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British Medical Association Library free MEDLINE service: survey of members taking part in an initial pilot project

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INTRODUCTION

In October 1992, the British Medical Association (BMA) Library purchased a CD-ROM system that holds the full MEDLINE database (1966 to date) on hard disk and allows for dial-up access. A pilot project was initiated to test the system, streamline necessary administrative processes, and develop documentation before making free, dial-up MEDLINE service available to BMA members throughout the United Kingdom (UK).

The first 108 members to sign up received an information pack to help them access the service and carry out their own searches. To users with access to a computer (IBM compatible or Macintosh), modem, and recommended communications software, the service was available twenty-four hours a day, seven days a week, free of charge, except for the members' telephone costs. A help desk was available by telephone between 9:00 A.M. and 5:00 P.M. on weekdays. During the period covered by the pilot project, the number of users able to access the system simultaneously was increased from four to eight. The database was updated monthly.

BACKGROUND

Considerations involved in the purchase and installation of the BMA Library's MEDLINE system were documented by McSeáin and Law [1] and by McSeáin, Rowlands, and Forrester [2]. The development and implementation of a similar system by the Philadelphia Health Sciences Libraries Consortium also has been documented by Simon [3].

There is a growing body of literature on the provision of networked, online search services offered directly to end users, with user-friendly search programs either running as part of the host system interface or loaded as front-end software. Evidence from studies such as those by Tilson and East suggests that...
the most popular aspects of networked, online search facilities are ease of use, convenience, and the time saved by direct access to information from the user's desk [4].

Further studies such as that by Haynes et al. have highlighted some of the difficulties faced by end-user searchers [5]. Haynes and colleagues reported that clinicians inexperienced in searching retrieved only 55% of the relevant articles retrieved by reference librarians and that 47% of searches aimed at resolving patient problems affected clinical decisions but were often based on scanty information (e.g., abstracts only). This information is conveyed on a welcome screen as a warning to BMA MEDLINE users. Haynes et al. also reported that clinician searchers chosen for their experience in searching did retrieve the same number of relevant articles as did reference librarians.

Finally, a more recent study by Lindberg et al. reported that in situations involving individual patients, rapid access to the biomedical literature via MEDLINE is at times critical to sound care and favorably influences patient outcomes [6].

METHODOLOGY

On February 1, 1993, the first 108 members registered to take part in the dial-up MEDLINE pilot project each were sent a detailed questionnaire (Appendix). The questionnaire was designed to collect basic information about the users, the computer hardware and software used to access the service, their impressions of the service to date, and particular search interests. Members also were asked for their comments and suggestions as to how the service might be improved. Respondents were asked to return the questionnaires by February 28, 1993.

RESULTS AND DISCUSSION

Replies were received from 61 of the 108 members, a return rate of 56%. Of the 61, 57 had accessed the service. Findings are based on all 61 replies. Percentages are rounded to the nearest whole number.

Respondents were mainly between thirty-one and forty years of age (52%), male (95%), and either family physicians (37%) or senior-grade hospital physicians (23%). A large number of respondents lived in London (22%), having the advantage of cheaper local telephone charges than did users dialing into the system from the rest of the UK. Most described themselves as either intermediate-level (39%) or beginner (30%) database searchers.

Respondents were asked to name the communications software packages used to access the system. They were allowed to list any number of packages. The most frequently used communications software packages were the recommended ones. Other respondents were using a range of nonrecommended packages, including the “Terminal” communications software included in Windows. Most (54%) were using modems running at 2,400 baud.

The main problems reported to the help desk by those using recommended packages were related to setting up the software. In particular, users had trouble with the preset three-stage log-in procedure and with the printing and downloading of search results. These problems generally were solved through either rereading of instructions provided in the information pack or telephoning the library for help. Respondents using nonrecommended software faced additional problems, including a total inability to print or download results, difficulties in using cursor and function keys when searching, and failure of the search interface highlighting facility.

The BMA Library now has a PC and a Macintosh with modems attached, with which to load and use recommended communication software packages and test nonrecommended software. Both machines are within easy access of the help desk so that librarians can provide direct assistance to telephone inquiries. A self-help database also has been established, containing details of the communications software packages used by all those registered for the service. This database helps members, especially those using nonrecommended software, contact one another to swap experiences and, where possible, offer mutual assistance.

Forty-four percent of respondents were accessing the service on a weekly (or even more frequent) basis and 34% on at least a monthly basis. From a list of eighteen, respondents were asked to note the broad subject areas in which they had searched. They were allowed to select as many of these areas as they wished. The most popular topic areas for searching were drug treatment (eighteen respondents), otorhinolaryngologic diseases (fourteen respondents), and nervous-system diseases (fourteen respondents). Most respondents nearly always (34%) or usually (25%) found what they were looking for, believed the items retrieved to be relevant (39%) or very relevant (33%), and were satisfied (52%) or very satisfied (26%) with the results.

The majority of respondents found the MEDLINE system easy to use (41%) or acceptable (33%). From a list of six main features, respondents were asked to select aspects of the system that they particularly liked or disliked. Favorite aspects were mapping of terms to the correct subject headings, speed of operation, and the capability to download search results. Major dislikes were again the speed of operation and also the difficulty of downloading search results. The full results for this survey question are shown in Figure 1.

Respondents listed a number of suggested improvements to the system. Their recommendations concentrated largely on simplifying the downloading...
procedure, system updating, and enhancing the user friendliness of the search interface. Many of their suggestions will be addressed by newer system interfaces.

Most respondents found the library's documentation satisfactory (39%) or good (34%). A number of users listed additional items they would like to have included in the information pack. For example, they wanted additional examples of searches, further details about the MEDLINE database itself, additional information about purchasing modems and communications software, and further explanation of printing and downloading search results. These items have been added. The pack will continue to be updated and improved on the basis of user feedback and largely rewritten for the introduction of the new system interface. In response to requests by survey respondents, the library now also runs a program of beginner and advanced MEDLINE courses dealing with setting up necessary equipment, navigating the system menu, detailed explanation of the structure of the MEDLINE database, and advanced search techniques carried out by commands.

Respondents listed a number of improvements they would like to see in the service as a whole. Specifically, they wanted cheaper long-distance calls or access via high-speed data networks, such as the Joint Academic Network (JANET) or the Internet; the availability of protocols faster than XModem for the transfer of search results; BMA provision of hardware and software needed to access the service; a twenty-four-hours-a-day help desk, and the capability to place direct orders for photocopies of full articles via the library's well-established document-delivery service.

The MEDLINE service is now available via JANET. In addition, search results can be transferred using ASCII, Kermit, XModem, YModem, and ZModem FTPs. An answering machine has been installed to store off-hours help-desk calls.

The library is planning a full Internet link for its own internal network, of which the MEDLINE CD-ROM system forms a part; investigating the possibility of supplying users with relevant hardware and software to access the service; and exploring a possible mechanism for the direct ordering of photocopy requests. Finally, respondents listed a large number of additional information sources they would like to be made available on the system. These sources ranged from databases such as EMBASE and the Science Citation Index to an electronic medical dictionary and electronic versions of other standard medical textbooks. The library plans to develop a range of networked dial-up services on the backbone of the MEDLINE service. There are plans to expand the internal library network to include electronic mail and bulletin board facilities, additional commercial and non-commercial databases, and information files provided by other BMA departments.

CONCLUSION

The official launch of the BMA Library's free MEDLINE service took place on June 2, 1993. The system now has more than 6,700 registered users, with approximately 150 to 200 new users registering each month. Information obtained from the initial pilot program has helped BMA streamline administrative procedures to cope with the continuing rapid increase in numbers of users. The survey respondents have provided valuable insight into use of the service and particular user likes and dislikes.

Suggestions made by the respondents have helped BMA improve the service. Access to the service is now possible via a high-speed data network (JANET), and a range of FTPs are available for the downloading of search results. A PC and a Macintosh, with modems and loaded with many types of communication software, are accessible from the telephone help desk. A self-help database has been set up to put members using nonrecommended communications software in contact with one another. The MEDLINE service information pack, sent to all new users, continues to be improved and updated.

Planned future developments include provision of access to the new system interface for DOS and, when possible, the Windows version; a full Internet connection for the library internal network, of which the MEDLINE CD-ROM system forms a part; and the further expansion of library networked services.

REFERENCES


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APPENDIX

BMA Library's MEDLINE Project: pilot study questionnaire

Thank you for helping us test out the MEDLINE service which we intend launching to the full membership at Easter this year. The pilot scheme has been running from November 1992, and this questionnaire is to obtain some feedback from the people who have been using it.

You are a member to whom we have sent full details of access. We would be obliged if you could complete the following questions as far as possible. This will help us to decide on changes needed, if any, and improved user documentation. Please return this questionnaire by the 28th of February.

First, some questions about you and your computer.

1. Age range:  
   - under 21
   - 21 to 30
   - 31 to 40
   - 41 to 50
   - 51 to 60
   - over 60

2. Sex:  
   - male
   - female

3. Are you a...  
   - medical student
   - junior doctor
   - registrar
   - consultant
   - general practitioner
   - other  
   (Please specify):

4. a. Which part of Great Britain are you from?  
   - England
   - Wales
   - Scotland
   - Northern Ireland
   - Isle of Man
   - Channel Islands

b. Which county are you from?  

5. Experience of database searching:  
   - novice
   - beginner
   - intermediate
   - experienced
   - advanced

6. What communications software do you use?  
   - pcanywhere
   - Procomm
   - Procomm Plus
   - Smartcom Exec
   - Crosstalk Mk 4
   - VersaTerm
   - Epinet
   - Transend
   - Mirror
   - Odyssey
   - DataTalk
   - other  
   (Please specify):

7. What speed of communication do you usually use?  
   - 300 baud
   - 1200 baud
   - 2400 baud
   - 9600 baud
   - other  
   (Please specify):

8. Please detail any problems that have occurred and any solution(s).

9. Would you be willing to give help to other members using the same communications software?  
   - yes  
   - no  
   If yes, please supply name and contact telephone number below.

These questions relate to the MEDLINE service.

10. Have you successfully accessed the MEDLINE service?  
   - yes  
   - no  
   If no, go to question 21.
11. Do you use it...  
- more than once a day □  
- once a day □  
- more than once a week □  
- once a week □  
- more than once a month □  
- once a month □  
- other □  
(Please specify): □

12. Below is a list of some general subjects. Please tick any that you have searched for in our MEDLINE service.  
- anatomy □  
- bacterial & fungal diseases □  
- cancer □  
- musculoskeletal diseases □  
- digestive system diseases □  
- respiratory diseases □  
- otorhinolaryngologic diseases □  
- nervous system diseases □  
- eye diseases □  
- obstetrics & gynaecology □  
- cardiovascular diseases □  
- immunologic diseases □  
- paediatrics □  
- occupational disease & injury □  
- drug treatments □  
- surgical techniques □  
- other □  
(Please specify): □

13. Is there a specific subject or subjects which you search for all the time?  
- yes □  
- no □  
If yes, please specify: □

14. Do you usually find what you are searching for?  
- always □  
- nearly always □  
- usually □  
- very often □  
- often □  
- seldom □  
- never □

15. Were the items you found relevant to what you were looking for?  
- very relevant □  
- relevant □  
- okay □  
- not very relevant □  
- not at all relevant □

16. Were you satisfied with what you found?  
- very satisfied □  
- satisfied □  
- okay □  
- not very satisfied □  
- not at all satisfied □

17. Do you find the MEDLINE system easy to use?  
- very easy □  
- easy □  
- okay □  
- not very easy □  
- not at all easy □

18. What do you like about the MEDLINE system?  
- the way it is displayed □  
- use of the function keys □  
- mapping of terms to the correct subject heading □  
- speed of operation □  
- downloading of search results □  
- help screens □  
- other □  
(Please specify): □

19. What do you dislike about the MEDLINE system?  
- the way it is displayed □  
- use of the function keys □  
- mapping of terms to the correct subject heading □  
- speed of operation □  
- downloading of search results □  
- help screens □  
- other □  
(Please specify): □

20. What improvement(s) would you like to see?  
Please jump to question 23.

The next questions are for those people who are currently not using the MEDLINE service.

21. Why are you not using the MEDLINE service? (Please select all items that apply.)  
- modem problems □  
- communications problems □  
- software problems □  
- have not received the mailing □  
- have no access to a PC □  
- not relevant at the moment □  
- other □  
Please detail other reasons. □

22. Can we help you?  
- yes □  
- no □  
If yes, please suggest below what you would like us to do. □

This section covers the documentation sent out and further training needs.

23. Was the documentation you received comprehensible and understandable?  
- very good □  
- good □  
- satisfactory □  
- poor □  
- poorly understood □
24. Was there anything else you would have liked to see in the documentation sent to you?  
   yes ☐ no ☐  
   If yes, please comment below.

25. Would you like to attend a training course?  
   yes ☐ no ☐  

26. If yes, what would you like the course(s) to consist of? (Please tick all that apply.)  
   basic searching techniques ☐ advanced searching techniques ☐  
   use and setting up of modems ☐ use and setting up of communications software ☐  
   Please suggest anything else.

27. To where would you be willing to travel in order to attend such a course?  
   London (BMA House) ☐ BMA regional office ☐  
   large nearby city ☐ other ☐  
   (Please specify):

28. Would you be prepared to pay £45 for this course?  
   yes ☐ no ☐  

Finally, a general section for your comments.

29. What is your overall impression of the MEDLINE service?

30. Have you any suggestions as to changes or improvements that you would like to see in the future?

31. Are there any other databases or sources of information that you would like to be able to search via the BMA Library?

32. Have you any comments you would like to make about other library services?

Please tick box if you would like to receive information about other library services: ☐