available resources and facilities. The questionnaire was developed by the project team and took account of comments from the project steering group. The questionnaire was piloted in two GP practices in the Trent Region, following which minor amendments were made.

General practices in the Northern and Yorkshire Region were identified using an electronic database. Three copies of the questionnaire and three copies of the letter of instruction were posted directly to every Practice Manager in the Region. The Practice Manager was asked in a covering letter to distribute the questionnaires to one GP, one practice nurse (or community nurse), and one other member of the primary health care team (PHCT) in the practice.

Each questionnaire was issued with a freepost envelope to encourage response and respondents were asked to return the questionnaire in the envelope provided. This was to ensure minimum administration by the Practice Manager. Questionnaires and letters were distributed during May 1999. A prize draw, involving book vouchers of £100, £50 and £25, was offered to practices as an incentive for them to respond to the survey. To gain entry to the prize draw all three questionnaires had to be completed and returned.

Four reminder letters were distributed to practices where no response was evident. In addition, two more specific reminder letters were distributed to those practices where only one or two replies had been received.

Data were entered onto a spreadsheet and analysed using SPSS 9. Simple descriptive statistics were used to summarise respondent reported awareness, access to and use of a number of information resources. Free text answers given by respondents to open ended questions were categorised according to subject and the frequencies calculated. Particular attention was given to describing levels of access to electronic and paper sources of health related research findings and describing barriers to their use.

* Primary care groups are local area groups which were established in 1999 by GPs and other primary care health professionals to plan and commission health services for their local communities, a role previously carried out by health authorities in England.
Table 1  Access to electronic databases in general practice (all respondents)

<table>
<thead>
<tr>
<th>Database</th>
<th>Easy access*</th>
<th>Less easy*</th>
<th>Not easy*</th>
<th>No access</th>
<th>Don’t know</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medline</td>
<td>132 (9%)</td>
<td>101 (7%)</td>
<td>117 (8%)</td>
<td>714 (51%)</td>
<td>150 (11%)</td>
<td>192 (14%)</td>
</tr>
<tr>
<td>CMAH</td>
<td>9 (&lt;1%)</td>
<td>14 (1%)</td>
<td>63 (4%)</td>
<td>808 (57%)</td>
<td>287 (20%)</td>
<td>225 (16%)</td>
</tr>
<tr>
<td>Psychline</td>
<td>3 (&lt;1%)</td>
<td>7 (&lt;1%)</td>
<td>39 (3%)</td>
<td>815 (58%)</td>
<td>303 (22%)</td>
<td>239 (17%)</td>
</tr>
<tr>
<td>Cochrane Library</td>
<td>69 (5%)</td>
<td>52 (4%)</td>
<td>97 (7%)</td>
<td>786 (54%)</td>
<td>210 (15%)</td>
<td>212 (15%)</td>
</tr>
<tr>
<td>Best Evidence</td>
<td>31 (2%)</td>
<td>32 (2%)</td>
<td>54 (4%)</td>
<td>774 (55%)</td>
<td>269 (19%)</td>
<td>246 (17%)</td>
</tr>
<tr>
<td>Electronic MIMS</td>
<td>305 (22%)</td>
<td>111 (8%)</td>
<td>87 (6%)</td>
<td>551 (39%)</td>
<td>163 (12%)</td>
<td>189 (13%)</td>
</tr>
<tr>
<td>Electronic BNF</td>
<td>141 (10%)</td>
<td>56 (4%)</td>
<td>54 (4%)</td>
<td>714 (51%)</td>
<td>173 (12%)</td>
<td>212 (15%)</td>
</tr>
<tr>
<td>National Register</td>
<td>11 (&lt;1%)</td>
<td>15 (1%)</td>
<td>44 (3%)</td>
<td>805 (57%)</td>
<td>282 (20%)</td>
<td>249 (18%)</td>
</tr>
</tbody>
</table>

*Easy access = in own office/consulting room; less easy = shared access with other staff; not easy = not in the building but available elsewhere e.g. local NHS library.

Results
Of the 1029 general practices identified in the Northern and Yorkshire Region, 718 (70%) returned questionnaires; 253 responding practices reported all three questionnaires completed while 434 responding practices returned one or two questionnaires completed. The remaining 31 practices returned the questionnaires and said that they did not want to participate in the survey.

A total of 3087 individuals were invited through their general practices to reply to the questionnaire, of whom 1406 (45%) responded. Of the 1406 respondents, 502 (36%) were GPs, 290 (20%) were practice nurses, 241 (17%) were community nurses, 229 (16%) were practice managers, and the remaining 91 (7%) were other members of the PHCT.

Access to Computer Equipment
Respondents were asked to state whether they had any access to a PC with a CD-ROM attached in their general practice/health centre; 297 (50%) GPs, 135 (39%) practice nurses, and 61 (25%) community nurses stated that they had easy access (defined as in own office/consulting room). Practice managers had the highest levels of easy access (71%; n=163).

Access to the Internet and NHS-net
Six hundred and sixty six (47%) of all respondents reported having no access to the internet, while 209 (15%) said they had easy access. GPs reported the highest levels of easy access to the internet (n=113, 22%). Reported easy access to the NHS-net (internet access for the NHS) by all respondents was 9% (n=134), the majority (59%; n=835) reported having no access. Practice managers (15%; n=35) and GPs (12%; n=61) reported the highest levels of easy access.

Access to Electronic Databases
Table 1 shows reported access to electronic databases by all respondents. GPs had the highest levels of reported easy access to Medline (18%; n=89) while 48 GPs (9%), seven practice nurses (2%), five community nurses (2%), and eight practice managers (3%) stated that they had easy access to the Cochrane Library.

Training Needs of Health Professionals
A total of 983 respondents (70%) said that they would need to be trained to use either a computer, the internet, or to search databases if the opportunity for easy access to any of these information services were available. Less than 1% (n=11) of all respondents indicated that they had no desire to be trained in the use of any of the information services mentioned in the questionnaire.

Access to and Use of Library Services
Seven hundred and forty four respondents (53%) reported having access to a librarian (or other professional) who could undertake literature searches on request; 296 GPs (59%), 169 practice nurses (49%), and 175 community nurses (73%) stated they had access to such a service. Five hundred and sixty six of the respondents (76%) who indicated that they had access to a librarian stated that their local hospital was their main library location while a further 69 (9%) indicated that the health authority was their main library location. GPs (n=246), practice nurses (n=69), and community nurses (n=131) all identified the local hospital as the main source of access.

Access to Evidence Based Journals at Work or Home
GPs reported the highest levels of access to Bandolier (71%; n=359), refereed journals (90%; n=452), Effective Health Care bulletins (61%; n=305), and the Drug & Therapeutics Bulletin (94%; n=473). Just over one third of GPs also stated that they had access to both Effectiveness Matters (38%; n=191) and Evidence Based Medicine (34%; n=171). As a test of questionnaire response validity, a fictitious publication was included in the list of evidence based journals; 74 GPs (15%) stated that they had access to the fictitious publication Effective Medicine Today. Table 2 shows those publications actually read by all respondents.

Journals Used to Inform Clinical Practice
Table 3 highlights the use of selected information sources to inform clinical practice by all respondents; 290 GPs (58%), 106 practice nurses (31%), and 76 community nurses (31%) stated that they had definitely used refereed journals to inform their clinical practice. A majority of GPs (55%; n=276) also claimed to have used Drug & Therapeutics Bulletin to inform their clinical practice.

Respondents were asked to provide examples of their use of these information sources to inform practice. Examples included the prescribing of statins (n=28), the management of wound care (n=31), and diabetes (n=48). A full list of these examples is available elsewhere.
Table 2  Publications actually read by all respondents

<table>
<thead>
<tr>
<th>Publication</th>
<th>Every issue</th>
<th>Occasionally</th>
<th>Not read</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandolier</td>
<td>231 (16%)</td>
<td>274 (20%)</td>
<td>569 (41%)</td>
<td>328 (23%)</td>
</tr>
<tr>
<td>Referreed journals (e.g. BMJ)</td>
<td>440 (31%)</td>
<td>599 (43%)</td>
<td>224 (16%)</td>
<td>141 (10%)</td>
</tr>
<tr>
<td>Effective Health Care</td>
<td>175 (12%)</td>
<td>322 (22%)</td>
<td>567 (40%)</td>
<td>341 (24%)</td>
</tr>
<tr>
<td>Drug &amp; Therapeutics</td>
<td>439 (31%)</td>
<td>409 (29%)</td>
<td>337 (24%)</td>
<td>220 (15%)</td>
</tr>
<tr>
<td>Effective Medicine Today*</td>
<td>27 (2%)</td>
<td>129 (9%)</td>
<td>815 (58%)</td>
<td>434 (31%)</td>
</tr>
<tr>
<td>Effectiveness Matters</td>
<td>99 (7%)</td>
<td>180 (13%)</td>
<td>721 (51%)</td>
<td>405 (29%)</td>
</tr>
<tr>
<td>Evidence Based Medicine</td>
<td>67 (5%)</td>
<td>223 (16%)</td>
<td>724 (51%)</td>
<td>391 (28%)</td>
</tr>
<tr>
<td>Evidence Based Nursing</td>
<td>54 (4%)</td>
<td>180 (13%)</td>
<td>765 (54%)</td>
<td>406 (28%)</td>
</tr>
<tr>
<td>Bacteria</td>
<td>34 (2%)</td>
<td>68 (5%)</td>
<td>828 (59%)</td>
<td>475 (34%)</td>
</tr>
<tr>
<td>Evidence Based Medicine</td>
<td>439 (31%)</td>
<td>409 (29%)</td>
<td>337 (24%)</td>
<td>220 (15%)</td>
</tr>
<tr>
<td>Effective Medicine Today*</td>
<td>30 (2%)</td>
<td>69 (5%)</td>
<td>369 (26%)</td>
<td>514 (37%)</td>
</tr>
<tr>
<td>Effective Health Care</td>
<td>675 (45%)</td>
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<td>316 (23%)</td>
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<td>339 (24%)</td>
<td>512 (35%)</td>
</tr>
<tr>
<td>Evidence Based Medicine</td>
<td>80 (6%)</td>
<td>126 (9%)</td>
<td>493 (35%)</td>
<td>371 (26%)</td>
</tr>
<tr>
<td>Evidence Based Nursing</td>
<td>75 (5%)</td>
<td>94 (7%)</td>
<td>439 (25%)</td>
<td>490 (35%)</td>
</tr>
</tbody>
</table>

*Effective Medicine Today is a fictitious publication.

Table 3  Respondents’ use of selected information sources to inform clinical practice in the previous 2 years

<table>
<thead>
<tr>
<th>Publication</th>
<th>Yes, definitely</th>
<th>Yes, maybe</th>
<th>No</th>
<th>Don’t know</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandolier</td>
<td>201 (14%)</td>
<td>158 (11%)</td>
<td>301 (21%)</td>
<td>430 (31%)</td>
<td>316 (23%)</td>
</tr>
<tr>
<td>Referreed journals (e.g. BMJ)</td>
<td>522 (37%)</td>
<td>297 (21%)</td>
<td>131 (9%)</td>
<td>303 (22%)</td>
<td>153 (11%)</td>
</tr>
<tr>
<td>Effective Health Care</td>
<td>144 (10%)</td>
<td>155 (11%)</td>
<td>286 (20%)</td>
<td>461 (33%)</td>
<td>360 (26%)</td>
</tr>
<tr>
<td>Drug &amp; Therapeutics</td>
<td>395 (28%)</td>
<td>239 (17%)</td>
<td>170 (12%)</td>
<td>361 (26%)</td>
<td>241 (17%)</td>
</tr>
<tr>
<td>Effective Medicine Today*</td>
<td>50 (2%)</td>
<td>69 (5%)</td>
<td>369 (26%)</td>
<td>514 (37%)</td>
<td>424 (30%)</td>
</tr>
<tr>
<td>Effectiveness Matters</td>
<td>62 (4%)</td>
<td>75 (5%)</td>
<td>339 (24%)</td>
<td>512 (35%)</td>
<td>412 (29%)</td>
</tr>
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</tr>
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<td>349 (25%)</td>
<td>490 (35%)</td>
<td>397 (28%)</td>
</tr>
</tbody>
</table>

*Effective Medicine Today is a fictitious publication.

Discussion

This postal survey of general practice staff in the Northern and Yorkshire Region suggests that many practices are struggling to set up the infrastructure and develop the skills that are necessary to make best use of available research evidence. This raises a number of interesting issues.

Although the individual response rate to the questionnaire was only 45%, at least one completed questionnaire was obtained from 70% of all the general practices surveyed. This suggests that the survey may provide a reasonable insight into the levels and types of information provision currently available to general practice staff in the Northern and Yorkshire Region.

In view of the response rate and the types of groups who responded to this particular survey, it is worth noting some of the inherent problems associated with self-reported questionnaires. No matter how clearly respondents are guided with definitions of terms used in questions, at every stage people will still apply their own interpretations and definitions to questions. For example, what a nurse may consider as representing easy access to a particular information resource may not be classed as such by a GP working in the same practice setting, even when clear definitions are given in the questionnaire.

In addition, there is the potential of self-reporting bias in any survey. This was borne out in this particular survey by the number of respondents who claimed to have access to the fictitious publication Effective Medicine Today. Just over 11% of all respondents claimed to have read the publication while 7% stated that they had actually used it to inform their own clinical practice in the last 2 years. It may be that with so many “evidence based” and “effectiveness” publications currently available, some health professionals have difficulty in identifying those they have read and used with any certainty.

There is some suggestion within this survey of differential access to information resources between different professions in primary care. GPs clearly still have far easier reported access than other professions to both paper based resources and electronic databases. This finding is similar to that reported in an evaluation of the Primary Care Sharing the Evidence (PRISE) project in Anglia and Oxford which also revealed some evidence of unequal access to and use of information services across disciplines.2 This evaluation found that, in terms of network access to the databases offered by PRISE, GPs who formed less than 20% of total target users made up 85% of total link usage.3

As such, there is a need for further investigation into the reasons why different professions working in the same practice setting have differential access to information resources available in primary care.

This survey reports similar findings to previous studies in terms of restricted access to the internet within the NHS in England.3 Levels of access in the Northern and Yorkshire Region, as reported in this survey, also appears to be very low. Just under 60% of all respondents reported having no access to the NHS-net and just under 50% also reported having no access to the internet. This compares with a recent survey of general practices in Scotland where 99% of general practices are connected to the NHS-net and 56% of practices reported using the NHS-net at least once a week (the GP in 47% of cases).4

The NHS-net offers the potential of electronic access to information resources for primary care professionals across the NHS. The recent NHS Plan has reiterated the target of connecting all general practices to the NHS-net by 2002.5 However, the Scottish survey found that few practices provided desktop access for all practice staff.6 Without desktop access the suggestion, within this survey, of differential access to online information resources experienced by certain professional groups may continue.

All respondents in this survey reported greater access to paper based information than to electronic databases. This is a similar finding to those reported in previous studies for GPs and for trust medical directors.7 6 12 Indeed, the majority of information sources listed by respondents as having been used to inform
their practice were paper based publications. Paper based publications (and especially summaries of research findings) may still represent the most convenient media for disseminating messages within the primary care setting.

Health professionals perceive a real skill gap with less than 1% of all survey respondents saying that they had no desire to be trained in the use of any of the services mentioned in the questionnaire. Training primary care team members in skills such as internet searching, finding the evidence, and critical appraisal may help to ensure that available information resources are exploited more effectively. However, despite the perceived importance of training, the nature of work in primary care means that training can be difficult to organise for a variety of reasons including busy timetables, inadequate training facilities, and other competing priorities. There would, of course, also be significant resources implications in developing and delivering a skills training programme to health professionals in primary care.

It should also be noted that it is still not clear just how much of a priority information skills training really is or should be for primary care professionals. We still do not really know whether the perceived importance of such training is connected to a belief that such skills would help professionals to practise evidence based health care, and whether training will eventually lead to improvements in the quality of patient care delivered. Given that more than half the respondents stated that they have access to a librarian, it may be that greater promotion of the information support services these individuals can offer may be a more feasible alternative to training. An understanding of the barriers to increased and more effective use of the existing evidence base and suggestions as to how these may be overcome is an area that requires further investigation.

The authors would like to thank responding practices for participating in this survey and also Anne Fletcher, Peter Campion, and Brian Ferguson for their extremely helpful input and assistance. This study was funded by NHSE Northern & Yorkshire Region.

Appendix: Postal Survey Questionnaire

The University of York
NHS CENTRE FOR REVIEWS AND DISSEMINATION
Access to the Evidence Base from General Practice
Questionnaire

1. What is your job title? (Please quote)

2. Which of the following best describe your current role? (Please tick box)
   - General Practitioner
   - Practice Nurse
   - Health Visitor
   - Occupational Therapist
   - Community Psychiatric Nurse
   - Speech & Language Therapist

3. How long have you worked in your current post? (Please specify and state years)

4. How many partners are there in the General Practice at which you work? (Please quote number of each partner)
   - Single handed
   - Two
   - Three
   - Four
   - Eight

5. Do you have access to any of the following within your general practice/home? (Please quote)
   - A PC with CD-ROM
   - The INTERNET
   - Mobile
   - Modem
   - Credit
   - Password
   - Customer Library
   - Best Evidence
   - eMistics
   - eMistics (CD ROM)
   - NHS (internet/CD ROM)
   - Other

6. If you ticked YES for any of the above answer please tick your arrangements for access (please quote)
   - Use and arrangement
   - Later borrow
   - Borrow without contact
   - I got and need access

7. Please tell us your training needs would be if the opportunity for easy access to any of the services mentioned in the previous question were available? (Please state)
   - Yes
   - No

8. Do you have access to a librarian or other professional who can undertake literature searches for you? (Please quote)
   - Yes
   - No
   - Don’t know

9. Do you have access to any of the following at work or at home? (Please state)
   - Role
   - Reference journals
   - EMBL Journal of Advanced Nursing, etc.
   - Electronic Health Care Bulletins
   - Drug and Therapeutics Bulletin
   - Electronic Medicine Today
   - EMBL Journal
   - Evidence Based Medicine
   - Evidence Based Nursing
   - JCTHEA
   - Other

10. Please tell us which of the journals you read (please quote)
   - Role
   - Reference journals
   - EMBL Journal of Advanced Nursing, etc.
   - Electronic Health Care Bulletins
   - Drug and Therapeutics Bulletin
   - Electronic Medicine Today
   - EMBL Journal
   - Evidence Based Medicine
   - Evidence Based Nursing
   - JCTHEA
   - Other
Access to the evidence base from general practice

11 Please tell us if information from any of the sources mentioned below has been used to inform clinical practice within the general practice in the last 2 years? (Mark box that best describes)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Randomized Controlled Trials (RCT)
- Systematic Reviews
- Evidence-based Reviews
- Other (please specify)

If you can provide an example:

__________________________________________________________________________

__________________________________________________________________________

12 Has your General Practice/Health Centre ever developed a service within the last 5 years which has helped to make your access to the research information easier? (please tick one box)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, please tell us about this in more detail (please use additional page if necessary, and where possible, if you have any literature, please send it with the questionnaire).

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

13 Evidence based health care uses a great deal of technical jargon. The following are a list of terms used in papers about evidence based health care. (Please tick box that best applies)

- relative risk
- absolute risk
- systematic review
- randomized controlled trial (RCT)
- confounding
- meta-analysis
- clinical effectiveness
- number needed to treat (NNT)
- confidence interval
- publication bias

14 What online resources do you use on a regular basis to help you access research information? (please tick one box)

- BMA Library
- CINAHL Information Service, University of York
- SCI.library
- BNF
- Other, please specify

Thank you for taking the time to complete this questionnaire.