The information needs and behaviour of clinical researchers: a user-needs analysis

Helena Korjonen-Close, The Institute of Clinical Research, Marlow, Buckinghamshire, UK

Abstract

Aims: As part of the strategy to set up a new information service, including a physical Resource Centre, the analysis of information needs of clinical research professionals involved with clinical research and development in the UK and Europe was required. It also aimed to identify differences in requirements between the various roles of professionals and establish what information resources are currently used.

Methods: A user-needs survey online of the members of The Institute. Group discussions with specialist subcommittees of members.

Results: Two hundred and ninety members responded to the online survey of 20 questions. This makes it a response rate of 7.9%. Members expressed a lack of information in their particular professional area, and lack the skills to retrieve and appraise information.

Discussion: The results of the survey are discussed in more detail, giving indications of what the information service should collect, what types of materials should be provided to members and what services should be on offer.

Recommendation: These were developed from the results of the needs analysis and submitted to management for approval. Issues of concern, such as financial constraint and staff constraints are also discussed.

Conclusions: There is an opportunity to build a unique collection of clinical research material, which will promote The Institute not only to members, but also to the wider health sector. Members stated that the most physical medical libraries don't provide what they need, but the main finding through the survey and discussions is that it's pointless to set up 'yet another medical library'.

Introduction

A clinical researcher is a professional involved in a clinical trial/study, which is an investigation in human subjects intended to discover or verify the clinical, pharmacological and/or pharmacodynamic effects of an investigational product(s) to identify safety, adverse reactions and pharmacokinetics.[1]

Correspondence: Helena Korjonen-Close, The Institute of Clinical Research, Thames House, Mere Park, Dedmere Road, Marlow, Buckinghamshire SL7 1PB, UK. E-mail: hkc@instituteofclinicalresearch.org

Individuals involved in clinical research may be physicians, pharmacists, research nurses, laboratory scientists, monitors, investigators, auditors, administrators and others. These individuals work in a variety of places: hospitals, primary care, clinical research organizations, pharmaceutical companies or as freelancers.

Sackett has defined evidence-based medicine as: 'the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.'[2] In the UK, several examples of initiatives exist for the implementation of evidence-based medicine and provision of instant access to information for health professionals to aid in decision-making: the National Electronic Library for Health,[3] OMNI[4] and local developments in health-care Trusts throughout the UK. However, all these systems, containing standards and guidelines, are usually aimed at disease-related areas rather than role related unless they have been developed by trade organizations and membership institutes, such as the Royal College of Nursing (RCN) for registered nurses.

The Institute of Clinical Research (from now on 'The Institute') is a membership organization for individuals anywhere involved in clinical research. The aims of The Institute are: 'to raise standards, share knowledge and develop professionals'. The Institute offers membership benefits such as training and the opportunity to get involved in issues relating to the regulations of clinical research. Please note that wherever 'clinical research' is mentioned throughout this article, it refers to the legislation, recommendations and standards in managing a clinical study, not information on results of such a study. The vision for the new information service at The Institute is to provide a comprehensive, specialist information service offering members access to quality information on clinical research. Previously, no information service existed at The Institute, apart from an online database of Clinical Research Focus (CRfocus)[5] (The Institute's journal) articles and a mechanism to field questions on regulations relevant to clinical research from members to the subcommittees for answering. The newly set-up service intends to improve the facilitation of discussion between members and the experts on the subcommittees as well as ensure the availability of information and resources in clinical research. These are available in a physical resource centre and online via the new database ODIN[6] (Online Database of Information and kNowledge). The new information service offers an e-mail helpline to members where enquiries can be submitted, which are either answered by the Information Services Officer or by the specialist groups such as the discussion fora held regularly for members or subcommittees. Members also receive information alerts via a monthly e-mail, via an online Monthly Awareness Bulletin and have access to a document delivery service. The aim of the research done in this paper was to assess information needs and gaps in knowledge and resources of these professionals, who are members of The Institute, to ensure the right strategy was applied when setting up the information services.

Background and objectives

The knowledge base of health-care provision worldwide is built upon information generated from clinical trials and other studies. The information published at the end of a study is what drives decision making, whether it be drugs to be used in a particular condition or what treatment guidelines should be written to ensure excellent patient care and improve clinical care in our health service. It is therefore vital that this information is made available to practising health-care professionals and is rapidly published to ensure that further research is continued in successful areas of discovery. The individuals involved with writing up results of trials are medical writers, investigators and other clinical researchers who have been involved in designing the trial. These are the individuals that The Institute supports and have recognized as having specialized information needs.

The quality of information available on health varies widely, as do the abilities of individuals to retrieve and judge information quality. Existing technologies for accessing important information resources have limitations. This includes use and retrieval, but also in terms of availability to health professionals not working for the NHS in the UK. Clinical research is a global industry, which means that a UK sponsor may be conducting a trial abroad, or a sponsor abroad conducting a trial in the UK. As a result of all these factors, clinical researchers need improved access to quality information on clinical research, improved training on using resources and the awareness of information resources and quality. Despite the diversity of this group of professionals, they all share common training needs: retrieval skills, critical appraisal skills and the ability to digest information and aid in decision making. This is not unique to clinical researchers, but applies in all groups of health professionals.[7,8]

Santoro[9] researched systems that are suitable to storing research information. He states that any new knowledge obtained from clinical research cannot easily be transferred to clinical practice for several reasons, including publication bias, lack of medical knowledge databases and lack of integration among these databases. ClinicalTrials.gov[10] and PubMed[11] are examples of integrated databases freely available on the Internet and developed by the National Library of Medicine[12] and National Institutes of Health.[13] These databases use a uniform language and structure, organize knowledge from medical literature, clinical research, medical guidelines and experience in the use of drugs. These databases do not offer clinical researchers the necessary details they need to support their work within a much-regulated industry.

Clinical research is a heavily regulated industry and, in Europe, the EU Directive 2001/20/EC[14] and the ICH (The International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use) GCP (Good Clinical Practice)[15] are the main legal regulations that clinical research should adhere to. Regulatory authorities involved with controlling the industry are: the Medicines and Healthcare products Regulatory Agency (MHRA)[16] in the UK, Central Office for Research Ethics Committee (COREC)[17] and The European Medicines Agency (EMEA).[18] Because of the variety of organizations and individuals involved, the information available is large and detailed, and varies from country to country. This is the type of information that clinical researchers lack, and which The Institute is aiming to collect and disseminate.

Even if information is available to health professionals, will they and can they use it? Information overload is an issue with all professionals in health. Guyatt[19] *et al.* in an editorial on evidence-based care, acknowledge that, because of the lack of time or skills, many practitioners fail to review the literature relevant to particular clinical problems. He maintains doctors can be trained to practice evidence-based care by consulting pre-appraised secondary sources of evidence. This is a very important point. Health-care professionals would need to read an impossible amount of information in order to remain current in their own professional field, something that databases and information portals add to as a strain on their time and skills. It cannot, and should not, be assumed that these professionals have the skills or time to conduct a literature search and critically appraise all relevant literature in order to make a decision. It is therefore important this need is taken into consideration when developing information services for health-care professionals. In a survey of US public health officials, the results showed that 72% never or seldom use MEDLINE. The electronic resource used daily or weekly was e-mail. Torre reported in another survey,[20] 175 family physicians were surveyed to determine interest in electronic journal publications. Only half the physicians reported good to excellent computer proficiency and only a quarter used online journals.[20] The surveys show that apathy has developed towards reading and maintaining an information-seeking behaviour in health professionals because of the amount of information available. The skills and resources available to reduce time spent on information are not known or developed.

When setting up information services, it is important to consider the needs of those who will be using the services on offer. The result of a literature search into the information needs of clinical researchers using EMBASE and MEDLINE databases, and the British Library catalogue, was nil (this search was carried out on 18 August 2004). The needs of other health professionals have been researched, but information needs is still an area which is poorly researched and publicised. As part of the strategy for the new Information Services at The Institute, an analysis of members' needs was required, to ensure that the needs of clinical researchers are met and that the Resource Centre collects the right type of material and offers the right type of services. There has been no attempt to analyse information needs based on geographical location in this survey, but this will be covered in a follow-up analysis in 2005.

Methodology

Traditionally, surveys at The Institute are run on the website and the URL is e-mailed to members asking them to participate. Additionally, the survey is notified in the journal CRfocus. Previous experience has shown that members prefer online surveys to paper surveys. The survey was run on The Institute's website[21] for a month between mid-June and mid-July 2004. An e-mail was sent out to all members who have registered their e-mail addresses with The Institute (*n* = 3693). Two hundred and ninety-eight 'bounce-back' emails were received, making the total number of recipients around 3393 members. Two submissions had to be rejected because of incomplete survey entries. When the survey finished, 290 members had responded to the survey. This makes it a response rate of 7.9%. The response rate is considered 'good', when comparing with other surveys run previously by The Institute. It was anticipated that individuals who took part in the survey were more aware of how the information service will improve their work and non-respondents already will have adequate access to an efficient information service in their workplace. Furthermore, it is well known at The Institute that only 5% of the membership are 'active' members, e.g. take an active interest in The Institute's development: someone who belongs to a subcommittee, or in other ways are involved in Institute activities. In this respect, the response rate of 7.9% was most likely members who are active and do not have access to a resource centre. The future analysis in 2005 will determine who uses the information service and if the development strategy for the current service was based on good data from the 2004 survey.

To ensure that the needs of members were captured further, apart from the survey (appendix A), it was important to attend meetings to discuss more informally information needs of the various subcommittees. The subcommittees are special-interest groups that have been set up to represent the specialized roles of clinical researchers.

Results of online survey

Membership type and related needs

The top five categories that members are involved with in their functional roles are:

- 44% are involved in study co-ordination;
- 41% with training;
- 37% people management;
- 35% study design;
- 31% monitoring.

Most of the participants in this survey work in pharmaceutical companies (41%) or clinical research organizations (CROs) (21%). The response rate from students (1%), site management organizations (1%) and service companies (1%) was low. Service companies don't have a direct need for information services, hence the low response rate. The Institute has a very small number of student members (at the end of 2004, there were under 50 student members), and that corresponds with the low response rates from this group.

As a result of the Disability Discrimination Act 1995[22] and amendments 2001,[23] members taking part in the survey were asked to declare any disabilities. Two members responded that they have hearing difficulties.

Table 1 Current sources of information

%	
94	Internet
56	E-mail
51	Company library
39	Mass media
16	Hospital library
16	British Library
8	Public library
7	Other

Information sources: general findings

Members use a variety of sources of information as can be seen in Table 1. The Internet tops the list followed by e-mail (alerts) and the use of company libraries.

Information sources: the Internet

Two hundred and sixty-nine respondents (94%) use the Internet as their current source of information. The members provided information about what resources on the Internet they use, with the following result: 249 (87%) members use search engines to find information on the Internet; 192 (67%) members use databases on the Internet; 52 (18%) members use portals on the Internet; 160 (56%) members use online journals on the

Internet; 49 (17%) members use other resources on the Internet.

Search engines

Two hundred and forty-nine members (87%) use search engines to conduct searches.

Fifty-seven members (23%) use Google, and another four members (2%) use Yahoo. Other search engines mentioned were: company provider, OMNI, MSN and Ask Jeeves.

Databases

One hundred and ninety-two (67%) members use databases to find information. The most popular database is MEDLINE, which 27 (14%) members use. Other databases mentioned were PubMed (2%), EMBASE, Cochrane, Datastar, BNF, Cancer Bacup, Current Controlled Trials, National Research Register, eMC, BIDs, Medscape, Idrac, Excerpta Medica and the Merck Manual.

Portals

Fifty-two (18%) members say that they use organization website and portals on the Internet in finding information. Not one portal stood out as providing members with suitable information, however, the following portals were mentioned: COREC, Biomednet, NeLH, Drug Discovery Online, Biospace, Inpharm, Aditus, Medscape, Eudraportal, MHRA, ABPI, EFPIA, DoH, ZONnet, Bioportfolio.

Journals

One hundred and sixty (56%) of our members use online journals. The British Medical Journal (BMJ) is the preferred online journal with 14 (9%) members mentioning it. The BMJ was followed by The Lancet and Scrip with three (2%) members and four (3%) members, respectively.

Other

Members had the opportunity to say what other online resource they use to find information and 49 members (17%) gave specific websites that they visit. The websites are listed in Table 2.

Table 2 Websites that members visit

BARQA (British Association of Research Quality Assurance)
NHS net
Institute of Clinical Research
ABPI (The Association of the British Pharmaceutical Industry)
MHRA (Medicines and Healthcare products Regulatory Agency)
EMEA (The European Medicines Agency)
DoH (Department of Health)
MRC (Medical Research Council)
COREC (Central Office for Research Ethics Committee)
FDA (Food and Drug Administration)
Yahoo Industry News
Online dictionaries
Blackwell-Synergy
First Word
GP Info
Inpharm
Center Watch
NICE (National Institute for Clinical Excellence)
ICH (International Conference on Harmonization)
EU (European Union)
Bodleian Library
Doctor's Net
Own company Intranets and Internets

Information sources: other sources

Other information sources are used by 7% of the respondents. The usual types of resources were mentioned, such as the British National Formulary,[24] websites, journals including CRfocus. Other sources are listed in Table 3.

Interesting sources of information mentioned by the participants were: The Institute of Clinical Research (*n* = 5), colleagues (*n* = 6), networking (*n* = 11), Training courses/seminars/conferences (*n* = 6).

Information sources: resource centres

It was necessary to establish if there are any libraries that are used by our members that could be possible candidates for partnerships in the future, and to establish what type of resource centres members use. The respondents mentioned very few physical libraries. Individuals may also feel that there are no physical libraries that can cater for their needs. Only two university libraries were mentioned: University of Hertfordshire and University of Oxford Cairns Library. The

Table 3 Other sources of information

Word of mouth
Conferences/seminars
Company search services
Networking
Protocols
Abstracts
Colleagues
Collaborators
Freelancers
Market surveys
Patient group literature
Industry contacts
Books
Company Intranet
Alerts
Business links
Pharmaprojects
North-west Trials Network

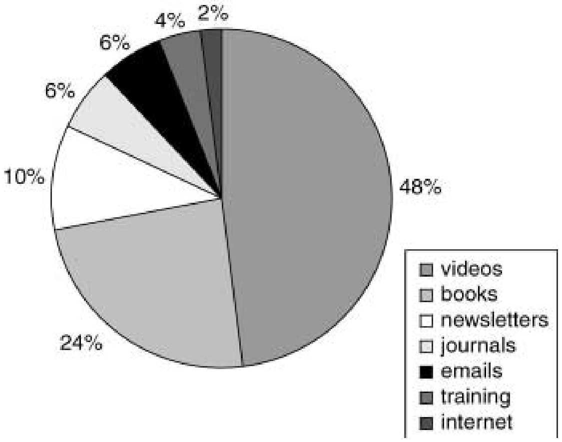

Figure 1 Essential and useful subject collection information

respondents' employing organizations' libraries and e-libraries were mentioned. Three respondents mentioned The Institute of Clinical Research. The Royal Pharmaceutical Society of Great Britain and The Training Shop were each mentioned once.

On the question of asking members to list physical resource centres used for information seeking; websites, such as Medscape, COREC and MEDLINE were listed as answers. It is uncertain why respondents misinterpreted this question and listed websites instead of physical resource centres.

Information needs: subjects and services (Fig. 1)

Essential resources. Clinical research is the most essential subject that should be available at The Institute of Clinical Research according to 192 (67%) respondents. This was followed by Pharmaceutical information (38%), Institute Educational material (29%) and continuous professional development material (28%).

Useful resources. Members were similar in responses to this question. All resources offered on the list (see Appendix A), apart from clinical research, were considered equally useful (36–51%). Clinical research has already been established as being the most important subject for the Resource Centre to collect.

Minimal resources. Members seem to have less of a requirement of the following resources: press information (28%), medical informatics (19%) and general scientific (15%).

Information needs: useful and use of materials (Fig. 2)

Members prefer videos (48%), books (24%) and newsletters (10%) over any other form of material. Least-requested material is the Internet.

Two hundred and sixty-four (93%) would use the materials for own personal development and awareness. One hundred and eighty-two (64%) would use the materials in teaching situations. No other uses of information were presented.

Information needs: languages and geographical focus

All respondents expect materials in English and no other language was mentioned. The majority of members 128 (45%) stated that they expect a worldwide focus of information in the collection.

Information needs: access and equipment

The members had the opportunity to categorize the above services into categories of essential, useful and minimal use.

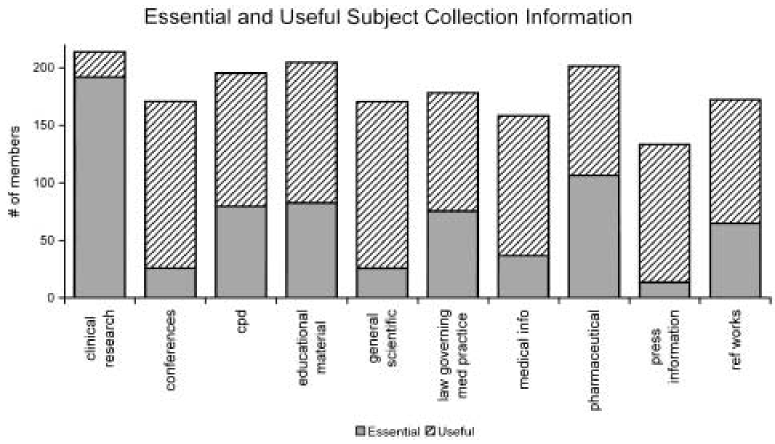

Figure 2 Use of materials

Under the essential category, the following services were listed: 149 (52%) members felt that an e-mail alert service should be offered. One hundred and thirty-two (46%) members asked for a current awareness service. One hundred and twenty-four (44%) members asked for electronic resources to be available. One hundred and thirteen (40%) members are asking for resource lists. All other services were nominated as 'useful', of which advice on resources and document delivery were ranked as highly useful resources.

One hundred and seven (38%) members asked for document delivery as a useful service, 29% felt it was an essential service that should be provided by the Resource Centre. Only 8% would find it of minimal use.

Eighty-three per cent expect access to a personal computer (PC), 78% the need for a desk and 73% access to a photocopier. A comfortable chair was requested by 59%. Other equipment asked for were:

- broadband Internet;
- coffee machine;
- scanner;
- telephone;
- librarian;
- printer;
- fax;
- somewhere to plug in laptop;
- pens/notepaper;
- video conference facility;
- good light.

Forty-one per cent said yes they would visit the physical resource centre. Fifty-two per cent said they would not visit. Out of the members who said they would visit, 54% would visit on a weekly basis, 28% on a yearly basis and 18% on a monthly basis. The weekly visit is a very surprisingly high number.

Information needs: requirement for document delivery

Two hundred and twenty-eight (80%) members said that they would like a document delivery survey, against 50 (18%) of members who said no. Two per cent did not respond to this question. When members were asked to comment on their decision, some comments were:

- requirement for cheap and quick service;
- they would like it as part of their yearly membership subscription;
- that the service would not become a profit-making business of The Institute.

Information needs: requirement for alerts

Two hundred and fifty-two (88%) members answered yes to this question and 28 (10%) members answered no. Two per cent did not respond to this question.

Results of discussions at subcommittee meetings

Members have many ways in which to share information. The subcommittees and working parties provide access to important and up-to-date information on clinical research. The work of the subcommittees benefit members by providing training courses, writing articles for CRfocus, answering clinical research queries and replying to consultation documents. The subcommittees meet regularly on a quarterly basis and are attended by the committee members, who represent all members who have registered the group as their particular membership interest. At the subcommittee meetings, during summer 2004, questions on current information provision and information requirements were posed to the committee members. The key findings were requirements for alerts and links to websites that will be of use to them in their key area(s). Training on literature searching and critical appraisal skills were other top requests required by members. Documentation, mainly grey literature, relating to their key area(s) were also requested to be collected in the Resource Centre. A request for a chatroom/e-mail discussion list was put forward, to encourage sharing of information and informal discussion on issues relating to their own work. Requests for good journals were made, again relating to their own key area(s) of work. Out of all the discussions held, it was clear that very few members receive adequate information provision from their own place of work, and only one member who works for a larger NHS Trust, receives regular alerts from Ovid via her Trust's Library.

Discussion of findings

Members state that they currently use the Internet as the main source of information, followed by emails and their own company library. Other sources of information mentioned were The Institute, networking and training courses/conferences. This is something The Institute should take advantage of and ensure that members are able to access information at The Institute whilst attending courses and give them the chance to network more with colleagues. Codgill[25] mentioned that access to colleagues is a source of information to nurse practitioners, supporting the result of this survey. Only 41% said they would visit the physical Resource Centre, but this means The Institute can promote access during courses and meetings held at the Marlow offices.

Members use search engines to find information more than any other form of resource on the Internet. This result corresponds with other surveys of health professionals. In a study of family practitioners in New Zealand, their skills in accessing and evaluating information on the Internet showed that search skills were basic. It was found that practitioners urgently need training in searching and evaluating information on the Internet.[8] Members are requesting videos when asked about what type of materials would be useful. The requirement for videos is a very surprising finding, indicating that members would like visual material to provide information. This may be because videos are similar to the training environment. The Institute should provide materials that can be used in training situations, which has been confirmed as members have requested videos as information resources and are heavily involved in training. It will be interesting to explore this further and consider how The Institute can meet this need.

Members are requesting current awareness and access to electronic resources, such as access to databases, online journals and other health websites. MEDLINE has been shown to be the most popular medical database used in several surveys.[8,26] They also request access to resource lists. The idea of having a regular Institute e-mail alert appeals to 88% of members and could provide members with Institute news and news alerts. A new Monthly Awareness Bulletin has been designed and launched recently to cater for the need of current awareness. The Bulletin contains summaries of the previous month's medical news, articles in journals, the results of literature searches on the topic of 'clinical research', questions and answers and acquisitions of new resources by the Resource Centre.

The challenge for the Information Service is to provide members with an excellent gateway to the right types of sources for clinical research on the Web, and provide them with the certainty that what they are looking at is appropriate. The development of the iPortal (Information Portal) with relevant links and a target to become a 'one-stop library' is currently under way. The survey highlighted the lack of a website that serves the needs of the clinical researcher. Library websites are considered valuable in providing electronic library resources[27] but Cullen states that there is a need for high-quality, evidence-based clinical and resources information.[8]

Very few physical libraries cater for the needs of The Institute's members. This is an opportunity to develop an information service that caters for the variety of needs that are not provided at other libraries. There is no point in setting up 'just another medical library'. This was also something that came up in the question on subjects of value to members, it was established that 'clinical research material' tops the list of an 'essential' subject with 67%, followed by 'pharmaceuticals' at 38%. In other words, members expect the 'essential' collection subjects to be: clinical research and pharmaceuticals. All the other subjects are considered 'useful' and no subject was considered of minimal use.

Document delivery was received positively with a surprising 80% who want to take advantage of this service if it's quick, cheap and a non-profit-making activity of The Institute.

Based on the result of the survey and discussions with the subcommittees, a strategic document was drawn up on the developments of the information services to be implemented. One of the recommendations was to set up a new database, entitled ODIN (Online Database of Information and kNowledge), which will be accessed by members via the website and can be searched for information regarding clinical research. None of the available databases collate references on clinical research materials specifically for clinical research professionals.

Another significant requirement is increasing the current collection of clinical research information. The difficulty is that this has financial implications at The Institute. One of the constraints of the service is lack of finances. It is envisaged that these developments will lead to increased membership and therefore increased income. The Institute is anticipating that the information service is perceived to be a benefit to a member of joining The Institute.

The service will need to provide broader information, with more country-specific information for the new European members. Information may even have to be provided multi-lingually. The national and international needs of members must be taken into consideration when developing the service in the future.

A concern for setting up a new information service is the future viability of such a service if some the management team does not address issues such as staffing levels. The service currently has only one full-time equivalent member of staff. If the levels of use increase, it is not clear how the service can be maintained in terms of quality and level unless staffing levels increase.

Progress has been made in developing partnerships with organizations to improve information and resource access for both the Information Services Officer and the members of The Institute. These partnerships are with other health libraries, health organizations and publishers of health literature. More partnerships are sought in the future, possibly in roles of sponsorship of a service, whereby the sponsor pays for an information service, receives adequate exposure to members in return, and the members receive a useful and appropriate service as a product. For example, the sponsorship of our publications, fact sheets on issues relating to clinical research and other similar material would benefit all parties involved.

Conclusion

This is the first attempt at conducting a survey into the information needs and behaviours of clinical researchers. The results of the analysis have provided evidence for the strategic development of the new information services at The Institute. The Resource Centre was launched on 1 October, followed by the new information web pages: iPortal in November and the ODIN catalogue will be launched in spring 2005. The undergraduate and postgraduate courses at LJMU, internal training courses and presentations at conferences and meetings, ensures that the information service will become an important part of the membership benefits of belonging to The Institute. It is also anticipated that the unique collection and services of this Information Service at The Institute will appeal to other health libraries, and partnerships can be established to ensure that information and resources are shared, therefore providing health professionals in the UK and beyond with excellent service provision.

Appendices

The appendices to this paper are available on the Blackwell Publishing website at http://www.blackwellpublishing.com/products/journals/suppmat/HIR/HIR562/HIR562sm.htm.

References

1 International Conference on Harmonization (ICH). *ICH Harmonised Tripartite Guideline for Good Clinical*

Practice 1996. Marlow: Institute of Clinical Research, 2004.

2 Sackett, D. L. Evidence-based medicine: what it is and what it isn't. *British Medical Journal* 1996, **312**, 71–2.

3 National Electronic Library for Health. Available from: http://www.nelh.nhs.uk/ (accessed 18 January 2005).

4 Organising Medical Networked Information (OMNI). Nottingham: University of Nottingham Greenfield Medical Library. Available from: http://omni.ac.uk/ (accessed 18 January 2005).

5 Institute of Clinical Research. *Clinical Research focus (CRf)*. Available from: http://www.instituteofclinicalresearch.org.

6 Institute of Clinical Research. Online Database of Information and kNowledge (ODIN). Available from: http://www.instituteofclinicalresearch.org.

7 Lee, P., Guise, N. B. & Sathe, N. Benchmarking information needs and use in the Tennessee public health community. *Journal of the Medical Library Association* 2003: 322–36.

8 Cullen, R. J. In search of evidence: family practitioners' use of the Internet for clinical information. *Journal of the Medical Library Association* 2002, **90.4**, 370–9.

9 Santoro, E. & Garattini, S. Un modello di integrazione delle informazioni per la ricerca biomedica. *Recenti Progressi in Medicina* 2004: 207–9.

10 National Library of Medicine. *Clinical Trials*. Available from: http://www.clinicaltrials.gov (accessed 18 January 2005).

11 PubMed. Avaiable from: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=Display&DB=PubMed (accessed 18 January 2005).

12 National Library of Medicine. Database. Available from: http://www.nlm.nih.gov/ (accessed 18 January 2005).

13 National Institutes of Health. Available from: http://www.nih.gov (accessed 18 January 2005).

14 European Commission. Directive 2001/20/EC of the European Parliament and of the Council of 4 April 2001 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the implementation of good clinical practice in the conduct of clinical trials on medicinal products for human use. *European Commission Official Journal* 2001: 1 May, **L 121**, P. 0034–0044.

15 International Conference on Harmonization (ICH). *Harmonised Tripartite Guideline for Good Clinical Practice*. Switzerland: ICH, May 1996.

16 The Medicines and Healthcare products Regulatory Agency (MHRA). Available from: http://www.mhra.gov.uk/ (accessed 18 January 2005).

17 Central Office for Research Ethics Committee (COREC). Available from: http://www.corec.org.uk/ (accessed 18 January 2005).

18 The European Medicines Agency. Available from: http://www.emea.eu.int/ (accessed 18 January 2005).

19 Guyatt, G. H., Meade, M. O. & Jeaschke, R. M. Practitioners of evidence based care. *British Medical Journal* 2000, 954–5.

20 Torre, D. M., Wright, S. M., Wilson, R. F., Diener-West, M. & Bass, E. B. Family physicians' interests in special features of electronic publication. *Journal of the Medical Library Association* 2003, 337–40.

21 The Institute of Clinical Research. Available from: www.instituteofclinicalresearch.org (accessed 18 January 2005).

22 The Disability Discrimination Act. *Disability Discrimination Act 1995*. London: The Stationary Office 1995: c. 50.

23 *The Special Educational Needs and Disability Act 2001*. London: The Stationary Office 1995: c. 10.

24 British National Formulary, British Medical Association and the Royal Pharmaceutical Society of Great Britain. Available from: http://www.bnf.org/bnf/.

25 Cogdill, K. W. Information needs and information seeking in primary care: a study of nurse practitioners. *Journal of the Medical Library Association* 2003, 203–15.

26 De Groote, S. L. & Dorsch, J. L. Measuring use patterns of online journals and databases. *Journal of the Medical Library Association* 2003, 231–40.

27 Tannery, N. H., Foust, J. E., Gregg, A. L., Hartman, L. M., Kuller, A. B., Worona, P. & Tulsky, A. A. Use of web-based library resources by medical students in community and ambulatory settings. *Journal of the Medical Library Association* 2002, 305–9.

Received *18 September 2004*; Accepted *25 February 2005*

Key Messages

Implications for Policy

- Analysing the information needs of users should be done regularly as needs change.
- Analysing the current information environment is equally important before setting up a new information unit.
- Health information services need well planned strategies when setting up, based on solid data of what is needed.
- There is a need to make recommendations for service provision to management, taking into consideration constraints and concerns that may arise in the future.

Implications for Practice

- The user of information services is central in all strategic planning activity.
- The launch of services to users is a marketing activity, which will ensure that users understand the benefit of the services and thus continue to aid its development by getting involved in decision-making of future services.
- Constraints and concerns can be useful when planning partnerships and future developments of services.