

# Attitudes of practitioners towards evidence-based practice – a survey of 2000 podiatrists and chiropodists

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## ABSTRACT

A cross sectional survey was undertaken with the objectives of recording podiatrists' level of awareness, knowledge and opinions towards evidence-based practice (EBP). A postal questionnaire was sent to 2000 randomly selected podiatrists and chiropodists of whom 1026 (51.8%) responded, following reminders. Most were very supportive of EBP, although the majority felt they needed further information about the concept. Also respondents cited barriers to EBP including lack of skills and time. Obtaining funding for further training was also an issue. Many of the respondents (particularly those in private practice) felt that they needed further training with regard to research, information technology and critical appraisal skills.

The results of this study suggest that although there is support for EBP amongst podiatrists, there is a need for more educational initiatives to be developed to address these difficulties. Coinciding with this development, support strategies are needed to allow practitioners more time to pursue EBP activities.

## INTRODUCTION

Government reforms to the National Health Service (NHS) have strived to improve the quality of health care that the NHS delivers. Launched in 1999, Clinical Governance<sup>1</sup> consisted of a comprehensive programme of quality improvement policies. One aspect of this was Clinical Effectiveness (CE) – a means of ensuring that practitioners were working effectively, using interventions with a proven track record. In order to achieve this, it was proposed that evidence-based practice (EBP) should be supported and applied in everyday practice.<sup>2</sup> EBP has been promoted throughout health care as means of making clinical decisions by the integration of the best research evidence with the individual's clinical expertise.<sup>3</sup> The main stages of EBP are outlined in Table 1.

Support for the initiative has been provided in many forms including government policy,<sup>1,4</sup> electronic sources – NHS net, National Electronic Library for Health,<sup>5</sup> evidence databases such as the Cochrane Library<sup>6</sup> and the National Institute for Clinical Excellence (NICE). Although such systems have been put into place it is still not clear how much EBP has impacted on podiatry or indeed on any of the allied health professions (AHPs).<sup>7</sup> Obviously, for the initiative to succeed it would require support from individual practitioners. In recognition of this, research has been undertaken to report the views and opinions of various AHPs.<sup>8–11</sup> Only two published studies included a small number of podiatrists (n=38).<sup>12,13</sup>

## AIM

The aim of this study was to assess amongst podiatrists:

1. Awareness of the CE and EBP initiatives within the profession.
2. Views on whether EBP is seen as a low or high priority.
3. Attitudes towards CE/EBP.
4. Perceived training and educational needs to achieve EBP.

This information could be then utilised to inform and formulate initiatives to improve the uptake of EBP in daily practice.

## METHODS

In 1998, a questionnaire was developed by researchers in Wales<sup>14</sup> to assess the knowledge and attitudes of Welsh health care professionals towards EBP. As the instrument was originally validated for use with PAMs and nurses it was directly applicable to the population under study. With the permission of the author, this questionnaire was selected for use in the current study.

Prior to a pilot study a panel of podiatrists was assembled to review the instrument in its current form. The group included four different clinical grades (with various lengths of service), private practitioners and a university tutor. Discussions within the group led to a number of changes being made to the questionnaire. As it was developed for use with all members of the PAMs some of the statements were re-worded to improve their direct applicability to podiatry. For example, questions pertaining to 'my professional practice' were altered slightly to 'podiatric practice' and 'healthcare staff' became 'podiatrists'. A pilot study was undertaken prior to the main data collection phase.

Following ethical approval, a random sample of UK chiropodists and podiatrists (n=2000) was selected from the membership register of the Society of Chiropodists and Podiatrists and sent a copy of the questionnaire along with a freepost return envelope. After a four-week period reminders were sent out to all non-responders and an advertisement was placed in *Podiatry Now* requesting return

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<b>1</b>	<b>Formulating an answerable question</b> – i.e. is oral Terbinafine more effective in treating a dermatophyte toenail infection than Itraconazole?
<b>2</b>	<b>Systematically searching the literature</b> – i.e. Cochrane library, Medline and EMBASE databases etc
<b>3</b>	<b>Selecting and appraising the most relevant papers</b> – i.e. using set criteria to assess its validity (closeness to the truth) and usefulness (does it apply to your patient?)
<b>4</b>	<b>Apply the results to clinical practice</b>
<b>5</b>	<b>Evaluate the outcome of this change</b>

**Table 1. The five stages of EBP (adapted from Ref 3).**

of any outstanding questionnaires. The data from the returned questionnaires were then double data-entered before being analysed using SPSS version 10 (SPSS Software, Inc).

**RESULTS**

The response rate was 51.3% (1026). Of these 1026 responses, 22 were retired members, 15 were currently not practising, and eight reported they had left the profession. Some questionnaires were also returned blank. In total 940 questionnaires were entered for analysis.

In order to assess any potential response bias within the sample, an analysis was undertaken between the first and second wave responders to test for any significant differences in basic characteristics (gender, age group, number of years qualified and place of work). For all tests there were no significant differences between first and second wave responders.

**Demographics**

The majority of respondents were female (69%) with a mean time since qualification of 14.5 years (SD=9.93). Most respondents

	<b>Numbers responding</b>	<b>Mean Score (SD)</b> 1 = strongly agree 5 = strongly disagree
There is a need for education and training relating to clinical effectiveness in the podiatry profession	930	1.82 (0.77)
The clinical effectiveness issue must continue	925	1.86 (0.95)
The current emphasis on clinical effectiveness is warranted	927	1.91 (0.99)
Clinical effectiveness is here to stay	926	1.97 (1.10)
I welcome the continued promotion of evidence-based practice	931	1.97 (0.77)
Evidence-based practice is a waste of time	925	4.18 (0.94)

**Table 2. Opinions of podiatrists on the CE and EBP initiatives (mean scores).**

worked predominantly for the NHS (62%) with around half this amount in private practice (34%) and a small number based in a university or research setting (3%).

**Do we need EBP/CE?**

Podiatrists were presented with various statements and they were asked to indicate their level of agreement with each statement on a five-point ordinal scale ranging from 1 (strongly agree) to 5 (strongly disagree). The results are presented in Table 2. When asked if their current practice was effective most practitioners were unsure. However, across all the occupational groups, there was a strong belief that EBP was worthwhile and the majority of practitioners welcomed its promotion. The vast majority of practitioners believed that there was a need for further education and training in this area.

**Knowledge of EBP and CE amongst podiatrists**

Podiatrists were asked to assess their knowledge of EBP and CE on a five-point, ordinal scale, according to their level of agreement with statements, ranging from 1 (strongest agreement) to 5 (strongest disagreement). The results are presented in Table 3.

It appears that podiatrists believe that their knowledge of EBP is below average, particularly regarding CE initiatives, and would welcome further information about it. Assessed by occupation, private practitioners rated their knowledge on the subjects lower than NHS podiatrists, while university and research staff rated their knowledge the highest of the three groups.

**Current practice of the component skills of EBP**

Podiatrists were asked how often they undertook various aspects of EBP. These attributes were measured on a four-point scale ranging from 1 (never) to 4 (frequently). A summary of the mean scores for each component is given in Table 4, with the least frequently performed components listed first.

It can be seen that, with all the components of EBP, practitioners feel that they practice most aspects on a regular basis, although critical appraisal, question formulation, evaluation of their practice and literature searching are performed least often.

	<b>Numbers responding</b>	<b>Mean Score (SD)</b> 1 = strongly agree 5 = strongly disagree
I know a great deal about the evidence-based practice issue	929	3.33 (1.17)
I know a great deal about the clinical effectiveness initiative	928	3.59 (1.15)
I do not need any more information on the clinical effectiveness issue	929	4.22 (1.01)
I do not need any more information on evidence-based practice	928	4.13 (1.02)

**Table 3. Podiatrists' reported knowledge of EBP and CE (mean response scores).**

### Perceived ability to undertake various aspects of EBP

Respondents were asked to rate their ability to undertake the various aspects of EBP using an ordinal scale ranging from 1 (low ability) to 7 (high ability), with 4 being average. The mean overall scores for all podiatrists are presented in Table 5, ranked in order of score from lowest to highest rated ability.

From the data it appears that respondents are least able to formulate a question based on knowledge gaps, technical abilities such as IT. Critical appraisal skills were also perceived to be below average. Practitioners rated their information sharing skills as highest, together with the ability to identify gaps in their practice. When cross-tabulating the means of each score with place of work (occupational group) it was interesting to note that private practitioners rated their skills lower than their NHS colleagues in all but one category.

### Changing practice

Podiatrists were asked which sources of evidence would be most influential in changing their practice. Their responses options were rated on a five point ordinal scale ranging from 1 (strongly agree) to 5 (strongly disagree). The results are summarised in Table 6.

Overall most practitioners reported that they would be likely to change their practice as a result of new evidence from any of the sources. Most likely to change practice was information from one’s own practice or from another podiatrist, while information from the Internet or a colleague from another profession was the least likely to lead to a change in their practice. This pattern was evident for all podiatrists, regardless of their place of work.

Component of Evidence-Based Practice	Numbers responding	Mean Score (SD) 1 = never 4 = frequently
Critically appraised the evidence against set criteria	920	2.39 (0.93)
How often have you formulated a question as a beginning to filling that gap?	921	2.99 (0.76)
How often have you evaluated the outcomes of your practice?	923	3.00 (0.89)
How often have you tracked down the relevant evidence?	920	3.02 (0.82)
How often have you shared this information with colleagues?	919	3.03 (0.93)
How often have you acted on the evidence you found?	919	3.16 (0.77)
How often have you identified a gap in your knowledge you needed to fill?	931	3.23 (0.60)
How often have you involved patients fully in their care?	931	3.73 (0.56)

Table 4. Podiatrists’ reported frequency of performing various aspects of EBP (overall mean scores (ranked)).

### Access to resources used in EBP

Respondents were asked to rate the ease of gaining access to various resources. This was on a five-point scale ranging from 1 (very easy) to 5 (very difficult). The results are presented in Table 7. Practitioners reported it was most difficult to obtain time for educational activities and study leave. This was followed closely by difficulty in securing funding for training and education. Access to computer databases and the Internet was considered to be somewhat easier.

Further comparison of occupational groups revealed a similar picture with access to computer databases and the Internet being rated as the easiest. However, apart from Internet access, private practitioners consistently scored higher than their NHS and university counterparts suggesting that this group find access to resources more of a problem.

### DISCUSSION

The results from the study suggest that podiatrists in general feel that they know little about EBP and CE. Subsequently, most

Component of Evidence-Based Practice	Numbers responding	Mean Score (SD) 1 = low ability 7 = high ability
Knowledge of the clinical	920	3.03 (1.68)
Conversion of your information	918	3.12 (1.56)
Knowledge of your local clinical	902	3.41 (1.76)
Research Skills	929	3.70 (1.34)
Ability to critically examine research	924	3.71 (1.68)
IT skills	923	3.79 (1.78)
Ability to determine how valid	924	3.86 (1.54)
Ability to undertake computer	922	4.03 (2.06)
Awareness of major information	921	4.10 (1.52)
Monitoring and reviewing of	917	4.17 (1.34)
Knowledge of how to retrieve	922	4.26 (1.26)
Ability to determine how useful	927	4.42 (1.42)
Ability to apply the information to	923	4.69 (1.34)
Ability to identify gaps in your	928	4.90 (1.22)
Ability to review own practice	923	4.92 (1.34)
Sharing of ideas and information	927	4.96 (1.58)

Table 5: Podiatrists’ self-rating of individual components of EBP (ranked lowest to highest scores).

respondents felt they needed more information about the two concepts – particularly those podiatrists in private practice. This in itself may seem disappointing for those wishing to promote EBP within the profession but when this finding is compared with the frequency of which practitioners perceived they undertook the various elements of EBP it seems that, to a certain degree, podiatrists are doing this already.

The disparity may be due to a number of possibilities. It could suggest that podiatrists tend to overestimate how often they undertake EBP activities or, conversely, that their level of knowledge is somewhat underestimated. Another explanation could relate to terminology - podiatrists frequently practice the various elements of EBP but may not be aware of the corresponding nomenclature.

Previous studies have highlighted the issue of the confusion that surrounds the definition of EBP.<sup>15,16</sup> In physiotherapy, a qualitative study uncovered a range of differing interpretations amongst practitioners.<sup>8</sup> Comparisons with earlier studies using the same questionnaire with other health care professionals revealed a similar level of perceived knowledge of EBP and CE amongst other AHPs,<sup>12,13</sup> radiographers<sup>10</sup> and nursing staff<sup>9</sup> suggesting the problem is not unique to podiatrists.

### EBP skills amongst podiatrists

Although practitioners reported that they undertook the various skills of EBP, certain skills were perceived to be practised less often than others - in particular critical appraisal and question formula-

Source of Evidence	Mean Score (SD) 1 = strongly agree 5 = strongly disagree
Own practice	1.69 (0.55)
Another podiatrist	1.98 (0.71)
Journal article	2.19 (0.65)
Clinical effectiveness facilitator	2.23 (0.73)
Colleague from another profession	2.56 (0.73)
Information from the Internet	2.77 (0.72)

**Table 6. Likelihood of podiatrists acting on evidence from various sources (mean scores).**

How easy ....	Numbers responding	Mean Score (SD) 1 = very easy 5 = very hard
Is it to obtain time for education / regular study leave?	925	3.61 (1.26)
Is it to obtain money for your training & education?	922	3.57 (1.23)
Is your access to an academic library?	926	2.89 (1.28)
Is your access to computer databases?	926	2.73 (1.36)
Is your access to the Internet?	927	2.18 (1.40)

**Table 7. Podiatrists' opinions on ease of obtaining resources for EBP, ranked in order of reported difficulty (mean scores).**

tion. Along with these, technical abilities such as IT and research skills were rated below average, while inter-personal skills tended to be rated much higher. Many other studies have similar findings.<sup>8,9,13,17</sup> If the EBP and CE initiatives are to continue then this is an area that would need further study to see if actual deficits exist in practitioners' knowledge of EBP and its related skills. If so, this may represent an area where there is an educational need for podiatrists, particularly for those in private practice.

### Attitudes to EBP

When any major changes are implemented in a large organisation, such as the introduction of EBP into health care, it has been assumed in the literature that individuals will often present the most resistance to the change.<sup>18,19</sup> Although respondents in this survey felt their skill levels were below average in areas, there seemed to be a high level of support for the EBP and CE initiatives by respondents. This was noted across all occupational groups (private practitioners, NHS and university podiatrists).

### Access to EBP resources

In order to undertake EBP effectively it is important to have adequate support systems.<sup>20</sup> Access to academic libraries, computer databases and the Internet were perceived in this study to be a minor problem, although private practitioners rated their difficulty slightly higher than NHS or university Podiatrists. This may be due to geography – private practitioners work outside the hospital and community clinic setting and therefore practices may be located away from the main academic libraries, or indeed it may suggest that many facilities at present do not permit access for non-NHS staff.

Access to the Internet was perceived as 'easy' across all groups. This perhaps reflects the growing numbers of people who now have access at home and work. It has now been suggested around 34% of the UK population have access to this medium.<sup>21</sup>

### Changing practice

It was interesting to note that podiatrists were most likely to act on evidence from their own practice or from another podiatrist rather than from a journal article – this situation is not unique to podiatrists and has been reported in nursing and by other AHPs.<sup>9,13</sup> Information from the Internet was reported to be least likely to change podiatrists' practice. This may be due to the debate surrounding the dangers and pitfalls of this source for reliable information/evidence.<sup>22-25</sup>

In itself this information is of value when one is considering various strategies for bringing about change. On the basis of this study it could be argued that EBP might be best delivered by a fellow podiatrist rather than another AHP. Indeed one study has suggested that a supportive colleague, particularly one with a higher degree and a knowledge of critical appraisal, could have a significant influence on EBP within a department.<sup>8</sup> In nursing the lack of a 'role model' has even been cited as a reason for the slow uptake of EBP.<sup>16</sup> Other studies have suggested that opinion leaders have the potential to change health professionals practice<sup>26</sup> but a systematic review of the literature on this issue highlighted the difficulties in assessing their effects.<sup>27</sup>

### LIMITATIONS OF THE STUDY

In discussing the results of this study it is important to raise some issues regarding the limitations in its design. The overall response

rate of just over 51% represents a fair response rate. Typically responses for mail surveys can be around 30%.<sup>28</sup> The sampling technique employed for this survey ensured a small margin of error within the results, even at the 50% response rate.

The limitations of the survey technique have been well documented and discussed.<sup>29</sup> Firstly, with any survey there is exhaustive literature reporting the gap between the measurement of attitudes and subsequent behaviour, which has to be acknowledged. From this, it is possible that some respondents have given socially desirable responses. Surveys are further limited in that they can only suggest causality between variables – for the purposes of this study however, this survey was instigated to provide a descriptive account regarding current attitudes towards EBP and CE.

## CONCLUSION

In conclusion, this study has presented an overview of podiatrists' attitudes and opinions of EBP. From the results it appears that these are no different to those held by other health professionals. Overall there is a strong positive view of EBP and its potential benefits for the profession and patient care. However, most podiatrists felt that they did not know enough about it and were limited by their lack of time and skills to implement it in their daily practice. Most problematic were technical skills such as critical appraisal, computer searching and IT skills.

The results of this work suggest the need for educational initiatives to improve practitioners' knowledge and skills (particularly those in private practice).

## ACKNOWLEDGEMENTS

In completing this study the authors wish to acknowledge the help of Mr Paul Harradine, Clinical Lead Specialist, Portsmouth City PCT, and Dr Dominic Upton. This work was funded through the Small project grant scheme, Portsmouth R&D Consortium and was part of an MSc thesis, University of Oxford 2001.

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