INFORMATION FOR HEALTH

Access to Healthcare Information Services in Ireland

A research report on the information needs of healthcare professionals and the public

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<table>
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<th>GLOSSARY</th>
<th>Definition</th>
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<tr>
<td>AIM</td>
<td>Advanced Informatics in Medicine (EU integrated telemedicine programme)</td>
</tr>
<tr>
<td>ASSIA</td>
<td>Applied Social Sciences Index and Abstracts</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>Compact disc - read only memory</td>
</tr>
<tr>
<td>CHI</td>
<td>Consumer health information</td>
</tr>
<tr>
<td>CINAHL</td>
<td>Cumulative index to nursing and allied health computerised database</td>
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<tr>
<td>CURRENT</td>
<td>Library process to provide users with information on new material published in their subject area</td>
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<tr>
<td>AWARENESS</td>
<td></td>
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<tr>
<td>SERVICE</td>
<td></td>
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<tr>
<td>DIALOG</td>
<td>Commercial online database host</td>
</tr>
<tr>
<td>DOCUMENT</td>
<td>Provision of articles from a central source to users (photocopies by post, fax or computer)</td>
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<tr>
<td>DELIVERY</td>
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<tr>
<td>EHB</td>
<td>Eastern Health Board</td>
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<tr>
<td>EHO</td>
<td>Environmental Health Officer</td>
</tr>
<tr>
<td>END USER</td>
<td>Health staff conducting own literature search of computerised databases</td>
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<td>SEARCHING</td>
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<tr>
<td>ENFO</td>
<td>Environmental Information Service, 17 St Andrew St.Dublin 2</td>
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<tr>
<td>ERIC</td>
<td>Educational Resources Information Center index and abstracts (US Dept of Education National Education Network)</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>GRATEFUL</td>
<td>USA National Library of Medicine user-friendly database search system</td>
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<tr>
<td>MED</td>
<td></td>
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<tr>
<td>GREY</td>
<td>Unpublished documents (in-house reports, research projects, memos, letters, etc)</td>
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<tr>
<td>LITERATURE</td>
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<tr>
<td>IAIMS</td>
<td>Integrated Advanced Information Management System</td>
</tr>
<tr>
<td>IBC</td>
<td>Integrated Broadband Communication (EU healthcare information multimedia communications network)</td>
</tr>
<tr>
<td>INTERNET</td>
<td>World-wide network of computer networks that intercommunicate using standard communications protocol</td>
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<tr>
<td>IRIS</td>
<td>Irish online information retrieval and document delivery service.</td>
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<tr>
<td>LOANSOME</td>
<td>A module of GRATEFUL MED - direct document delivery service</td>
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<tr>
<td>DOC</td>
<td>Library Association of Ireland</td>
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<tr>
<td>LAI</td>
<td>Library and Information Science Abstracts</td>
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<tr>
<td>LISA</td>
<td>USA National Library of Medicine online and CD-ROM access to medical databases</td>
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<tr>
<td>MHB</td>
<td>Midland Health Board</td>
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<tr>
<td>MWHB</td>
<td>Mid-Western Health Board</td>
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<tr>
<td>NEHB</td>
<td>North Eastern Health Board</td>
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<tr>
<td>NWHB</td>
<td>North Western Health Board</td>
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<tr>
<td>PREPP</td>
<td>Post Registration Education and Practice Project (UK Central Council for Nursing, Midwifery and Health Visiting report, 1990)</td>
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<tr>
<td>PROJECT</td>
<td>UK Central Council for Nursing, Midwifery and Health Visiting report on nurse education, 1986</td>
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<td>RCSi</td>
<td>Royal College of Surgeons in Ireland</td>
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<tr>
<td>SEHB</td>
<td>South Eastern Health Board</td>
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<tr>
<td>SHB</td>
<td>Southern Health Board</td>
</tr>
<tr>
<td>TCD</td>
<td>Trinity College Dublin</td>
</tr>
<tr>
<td>UCC</td>
<td>University College Cork</td>
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<tr>
<td>UCD</td>
<td>University College Dublin</td>
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<tr>
<td>UCG</td>
<td>University College Galway</td>
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<tr>
<td>UCHG</td>
<td>University College Hospital Galway</td>
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<tr>
<td>UHC</td>
<td>University Hospital Cork</td>
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<tr>
<td>UNCOVER</td>
<td>Database providing contents indexing of 17000 journals</td>
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<td>WHB</td>
<td>Western Health Board</td>
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national survey conducted by an independent consultant has shown that:
- there are serious deficiencies in access, awareness and availability of information for both healthcare staff and patients in Ireland (2.2.3, 2.3.1);
- many health service staff and patients, particularly in rural areas, have been severely disadvantaged in their access to up to date specialised information (2.3.2);
- there has been a lack of recognition from central government of the importance of library and information services and of the potential use of information technology in accessing healthcare information (4.3);
- no central lead on information strategy and future planning has meant that the development, cooperation and coordination of healthcare information services has been restricted (4.4);
- the sophisticated access necessary to the world-wide knowledge base of healthcare (for example on the Internet) is not available to many staff and is under-utilised in Ireland (2.3.1);

A study of international best practice (including countries of similar size and resource base) has also shown that
- professionally staffed library and information services have the ability to provide cost-effective and timely access to relevant information in the required format, saving the time of health professionals (1.6.1, 4.2, 4.3);
- these services improve patient care outcomes, effective decision making, research and continuing education and development of all staff (1.6.1, 4.2, 4.4, 4.5).

As a result of the survey and review of best practice it is recommended that the Department of Health and the Library Association of Ireland set up a panel to develop a comprehensive national information strategy and plan to coordinate the future development of health sciences information services. The recommendations include:
- the development of an integrated and coordinated health sciences library and information network for Ireland with the emphasis on shared information resources;
- the development of information services for specialised groups through national coordination and networking.

Further details of the terms of reference, research and findings are summarised in the following pages with the recommendations cited in full.

**Terms of reference**

Against a background of change in the healthcare environment, the publication of *Shaping a healthier future* (Department of
Health), and the report on *The future of nurse education and training in Ireland* (An Bord Altranais) the research was commissioned in 1994 to review levels of access to information and library services for healthcare staff, patients and the public in Ireland. An experienced independent consultant was appointed by the Library Association of Ireland to conduct the research, funded by the Department of Health with money from the National Lottery.

The major objectives of the research were to:

- determine the information needs of medical practitioners (including doctors, dentists, and nurses), the paramedical professions (including physiotherapists, occupational therapists, nutritionists, and radiographers), senior managers, environmental health officers, scientists, technicians, as well as patients and their carers;
- determine best practice internationally;
- make recommendations for the future development of healthcare information services in Ireland.

The methodology included:

- interviews with senior health service managers, professional organisations and academic institutions, and voluntary bodies representative of staff, patients, carers and the public in Ireland;
- national postal questionnaire survey of 500 healthcare staff from different grades and specialties;
- a telephone survey of all city and county libraries;
- a literature search and review of best practice internationally.

**Summary of results**

The survey of health service professionals in Ireland showed that the most important reasons for seeking information were to keep up to date, to help with a particular case and for continuing education purposes. 70% of doctors regularly needed to access information within 24 hours, although methods of obtaining the information varied widely. A third of respondents needed to access information out of normal office hours and less than 50% of respondents were successful in satisfying their information needs.

The most frequently used information sources were colleagues at work, followed by journals. Almost a third of staff seldom or never read any government publications. Half the staff surveyed seldom or never consulted a librarian for advice on information seeking and over half seldom or never used computer information systems such as MEDLINE or CINAHL as sources. The regular use of libraries was in direct relation to accessibility. Hospital doctors were the highest users of libraries amongst the medical and nursing professions and were the most likely to have relevant libraries easily accessible to them. However, many doctors experienced difficulties obtaining specialised information.

Reasons for non use of libraries by doctors were mainly related to GPs and hospital doctors who lived in rural areas and/or had no access to medical libraries. Nurses complained of lack of proper library provision with relevant nursing material while the paramedical professions also lacked access to specialist library and information services. Managers with professional library services in the health board made more use of libraries than those without. Many of the latter noted the lack of suitable facilities for health service managers generally. Environmental health officers overwhelmingly referred to their lack of library and information services. Overall, a general lack of awareness of library and information services and their facilities was very evident in the responses; less than a third of staff surveyed had ever had any training in library use or information handling skills.

The greatest restrictions to accessing information were lack of time and geographical location; one third of health service staff worked at least 10 miles from the nearest specialist collection relevant to their work. Lack of access to specialist information was felt to be a restriction by over a third of respondents overall - this varied from 67% of environmental health officers, 47% of the paramedical professions, to 34% of senior managers. Over a third of staff said that restricted access (in terms of policy
and opening hours) to health sciences libraries was a barrier to obtaining information. Over 40% of senior managers and 31% of doctors were restricted in their access to information by the lack of computer systems and networking facilities. A quarter of health professionals overall said that the lack of a librarian or information specialist restricted their access to information. Many staff commented on the difficulties of obtaining up to date information in their specialist areas due to these restrictions. Concern was expressed by all professional groups at the difficulties experienced gaining access to the most recent specialist journals for information on the latest advances in techniques and research.

Suggestions on improving access to library and information services were most frequently concerned with increasing access to computers, networks and CD-ROMs and to greater awareness of information resources and services available in health science libraries. Increased access to libraries and more education and training in the use of libraries and information searching and retrieval was seen as very important by many respondents. Those staff who had experienced a professional library service were aware of the benefits and time saved in the effective use of such a facility. Many staff demanded increased resources including more library staff, easier access to specialist journals, up to date books and more space in the library for studying.

Health service professionals surveyed expressed overwhelmingly that there was a lack of adequate information on healthcare and related matters at the right level for the public, patients and their carers. Although the situation in consumer health information was improving, particularly with the publication of leaflets by voluntary bodies, charities, the Health Promotion Unit, and television and radio programmes, there were gaps in coverage in some areas. The lack of public availability and awareness of healthcare information was also a matter of concern to many staff, particularly in rural areas.

The survey of public library provision in this area revealed an increasing demand over recent years for information on all aspects of healthcare, self-help, alternative and preventive medicine, and diet and fitness. There was a need for better coordination of the dissemination of consumer health information and a directory or listing of material available, particularly of leaflets and booklets. While all public librarians stocked some material on health and fitness subjects, it was difficult in a multidisciplinary service to keep track of up to date information in leaflets produced by a wide variety of sources. Most public libraries did not have the resources to provide enough multiple copies of books and videos required for the branches, or the staff time to maintain the leaflet collections as well as they would like.

**Conclusions and recommendations**

Although many health science libraries and librarians were praised and obviously well used by health service staff, the research identified serious deficiencies in access, awareness and availability of healthcare information for both staff and the public. Overall, the research reveals an unsystematic and uneven approach to the provision of health sciences library and information services. Although there are many examples of excellent service provision in spite of limited resources, and initiatives such as the Irish Medical Libraries' Journal Holdings scheme are very successful, many health service staff and patients, particularly in rural areas, have been severely disadvantaged in their access to up to date specialised information. The lack of appropriate resourcing and recognition from central government of the importance of information and IT or a central lead on strategy and future planning has meant that the development, cooperation and coordination of healthcare information services has been restricted.

From the results of the survey it must be concluded that the sophisticated access required to the world’s knowledge in the health science field (including the Internet) is not available to many healthcare professionals in Ireland. From the literature review and the study of international best practice (including countries such as New Zealand with similar sized populations) it has been shown that professional library and information services have the ability to identify information needs cost-effec-
tively and provide timely access to relevant information in the required format, thus saving the time of health professionals and cutting institutional costs. It has also been shown that library services influence patient care outcomes, effective management decision making, research activity, and the continuing education and development of all healthcare staff.

The review of best practice indicates that a systematic review of information strategy and planning is the way forward to ensure a basic level of provision to meet the needs and requirements of the complex modern healthcare environment. To ensure the success of such a review it is essential that central government and the health boards make a firm commitment to the future development and role of health science libraries. Major decisions must be addressed to ensure that the investment already made in information technology and library services is not wasted.

In order to support effectively the aims and objectives of the recent strategy for healthcare a strong and proactive library and information service is necessary to provide cost-effective information management and retrieval for the nation’s health professionals. A commitment to the importance of information and information services for healthcare from government and recognition of the value of professional library and information specialists is vital to this process.

The recommendations accordingly stress the urgent attention required for a major review of library and information provision in line with best international practice. Minor changes to the system would not have the desired effect of ensuring that the needs of healthcare professionals are met and, it is argued, they should have the best possible facilities that the government can afford, for the benefit of the nation’s health.

The recommendations cited below place the emphasis on a structured review of library and information services for healthcare in Ireland. The involvement of librarians and information specialists is essential. The Department of Health has a key role in any review and should be involved at every stage of the planning process; if it does not then the exercise will be much less effective.

The objective of the following recommendations is to provide a cost-effective and realistic way forward for the future planning of information support services for Irish healthcare professionals and the public. The recommendations also emphasize the need for further investment in information technology and integration of computer systems and services to ensure value for money and to avoid the perils of heavy investment without effective information management strategies.

Unless attention to these issues is given at the macro level Ireland will lose an opportunity to be at the forefront of healthcare information development, and the resources already invested will be less effective, to the ultimate detriment of the population as a whole. Accordingly the following recommendations are made.

The future development of healthcare information and library services requires a mechanism whereby major issues and problems can be discussed and an agreed national strategic framework developed. In accordance with examples of best practice it can be seen that effective and targeted resources are necessary to develop information services for healthcare staff and patients; official recognition of the value of professional library and information skills from national level is required.

**Recommendation 1**

It is recommended that the Department of Health and the Library Association of Ireland set up a panel to develop a national healthcare library and information strategic plan. Suggested objectives of the strategic plan include:

- the development of an integrated and coordinated health sciences library and information network for Ireland with an emphasis on shared information resources;
- the promotion of the role of the professional librarian and a proactive approach to health service information management, increasing staff and public awareness of services available;
- the development of a policy on the training and education of staff and students in library use and information handling skills;
the development of a policy to improve the provision of healthcare information for the public, patients and their carers.

**Recommendation 2**

It is recommended that, to ensure the successful implementation of a healthcare library and information strategic plan, and in accordance with best practice, the following initiatives be considered by the panel:

- the establishment of a national forum for the exchange of views and information, to represent the interests of libraries and users, to inform relevant policy making and to promote collaborative effort between all providers of healthcare information;
- the undertaking of an audit of health science library and information services in Ireland;
- a study of the implications of the new nurse and medical education curricula and their effects on library and information services with a view to improving services for training and continuing education;
- the publication of directories of specialised information resources;
- the development of marketing skills and continuing education and training for all library and information staff;
- the development of library use and information skills training courses for all healthcare professionals;
- the promotion of information technology to all health professionals;
- the development of information networking including increased CD-ROM networks on local and wide area networks;
- the provision of examples of good practice;
- the development of services for specialised groups through national coordination and networking, with particular attention to the paramedical professions, dentists, environmental health officers and health service managers;
- the development of policy on the integration of management information systems with library systems in healthcare units;
- the fostering and improvement of communications and information exchange with voluntary organisations including self-help groups, charities and other information providers.

**Recommendation 3**

It is recommended that in order to address the central issue of lack of access by many healthcare staff to specialist information services in their region, as shown in section 2.3.1 of this report, that:

- a library and information service be provided by all Health Boards or arrangements made to share resources with an existing institution, to provide a library service for all healthcare professionals within the region; these should include a minimum of one full-time professional librarian, plus clerical and professional assistance as necessary, and a budget, in accordance with the *Standards for Irish Health Care Libraries* laid down by the Library Association of Ireland;
- all teaching hospital libraries should have a minimum of one full-time professional librarian and that all teaching hospital libraries receive accreditation from the universities or colleges.

**Recommendation 4**

It is recommended that, in order to ensure the continuing development and quality of professional information and library services required by healthcare staff as evidenced by this research and best practice abroad, the Department of Health and the Health Boards recognise the professional status of librarians in health science libraries and provide appropriate grading, salary and career structure.
Recommendation 5

It is recommended that the restrictions to information access caused by lack of time, geographical dispersal and lack of computer equipment as shown in 2.3.1, be addressed through increased investment in information technology and the development of computer networking to healthcare units and practices, with a view to improving library and information services for all healthcare staff in rural areas and those with specialist needs.

Recommendation 6

It is recommended that as a result of the findings of this research (2.2.3), and in view of the proposed changes to nurse education and training, special consideration be given to the improvement of all nurse library and information services, particularly in the areas of increased resources to those institutions supporting the new nurse education courses.

Recommendation 7

It is recommended that the need for access to library and information services by all healthcare staff during and after training, as shown by the research (2.3.1 and 2.3.2) and evidenced in the review of best practice, be recognised. Increased investment in collection development and information technology in libraries is required from the Department of Health and Health Boards in order to build up professional services to support staff in their work and continuing education; particular attention should be paid to the needs of environmental health officers, the para-medical professions, dentists, health service managers and GPs, especially in rural areas.

Recommendation 8

It is recommended that, in view of the findings outlined in Chapter 3 and in the review of best practice, further research be done in the area of consumer health information; to assess the demand for and provision of information by self-help groups, voluntary organisations and charities; to consider the adoption of a nationally coordinated dissemination policy and the development of a database of information sources of benefit to healthcare professionals, patients and the public. A feasibility study to assess the benefits of introducing a consumer health information service similar to Help for Health and others in the UK should be undertaken. The role of health sciences libraries, public libraries, the Department of Health and the voluntary organisations should be considered in any national policy or plan to increase access to this, the fastest growing area of healthcare information.

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June 1995
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Information is essential for the effective functioning of all organisations and individuals. In the provision and management of healthcare services, easy access to relevant up-to-date information can make the difference between life and death. Many factors can affect an individual’s need for and use of information, from educational background and professional status to work environment and accessibility of information services.

The research project was set up to review access to library and information services for healthcare staff and patients in Ireland and to make recommendations for service development. This report provides an evaluation of the information needs of medical practitioners (including doctors, dentists, and nurses), the paramedical professions (including physiotherapists, occupational therapists, and nutritionists), administrators, managers, environmental health officers, scientists, technical and ancillary staff, as well as patients and carers.

The research was commissioned at a time of fundamental change and development in the Health Service in Ireland. In 1994 the Department of Health published *Shaping a healthier future: a strategy for effective healthcare in the 1990s,* which sets out objectives and targets for the reorientation of the health service based on the three main principles of equity, quality of service and accountability. A Four Year Action Plan sets out a range of organisational reforms involving legislation and resource allocation at national level. One of the measures to be taken to achieve the best possible health and social gain with available resources is the provision of “better information, research and evaluation as a basis for decision making.” The adoption of the concepts of health gain and social gain in service planning and delivery will inevitably “rely very heavily on the collection and analysis of accurate and comprehensive data.” (p.24) The necessity of increasing the consumer-orientation of health and social services is emphasized in Chapter 4 where one method of achieving this objective is “to ensure that detailed and accurate information is available when required.” (p.40) This implies a need for flexible, timely and relevant information and document delivery services supplied by professional information specialists and library services.

Also in 1994, An Bord Altranais (The Nursing Board) published its report on *The future of nurse education and training in Ireland,* which presented 28 recommendations for fundamental changes in the organisation, education, training and resourcing for the future preparation of nurses. The proposals include the change in status of student nurses from employees in the health service to full-time students and the establishment of a national curriculum and framework linking the colleges of nursing with higher education institutions. A programme of mandatory post-
registration nurse education and training is also proposed. The Department of Health has already recognised the importance of information to continuing nurse education, by making available substantial funding in 1994 to provide access to the CINAHL nursing database.

The implementation of the healthcare strategy, changes in nurse education as well as other major reforms such as the proposed requirements for continuing medical education for doctors, will have far-reaching implications for all healthcare information services and libraries in the increasingly complex and technically advanced health service environment. Health service staff of all grades require sophisticated information and library services to enable them to keep up to date with a fast developing and changing work environment and increasing support for continuing education and training.

The Library Association of Ireland (LAI) decided that the general lack of primary data on information needs and requirements in the Health Service together with an awareness of a national inconsistency and unevenness in healthcare information services and library development should be addressed with two new initiatives. A set of basic Standards for Irish Healthcare Libraries was formulated by the Health Sciences Libraries Section of the LAI and presented to the Minister of Health in March 1994.

Simultaneously, the LAI decided that it was essential to review current levels of access to library and information services and make recommendations for their development with due regard to the country’s resource base. Funding for the research was made available by the Department of Health with money raised from the National Lottery. The LAI appointed a Research Committee with representatives drawn from all sectors of the library community.

1.2 Objectives and methodology

The major objectives of the research were to

- determine the information needs and requirements of the whole range of healthcare practitioners including doctors, nurses, paramedical staff, managers, administrators, researchers, scientists as well as the public, patients and their carers;
- determine best practice internationally;
- make recommendations for the future development of healthcare information services in Ireland.

The methodology of the research is outlined as follows:

- literature searches including the following databases: MEDLINE, CINAHL, LISA, ASSIA, ERIC;
- interviews with Chief Executive Officers and senior managers of Health Boards, senior representatives of professional associations, colleges, societies, councils, faculties, public libraries, charities and voluntary bodies which are representative of staff and/or patients and their carers in healthcare and related areas; (these organisations are included in Appendix A);
- pilot survey
- a postal questionnaire survey of the information needs of staff from all grades across the whole range of health and related services; (questionnaire is reproduced in Appendix B);
- a telephone survey of all public city and county libraries in Ireland to evaluate their role in the provision of information on health and related issues for the public; (questionnaire is reproduced in Appendix C);
- follow-up interviews and consultations around the country to study in more depth the issues raised in the survey;
- a review of best practice internationally;
- collation, analysis and interpretation of data collected;
- production of report and executive summary;
- dissemination of findings.

1.3 Preliminary interviews

It was essential at the start of the research to gain an overall view of the issues concerning health service staff and patients by consulting initially with their representative bodies. A list of organisations representative of the health professions, patients and carers, medical education and health-related bodies was compiled with advice from the Research Committee. Structured
INTRODUCTION AND RESEARCH DESIGN

3

Interviews were used as a basis for discussion of information needs and use. Some consultations were held face to face, and the rest conducted by telephone.

These discussions proved a valuable aid in the questionnaire design for the main survey. They also helped put into context the differing working environments and information requirements of the various professions and users of the health service. Common themes running through these discussions included, for example, variability of services and accessibility by staff; the need for increased resourcing and staffing; and more computer networks and access to CD-ROM databases. Many of the specialist and paramedical professions reported a lack of easily accessible information specific to their particular subject areas. There was a general lack of awareness amongst some groups of the availability of library and information services. These issues are examined in more depth later in this report.

1.4 Sample

There is no single, centrally compiled register of all health service staff and therefore a variety of different sources and methods were used to compile a sample of groups studied. During the preliminary interviews with heads of representative organisations access to membership lists was requested where appropriate. This was often granted, and where this was not possible some organisations agreed to dispatch questionnaires on our behalf.

The size of the sample was determined by the resources available in terms of time and finance. While a wide range of professions within the health service was to be surveyed it was important to achieve reasonable numbers from each group in terms of response to ensure reliability of the data. The groups of professions surveyed were selected to represent as wide a diversity within the health service as possible. It would have been impossible to survey every specialism in a project of this size. Sample sizes from each group vary due to the overall restraints on the project but every attempt has been made to provide a good response figure from each profession. For example, An Bord Altranais have over 46,500 nurses on their active register at present - while the sample for this survey is only 400, it represents a random sample selected by computer from the register and has provided a response from all levels and specialties in the nursing profession.

The sample of senior managers was chosen at random by selecting 8 from each health board and 1 from each voluntary hospital as listed in the Institute of Public Administration Yearbook and Diary 1994. The samples of doctors and dentists were taken at random from the General Register of Medical Practitioners (the Medical Council, 1993/4) and the Register of Dentists (Dental Council, 1994). Samples of the other groups were taken at random from membership lists or sent to the organisations for random distribution amongst their members.

Table 1 shows the overall population and sample figures as well as the response rates. The population figures were obtained from the professional organisations and represent approximate numbers of staff working in Ireland. Inevitably in a highly mobile and large workforce some staff had retired, moved, emigrated or died since the figures were compiled.

Table 1: Overall response rate of healthcare staff to questionnaire survey

<table>
<thead>
<tr>
<th>Category</th>
<th>Population*</th>
<th>Sample</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentists</td>
<td>1000</td>
<td>100</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>Doctors</td>
<td>5900</td>
<td>250</td>
<td>119</td>
<td>48</td>
</tr>
<tr>
<td>Environmental Health Officers</td>
<td>250</td>
<td>25</td>
<td>21</td>
<td>84</td>
</tr>
<tr>
<td>Laboratory Scientists</td>
<td>700</td>
<td>70</td>
<td>29</td>
<td>41</td>
</tr>
<tr>
<td>Senior Managers</td>
<td>293</td>
<td>97</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Matrons</td>
<td>120</td>
<td>12</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>Nurses</td>
<td>46500</td>
<td>400</td>
<td>155</td>
<td>39</td>
</tr>
<tr>
<td>Nutritionists/Dieticians</td>
<td>230</td>
<td>23</td>
<td>10</td>
<td>43</td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td>350</td>
<td>35</td>
<td>22</td>
<td>63</td>
</tr>
<tr>
<td>Physical Scientists</td>
<td>80</td>
<td>8</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Physiotherapists</td>
<td>1032</td>
<td>50</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>Radiographers</td>
<td>170</td>
<td>17</td>
<td>9</td>
<td>53</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>56,625</strong></td>
<td><strong>1087</strong></td>
<td><strong>501</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>

*Population figures are approximate for number of staff working in Ireland, 1993/4.
1.5 **Response and statistical analysis**

The detailed response figures are given in Table 1. Figures 1 and 2 illustrate the proportions of sample and response size. Having sent out second questionnaires and pre-paid envelopes to non-respondents a final response rate of 46% was achieved. This is considered an excellent response for this type of postal survey where return of the forms is entirely dependent on the goodwill of the participants. Telephone reminders were also made to a number of non-respondents following the second posting.

Response rates varied considerably between the various professional groups. The highest response rate was from environmental health officers at 84% and the lowest was from physiotherapists at 32%. A response of 66% was received from senior managers in the health boards and voluntary hospitals, and 48% from doctors in hospitals and general practice. 40% of nurses and matrons returned completed questionnaires.

The analysis and presentation of the data was carried out using dBase III Plus and Excel 5 software packages. In the case of missing values, where respondents did not answer all questions on the questionnaire, unless otherwise stated, the percentages in the report and tables refer to proportions of the total number of respondents to a particular question. Therefore, the assumption is made that the missing values are distributed pro rata across the various categories; the number of missing values was in most cases very low and so the validity or otherwise of this assumption is insignificant.

Expert statistical advice was sought on the analysis and it was advised that the responses from groups of professions be aggregated as much as possible to provide larger more reliable numbers for analysis. This has been done as follows:

- **Medical** - Doctors and Dentists
- **Environmental Health Officers**
- **Nursing** - Matrons, Nurses, Midwives and Public Health Nurses.
- **Paramedical professions** - Laboratory scientists, Nutritionists and dieticians, Occupational therapists, Physical scientists, Physiotherapists and Radiographers
- **Senior Managers**
It is recognised throughout this research that the individual professions and indeed the specialist groups that together comprise each profession, have distinct working environments and specific needs. Reference will be made throughout the report to individual professions and specialisms where the responses differ significantly from those of the total group, or to illustrate particular points.

Completed questionnaires were categorised by type of employing organisation. These were as follows:

- Health Boards
- Voluntary hospitals
- GP surgeries
- Dental surgeries
- Private institutions (hospitals, clinics, nursing homes, hospices etc)
- Institutions with charitable status (e.g. National Cancer Registry; Crosscare, the Catholic Social Service Conference)
- Academic institutions (universities and colleges)
- Others (Department of Defence, National Medical Rehabilitation Centre, National Rehabilitation Board, Central Remedial Clinic).

Table 2 shows the level of response from these organisations. Seven respondents who returned questionnaires were temporarily not working, for example on maternity leave. A more detailed breakdown is included in Appendix D.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Boards</td>
<td>236</td>
</tr>
<tr>
<td>Voluntary hospitals</td>
<td>101</td>
</tr>
<tr>
<td>General practice surgeries</td>
<td>71</td>
</tr>
<tr>
<td>Dental practice surgeries</td>
<td>31</td>
</tr>
<tr>
<td>Private institutions</td>
<td>35</td>
</tr>
<tr>
<td>Charities</td>
<td>3</td>
</tr>
<tr>
<td>Academic institutions</td>
<td>13</td>
</tr>
<tr>
<td>Others</td>
<td>4</td>
</tr>
<tr>
<td>Not working at present</td>
<td>7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>501</td>
</tr>
</tbody>
</table>

1.6 Literature review

The area of healthcare information management is wide and diverse and the literature covers subjects from medical informatics computer systems, medical databases and clinical decision support systems, to information and communications technologies and telematics, integration of healthcare systems, training and education, and consumer health information. Here it is intended only to highlight a few examples of the literature as they relate to the present research and the situation in Ireland. A wider perspective is provided in Chapter 6 in a review of international best practice including the literature on information strategy development.

As a recent article in the Sunday Times highlighted, the importance of doctors being kept up to date with reliable, accurate information on the latest research is measured in terms of life and death. Doctors admit that patients have died as a direct result of use of outdated textbooks and training methods which fail to recognise the latest techniques and research findings. With the current emphasis on clinical outcome evaluation and cost-effective patient care the provision of efficient library and information support services is essential.

In a recent study Storey examined the spatial distribution of education and welfare facilities in rural Ireland and shows that those areas in most apparent need of public welfare facilities may often be those most likely not to have access to them. The uneven distribution of services and facilities can have a profound effect on the public. “The degree of access which people have to these services undoubtedly has a considerable bearing on the quality of their lives.” The significance of access to information about available health services assumes even greater importance under such circumstances.

1.6.1 Clinical decision making and cost-effectiveness

A review of the literature reveals several studies and reports on the impact of reliable information and library services on clinical decision making. Notably, in the USA, the Rochester Study in 1991 systematically reviewed the impact of information provid-
ed by the medical library to physicians on a specific clinical case. The results showed that 80% of physicians said they had probably or definitely handled an aspect of patient care differently than they would have otherwise. These changes included diagnosis (29%); choice of tests (51%); reduced length of stay in hospital (19%); advice to the patient (72%). Physicians said that information provided by the library contributed to their avoidance of mortality (19%), hospital-acquired infection (8%), surgery (21%), and additional tests and procedures (49%).

A series of studies conducted since the mid 1970s have also shown direct benefits in terms of cost effectiveness and patient care. Other extensive research has been undertaken in the United States on the benefits and value of health science libraries including a scientific study in which 95% of physicians said that information obtained from the library contributed to higher quality care for their patients. Computerised literature searches have been shown to be an important diagnostic tool for physicians and an effective alternative to costly diagnostic tests. In fact, doctors and hospitals in the USA have been successfully sued for negligence because a proper literature search was not carried out before treatment was decided.

In 1985 Garfield illustrated the various ways in which a medical library supports clinical decision making by providing up to date information in a cost-effective manner. The importance of the role of the library in continuing education is also described as well as the value of demonstrating their effectiveness through quantitative evaluations. Previously evaluation had relied on data from user questionnaires but more objective studies needed to be carried out.

Issues involved in clinical information delivery are further discussed by Marshall who provides a review of the literature and describes services including end-user searching of computerised databases, quality filtering of the literature and clinical information systems which integrate internally generated information like the patient record with access to library and information services. Quality improvement programmes use the literature to help health professionals to improve patient outcomes.

Recent attention has turned to a new approach towards medical education based on evidence-based medicine, which requires efficient literature searching and evaluation of clinical literature. Healthcare professionals do not have the time to retrieve all reliable information from reports of original research about the effects of healthcare. Systematic reviews are therefore necessary to link research results to improved health outcomes. In the past reviews have not been carried out systematically so that the implementation of some highly effective healthcare methods has been delayed for many years and other forms of healthcare have continued to be used long after research has shown them to be ineffective or even harmful. The role of information specialists is a crucial one here in advising reviewers on exploiting the information resources available and search and retrieval techniques. A study at the University of Pittsburgh analyzed the similarities between medical librarians' and physicians' criteria for selecting relevant articles. The decision making processes of both were studied and it was found that there were no significant differences between librarian and physician. The study showed that librarians can effectively provide a quality filtering process for the clinician, and that this should be extended to other areas.

Work currently being done at the UK Cochrane Centre in Oxford and the NHS Centre for Reviews and Dissemination at the University of York conducting systematic reviews of research findings and disseminating results is described in a number of recent publications. This process requires very strong support from library and information services in order to identify all the relevant publications and the role of the information specialist here is vital.

The enormous problems faced by all health service staff in dealing with the deluge of information relating to healthcare serve to illustrate how the medical librarian's role has changed to become both an intermediary bridging the gap between the literature and the practitioner and an instructor for end-user searching. Makowski discusses the development of the clinical medical librarian (CML) programmes in the USA and suggests the evidence shows that the CML can increase use of literature.
in the clinical setting by providing case-specific information which can have direct impact on patient management.\textsuperscript{24}

1.6.2 \textbf{General Practitioners and rural services}

Access to relevant up to date information is a particular problem for health service staff in rural areas away from the large teaching hospitals. As Culhane and O’Mahony explain, General Practitioners (GPs) are particularly vulnerable and could benefit from developments in information technology (IT) which can bring the full range of medical knowledge within easy reach.\textsuperscript{25} However, a major obstacle to this solution is the need to develop information searching and critical appraisal skills with which to identify and interpret the information available, as well as computer literacy skills. Robishaw and Roth describe an outreach project run by a medical library in rural Pennsylvania to provide local physicians in a large sparsely populated area with access to current medical literature.\textsuperscript{26} The exercise involved demonstrations of the National Library of Medicine’s GRATEFUL MED and LOANSOME DOC end-user searching packages at local meetings of medical societies or at hospitals. This was followed up with installation and training in individual practices and offices. Although telecommunications and technical support problems were encountered and some librarian reluctance to participate (due to fears of being flooded with interlibrary loan requests), by the end of the project 32\% of those who had attended the demonstrations had access to GRATEFUL MED. The project showed that whereas doctors already knew that searching medical literature was useful for research and writing papers they had not generally realised its potential as a valuable aid to diagnosis and treatment decisions. The medical librarian continued to act as a search consultant helping doctors to construct or revise search strategies and conducting searches where professional expertise was required.

A paper by Sillince and Frost reviews the current information systems available for GPs and discusses the critical success factors for primary care systems. These include timeliness, security of patient information, accessibility and availability, flexibility, accuracy, comprehensiveness and relevance. The effects of rapid expansion of information systems in UK primary healthcare are also examined\textsuperscript{27}.

1.6.3 \textbf{Nurse education and training}

A great deal of material has been published recently in the UK on the information needs of and services for nurses. This is largely in response to the new demands made by the fundamental changes in the nurse training curriculum as recommended by the Project 2000 report\textsuperscript{28} and the new requirements for continuing education outlined in the Post Registration Education and Practice Project (PREPP)\textsuperscript{29}. Recent initiatives in the programme to address the implications for information and library services are described by Kennington\textsuperscript{30}.

As previously mentioned, An Bord Altranais has compiled a report on \textit{The future of nurse education and training in Ireland} published in 1994, which sets out its recommendations for the development of training and post-registration of education of nurses. A pilot course has already begun at University College Galway and a second will be run by Dublin City University, the Royal College of Surgeons in Ireland and Beaumont Hospital in 1995. The basic change from a practice-based curriculum to one concerned with developing self direction and research skills will have obvious implications for library and information services for nurses. Wakeham and Thompson & Bullimore have studied these implications and looked at the information-seeking behaviour of nurses\textsuperscript{31,32,33}. Libraries will have a central role in providing the information resources needed to support the new curriculum. Increased staffing and financial resources will be necessary to ensure that nursing learning materials, textbooks and journals are widely available and up to date, and that nurses receive the support and training they need in literature searching and use of the databases available on CD-ROM and online. The linking of schools of nursing with third level academic institutions is another significant development which will potentially place a greater burden on university and college libraries.

In the light of the recent developments in nurse education a
survey of nursing libraries in the Northern Region of England was commissioned which demonstrated the importance of libraries in the studying and updating activities of all health service staff. Proper resourcing of libraries to provide the resources needed for these activities is vital. The survey found that use of libraries by qualified nurses on further courses constituted a large proportion of the total and that this could only increase with the adoption of PREPP.

The importance of provision of adequate resources and time for the updating and continuing education of nurses is underlined by the findings of a recent survey by the Irish Nurses Organisation on *The experience of stress amongst Irish nurses*. One of the most common sources of nursing stress was cited as “difficulties keeping up to date with theoretical knowledge” (p.50). Respondents to the survey also indicated a lack of in-service training (30.5%) and no time off for study leave (73.5%).

### 1.6.4 Consumer health information

Consumer health information (CHI) is the fastest growing area of health information provision. There is an increasingly sophisticated demand for knowledge on all matters related to health as consumer expectations generally are much higher than a decade ago. The individual is assuming much greater responsibility for maintaining a healthy lifestyle and demands more information with which to make decisions about healthcare generally. The development of CHI is charted by Gann in a paper covering its history and the development of a wide variety of services in the USA and UK. As he explains in a more recent editorial even the term ‘consumer’ is not strictly accurate as we produce as much healthcare (self care and mutual support) as we consume from professional services.

The sources of healthcare information are many and diverse, from medical dictionaries and encyclopaedias, articles in nursing and medical journals, Health Board information on local services, leaflets such as those produced by the Health Promotion Unit, booklets from self-help groups and charities, to women’s magazines. A recent study examined the content of the health information provided in weekly magazines which represent an important source for millions of women, and men, who read them.

The Department of Health in its *Charter of rights for hospital patients* refers to the right to information on the patient’s condition, proposed treatment, alternatives, risks and side effects. The publication of this document highlights the growing awareness in Ireland of the need for better information on health matters. One example of the need for more information for the public is revealed by recent research on *Infant feeding in Ireland*. The report recommended that information on correct infant feeding practices and use of formula milks should be disseminated by the Health Promotion Unit to improve the low rate of breast feeding in Ireland and the general nutrition of infants.

It has been shown that increased access to specific healthcare information leads to real improvements in patients' understanding, compliance with treatment regimes and decreased stress, which in turn often lead to easier and faster recovery rates. The effect of information provision on patient anxiety levels is also studied in a paper by Bolton and Brittain. The role of libraries and information services in providing information for patients in general practice, hospital and community settings is examined. All primary healthcare practitioners should be aware of the importance of information as central to the successful communication between doctor and patient. Patient libraries in surgeries and good local information centres are recommended. In the hospital setting the authors suggest that every hospital should have a medical library or information service to cater for patients as well as staff. At a local level each main public library should have a health information service to advise on and coordinate other information services and medical libraries available in the area.

In the past the practice was for doctors to make decisions on treatment without question or comment from patients who were expected to remain passive, grateful and ‘patient’. Today a number of studies have shown that patients and their carers and families benefit from knowing details of diagnosis, treatment and likely outcomes and that such information is a vital
part of the recovery process\textsuperscript{45}. The concept of “information therapy” is discussed by Lindner who argues that the process of acquiring information helps the patient to feel empowered and more in control\textsuperscript{46}. A survey carried out in the mid-eighties of Canadian medical librarians showed that most respondents felt that good healthcare information could be provided by cooperation between librarians, medical practitioners and public libraries. A collaboration between a university medical library and a large public library has proved a solid partnership in the distribution of consumer health information\textsuperscript{47}.

In the USA a survey has shown that most randomly sampled hospital and medical centre libraries allow patients use of their libraries and 90\% of librarians supported patient access to medical libraries\textsuperscript{48}. A description of the Planetree Health Resource Centre is provided by Cosgrove, who charts the objectives and development of this service to provide medical library and health information resources directly responsive to the needs of the general public in California\textsuperscript{49}.

An encouraging development in Ireland in recent months has been the publication of \textit{Your Health} by the Irish College of General Practitioners\textsuperscript{50}. This is a journal produced as a service to patients and is available for reference in GPs’ surgeries. This is an attractive magazine designed “to provide help, advice, discussion and entertainment as you wait.” The first issue includes articles on Maureen Potter’s struggle with arthritis, information on the services available during pregnancy, contraception, ways of avoiding cancer and smoking. This is the first journal of its type in Ireland and hopefully will become more widely available in the future. Another very useful publication in the area of health-related information is the \textit{Directory of national voluntary organisations, social service agencies and other useful public bodies} produced by the National Social Service Board, which includes descriptions of many organisations in Ireland which provide help, support and information on health and welfare matters\textsuperscript{51}. Examples of more specialised initiatives include the \textit{Good Practices in Mental Health} (GPMH) project in County Longford which identifies and describes local mental health projects and services\textsuperscript{52}. GPMH projects also exist in other areas and provide a source of practical information for those wishing to set up similar schemes. Another recent publication has highlighted the problems of carers often coping alone with seriously ill relatives for long periods at home with little support or resources\textsuperscript{53}.

The role of libraries in the provision of CHI in the USA is described by Dahlen\textsuperscript{54}. The problems relating to the dissemination of health information within the current complex environment of social issues, structured pricing and IT are discussed. The author stresses the need for libraries to foster and maintain links with community and state organisations which produce and distribute information resources. It is important that libraries take a proactive approach to collecting and disseminating information. The lack of a centralised system to coordinate a national CHI programme is the reason for under-utilisation of existing resources and is affecting patients’ choice through limited access to information.

\textbf{1.6.5 Training and education in information management}

In the UK it has been shown that a lack of training for all healthcare staff in information management and technology has led to a serious under-exploitation of the new information technology as well as inappropriate or misapplied investment in IT\textsuperscript{55}. The work of the NHS Training Directorate in drawing up the Information Management and Technology Strategy for Training and Staff Development has been to improve this situation and now spends around £4 million annually in all areas of the NHS\textsuperscript{56,57}.

The increasing range and diversity of numerical and textual information now needed to run an effective health service requires a broad set of professional skills and expertise to retrieve, analyze, manage and present it. The present division between information officers (traditionally dealing mainly with statistical data) and librarians (mainly textual information handlers) is unrealistic since so much of the data required by health professionals and managers overlap these areas\textsuperscript{58}. A much wider...
A number of writers have argued for a different type of training and education for information professionals to enable them to assemble, analyse, manage and present the expanding range and diversity of information required to run an efficient health service. The well rounded professional must have a wide range of skills and knowledge including techniques for identifying information needs, organisation of text and numeric data, development of information systems, ability to search databases, proactive information dissemination and liaison with IT personnel. One of the major obstacles is persuading senior managers to commit resources for the training and continuing education of information staff in healthcare organisations. However, there are now a number of new postgraduate diplomas and masters’ degrees in healthcare information management and informatics offered at universities in the UK, including the University College of Wales, Aberystwyth, and the Universities of Manchester and Sheffield.

The importance of helping healthcare librarians keep track of changes in the healthcare environment is highlighted by Palmer and Streatfield who describe a new programme of professional development in Oxford. If health professionals are to gain easy access to the knowledge base of healthcare to improve clinical effectiveness then information professionals must take the leading role or face marginalisation. The new role of knowledge management consultant is stressed and information staff are encouraged to explore these issues and to recognise the impact of IT and intensified information demands on their future work.

1.6.6 Summary

This review of a selection of the recent literature illustrates the multi-disciplinary nature of the developments affecting the delivery of healthcare information, and the technology and expertise required to gain access and exploit the available resources. The far reaching changes in the healthcare environment, both in patient care and service management, have significant implications for the healthcare professional and their need for and use of information of all types. The sophisticated network of world-wide healthcare information resources requires the appropriate professional expertise to organise, manage and access it in a cost-effective and timely manner.

References

2.1 Information needs of health service staff

Section B of the questionnaire to health service staff examined their information needs by asking about their reasons for seeking information and whether they required it quickly and/or out of office hours. Participants were also asked to describe the type of information they had to acquire fast and how successful they were in achieving their information needs generally. It is important to note here that the term information includes all types of textual or statistical knowledge of relevance to health service staff, and would be available from a wide range of sources including libraries.

2.1.1 Reasons for seeking information

Keeping up to date in their field was the reason for seeking information most cited by all the professions surveyed (95%). 94% of all doctors and 99% of the paramedical professionals indicated that they sought information for this purpose. Table 3 shows the breakdown of the figures for professional groupings.

70% of respondents overall indicated that they sought information for continuing education purposes. It is interesting to note that while all the physical scientists cited this reason, as many as 81% of nurses also gave continuing education as a reason for seeking information. This is significant in view of the plans to reform nurse education as a whole with its emphasis on self-directed learning and the resulting increased demands on library and information services this implies.

68% of all respondents stated that they sought information to help with a particular case, condition or clinical problem. This category is important in that it includes those instances where information is sought which directly relates to patient care or public health. A similar proportion (70 - 71%) of doctors, dentists and nurses gave this as a reason, while it was cited by a higher percentage of nutritionists (80%), occupational therapists (91%), and physiotherapists (87%). 81% of environmental health officers also needed to find information for particular cases.

55% of those surveyed cited the preparation of talks and presentations as a reason for information seeking. The highest figures came from matrons (100%), nutritionists and dieticians (90%), and environmental health officers (76%). 65% of doctors, but only 30% of dentists, sought information for this purpose. High percentages of laboratory scientists (76%), occupational therapists (77%) and physical scientists (75%) also cited this reason.

Preparation for meetings was given as a reason for seeking information by 45% of respondents overall. The profession with the highest incidence was, not surprisingly, senior managers, with 52% of environmental health officers, 60% of doctors and only 19% of dentists also giving this reason.
44% and 41% of those surveyed said that research and teaching respectively were reasons for looking for information. While very few dentists cited these reasons, over half the doctors indicated research and 63% teaching. This last figure reflects the relatively high number of GP tutors amongst the respondents. 51% of managers and 57% of environmental health officers gave research as a reason for information seeking. As could be expected, the highest number of the respondents to give management purposes as a reason was managers (84%), with only a small number of doctors, dentists and nurses also citing it.

A few respondents took the opportunity to submit other reasons for seeking information. Several of these referred to the need for technical information, while others focused on general knowledge, legal information and preparation for interviews and exams. Staff training was mentioned by one respondent as was “liaison with GPs abroad” and “improve service to patients”.

Respondents were asked to list the three most important reasons for seeking information in order of importance. As already indicated above these were

1. To keep up to date
2. To help with a particular case, condition or clinical problem
3. For continuing education.

Administration was the least cited reason. 51% of doctors and dentists, 65% of nurses, 58% of the paramedical professions, 48% of managers and 52% of environmental health officers said that keeping up to date was the most important reason for seeking information. Only 12% of doctors and dentists indicated that their MOST IMPORTANT REASON for seeking information was to help with a particular case, condition or clinical problem.

### Table 3: Reasons for information seeking given by professional groups

<table>
<thead>
<tr>
<th>REASONS</th>
<th>Medical</th>
<th>Nursing</th>
<th>ParaMed</th>
<th>Managers</th>
<th>EHOs</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to date</td>
<td>94%</td>
<td>95%</td>
<td>99%</td>
<td>91%</td>
<td>100%</td>
<td>95%</td>
</tr>
<tr>
<td>Cont Education</td>
<td>69%</td>
<td>80%</td>
<td>70%</td>
<td>55%</td>
<td>52%</td>
<td>70%</td>
</tr>
<tr>
<td>Case/condition</td>
<td>71%</td>
<td>69%</td>
<td>74%</td>
<td>42%</td>
<td>81%</td>
<td>68%</td>
</tr>
<tr>
<td>Talks</td>
<td>56%</td>
<td>38%</td>
<td>69%</td>
<td>66%</td>
<td>76%</td>
<td>55%</td>
</tr>
<tr>
<td>Meetings</td>
<td>49%</td>
<td>29%</td>
<td>45%</td>
<td>75%</td>
<td>52%</td>
<td>45%</td>
</tr>
<tr>
<td>Research</td>
<td>44%</td>
<td>41%</td>
<td>40%</td>
<td>51%</td>
<td>57%</td>
<td>44%</td>
</tr>
<tr>
<td>Teaching</td>
<td>49%</td>
<td>38%</td>
<td>49%</td>
<td>30%</td>
<td>9%</td>
<td>41%</td>
</tr>
<tr>
<td>Management</td>
<td>14%</td>
<td>19%</td>
<td>33%</td>
<td>84%</td>
<td>0</td>
<td>28%</td>
</tr>
<tr>
<td>Publications</td>
<td>38%</td>
<td>10%</td>
<td>30%</td>
<td>25%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>Administration</td>
<td>9%</td>
<td>15%</td>
<td>20%</td>
<td>50%</td>
<td>0</td>
<td>18%</td>
</tr>
</tbody>
</table>

2.1.2 Information needed quickly

59% of health service staff surveyed said they needed information quickly (i.e. within 24 hours) and 13% of these needed it on a weekly basis (see Figures 3 and 4). A further 7% had to acquire information fast every 2 weeks, 29% monthly, 24% 3 monthly and 27% less often. The detailed breakdown is supplied in Table 4.

70% of doctors said they needed to get information quickly, and 22% of these needed it at least weekly or fortnightly. 60% of dentists needed to get information fast but only 8% needed it as often as weekly or fortnightly. 30% of nurses surveyed and all matrons needed information fast but 71% of nurses only required it approximately every 3 months or less often.

Of the paramedical professionals 60% of nutritionists and
dieticians, 59% of occupational therapists, 56% of physiotherapists and 48% of laboratory scientists needed information quickly.

Table 4: **Number of respondents needing information quickly**

<table>
<thead>
<tr>
<th>Professional groups</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>110</td>
<td>50</td>
<td>160</td>
</tr>
<tr>
<td>Nursing</td>
<td>68</td>
<td>95</td>
<td>163</td>
</tr>
<tr>
<td>Paramedical</td>
<td>46</td>
<td>44</td>
<td>90</td>
</tr>
<tr>
<td>Senior managers</td>
<td>48</td>
<td>16</td>
<td>64</td>
</tr>
<tr>
<td>Environmental HOs</td>
<td>19</td>
<td>2</td>
<td>21</td>
</tr>
</tbody>
</table>

*(n = 498)*

The professions showing the greatest need for information to be provided quickly were managers (75%) and environmental health officers (90%). 31% of environmental health officers needed information within 24 hours at least every week.

**Types of information needed quickly**

The types of information needed quickly varied considerably from “treatment protocol” and “unfair dismissal” to “health and safety in the workplace” and even “exhumation”. Doctors, dentists and nurses described predominantly information required for a specific case or condition in a patient, while details on drug usage and side effects was also significant. “Research” was a term used by 20 respondents in answer to this question. This could cover a number of types of information from work on a particular case to personal research for continuing education purposes. Other subjects mentioned by this group included use of equipment, toxicity, clinical policy updates, interviews, and legislation.

In the group of paramedical professions, apart from the main need for information related to specific cases and patient care, information on technical specifications and the use of equipment and medical products was most often cited. This was especially noticeable with the occupational therapists whose work involves the evaluation of and advice on the use of medical and technical aids. Methodologies for scientific tests were also cited by laboratory scientists.

Nurses most often described the type of information they needed as for a particular case or patient's condition. Matrons required details of staffing and personnel policies, hospital activity statistics, and health service planning.

Amongst the senior managers who answered this question a significant number referred to the need for information on spe-
specific conditions, aspects of patient care or drug usage. The need for knowledge of current legislation and EU regulations as well as internal hospital statistical data were the other major areas of information they needed.

Environmental health officers were most concerned with information relating to specific cases or events such as outbreaks of serious food poisoning, pollution, particular bacteria, contaminants and effluent. The second most important area was legislation, EU regulations, court cases and planning details.

**How this information was obtained**

Respondents were asked to describe how they had obtained information on the last occasion when they needed it quickly. 32% of those doctors who replied to this question said they used a library to get the information they needed quickly, whereas only 15% of dentists used libraries. This reflects the fact that the only specialised library collections for dentists are in Dublin and Cork attached to the schools of dentistry for the use of students and staff. Doctors and dentists used their own textbooks and journals at home and at work and their colleagues equally to obtain information (19%). 12% used databases on computer links and CD-ROMs at work. Other sources of information included pharmacies, manufacturers and poisons information centres.

Nurses' and matrons' main sources of information needed quickly were divided between textbooks and journals on the ward or at home (26%), and libraries (32%). An additional 13% of nurses specifically mentioned the An Bord Altranais library service. Nurses also used colleagues (15%) and doctors (13%) to obtain information fast. A wide range of specialist bodies and individuals were also mentioned by this group, for example the Mental Health Association, Infection Control Officer, Health and Safety Association, and specialist clinics.

Senior managers in voluntary hospitals and health boards typically used a very wide range of information sources from the Institute of Public Administration to Government departments and the Central Statistical Office. Of those who replied to this question 21% said they used the health board or hospital library to obtain information quickly. Relatively few used their own books and were as likely to quote the hospital computer system or data bases (17%).

Only two references were made by environmental health officers to libraries, and a higher proportion than any other profession surveyed quoted colleagues as their main source of information needed quickly. Other sources included the Barbour Index (environmental information on microfiche) and textbooks and journals at work, laboratories, government departments and specialist organisations. There is no specialist information service for practising environmental health officers and the multidisciplinary nature of their work means that a wide diversity of sources of information must be used.

255 respondents indicated that they received the information in time to be of maximum use and 70 that they did not. However, there was a higher number of respondents to this question than had originally said they needed information quickly, making an accurate analysis of this response impossible.

2.1.3 Information required out of office hours

457 respondents answered the question on whether they required information out of office hours (see Figure 5). Of these 34% said they did need it and 66% that they did not. The professions most in need of information out of hours were doctors (49%), some of whom referred to the difficulties of getting access to information out of hours: “could not discover any means of obtaining same”. GP tutors in particular have a need for library and information services at weekends and in the evenings when they tend to do most of their preparation of teaching materials.
29% of nurses and matrons needed information out of hours, especially while on night duty. While some of this is information obtained from the Poisons Centre, a need was expressed for access to library services: “very frustrating not to have access to nurse libraries at weekends especially”.

Table 5: **Information required out of office hours by professional groups**

<table>
<thead>
<tr>
<th>Out of hours</th>
<th>Medics</th>
<th>Nursing</th>
<th>Paramedics</th>
<th>Managers</th>
<th>EHOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>41%</td>
<td>29%</td>
<td>24%</td>
<td>28%</td>
<td>19%</td>
</tr>
<tr>
<td>No</td>
<td>52%</td>
<td>59%</td>
<td>68%</td>
<td>67%</td>
<td>80%</td>
</tr>
</tbody>
</table>

(n = 460)

There is no discernable pattern to the open-ended comments from the other professional groups. 24% of the paramedical professions, 28% of managers, and 19% of environmental health officers said they needed information out of normal office hours.

2.1.4. **Success rates in satisfying main information needs**

Respondents were asked how successful generally they were in satisfying their main information needs. The response revealed that 48% claimed to be completely or nearly always satisfied. However, 15% were only occasionally, rarely or never satisfied. It is difficult to detect a pattern emerging between the professions. In the totality of information needs and requirements covered by this question it must be remembered that the responses here included knowledge received from colleagues, superiors, specialist agencies (eg. poisons centres), laboratories, other hospital departments, personal copies of textbooks and journals, commercial companies, and so on as well as libraries and information centres. (See also responses to questions on sources of information below in 2.2.1.)

As reported in an earlier similar survey in the UK, demand is strongly influenced by supply. Those health service staff with no or only limited access to information and library services make fewer demands and are more likely to express satisfaction than those with better access to facilities.

2.2 **Sources of information and use of library and information services**

Health Service staff were asked to provide more details of the specific sources of information used, and their patterns of use of libraries. Reasons for non-use were sought as well as their knowledge of the nearest specialist collection. Respondents were asked whether they purchased books and/or journals to support their work and if they used any library services by post. An indication of any previous training in library use or information handling skills and any relevant comments were also requested.

2.2.1 **Sources of information**

The source of information cited most frequently by respondents overall (57%) was colleagues at work on at least a weekly basis. (See Table 6). 71% of respondents consulted colleagues on a weekly or monthly basis. Environmental health officers indicated one of the highest uses of this source of information (90%),
while all the paramedical groups also used colleagues to a large extent (occupational therapists 91%, physiotherapists 87%, nutritionists 80%, and radiographers 77%, laboratory scientists 76%, and physical scientists 75%). 67% of doctors consulted colleagues for information on a weekly or monthly basis while 49% of dentists did the same. Colleagues from outside the workplace were consulted by 41% either weekly or monthly.

55% overall indicated that they read newspapers and 39% read journals weekly (often daily, as noted by some staff). A quarter of respondents said they read books only occasionally while 13% consulted journals occasionally. (The term occasionally was defined in the questionnaire as meaning “at least once per year”). A high proportion of all groups used journals as a source of information fairly frequently, the greatest users on a weekly basis being doctors (73%). Twice as many nurses (44%) read journals monthly as weekly. A third of those surveyed indicated that they seldom or never used government publications and a quarter seldom or never read internally produced information.

Half the respondents seldom or never sought advice from a librarian for information. Fewer of the paramedical professions consulted librarians and 76% of environmental health officers seldom or never did. As the
preliminary interviews had indicated, many staff in these groups describe a lack of accessible specialised information services. 48% of doctors, 56% of dentists and 50% of nurses also hardly ever used a librarian for advice on information seeking. Half of GP tutors would occasionally ask a librarian for advice and most matrons would seek advice monthly or occasionally.

Over half of all respondents seldom or never used computer information systems such as MEDLINE. 71% of environmental health officers and 60% of dentists never used these systems. While 48% of nurses also never used computers for this purpose, slightly fewer of the paramedical professions (29%) and 31% of senior managers never sought information from computer systems. A surprisingly high 41% of doctors seldom or never use MEDLINE or other information system.

There was a very low response rate to the item “current awareness service” in this question and a number of respondents inserted question marks instead. It is assumed that a lot of staff either do not understand what the phrase means or that they have never had access to such a service which aims to provide up to date information on current events and publications, contents of current journals and so on. 48% of doctors and 29% of nurses indicated that they had never used this source for information. The pattern for the other professions was similar.

Only a small number of respondents added other sources of information and some of these repeated items already mentioned in the list provided. Other additional sources included video tapes, continuing education courses, microfiche, TV programmes, UK publications, manuals, and the British Library.

### 2.2.2. Purchase of books and journals

Respondents were asked whether they personally bought any journals and/or books because they could not get access to them at work, and to indicate approximately how many they had bought over the last year. 57% of respondents overall said they did buy books and/or journals and 40% did not. (3% did not answer the question). In the last year 286 respondents estimated they had bought altogether 1015 books and 521 journal subscriptions. Table 7 shows the details of the numbers purchased.

Differences between the grouped professions were slight. Doctors tended to buy more books than do dentists but bought only slightly more journal subscriptions. Laboratory scientists bought more books than the other paramedics but occupational therapists tended to purchase more journals. Senior managers bought more books than any other group.

### Table 7: Books and journals purchased by health service staff

<table>
<thead>
<tr>
<th>PROFESSIONAL GROUPS</th>
<th>Medics</th>
<th>Nursing</th>
<th>Paramedics</th>
<th>Managers</th>
<th>EHOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. staff who buy bks/jnls</td>
<td>111</td>
<td>88</td>
<td>52</td>
<td>29</td>
<td>6</td>
</tr>
<tr>
<td>Staff who do not buy bks/jnls</td>
<td>45</td>
<td>75</td>
<td>35</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>No. books bought last year</td>
<td>441</td>
<td>255</td>
<td>138</td>
<td>178</td>
<td>5</td>
</tr>
<tr>
<td>Average</td>
<td>3.9</td>
<td>2.8</td>
<td>2.6</td>
<td>6.1</td>
<td>.8</td>
</tr>
<tr>
<td>No. jnl subs bought last year</td>
<td>251</td>
<td>101</td>
<td>112</td>
<td>51</td>
<td>6</td>
</tr>
<tr>
<td>Average</td>
<td>2.2</td>
<td>1.1</td>
<td>2.1</td>
<td>1.7</td>
<td>1</td>
</tr>
</tbody>
</table>

(n = 286)

### 2.2.3. Use of libraries

54% of health service staff surveyed indicated that they did not make regular use of libraries in connection with their work or research. 44% said they did use libraries regularly and 2% did not answer this question. (See Table 8).

### Table 8: Regular use of libraries by professional groups

<table>
<thead>
<tr>
<th>PROFESSIONAL GROUPS</th>
<th>Medics</th>
<th>Nursing</th>
<th>Paramedics</th>
<th>Managers</th>
<th>EHOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>USE OF LIBRARIES</td>
<td>Yes</td>
<td>49%</td>
<td>38%</td>
<td>50%</td>
<td>51%</td>
</tr>
<tr>
<td>No</td>
<td>47%</td>
<td>61%</td>
<td>49%</td>
<td>48%</td>
<td>86%</td>
</tr>
</tbody>
</table>

(n = 491)
The regular use made of libraries was much higher by doctors (58%) than dentists (23%) reflecting the far greater accessibility of medical libraries to many doctors and the fact that more GP and continuing medical education tutors are regular users (67%). While only 34% of nurses use libraries regularly, usually related to continuing education and course work, almost all matrons do use them. A higher proportion of nutritionists and dieticians (70%), occupational therapists (54%), and all the physical scientists surveyed were regular library users. The lowest number of users were radiographers and environmental health officers.

Libraries used by respondents

Of the dentists who specified which libraries they used the majority were based in the Dublin area and used the library at the Dublin Dental Hospital. Several were hospital-based dentists and one travelled every 2 months from Letterkenny to use it. Other libraries mentioned included UCC, UCD, TCD and UCG Medical Libraries, and the Irish Dental Association. As expected libraries on site were used much more frequently than those where travel was involved.

Many of the dentists who did not use libraries regularly declined to give reasons for this when asked. The majority of those who did comment referred to the lack of dental information locally:

“No service available locally” (Mullingar)
“None available in immediate area” (Co. Mayo)

Other comments from dentists emphasized specifically the need for more specialised information generally and difficulties of access. These included “Not specialist enough” (Roscommon) and “Too far away” (Kerry); also:

“Limited access - mainly available for staff and students in DDH - limited opening hours” (Crumlin)

Hospital doctors and consultants used the libraries in their own hospitals and/or the nearest teaching hospital library. They were the most likely to have specialised collections easily accessible to them and used them more frequently than GPs who often did not have access to any library service locally. Many hospital libraries were mentioned particularly, as expected, all those in the teaching hospitals and other hospitals in Dublin, Cork, and Galway. Medical libraries round the country mentioned by doctors included the South Eastern Health Board, Sligo General Hospital, and Letterkenny General Hospital, Ardkeen Hospital, Bon Secours (Cork) and Castlebar General Hospital. Other library services used by doctors included the Royal College of General Practitioners, Cavan/Monaghan Mental Health Services, the National Library of Ireland, and the Central Catholic Library. The wide range of libraries consulted reflected to an extent the lack of understanding or awareness of appropriate and/or relevant information services and sources.

Reasons for non-use of libraries by doctors revolved mainly round the lack of access for those in rural practices or hospitals without libraries and too far from good medical information services. Time and distance factors were important elements in these cases as in the comments “Too far away” made by doctors in Counties Cork, Kerry and Mayo, and “I work away from main medical libraries.” (GP Tutor)

A general lack of awareness of library and information services and what they can offer was evident. Some doctors referred to a lack of material in local public libraries and others felt that they did not need to use libraries:

“Not necessary in my field” (GP, Co. Clare)

“Never thought that local library or any other library would give me access to that type of information until now”. (GP, Co. Kerry)

“Trained in different era - none available in early years”. (GP, Limerick)

Accessibility was an issue which many Doctors, especially GPs, were concerned with the fact that there was “no ready access at all to GPs” (GP, Co. Mayo) and libraries were “difficult to get to during normal hours” (GP, Co. Kilkenny). Other comments included:

“Major libraries not convenient - attached to medical schools” (Consultant Anaesthetist, WHB)

“No library at EHB HQ” (Occupational physician, EHB)
A view of how libraries are developing in rural areas is provided by one GP:

“Rural practice - we have our own library in the surgery (4 partners). It is small but we try to keep it up to date in main areas.” (GP, New Ross)

Concern was expressed by some specialists at the difficulty of obtaining information on their subjects due to lack of resources:

“SHB has no provision for use of libraries outside hospitals. The hospital library is 14 years out of date, no radiological, ultrasound, CT or other imaging journal” (Consultant Radiologist, SHB)

“Have not been able to find a specialist library” (Psychiatric Consultant, Dublin)

“Library here has inadequate radiology literature” (Consultant Radiologist, MHB)

Nurses and matrons listed hospital and nursing school libraries as those most frequently used. Many of these were small collections with no professional librarian. Public libraries were also listed frequently. The teaching hospital libraries were frequently mentioned, especially UCD, RCSI, and TCD. Several nurses mentioned An Bord Altranais library service and a number referred to public libraries like Dublin Corporation Libraries (ILAC Centre and other branches), and others round the country. Other libraries mentioned included those at Magee College University of Ulster, Sligo Mental Health Services, Letterkenny Hospital Education Centre, South Eastern Health Board, International Missionary Training Hospital Drogheda and Cambridge University. There was no discernable difference between nurses and matrons in this respect although their reasons for library use tend to differ.

Nurses’ comments on non-use of libraries concentrated on lack of time and accessibility. Many nurses complained as follows:

“No facilities in my area” (NWHB Ambulance Service)

“Limited information available - no medical journals on file” (Nursing Home, Co. Wicklow)

“We don’t have a proper library service” (Castlebar)

“No nursing library in our hospital” (Ennis)

“No medical libraries for nurses available locally” (Tralee)

“No access to nursing library” (Cork)

“Hard to get to Dublin. I used the Royal College of Nursing library regularly when I worked in London.” (Wexford)

Even if libraries are available nurses often noted that the “hospital library is very limited and oriented to medical staff” (Cashel) or that the “materials [are] not available and books very out of date” (Private Nursing Home, Galway), and “very old books - technology is moving very fast!” (Enniscorthy)

A number of nurses referred to the fact that they had some books available on the ward and that these were adequate. Others felt they did not need to use libraries because “we have very good medical encyclopaedias at work” (Private Nursing Home), “not involved in any updating or teaching so do not need information on a regular basis” (Trim), “I have not been involved in further education” (Dublin) or “not involved in research.” (Co. Donegal)

Awareness of the changing situation is growing however:

“Until recently there did not seem to be the need, but with the new policies, management and the whole system changing, one has to keep up to date - only just dawned on me.” (Roscommon)

Some nurses expressed their lack of confidence in using information services:

“I seem to be very poor at using resource services.” (Dublin)

Most of the paramedical professionals who answered the question listed libraries in their own hospitals or other place of work. Specialist libraries mentioned by occupational therapists included those at the National Rehabilitation Board, Central Remedial Clinic and the School of Occupational Therapy, TCD. The teaching hospital and university libraries were also listed by this group.

The majority of comments by the paramedical professions referred to the difficulties of various aspects of accessibility. These ranged from the lack of up to date material, to lack of libraries or access to them.
“Not enough up to date journals or books on transfusion science.” (Laboratory scientist, Cork)
“No library, and restricted access to DIT libraries, rarely able to use them.” (Laboratory scientist, Dublin)
“Don’t use hospital library - not encouraged to do so.” (Nutritionist, Dublin)
“Access to university libraries difficult to obtain.” (Nutritionist, Dublin)
“Lack of access to medical libraries in local universities.” (Occupational therapist, Dublin).
“Difficult to get access.” (Occupational Therapist, Co. Clare)
“None available in Limerick to do with my work” (Physiotherapist, Limerick)
“This is North West Donegal!” (Physiotherapist, NWHB)
“Use library at work occasionally but it is for the doctors and has very few books of interest.” (Physiotherapist, Dublin)
“No radiography books in hospital library.” (Radiographer, Louth)

The most significant factor to emerge when analysing the senior managers’ responses to this question was that those with a health board library and information service, run by a professional librarian were more likely to use libraries, and use them more frequently, than those without. Thus, the libraries mentioned most often in these replies were those of the SEHB (Kilkenny) and the MHB (Tullamore). All the senior managers who replied from the SEHB and half those from the MHB used the library regularly, usually on a weekly or monthly basis.

Other medical libraries mentioned by senior managers included UCD, TCD, RSCI, St Luke’s Institute of Cancer Research, UCG, University of Limerick, UHC, St Vincent’s Hospital, Sligo General Hospital, and Letterkenny General Hospital. A variety of other sources of management information were mentioned including the Institute of Public Administration, the Institute of Chartered Accountants, Institute of Personnel and Development and the Irish Management Institute. Nurse managers consulted the An Bord Altranais Library on a regular basis and one mentioned a School of Nursing library. One manager from the NWHB used a range of libraries, mainly in Dublin, including the Department of Health Library and Information Unit.

21 managers gave reasons for not using libraries regularly. The majority complained that there were no suitable libraries for them easily accessible:
“Not readily accessible.” (EHB)
“Local libraries don’t have scope - we are too remote from university libraries and DoH etc.” (NEHB)
“No good library on management/administration within easy access.” (NWHB)
“Information is usually too specialist and not available in libraries.” (NWHB)
“None relevant” (Peamount Hospital, Co. Dublin)

Some managers felt that they did not have time to use libraries or did not need to use them because of “time constraints” (WHB) or they either “know most information myself through books and journals.” (NWHB) or it was “not necessary.” (MWHB)

A number of managers, mainly in the voluntary hospitals, revealed a general lack of awareness of library and information services:
“Lack of awareness of data available in libraries.” (Dublin Children’s Hospital)
“Unaware of where to look.” (Royal Hospital, Dublin)

Environmental health officers listed only 3 libraries - Clare County Library, University of Limerick, and the Environmental Information (ENFO) service in Dublin. The overwhelming majority of comments on non-use referred to the lack of a suitable service:
“No suitable one available.” (EHB)
“No relevant books/journals in local library.” (MWHB)
“Local libraries not equipped with scientific/technical data due to diverse nature of information required - don’t think they should be expected to.” (NEHB)
“Local library inadequate.” (NEHB)
“Access is restricted, time involved not available, information outdated.” (EHB)
**Distance from the nearest library and information service**

Respondents were asked to give the name of the nearest library/information service with a specialised collection relevant to their work. 20% of respondents did not answer this question which may indicate a lack of awareness or interest. In fact 7% of respondents to this question said either that they did not know where the nearest service was or that there was none at all. Several were doubtful about the libraries they cited and some named public libraries. 27% of health practitioners surveyed had libraries onsite but 35% were up to 10 miles away from their nearest service. A large proportion of health service staff (20%) said their nearest specialised service was between 10 and 50 miles from their workplace. A further 12% were more than 50 miles distant from a library or information service relevant to their work. These figures raise serious issues of accessibility for large numbers of staff unless computer networks can be used to overcome some of the problems.

**Library and information handling skills**

Only 30% of health service staff surveyed had ever had any training in library use or information handling skills (see Figure 6). 70% said they had never had any training in this area. The pattern for the individual professions was very similar to the overall figures (Table 9). The only exceptions were in the case of occupational therapists and environmental health officers. Occupational therapists were the most likely to have received training in library use (54%), whereas 81% of environmental health officers had not received any.

<table>
<thead>
<tr>
<th>Table 9: Professional groups' library and information handling skills</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>INFORMATION SKILLS</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
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</tbody>
</table>

For many of those who had received training, particularly in the case of doctors, it had taken place at the undergraduate stage and was several years ago:

“Only 1 one hour period years ago.” (Doctor, Maynooth)

“Taught erratically by senior research staff - emphasis on how to find relevant information is lacking generally in medical undergraduate education.” (Lecturer, TCD)

“So long ago I have forgotten how to use it efficiently.” (Doctor, Beaumont Hospital)

One nurse commented that her only training had been from “the school librarian” and many had learnt skills abroad while training in Northern Ireland, Britain, or America. Of those who had received some training several commented that it had not been comprehensive:

“Very basic - I am sure I could be more efficient.” (Occupational therapist, National Rehabilitation Board)

“Yes, but very limited.” (Dentist, Dublin)

“In UK - none in Ireland.” (Doctor, Co. Mayo)

Institutions where training had been received were named by some respondents and those mentioned most were TCD, UCD, RCSI, and UCC. Examples of comments include:
“Library tour and information day in TCD very helpful; use of CD-ROM in RCSI and library tour when doing research course also very helpful.” (Nurse, EHB)

“From very helpful library staff at Cork University Hospital.” (Doctor, Cork University Hospital)

“Open day in hospital library with information on use of service.” (Radiographer, Our Lady of Lourdes Hospital, Drogheda)

“Librarian provides an annual literature search teach session for new trainees and updates for those already in training.” (Director of Vocational Training, Sligo)

Several respondents said they were self-taught or had learnt by experience of using libraries. One GP tutor described himself as a “self-taught messer”! Relatively few staff indicated that they had received any training on use of CD-ROM, MEDLINE or other computer applications and many felt that “training on how to use a library properly would be most beneficial” (Environmental health officer, EHB) and many “would like to understand how to use a library and computer facilities.” (GP Tutor, Dublin). Other comments on this aspect included the following:

“I can access books but have no skill in computer use so access to papers in journals is difficult.” (Doctor, EHB)

“Would be extremely useful on Index Medicus and CD-ROM when I first used them.” (Laboratory scientist, Dublin)

“This is vital training which should be provided to senior nursing personnel.” (Matron, Galway)

“Would like more training in use of MEDLINE - special courses would be great eg. day seminars.” (Senior manager, Adelaide Hospital, Dublin)

“Would be very helpful especially when using MEDLINE system.” (Physiotherapist, Navan)

**Use of library and information services by post**

Answers to this question were provided by 434 respondents of whom 57% did not use any library or information services by post such as current awareness, photocopy requests or inter-library loans. 22% indicated that they used inter-library loans and photocopy requests. Nurses also used the service provided by the An Bord Altranais Library of current awareness and article requests by post. Some requested photocopies from a range of specialist bodies, for example the National Sports Medical Institute London, Cancer societies, Mencap, the Disabled Living Foundation, and commercial companies. Other sources mentioned included the Health Promotion Unit, the Department of Health, Irish Dental Association, National Rehabilitation Board, Royal College of Nursing (UK), the King’s Fund Centre (London), the Central Remedial Clinic, the Institute of Public Administration and friends and colleagues. There was no discernable pattern in the analysis of individual professions.

### 2.3 Information access problems

This section examines the problems that health service staff experienced in trying to gain access to information. Specific barriers to information access were studied as well as the types of information which respondents found hard to retrieve.

#### 2.3.1 Barriers to information access

Respondents were asked about their difficulties in accessing information for work and continuing education purposes by indicating which of a predetermined set of elements were barriers to access. Table 10 provides the figures for responses overall. A detailed breakdown is provided in Appendix D.

**Table 10: Restrictions to accessing information**

<table>
<thead>
<tr>
<th>Access restrictions</th>
<th>No. of respondents</th>
<th>% total respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of time</td>
<td>331</td>
<td>66%</td>
</tr>
<tr>
<td>Geographical reasons/too far to travel</td>
<td>230</td>
<td>46%</td>
</tr>
<tr>
<td>Information in a foreign language</td>
<td>42</td>
<td>8%</td>
</tr>
<tr>
<td>Lack of specialised information</td>
<td>175</td>
<td>35%</td>
</tr>
<tr>
<td>Lack of computer systems/networks</td>
<td>148</td>
<td>29%</td>
</tr>
<tr>
<td>Lack of librarian</td>
<td>126</td>
<td>25%</td>
</tr>
<tr>
<td>Restricted access to library</td>
<td>154</td>
<td>31%</td>
</tr>
<tr>
<td>Other reasons</td>
<td>34</td>
<td>7%</td>
</tr>
</tbody>
</table>
Predictably, the greatest problem encountered by health service staff was lack of time which was indicated by 66% of all respondents. (See Figure 7). Closely related to this aspect was that of geographical location involving travelling to and from libraries which was cited by 46% of staff overall. These responses correlate with those given earlier showing that at least a third of staff were situated over 10 miles from their nearest specialised service.

The lack of specialised information was cited by over a third of respondents. This is obviously a major difficulty for many health service personnel in Ireland and was brought out repeatedly in the preliminary interviews. As expected, this was most keenly felt by environmental health officers (67%), the paramedical professions (47%) and the nursing professions (42%). Over one third of senior managers also said the lack of specialised information was a problem for them. With the rapid increase world-wide of healthcare specialties and related literature this situation can only deteriorate unless resources are made available to extend access for staff to specialist areas of knowledge.

The next greatest problem for staff was that of restricted access to health science libraries. Earlier questions had revealed a concern amongst some members of all groups that they found access to libraries difficult in terms of both opening hours and policy (although in some cases this was clearly a result of staff being unaware of the availability of services). At least one third of all the professions cited this as a restriction, the highest numbers being amongst the paramedical staff (38%) and environmental health officers (38%). 34% of all doctors and dentists and 30% of nurses also said they were restricted by lack of access. Long hours, shift patterns and unsocial hours meant it was difficult for many staff to get to the library at all. Access policy to restrict users due to limited resources and space, as already revealed by this study, also caused problems for many staff. This is another area where more resources are in urgent need if healthcare staff are to keep up to date and maintain high standards of care.

It is recommended that the need for access to library and information services by all healthcare staff during and after training, as shown by the research (in sections 2.3.1 and 2.3.2 of this report) and evidenced in the review of best practice, be recognised. Increased investment in collection development and information technology in libraries is required from the Department of Health and Health Boards in order to build up professional services to support staff in their work and continuing education; particular attention should be paid to the needs of environmental health officers, the paramedical professions, dentists, health service managers and GPs, especially in rural areas.

It is further recommended that as a result of the findings of this research and in view of the proposed changes to nurse education and training, special consideration be given to the improvement of all nurse library and information services, particularly in the areas of increased resources to those institutions supporting the new nurse education courses.

29% of staff surveyed indicated that access to information was impeded by the lack of computerised systems and networking facilities. This was felt particularly strongly by environmental health officers (67%), health service managers (41%) and the
paramedical professions (39%). A third of all doctors surveyed also said they were restricted by this lack of information technology. While information systems and computer networks are gradually being installed in healthcare units and practices, it is vital that these are backed up with good training from information and library specialists who can ensure that the software is used efficiently and exploited to the benefit of staff and patients in the most cost-effective manner.

It is recommended that the restrictions to information access caused by lack of time, geographical dispersal and lack of computer equipment be addressed through increased investment in information technology and the development of computer networking to healthcare units and practices, with a view to improving library and information services for all healthcare staff in rural areas and those with specialist needs.

A quarter of all respondents said they were restricted in their access to information by the lack of a librarian or information specialist. 22% of doctors and 27% of nurses surveyed indicated that this was a restriction for them while 31% of the paramedics and 43% of environmental health officers also cited this problem. As many as 20% of senior managers felt that the lack of a librarian or information specialist restricted them in their access to information. As has been proved in earlier research and indicated here, where there is an efficient professional library service demand increases and health service staff of all types are able to function more effectively.

8% of respondents overall found that information in a foreign language was a problem. This figure rose to 11% in the case of doctors and 25% for physiotherapists. 9% of senior managers found that this restricted their access to information.

Staff were invited to specify any other difficulties in gaining access to information. The most frequent comments were related to a general or specific lack of resources (funding, space, up to date books, required journals were all listed here). Also frequently mentioned was the respondent’s own “lack of knowledge and confidence in library use” (Occupational Therapist). Other problems included “lack of management encouragement” (Environmental health officer), “inadequate resourcing - financial and time” (Doctor), waiting lists for medical books, booking in to access the system, lack of fax facilities, and cold premises. Examples of other comments made are as follows:

“Inhouse library has no librarian and no space to read.” (Nurse)
“No training in access to library.” (Physiotherapist)
“Unable to use Medline or follow instructions.” (Doctor)
“Have no access to libraries so don’t know what is available.” (Occupational Therapist)

Comments received on the greatest problems encountered by staff in accessing information re-emphasized their lack of time and difficulties of travelling to libraries with suitable material. Many commented on their problems of “lack of computerised systems - if available would not need to travel and time would be more effective” (Dentist, Thurles), “restricted access - would benefit us greatly if the library was accessible for longer
hours” (Doctor, Cork), “lack of specialised information” (Manager, Dublin), and “lack of computerised systems and information specialist” (Manager, psychiatric hospital). Acquiring up to date specialised information was frequently cited exacerbated by lack of computer access and information specialists. Typical comments included:

“Geographical reasons - may be a local system for getting information via computer but I am unaware of it.” (Dentist, Letterkenny)

“Librarian/information specialist - none employed by SHB.” (Doctor, Tralee)

“Lack of access - if I was more involved in library use I would be generally better informed.” (Environmental health officer)

“Restricted access when not enrolled in an educational establishment.” (Laboratory scientist, Naas)

“No computerised systems network.” (Manager, NWHB)

“Time is a problem but worse is not having access to appropriate library facilities.” (Nutritionist, Dublin)

“Lack of specialised information - few medical, nursing or general libraries have information on mental handicap”. (Nurse, Dublin)

“Being outside Dublin is always a problem getting information.” (Nurse, Tipperary)

“No access to libraries - I cant browse so don't know what is available for me.” (Occupational therapist, Cerebral Palsy Ireland, Co. Clare)

“Lack of specialised information on physiotherapy.” (Physiotherapist, Sligo)

“Lack of specialised information on radiography.” (Radiographer, Cork)

It is recommended that in order to address the central issue of lack of access by many healthcare staff to specialist information services in their region that:

- a library and information service be provided by all health boards or arrangements made to share resources with an existing institution, to provide a library service for all healthcare professionals within the region; these should include a minimum of one full-time professional librarian, plus clerical and professional assistance as necessary, and a budget, in accordance with the Standards for Irish Health Care Libraries laid down by the Library Association of Ireland;

- all teaching hospital libraries should have a minimum of one full-time professional librarian and that all teaching hospital libraries receive accreditation from the universities or colleges.

2.3.2. **Types of information most difficult to access**

Question 12 of the questionnaire asked health service staff what type of information they found was the most difficult to get access to. They were asked to provide brief details. All the professions were concerned with getting up to date information and many obviously had difficulties retrieving it. Problems of journal currency recur throughout the responses.

Most of the dentists who responded to this question said they had problems gaining access to information on the latest clinical procedures, specialties, and practice management. Over half the doctors surveyed indicated that they had difficulties accessing information. The majority of these were related to recent developments especially in specialist areas like psychiatry, physical handicap, histopathology, rare conditions and recent syndromes. Patient management and clinical decision making were also cited as hard to access. Doctors also found that the latest editions of medical books and recent specialist journals were difficult to find. Several references were made to out of date books in libraries.

Half the nurses surveyed described problems of access to information. The information requirements were very wide-ranging from epidemiological, management, parent craft, pre-hospital care and social behavioral science to mental handicap, infection control, trauma, psychiatry, legal aspects of community care, use of drugs, neonatal issues, palliative care, use of radium, alternative medicine, to the current changes in nursing in Ireland. All these, amongst other subjects, were cited as difficult areas in which to obtain information. Up to date research infor-
mation was mentioned by many nurses and specialised information and recent journals were generally hard to access. Matrons were more concerned with difficulties accessing general management information and statistical data.

Recent specialised journals were the most commonly mentioned items by the paramedical professions overall. Laboratory scientists had a higher requirement for computer related information and CD-ROM based information systems while specific subjects included mortality and morbidity statistics, drug resistance and American data. Nutritionists and dieticians also cited American material as hard to access as well as specialist nutrition and dietetics journals and sports nutrition. Occupational therapists had difficulties accessing up to date specialist information, for example on: treatment norms, current trends, treatment techniques, and brain injury. Again physiotherapists experienced problems accessing information in their specialist area particularly recent research and the latest advances in techniques. Physical scientists and radiographers cited problem areas as including foreign material and non-UK journals, general information on disability, imaging, and model links for particular conditions.

One manager commented in answer to this question: "this is a specialised field though eclectic - little generally available to support our information needs." Much of the comments by managers related to general management information although many also referred to healthcare statistics, comparative data, case law, technical and design data, resource allocation and decision making. Current research and new codes and regulations were also cited as difficult areas to access effectively.

Environmental health officers listed a wide range of topics of information which were difficult to access reflecting the multidisciplinary nature of their work. The most commonly cited subjects were related to pollution (industrial, farm effluent, water), legislation (especially recent EU directives), food hygiene and food poisoning, and bacteria and viruses. One respondent wrote:

“Technical information - at times we don't even know where to look for information“

2.3.3. Improving access to library and information services

All respondents were asked to comment and/or make suggestions on improving access to information and library services in their area of work and for continuing education purposes. Almost 70% of those surveyed did supply comments, the majority of which re-emphasized and expanded upon problems and concerns raised earlier in the questionnaire.

The improvements most often recommended by health service staff across the whole range of professions surveyed were increased access to computers, networks and CD-ROMs and better awareness of library and information services. As was seen earlier in this report the two main barriers to information access were lack of time and geographical location. Many of these difficulties could be overcome by a much greater network of computerised systems as many health service staff recognise:

“ A computer network system would save much time. All staff should be fully trained in basic information searches and sources of information networking.” (Occupational therapist, Clondalkin)

Direct access through modem links and local area networks to a central library and information service in the region was suggested by many respondents. Some thought this could involve either the local hospital, university or public library. One laboratory scientist recommended “modem links between education outlets and all health service providers.” Doctors and paramedics in particular wanted access to CD-ROM databases like MEDLINE and CINAHL in libraries through modem link-ups. One lecturer at TCD said he needed “access to more databases on networked CD-ROM service in TCD library (in the pipeline), and better training for staff and students on how to search literature effectively.” Several staff said they wanted access to full-text journals on CD-ROM as opposed to abstracts only, while others in rural areas needed computer access to more specialist journals which they could not obtain. This last requirement was especially true of some of the paramedical professions who often have no official access to the larger health sciences libraries. Some doctors and managers referred to the
need for epidemiological information on computer systems with links between hospitals, health boards and GPs. The integration of hospital management information systems (such as Hospital In-Patient Enquiry) and library-type textual systems must be considered at an early opportunity to ensure a cost-effective exploitation of the technology.

The issue of awareness of library and information services was of concern equally to staff in all professional groups. Lack of knowledge and/or confidence in library and information technology use was expressed by a large number of respondents. One nurse commented that “I have never heard about library services and networking prior to receiving this questionnaire.” A lack of awareness generally of the potential information resources available through health sciences library and information services was apparent in many responses. (Comments from some non-respondents to the survey evidenced a lack of interest and/or knowledge of the personal benefits of such a service). Amongst the recommendations to increase awareness were posters, leaflets, a directory, and a regular information bulletin listing library and information services, and facilities available in the area and by post. Several staff said they would welcome visits, talks and seminars from librarians on services, costs and use of information sources. There was a feeling expressed by a number of staff that library and information services should advertise and promote their facilities much more aggressively. If potential users know little or nothing about a service they will not ask for it. A proactive approach was suggested by several respondents to “actively encourage use” (Dentist);

“Making health professionals like myself aware that information of the type that we require is available would be a step in the right direction.” (GP, Co. Kerry)

An environmental health officer suggested:

“If the library could, at the start of each year, provide an index of relevant information stored on the premises with other services available, this would keep the library in mind when in need of information on certain topics.”

Two laboratory scientists said they needed more knowledge of how to go about acquiring information and the libraries which could be used; a directory of library services in Ireland including lists of journals stocked would be useful. Several Senior Mangers suggested that the “availability of facilities should be published regularly”.

Closely related to this issue of the awareness of library and information services was that of user education and training in information retrieval. Many staff wanted more help in dealing with the new technology involved in accessing the enormous range of information available world-wide. Proper training in the use of databases and information retrieval is seen as important by a large number of staff “to get the information I want as quickly as possible, eg. MEDLINE journal search.” (Doctor, Mater Misericordiae Hospital) Occasional seminars or workshops, preferably in the evenings, on how to keep up to date with evolving systems and how to access them were suggested by one doctor. The necessity of adequate training for students on all healthcare and medical courses in the use of information technology and retrieval methods was also stressed.

Access to library and information services was one of the most frequently expressed concerns of health service staff. This ranged from the need for the development of a library service to longer opening hours for existing services. Many units and health boards do not have a professionally run library and information service and many nurses and paramedical staff do not have access to any health sciences library once they have completed their education and training. There is no specialised library or information service for environmental health officers.
As one EHO said: “My workplace doesn’t even have PCs, never mind networked information!”. Nurses, doctors and the para-medical professionals were concerned at the lack of study/reading time and many felt that more time should be officially allocated for this. One manager wrote that “we have insufficient time and too much data/paper/journals - do we need a greater awareness of [the] filter systems that are available?”

Current awareness services are needed by all professionals and would be used by many more staff if comments such as the last one are interpreted correctly. Another manager suggests that “a member of staff be available to identify pertinent articles in journals, photocopy them and make them available to interested staff”. This is a description of selective dissemination of information (SDI) which can be provided by librarians in well resourced health sciences libraries. This is a service which, along with a current awareness service of journals and contents pages, saves valuable time and ensures staff are kept up to date with current trends and developments.

The importance of the support of an efficient library and information service was referred to by many respondents:

“We need a librarian and up to date books and journals relevant to specialities. Failing this we need a computer link with a qualified librarian.” (Consultant, Tralee)

“Each county hospital should have a post graduate centre with a librarian, a reading room and a journal room.” (Doctor, Co. Kildare)

“A full-time librarian would be desirable. Since the introduction of a part-time librarian the quality of student work is remarkably improved. An affable, expert and professional librarian is a most valued person on our staff - students are highly motivated.” (Senior manager, School of Nursing, Dublin)

One senior manager in a Dublin teaching hospital commented on the lack of adequate investment in health sciences library and information services in Ireland:

“Experience in the US showed me a library system as it should be - could call on librarians to perform searches, and get advice. Here libraries seem to be universally understaffed and librarians have little time for this kind of work. This is a great pity and a great waste of resources.”

In many units there was a disparate collection of often out of date books and journals, and this situation was multiplied over a region. The need for organisation, coordination and easier access was expressed by a significant proportion of staff:

“Health Boards should be required to provide comprehensive library facilities for management, medical and nursing staff.” (Senior Manager, WHB)

A number of staff, particularly nurses and paramedics in country areas, said they would welcome a mobile library service and/or a “visiting librarian” on a regular basis to provide support and advice.

Many staff wanted increased resources including more specialist journals, up to date books, and more space for the library. Increased numbers of professional library staff and library assistants were demanded to allow better access to information services over longer periods. The problem of satisfying information needs out of normal office hours, lunch-times and in the vacations was raised frequently by staff from all areas.

“The development of information and library services in this hospital, although better than many, continues not to be given priority ie. temporary accommodation, part-time librarian, for as long as I can remember.” (Director of Vocational Training in general practice)

These concerns were expressed by staff of all levels from all parts of Ireland and must be addressed if the needs of health professionals and therefore their patients are to be met. In accordance with examples of best practice it can be seen that effective and targeted resources are necessary to develop information services for healthcare staff and patients; official recognition of the value of professional library and information skills from national level is required.

Therefore, it is recommended that the Department of Health and the Library Association of Ireland set up a panel to develop a national healthcare library and information strategic plan. Suggested objectives of the strategic plan include:

- the development of an integrated and coordinated health
sciences library and information network for Ireland with an emphasis on shared information resources;

- the promotion of the role of the professional librarian and a proactive approach to health service information management, increasing staff and public awareness of services available;
- the development of a policy on the training and education of staff and students in library use and information handling skills;
- the development of a policy to improve the provision of healthcare information for the public, patients and their carers.

It is also recommended that, to ensure the successful implementation of a healthcare library and information strategic plan, and in accordance with best practice, the following initiatives be considered by the panel:

- the establishment of a national forum for the exchange of views and information, to represent the interests of libraries and users, to inform relevant policy making and to promote collaborative effort between all providers of healthcare information;
- the undertaking of an audit of the health science library and information services in Ireland;
- a study of the implications of the new nurse and medical education curricula and their effects on library and information services with a view to improving services for training and continuing education;
- the publication of directories of specialised information resources;
- the development of marketing skills and continuing and education and training for all library and information staff;
- the development of library use and information skills training courses as an integral part of basic and continuing education;
- the promotion of information technology to all health professionals;
- the development of information networking including increased CD-ROM networks on local and wide area networks;
- the provision of examples of good practice;
- the development of services for specialised groups through national coordination of services and networking, with particular attention to the paramedical professions, dentists, environmental health officers and health service managers;
- the development of policy on the integration of management information systems with library systems in healthcare units;
- the fostering and improvement of communications and information exchange with voluntary organisations including self-help groups, charities and other information providers.

Reference

The published literature and research shows that the public generally are demanding increasingly sophisticated information on all aspects of healthcare and related areas. This includes information about the range of health services locally and nationally; preventative information on a wide range of conditions; diseases and specific conditions such as asthma and diabetes; depression and mental health; available treatments and alternatives; side-effects; and self-help and support groups. In addition, the public wants help on improving and maintaining health and fitness, up to date advice on diet and nutrition; how to stop smoking; alcoholism and substance abuse; and on self-examination techniques. There is also a growing awareness of the need for more information aimed at specific groups such as the rural population, travellers, disabled people, children and young people. As the literature survey in Chapter 1 highlights, accurate and timely information benefits the patient and improves compliance with treatment and recovery.

The preliminary interviews with voluntary organisations and charities revealed a high level of concern as to the lack of sufficient resources to produce adequate information and for the lack of general awareness of the specific needs of certain groups. For example, although there are an estimated 150,000 home carers in Ireland trying to cope with many different conditions and disabilities, there is very little official recognition of their role or information specifically for them.

3.1 Views of health service staff on Consumer Health Information

Health service staff were asked to express their views on the provision of health information to the public, patients and carers - was appropriate information readily available at the right level, for example. The overwhelming response to this question was that there was not enough information available, that although the situation was improving there was still a great lack of suitable information at the right level on many subjects. Many respondents felt that although there was some very good information available some areas were less well covered:

“General stuff, for example on diet and smoking are good, but better information is needed for the public on such things as asthma, epilepsy and diabetes to dispel the myths and give a greater sense of control to the patient.” (Doctor, EHB)

Several staff mentioned the problem of the public not having the right information and often relying merely on hearsay or over-dramatised stories in the popular press. The issue of information not properly presented could cause unnecessary fear and worry:

“The public and especially patients and family, need clearly and sensitively presented information - over dramatisation of areas like cancer, AIDS etc. can cause fear rather than understanding.” (Doctor, St Vincents Hospital, Dublin)
"More information should be available at a basic level which can be understood by all, as ignorance can cause fear and distress." (Nurse, Nursing Home, Wicklow)

"More information would reduce worrying and stress levels for patients and give carers a better understanding of conditions and illnesses." (Nurse, Limerick)

Whereas those leaflets prepared by the Department of Health, particularly Health Promotion Unit materials, were widely admired and welcomed, it was felt by many health professionals that there were not enough subjects covered and that they were not sufficiently promoted, accessible or generally available, especially in rural areas.

"Not enough available - the leaflets do not cover all services or information required by the public or patients. People don't know where to get it." (Public Health Doctor, Co. Donegal)

"Current information is lacking or totally absent in some areas - the public in some instances are confused, unaware and ill-informed." (Environmental Health Officer, Newcastle West)

Some staff felt that the problem of achieving the right level of information for the public was an issue that had to be solved. Some felt that the information was of too general a nature to be helpful, whereas too specialised information could be difficult to understand. However, the majority were of the opinion that

"Comprehensive information should be available to patients and carers - it is not always available and at times there is a reluctance/inability to give information on clinical matters." (Nurse, Cork)

A few staff did feel that adequate information was readily available, and a very small minority expressed a view that the public were already well informed or could not deal properly with the information:

"Patients too well informed today, tend to query everything - a hinderance...have become very legal minded" (Nurse, Co. Mayo)

"No matter how much information you give patients, most of them will interpret it in a way that is counter productive." (Doctor, Co. Mayo)

"Public have been given more information than us. Bad media coverage of hospital ethics gives public more to crib about, therefore we are always in the firing line." (Nurse, Limerick)

The lack of availability and awareness of information was a major concern with all groups of health professionals. This was especially the case in the rural areas where dissemination and communication of health information was felt to be a real difficulty:

"Information is available but in rural areas some towns have no GP surgery, never mind health centre or hospital where information could be displayed or collected." (Ambulance nurse, NWHB)

A significant number of staff mentioned the use of television and radio as a positive contribution to the increase in health information and public awareness of health issues generally. The RTE programme *Checkup* was mentioned several times as being of great interest, as well as radio discussion and phone-in programmes, and it was felt that this type of information dissemination should be increased. Videos on health matters should be used more, especially in surgery and out-patient waiting areas according to many respondents. The availability of information leaflets in more easily accessible outlets such as shopping centres, churches, and schools was often suggested, and more should be available in doctors' surgeries and public libraries. It was felt by a number of staff that more health information should be given in schools as part of the curriculum, particularly on substance abuse, diet, smoking, alcohol and AIDS.

The difficulties of obtaining up to date information was mentioned as well as maintaining stocks of leaflets. Public libraries needed to have more current material according to some respondents, but were mentioned several times as a good local source of this type of information. Several staff suggested that libraries and computer information services had an important role to play in the provision of health information for the public:

"I would like to direct patients with specific problems to a hospital library and provide them with more detailed information than available through leaflets etc." (GP, Sligo)

"A computer information service for patient access would be tremendously useful." (Doctor, RCSI)

"Very poorly organised - the control of public information leaflets should be via a library system." (Doctor, Crumlin)
“We need a specialist health information library service - this would be a very welcome addition.” (Senior Manager, WHB)

The importance of this growing area of information was emphasized:

“Health information and education are a right for public and patients - the preparation and dissemination of this information requires specific expertise and attention which is not generally available at present.” (Senior Manager, MHB)

Several groups of patients and their families/carers were singled out as lacking adequate information. The most frequently mentioned group was the elderly, who, as a growing proportion of the population needed more help and advice:

“Families do not seem to have the know-how to care for them at home.” (Nurse, Roscommon)

Other groups mentioned included the house-bound and disabled children, and the mentally ill:

“Mental handicap information is needed to create greater awareness and educate generally.” (Nurse, Co. Galway)

The lack of information for carers was noted:

“Appalling lack of information especially for families/carers of older relatives or disabled - so little recognition of carers that more often than not health professionals fail to recognise their existence never mind their role.” (Doctor, Crosscare)

Comments were made by several health professionals on the provision of health information by commercial pharmaceutical and food companies. While some said that this was well-produced and useful information others were very concerned at the biased information they contain:

“Food companies give out information which may be all that is available but is not objective - so gives a biased view to patients.” (Nutritionist, Children’s Hospital)

Concern was also expressed by some doctors on the amount and type of information on alternative medicine. Some felt that more information needed to be disseminated to “counteract that given by alternative practitioners.” (GP, Co. Kerry)

“Probably the fault of the medical profession but there is too much emphasis on alternative therapies.” (GP, Dublin)

Specific information for hospital patients was mentioned several times. For example, patients needed more information on admission to hospital, on what to bring with them and on what to expect. Also more information was required on hospital procedures:

“Patients rarely know anything about the tests they have to have. GPs/Doctors never explain the procedures. Information is not available to patients about x-ray procedures.” (Radiographer, Co. Louth)

The overall consensus was that more information for the public was needed and that there should be more awareness generally of the long term health benefits to be gained by increased access to the right information.

3.2 Survey of public library provision

One of the aims of the research was to investigate access to healthcare information by the public, patients and their carers. Here the role of the public libraries was potentially crucial. A telephone survey of all 32 City and County Public Library services was undertaken with 100% response (Questionnaire reproduced in Appendix B). In most cases the Chief Librarian was interviewed, but in a few cases a deputy or other person responsible for this area was interviewed.

The first question asked whether the library service had a policy on health information for the public. The majority (25) said they did not have a specific policy on this but that it was part of the general collection policy. Seven librarians said they did have a policy to collect health information specifically. Many replied that anything on health that was sent to them would be displayed in the libraries.

3.2.1 Demand for health information

27 Librarians said there was a demand for health information and that it had increased “noticeably in recent years.” Areas of particular interest included self-help, fitness, diet, and alternative and preventive medicine. Comments by librarians referred to health being “one of the most popular areas in the library”
and that the library was “the natural place to come for it.”

Five librarians either said they did not know about the amount of demand for health information or there was no obvious demand apart from the usual reference books. Three librarians felt that the library was not seen as an obvious source of information on healthcare locally and that the public would tend to go to local clinics or hospitals. Some commented on the lack of awareness of library provision which should be improved.

All the public libraries funded health information out of the general book budget although one librarian had been awarded £1000 by the local RTC to buy books to support a pre-nursing course.

3.2.2 Types of information provided

The librarians were asked which categories of material were collected systematically in relation to health and fitness, medical conditions, disabilities and so on. All the libraries bought books including reference books (medical dictionaries etc) and a range of other books for loan in all branches, depending on the size of the library. No journals were bought in this area except for those classified as newsletters from various voluntary bodies and charities. Two city libraries bought the *Nursing Times* as they had many student nurse members. Newsletters sent free were always displayed by the libraries as were any annual reports or similar publications. Those mentioned included *Aware*, and *Arthritis Today*.

All the libraries stocked leaflets and booklets from self-help groups, voluntary bodies, charities and the Health Promotion Unit. These were displayed and made available as much as possible depending on the number of copies available. One copy would normally be kept for reference. Many librarians said the supply was *ad hoc* and irregular and that it was difficult to know exactly what was available and how up to date the information was. It was often hard to get enough multiple copies and the leaflets were frequently out of print. Several of the librarians said they had to send off for the leaflets and it was very time-consuming trying to track down all the relevant publications. Most, however, indicated that the material was sent automatically to the library and that no attempt was made to order items. Seven librarians said that the Department of Health Health Promotion Unit sent information leaflets automatically and some that they were “on the mailing list”. However, at a later date a spokesperson for the Health Promotion Unit told the researcher that they had no mailing list as yet and material was only ever sent out in response to specific requests. The Health Promotion Unit hopes to compile a mailing list when the service is computerised.

Librarians were asked if they held talks in the libraries on health topics. 21 replied that they did not, although some libraries were used to host talks arranged by outside agencies. A third of libraries did hold talks or lectures on health related matters - either arranged by the library or in conjunction with other organisations such as the Red Cross, the La Leche League, and as part of Active Age Week, heart awareness weeks or other similar events. Talks for the elderly were very popular, as were those on fitness, alternative medicine such as reflexology and homeopathy etc. One librarian said that staff would regularly go out to give lectures to active retirement groups, and another referred to regular talks given, for example, on drugs and childcare in the library. A few librarians mentioned that they would produce booklists to accompany these events and talks.

Few library services kept subject files of newspaper and magazine articles on health and welfare subjects, but most public libraries provided files of local community information which included health services, details of clinics, names and addresses of self-help groups etc. At least 3 services were compiling, or already offered, this information on computer and print-outs could be provided of the information required. Two services produced a booklet from this information. One librarian hoped to be able to electronically scan health articles on to computer as part of the library automation process. One health board provided a health information terminal in the main branches of two library services. This is very popular but needs regular updating and would benefit from being brought online and/or networked more extensively. Six librarians did not provide a local information service, referring to the fact that the information was available elsewhere, for example on notice boards and Citizens
Information Centres. One commented that it was “not necessary in rural areas as it was covered in the local papers”.

Thirteen public library services provided copies of medical card application forms along with up to 160 other social welfare forms. A quarter of the librarians mentioned the National Social Service Board Information Files which were subscribed to and found to be very useful and popular.

All but one of the library services provided information on alternative medicine and therapies. Many said that although this was in increasing demand there was a slight uneasiness amongst several librarians about some of the material and the claims that were made, and a few had received complaints about certain literature on display. Several librarians said they would not display any material of a commercial nature.

### 3.2.3 Promotion of health information

Most librarians tried to have as much consumer health information as possible in as many branches as was feasible. As might be expected, the largest collections of health information would generally be held in the main branch with access to it from the smaller branches. Where multiple copies of leaflets could be obtained these would be spread around the other branches according to library size and opening hours.

Most library services did not specifically promote or advertise their health information but included it as part of the general community information services. Five said they did promote the health information service.

City and county librarians were asked if they liaised with any health or social welfare professionals or voluntary groups on the provision of health information. Over a third said they did not, but many others had informal links, often with local groups such as the elderly, blind and mentally handicapped. Good relations were built up with organisations which held talks and awareness events in the libraries. Social workers often used libraries to help with projects and exhibitions for local schools etc. Very few libraries had any links with local GPs although a few did advertise health-related events in surgeries. Some libraries acted rather as a referral point to the local Citizens Information Centre or the Health Board and Social Welfare offices.

One county librarian provided lists of books recommended by the cancer specialist at the local hospital who refers patients to the library. Another librarian had a good relationship with the local hospital and a development officer on mental handicap who runs regular courses and talks and promotes books in the library. One county library has compiled a series of annotated booklists aimed at helping children deal with specific problems or situations in life like adoption, bereavement, and health issues. These are produced in conjunction with Barnardo’s National Children’s Resource Centre.

Half the librarians questioned said that they had few or no enquiries from health professionals and some did not know. Nurses were mentioned as regular users by a quarter of librarians (one particularly referred to student nurses who requested a lot of textbooks and felt that the health board should contribute to this cost); other groups mentioned to a lesser degree were GPs, social workers and representatives of community groups like the disabled. GPs and nurses used the inter-library loan services in these libraries. One county librarian has a formal arrangement with the local health board to order medical journals on their behalf; inter-library loans were also used a lot by the medical staff here who phoned in their requests.

### 3.2.4 National initiatives

Librarians were asked what initiatives, if any, they would like to see developed nationally or locally to help in the provision of health information. The majority of suggestions were related to the need for some type of national coordination or bibliographic control of the dissemination of information on health, especially of the leaflets produced by voluntary bodies, charities and self-help groups, such as a directory or list. This was recognised as valuable information and librarians wished to provide it as fully as possible for the public. However, problems of knowing what was available on any one subject, how up to date it was, what level it was aimed at, where it could be obtained and if it was out of print, cost, and whether it could be ordered in multiple copies, made this a very labour intensive job for already
hard-pressed library staff dealing with information on every subject. Improved circulation of information leaflets was needed. Several librarians suggested that a central agency was necessary to coordinate the distribution of information leaflets or to act as a channel for access and retrieval of documents similar to the service provided by the National Social Service Board. A health directory and/or database to identify and list by subject the information available with all the relevant organisations and groups supplying information would be very useful. Increased automation and networking of health information with links to the health boards would be welcomed as more and more public libraries are automated. An initiative such as the North Eastern Health Board’s Information Line computer terminals could be extended nationally.

A national policy or guidelines to define the role of public libraries in the provision of health information would be helpful to many librarians. This would need to address the question of cooperation on information provision with the health boards and related funding. Whereas some librarians had an arrangement with their local health board to provide textbooks or journals (for nurses particularly), some did this without financial support. Other health boards on being approached to provide a joint medical information service on the same basis as that provided to schools were not interested. A grant from the local health board to help finance information on health maintenance for the public was suggested by one librarian as a method of updating the material and ensuring that books recommended by local specialists were bought.

Other suggestions from librarians included:
- better cooperation between libraries themselves as well as with the health boards;
- MEDLINE and CD-ROM services should be provided by public libraries especially for GPs who needed help in accessing these;
- guidelines were needed on recommended alternative medical practices to ensure that no misleading literature was displayed;
- promotion of health information services needed to be improved and better display equipment was needed;
- the problems of accessing unpublished “grey literature” needed to be addressed;
- there was no non-fiction information in large print form, eg. on arthritis.

Not surprisingly there was general concern over the lack of resources to provide the information demanded by the public - in particular for multiple copies of books for all branch libraries and for adequate display equipment for leaflets.

3.3 Summary

There is an obvious need for more health information to be made easily accessible to the public. While all public libraries provided a certain amount of material, they have a multidisciplinary role with limited resources. There is a need for better coordination of the dissemination of leaflets and more bibliographic control to enable librarians and others to retrieve this valuable information for the public. The preventative nature of the information needed and demanded by the public is significant and deserves government support.

It is recommended that, in view of the findings outlined in this chapter and in the review of best practice, further research be done in the area of consumer health information to assess the demand for and provision of information by self-help groups, voluntary organisations and charities; to consider the adoption of a nationally coordinated dissemination policy and the development of a database of information sources of benefit to healthcare professionals, patients and the public. A feasibility study to assess the benefits of introducing a consumer health information service similar to Help for Health and others in the UK should be undertaken. The role of health sciences libraries, public libraries, the Department of Health and the voluntary organisations should be considered in any national policy or plan to increase access to this, the fastest growing area of healthcare information.
This chapter provides an overview of the major developments in accessing healthcare information world-wide. In the present rapidly changing healthcare environment many countries are experiencing fundamental shifts and reorientation in their approach to the delivery and organisation of healthcare. A review of the literature reveals the different stages of information services development in various countries depending on individual cultural, economic and social influences. However, the experiences of the USA, Canada, the UK, Australia and New Zealand were found to have the most published material of relevance to Ireland. The policies and practices of the European Union (EU) are also discussed in terms of their effect on future developments in Ireland.

4.1 **Historical and global perspective**

During the late 1980s and early 1990s many countries experienced fundamental changes in the structure and funding of their health services. In the USA the development historically of a decentralised and fragmented healthcare system has meant relatively little control by the federal government over a national healthcare policy or financing, and recent attempts to radically reform American healthcare have failed to overcome these problems. In Britain a fundamental review and restructuring of the National Health Service (NHS) based on internal market forces has entailed a split along commercial lines between purchasers and providers of healthcare⁵. (In Scotland the reforms were implemented a year later where the NHS is slightly differently organised⁶). These changes were information intensive and depended on the systematic collection and processing of information at all levels of healthcare provision. Reforms based on the element of competition within the public system were also gradually introduced in the Netherlands with the emphasis on consumer choice. This was also the premise behind major reforms in Germany and Belgium. Healthcare reforms are also taking place in Russia, Hungary and Sweden where a new national healthcare information management system has been developed to provide systematic and objective information for health providers⁷. Australia has a state system of healthcare with an overall department responsible for national projects and healthcare policy development. New Zealand is reorganising its health service along lines similar to the UK, by separating the purchasing and providing functions, but not without concerns as to the commercialisation of the service⁸.

The increasingly competitive environment for healthcare has involved changes in customer requirements, technology, competitors, economic structure and legislation. Since the Second World War there has been a massive increase in the
amount of information needed to run an efficient health service. The introduction in the 1960s of mainframe computers enabled large amounts of data to be processed very quickly. However, the initial impact of information technology (IT) was very much in the background - in secretarial offices and medical records departments for example. In fact, healthcare services have generally been slow to adopt the new technologies and the strategic application of information systems compared with the business world and industry. Now that the benefits and rewards in assisting healthcare delivery are beginning to be realised the pace of change in healthcare services worldwide has accelerated.

At the same time the advances in medical knowledge make it a formidable task for health professionals to keep up to date. In 1992 the editor of the Journal of the American Medical Association estimated that there were more than 2 million articles published each year in the biomedical literature. In order to keep up to date with everything possibly relevant approximately 6000 articles a day would have to be read! In fact, it has been shown that 90% of major scientific advances are published in only 150 major publications and a core of 1,000 journals. Nevertheless, an increasing percentage of healthcare professionals' time will be taken up with keeping abreast of the latest developments.

Simultaneously with the growth in range and complexity of the healthcare environment many countries are seeking to implement reforms to improve efficiency, effectiveness and economy through fundamental change. In Ireland the new strategy *Shaping a healthier future* identifies equity, quality and accountability as its guiding principles and identifies clear targets for health gain. The emphasis on health outcomes will require a much wider knowledge base and extensive information support as a basis for decision making. The literature review in Chapter 1 has already highlighted the importance of evidence based medicine and the need for a systematic review process of the effectiveness of healthcare interventions. The information required by health professionals includes all types of routine or *ad hoc* local statistical information; patient administrative data; statistical and epidemiological data; clinical information such as diagnostic and therapeutic procedures; scientific, clinical and biomedical textual information; financial and budget reports; and information for patients on services, diseases, treatments and self help.

The library without walls is now a reality as a result of networking and telecommunications developments. Library systems have evolved from handling basic internal library functions such as cataloguing, to systems which provide public access to many national and international services. As well as access to the online library catalogue users may access MEDLINE, CINAHL and other databases on CD-ROM and online, as well as the Internet and electronic mail with services like inter-library loan and article reproduction. Many different initiatives have been developed world-wide to improve the availability and integration of library and information services for the direct benefit of healthcare management and delivery.

### 4.2 Integration, networking and telecommunications

In the USA the National Library of Medicine (NLM) was set up over 150 years ago with the mandate to "assist the advancement of medical and related sciences, and to aid in the dissemination and exchange of scientific and other information important to the progress of medicine and to the public health". Among its many roles and services the NLM has had a unique role in the development of medical information systems, primarily with the publication of Index Medicus, the creation of the MEDLARS online service and MEDLINE, the database version of Index Medicus. In addition the establishment of the National Network of Libraries of Medicine (NNLM) and its funding for research into all areas of health sciences information services has made the NLM a focus for healthcare information specialists in the USA and abroad.

Healthcare managers and clinicians need access to many different types of information including biomedical and scientific information and patient-generated data as well as hospital activity data and management information. Clinicians are gradually
becoming more involved in the management of their units while managers require more information on outputs and health gain. The emphasis is now on quality of outcome at the lowest cost. The aim is, therefore, to integrate the systems dealing with medical and scientific knowledge with those concentrating on the management of healthcare and internal through-put data. In the USA the NLM has developed a major initiative in the integration of healthcare information systems called Integrated Advanced Information Management Systems (IAIMS). The programme is designed to encourage health sciences institutions to plan and implement an integrated organisational approach to information management for clinical practice, medical education and biomedical research. This demands the collaboration of libraries, computing and telecommunications in bringing disparate institutional databases and systems into a single network.\(^{10,11}\)

Roderer describes the development and impact of five programmes, including NNLM and IAIMS, which have had particular significance in the evolution of biomedical information in the USA since the 1970s. Originally IAIMS was based on the concept of the library supporting the development of information network systems, the integration of IT into the health professions and education, and to encourage the development of information staff in academic health sciences institutions. The IAIMS grant programme has spread to include 40 institutions and in some of these it is the computing or medical informatics departments which have taken the lead, while the role of the library in accessing reference material remains a core feature. As Lindberg et al have found, most health science centres are beginning to study the role of information in their organisations and to commit resources to its development and systems networking: “The term IAIMS is becoming a generic acronym for the carefully planned information system”\(^{12}\).

In the European Union the emphasis has been on improving the overall standards of healthcare; widening access to and knowledge of services; establishing standards in hardware, software and terminology; and efficient communication of medical records and information through integrated health systems. The main tasks of the Advanced Informatics in Medicine (AIM) programme was to integrate decision support systems with hospital information systems; to integrate medical informatics generally with communication concepts and systems; and the development of the telemedicine concept. The enormous range of services now available from healthcare units demands more sophisticated communications networks, while increasing the levels of data exchange and integration is essential. The integrated broadband communication (IBC) service will be introduced in 1996. This is a new multimedia communications network to facilitate improved integration of European healthcare services and increased exchange of healthcare data. IBC will be integrated with hospital information systems to facilitate these new developments in Europe. The overall shift of emphasis towards primary care increases the role of effective communication between patients, medical practitioners and healthcare units. Telecommunications also has a major role in the continuing education and updating of information for healthcare professionals through such means as distance learning and remote consultation and conferencing as well as in supporting collaborative treatment programmes. It is hoped that, through telemedicine, multimedia information for patients and the public on health promotion and the latest advances in the diagnosis and treatment of such diseases as AIDS may be transmitted easily and effectively to a wide and disparate population.\(^{13}\) The EU’s Telematique programme part funds the recently developed IRIS Service which is an online information retrieval and document delivery service linking the resources of Irish university libraries and Forbairt using computer networking
technology. IRIS also provides access to the UnCover database which indexes the contents pages of 17000 journals worldwide and allows subscribers to build up a personal list of relevant titles.

In the UK networking is playing a crucial part in managing information to improve the quality, quantity and range of services in the NHS. The NHS Information Management and Technology Strategy has launched several initiatives to ensure a single infrastructure and an integrated approach to information management and the sharing of information. These include a common set of standards such as a thesaurus of coded clinical terms for communication, and NHS-wide networking to link hospitals, GPs, libraries and other organisations by 1996. There are many problems to be overcome and the process may be rather more incremental than originally envisaged, but the NHS is nevertheless committed to the implementation of the network. The benefits of a fully integrated communications network will include, for example, pathology systems in one hospital interconnecting with a GP's computer in a remote location, direct access to medical libraries and full-text transmission of journal articles, x-ray images transferred across the country, or the transfer of data from one district nurse's lap-top computer to a colleague in another region.

The Campus 2000 network for communication in educational organisations has a section designed specifically for nursing colleges developed by the English National Board for Nursing, Midwifery and Health Visiting (ENB). ENB Campus has many different facilities including electronic mail, computer conferencing (to be used for teaching and debate) and access to ENB and DIALOG databases.

An ambitious project to provide online access to an extensive Regional Document Database has been undertaken by the South West Thames Regional Health Authority Library Service. The aim is to make the database, of which 30% consists of unpublished or “grey” literature, available with other bibliographic and full-text databases to all healthcare staff using existing local and wide area networks.

Strengthening and maximising access to information resources through a dynamic and user-friendly computer network in order to improve the health status of New Zealanders is the mission statement of the New Zealand Health Sciences Network. This network, set up in 1990, comprises a set of databases, textual and bibliographic, available nationally from the Department of Health in Wellington. The system can be used for electronic mail and the transmission of interlibrary loan requests and as a gateway to other systems and databases. An important service offered by the network is the US National Library of Medicine's online catalogue, CATLINE. Other services include computerised cataloguing, training and consultancy, end-user searching and selective dissemination of information.

The New Zealand Regional Medical Library Service based at the Canterbury Medical Library was set up to improve the delivery of health information to professionals outside large urban areas. It is funded by five hospital boards on a percentage usage basis, and provides an advisory service to develop the boards' own libraries and a backup resource from the Canterbury Medical Library. Experience has shown that the regional resource has advantages over a national scheme with closer links between users and participants. However, funding access for those professionals employed outside the hospitals, such as GPs, is more problematic. Regional Health Authorities, it is suggested, should take some responsibility for funding the service to the benefit of all health professionals in the region.

In Texas a demonstration project was designed specifically to help doctors in isolated areas maintain contact with their peers by providing access to information, consultative and diagnostic services and continuing education. This was done through interactive video, telecommunication services and fax. Isolated practitioners are able to consult face to face with specialists, and fax machines are used to transmit clinical tracings, fetal monitoring strips and other documents. The librarian works as an information specialist in conjunction with a subject specialist for each continuing education programme, identifying relevant information, combining the various multimedia resources into individual study packages.
and delivering them to the doctors. The librarian acts as curriculum developer and evaluation specialist for the continuing education programmes, locating resources and directing the programmes for doctors.

A survey of the information needs of rural healthcare practitioners in Hawaii found that the main barriers to information access included lack of adequate hardware, infrastructure problems and insufficient knowledge of information sources and how to access them. Recommendations included the development of a centralised rural health clearing house or library with a health information specialist, avoiding over duplication of resources, maximising access through increased use of fax, online searching and subsidising the costs of information delivery to equalise the availability of information to all.

4.3 Coordination of information resources, cooperation and health information plans

In the UK the concept of Library and Information Plans was initially developed in 1983/4 to address the lack of forward planning mechanisms for library and information services throughout the country. The aim was to bring together willing partners in five-year plans to develop cooperative schemes using the total resources available on a regional and later, on a sectoral basis. Benefits include providing a framework for action, a forum for discussion and analysis, the development of new services without reinventing wheels, facilitating cost-sharing and cooperative agreements between partners, and demonstrating to funding bodies a seriousness of intent in effecting service improvements. Health Information Plans (HIPs) have been developed in a number of regions in the UK including the Northern Regional Health Authority in England and in Wales, both areas with many small and isolated rural communities. The document Health information in the North provides a strategic framework for cooperation and coordination of information services in support of health and social care, outlines the resources available, and proposes short and medium term actions to improve access for professionals and consumers to health information in the Northern Region.

In Wales the development of a medical library and information plan has grown out of the All Wales Health Information and Library Extension Service (AWHILES) which has pioneered several cooperative initiatives including an active document and information delivery system for Wales. The service is based on the provision of back-up facilities provided by the libraries of the University of Wales College of Medicine (UWCM) for other healthcare libraries in Wales. Apart from the provision of journal articles, a union list of journals of all health libraries, CD-ROM and online literature searching, book and video loans, reference enquiry backup, a disaster plan, and general support are provided. Other developments in Wales include the active involvement of the UWCM Library in the development of future strategies for the Welsh Clinical Effectiveness Group. Several pilot projects for the improvement of information access in rural areas are in operation including needs assessment in Montgomeryshire through telemedicine technology. The Welsh Common Services Authority is mounting a number of databases on a central information server in a pilot scheme to look at the potential of the Digital All Wales Network as a knowledge carrier. The medical library and information plan is being developed based on the concepts of integration, cooperation and standards representing the key developments taking place currently in the health sciences information sector in Wales.

In Vietnam, in spite of huge economic and political problems, the medical library community have achieved remarkable progress. The Ministry of Health runs the Central Institute for Medical Science Information (CIMSI) which acts as a national coordinating body for a network of medical libraries serving all areas of the country. It also promotes cooperation in networking and collection development in medical libraries, carries out research in information management and technology and acts as a focal point for health services information in the western Pacific region.

In an attempt to overcome the increasing charges of interlibrary loans a group of small healthcare libraries in Sydney, Australia formed a cooperative network called GRATIS in 1982.
The success of the group is based on its philosophy of “cooperation is preferable to charges”. Since then the networks have grown to cover other states and a wide variety of libraries. One of the main aims of GRATIS is to ease as far as possible the pressure on the larger specialised collections. Initial requests are always made to the smallest library capable of filling the request, and internal network sources are maximised before approaching outside sources. As a free, voluntary interlibrary loan service GRATIS has been very successful in mobilising lightly used collections in its region. It has been achieved without funding and through cooperation between health sciences libraries.

The British Library (BL), unlike the National Library of Medicine, is not a specialist provider of healthcare information and in the past has not been perceived as identifying with the community of medical librarians. However, the BL is used extensively by health sciences librarians in the NHS and outside for the inter-library loan of books, documents and journals and for access to MEDLINE and the databases produced by the NLM. The BL has, in fact, the largest collection of biomedical information in the UK and recently has been actively facilitating and supporting the development of a national health information forum and strategy in cooperation with the Department of Health, the Library and Information Cooperation Council and major library and information services such as the King’s Fund Centre, Guys and St Thomas’s Medical and Dental School, the University of Oxford, the Help for Health Trust and NHS Regional Health Authorities, as described below.

4.4 Information strategy

In the modern healthcare environment with constant advances in health informatics and advanced information technology coupled with the increased emphasis on accountability and measurement of clinical outcomes, the need for a comprehensive information strategy is obvious. The proliferation of information sources including databases on CD-ROM, online searching and computer networking has led to easy access to information available world-wide covering an enormous range of applications. The types of information and areas of IT application are reviewed in a recent edition of the *Annual Review of Information Science and Technology*.

In the South West Thames Regional Health Authority librarians have been working with managers in five main strategic policy Focus Groups covering the key areas of accidents, heart health, cancers, mental health and sexual health identified by the *Health of the Nation* strategy document. A variety of regional information services have been developed in response to need and experience within the groups, including a database to make information on project work and good practice available to others in the region at an early stage.

The need for a national strategy for healthcare library and information services was recognised in Great Britain in July 1990 with the setting up of the Medical Information Review Panel by the British Library. This was designed to elicit the views of the profession on a review of the structure for serving medical information needs. As part of this review a report was commissioned on *The use of information in the NHS* which provided an overview of the issues involved in the use and provision of healthcare information of all types in the NHS.

Following a seminar chaired by Baroness Cumberlege (Secretary of State for Health and a former nurse) in 1992, an organising committee was formed to represent the health library community and to ensure that commitments made at the seminar were followed through. A report of the second seminar, *Managing the knowledge base of healthcare*, identified strategic objectives and priorities for action. The Library and Information Cooperation Council (LINC) has set up a Health Panel with the goal of improving the availability of health information to all members of the community by increasing the effectiveness of health library and information services.

The importance of integrating information services of all types is a major concern. In the UK the Information Management Group of the NHS has developed an information strategy to implement the government reforms in information terms. However, this has concentrated mainly on statistical...
information and other management information with less attention to textual knowledge and information. The necessity of redressing this imbalance has been stressed\(^3^3\) and the Cumberlege initiative is actively seeking to achieve this. The main strategic objectives of the initiative are

- to improve the quality of the knowledge base of healthcare and its coordination
- to ensure that the knowledge base is disseminated widely using the technology that is becoming available
- to identify, promote and disseminate good local practice
- to improve local organisation and transmission of the knowledge base\(^3^6,3^7\).

A key development arising from the Cumberlege initiative is the appointment of the NHS Library Advisor in January 1995. The remit includes advising on the coordination of library and information services within the NHS and, in particular, on standards and good practice. The encouragement of cooperative initiatives and local support for library and information networks will be a priority, as well as the development of a library and information strategy.

The success of the new health reforms in New Zealand will depend to a large extent on appropriate information systems according to the Associate Minister for Health quoted in *New Zealand Health and Hospital*\(^3^8\). He describes how the Health Information Strategy for New Zealand identified several problems with the current information systems which have developed on an *ad hoc* basis and generally do not meet the needs of individuals, the public or private sectors. A new national New Zealand Health Information Service has been set up to establish the core elements of:

- a national minimum dataset
- a national health index
- a national household health survey
- access to documentary databases
- national health information service network
- standards and guidelines for technology, data and quality.

This strategy includes the provision for integration of textual information as well as statistical data. A clearing house will be set up to provide a “one stop shop” for access to all information, whether it be statistical and quantitative, research and analytical or textual and qualitative” and will be available to all.

A survey of nursing libraries in the Northern Region of England commissioned by the English National Board in 1992 showed the importance of libraries in the studying and updating activities of all staff, and that adequate resourcing to provide the basic stock, staffing and accommodation is essential to meet the users' needs. The library resources did not meet standards laid down by the Colleges of Further and Higher Education and a series of recommendations were made to improve the situation. These included:

- a strategy for library services to all health service staff with input from users, managers and librarians; part of the strategy should be the appointment of a librarian to plan and oversee library services in the region, working towards coordination, rationalisation and standardisation of service and systems;
- there should also be a strategy for library and information services for student and qualified nurses, taking into account the needs of Project 2000: a new preparation for practice and the report of the Post-Registration Education and Practice Project (PREPP);
- a common standard for library services should be adopted by colleges of nursing and a common set of management information to enable the service to be compared to the standard;
- a clear library staff structure should be established in the
colleges to allow career progression; librarians should be used fully and involved in policy, budgeting and management of the libraries and in college policy-making, curriculum planning and library and information skills teaching.

The importance of strategy development for all healthcare library and information services assumes even greater significance with the developments in nurse education and the trend towards multidisciplinary libraries including clinical, nursing, paramedical and management materials.

In the Netherlands the focal point for biomedical information is the Library of the Royal Netherlands Academy of Sciences with 10,000 current journals alone in this area. The library has developed a strategic approach to service delivery by involving the users in the improvement and development of the service. By means of a questionnaire survey of users the library identified that the satisfaction rate of requested articles and the speed of delivery were key areas for improvement. Document delivery processes must be strengthened and renewed by libraries or run the risk of this being taken over by commercial document delivery services. The strength of libraries is their expertise in the relationship between services, collections and user needs which forms the strategic triangle at the core of the Library of the Royal Netherlands Academy of Sciences.

4.5 Consumer health information

Consumer health information (CHI) is the fastest growing area of healthcare information provision. This is in direct response to increasing public demand and pressure from governments for health organisations to be more open and accountable. The publication in Ireland of the Charter of rights for hospital patients, and in the UK of the Patient's Charter recognised this trend and set out the basic rights of healthcare consumers, including access to detailed information on health services.

One of the first health information services for the public began at the Lister Hospital library, Stevenage in England in the late 1970s. The service originally grew out of the librarian's interest in the area of consumer health information and of her editing of the Popular Medical Index. Funding of the service is now shared between Hertfordshire Public Library Service, North Herts Health Authority and North West Thames Regional Health Authority. In addition to a core collection of popular medical books, the service relies on a large number of subject files, comprising leaflets and cuttings from medical journals, magazines and newspapers. Online searches are conducted and CD-ROM databases are used to answer enquiries. Other sources are also used, such as the hospital drugs information unit and external specialist organisations.

As part of the National Health Service Management Executive's scheme to develop centres of excellence the Health Information Service at Lister Hospital was awarded a grant to develop its outreach programme of providing health information to patients in GP's surgeries. The programme has shown that written health information enables many patients to gain useful information which they would not have sought elsewhere. The grant enabled a total of £500 to be made available to each of 10 surgeries for updating of books and leaflets. These can be borrowed or browsed while waiting at the surgery. The success of each patient information collection (PIC) depends very much on the support and enthusiasm of the surgery staff, especially doctors. The service is evaluated by questionnaire surveys and future developments include the production of a series of patient information leaflets and an annotated bibliography of the most popular books. A computerised information service has been provided in GP surgery waiting rooms in Dorset, giving summaries of medical conditions, details of books, and listings of local and national self-help groups. The database is funded by the Dorset Health Commission and set up by the Help for Health Trust and will extend to hospitals, supermarkets and public libraries.

New CHI services have developed strongly in the UK over the last 5 years from a variety of backgrounds. These include libraries, high street information shops, hospital information desks, advice centres, mobiles, and disability centres. In 1992 Regional Health Information Services were set up by the Health Information for Health.
Authorities as required by the government. The following year a national freephone number was launched to enable the public to telephone from anywhere in the country and be automatically routed to the nearest Regional Health Information Service. Many consumer health information services rely on little more than the fax and telephone and computer for storage and retrieval of databases such as Helpbox, developed by the Help for Health Trust and used widely throughout the UK. This is becoming more widely available on public access videotext systems in libraries, health centres and so on. In the USA the Health Reference Center on CD-ROM contains reference books, an index to hundreds of popular health and professional journals, some in full text, and a directory of support groups and information services. However, the high cost and very high American bias makes it of limited interest to European users at present.

In California the Planetree Health Resource Center aims to provide medical and health information resources to the general public, which is responsive to the needs and interests of a diverse public. The service is based on the belief that access to information and educational resources can help consumers feel more empowered in making personal health decisions. Services include free health information packets for patients which are compiled and delivered within 24 hours to the ward or the patient’s home.

The coordination of consumer health information services is a vital factor in developing standards, and providing unified support for the consumer’s right to information. In the UK this role is undertaken by the Consumer Health Information Consortium (CHIC). One of their main aims is to develop a consistent approach in the quality and standard of information provision to healthcare consumers.

4.6 Summary

It is vital that senior health service managers and government recognise the importance of these international trends in information development, transfer and delivery in the healthcare environment. A few of the recent advances in sophisticated information technology are highlighted here as well as examples of smaller projects and cooperative resource sharing schemes. The expertise of information professionals is essential to coordinate, assess and manage the vast information resources available. The overwhelming conclusion is that strategic planning at national level is essential to ensure the cost-effective implementation of future IT development, computer networking, and improved library and document delivery services. A coordinated approach based on agreed standards and consultation is needed to plan for an effective and comprehensive information service for all healthcare professionals, patients and the public in Ireland.

References

14. Further information from An Chomhairle Leabharlanna, Tel: Dublin 6761167, Fax: Dublin 6766721.
25. Letter and unpublished papers sent to the author by John M Lancaster, Librarian, University of Wales College of Medicine, The Sir Herbert Duthie Library, University Hospital of Wales, Heath Park, Cardiff CF4 4XN.
36. LIBRARY AND INFORMATION COOPERATION COUNCIL (LINC). *Proposal for a LINC Health Panel*. LINC Secretariat, 11 Paxton Court, Sheffield, S14 IRH.
Conclusions and recommendations

5.1 Summary of research results
The survey of health service professionals in Ireland showed that the most important reasons for seeking information were to keep up to date, to help with a particular case and for continuing education purposes. 70% of doctors regularly needed to access information within 24 hours, although methods of obtaining the information varied widely. A third of respondents needed to access information out of normal office hours and less than 50% of respondents were successful in satisfying their information needs.

The most frequently used information sources were colleagues at work, followed by journals. Almost a third of staff seldom or never read any government publications. Half the staff surveyed seldom or never consulted a librarian for advice on information seeking and over half seldom or never used computer information systems such as MEDLINE or CINAHL as sources. The regular use of libraries was in direct relation to accessibility. Hospital doctors were the highest users of libraries amongst the medical and nursing professions and were the most likely to have relevant libraries easily accessible to them. However, many doctors experienced difficulties obtaining specialised information.

Reasons for non use of libraries by doctors were mainly related to GPs and hospital doctors who lived in rural areas and/or had no access to medical libraries. Nurses complained of lack of proper library provision with relevant nursing material while the paramedical professions also lacked access to specialist library and information services. Managers with professional library services in the health board made more use of libraries than those without. Many of the latter noted the lack of suitable facilities for health service managers generally. Environmental health officers overwhelmingly referred to their lack of library and information services. Overall, a general lack of awareness of library and information services and their facilities was very evident in the responses; less than a third of staff surveyed had ever had any training in library use or information handling skills.

The greatest restrictions to accessing information were lack of time and geographical location; one third of health service staff worked at least 10 miles from the nearest specialist collection relevant to their work. Lack of access to specialist information was felt to be a restriction by over a third of respondents overall - this varied from 67% of environmental health officers, 47% of the paramedical professions, to 34% of senior managers. Over a third of staff said that restricted access (in terms of policy and opening hours) to health sciences libraries was a barrier to obtaining information. Over 40% of senior managers and 31% of doctors were restricted in their access to information by the
lack of computer systems and networking facilities and a quarter of health professionals overall said that the lack of a librarian or information specialist restricted their access to information. Many staff commented on the difficulties of obtaining up to date information in their specialist areas due to these restrictions. Concern was expressed by all professional groups at the difficulties experienced gaining access to the most recent specialist journals for information on the latest advances in techniques and research.

Suggestions on improving access to library and information services were most frequently concerned with increasing the amount of computers, networks and CD-ROMS and to greater awareness of information resources and services available in health science libraries. Improved access to libraries and more education and training in the use of libraries and information searching and retrieval was seen as very important by many respondents. Those staff who had experienced a professional library service were aware of the benefits and time saved in the effective use of such a facility. Many staff demanded increased resources including more library staff, easier access to specialist journals, up to date books and more space in the library for studying.

Health service professionals surveyed expressed overwhelmingly that there was a lack of adequate information on healthcare and related matters at the right level for the public, patients and their carers. Although the situation in consumer health information was improving, particularly with the publication of leaflets by voluntary bodies, charities, the Health Promotion Unit, and television and radio programmes, there were gaps in coverage in some areas. The lack of public availability and awareness of healthcare information was also a matter of concern to many staff particularly in rural areas.

The survey of public library provision in this area revealed an increasing demand over recent years for information on all aspects of healthcare, self-help, alternative and preventive medicine, and diet and fitness. There was a need for better coordination of the dissemination of consumer health information and a directory or listing of material available, particularly of leaflets and booklets. While all public librarians stocked some material on health and fitness subjects, it was difficult in a multidisciplinary service to keep track of up to date information in leaflets produced by a wide variety of sources. Many public libraries did not have the resources to provide enough multiple copies of books and videos required for the branches, or the staff time to maintain the leaflet collections as well as they would like.

5.2 Conclusions

Although many health science libraries and librarians were praised and obviously well used by health service staff, the research identified serious deficiencies in access, awareness and availability of healthcare information for both staff and the public. Overall, the research reveals an unsystematic and uneven approach to the provision of health sciences library and information services. Although there are many examples of excellent service provision in spite of limited resources, and initiatives such as the Irish Medical Libraries’ Journal Holdings scheme and the IRIS Service are very successful, many health service staff and patients, particularly in rural areas, have been severely disadvantaged in their access to up to date specialised information. The lack of appropriate resourcing and recognition from central government of the importance of information and IT or a central lead on strategy and future planning has meant that the development, cooperation and coordination of healthcare information services has been restricted.

From the results of the survey it must be concluded that the
sophisticated access required to the world's knowledge in the health science field (including the Internet) is not available to many healthcare professionals in Ireland. From the literature review and the study of international best practice (including countries such as New Zealand with similar sized populations) it has been shown that professional library and information services have the ability to identify information needs cost-effectively and provide timely access to relevant information in the required format, thus saving the time of health professionals and cutting institutional costs. It has also been shown that library services influence patient care outcomes, effective management decision making, research activity, and the continuing education and development of all healthcare staff.

The review of best practice indicates that a systematic review of information strategy and planning is the way forward to ensure a basic level of provision to meet the needs and requirements of the complex modern healthcare environment. To ensure the success of such a review it is essential that central government and the health boards make a firm commitment to the future development and role of health science libraries. Major decisions must be addressed to ensure that the investment already made in information technology and library services is not wasted.

In order to support effectively the aims and objectives of the recent strategy for healthcare a strong and proactive library and information service is necessary to provide cost-effective information management and retrieval for the nation's health professionals. A commitment to the importance of information and information services for healthcare from government and recognition of the value of professional library and information specialists is vital to this process.

The recommendations accordingly stress the urgent attention required for a major review of library and information provision in line with best international practice. Minor changes to the system would not have the desired effect of ensuring that the needs of healthcare professionals are met and, it is argued, they should have the best possible facilities that the government can afford, for the benefit of the nation's health.

The recommendations cited below place the emphasis on a structured review of library and information services for healthcare in Ireland. The involvement of librarians and information specialists is essential. The Department of Health has a key role in any review and should be involved at every stage of the planning process; if it does not then the exercise will be much less effective.

The objective of the following recommendations is to provide a cost-effective and realistic way forward for the future planning of information support services for Irish healthcare professionals and the public. The recommendations also emphasize the need for further investment in information technology and integration of computer systems and services to ensure value for money and to avoid the perils of heavy investment without effective information management strategies.

Unless attention to these issues is given at the macro level Ireland will lose an opportunity to be at the forefront of healthcare information development, and the resources already invested will be less effective, to the ultimate detriment of the population as a whole. Accordingly the following recommendations are made.

5.3 Recommendations

The future development of healthcare information and library services requires a mechanism whereby major issues and problems can be discussed and an agreed national strategic frame-
work developed. In accordance with examples of best practice it can be seen that effective and targeted resources are necessary to develop information services for healthcare staff and patients; official recognition of the value of professional library and information skills from national level is required.

**Recommendation 1**

It is recommended that the Department of Health and the Library Association of Ireland set up a panel to develop a national healthcare library and information strategic plan. Suggested objectives of the strategic plan include:
- the development of an integrated and coordinated health sciences library and information network for Ireland with an emphasis on shared information resources;
- the promotion of the role of the professional librarian and a proactive approach to health service information management, increasing staff and public awareness of services available;
- the development of a policy on the training and education of staff and students in library use and information handling skills;
- the development of a policy to improve the provision of healthcare information for the public, patients and their carers.

**Recommendation 2**

It is recommended that, to ensure the successful implementation of a healthcare library and information strategic plan, and in accordance with best practice, the following initiatives be considered by the panel:
- the establishment of a national forum for the exchange of views and information, to represent the interests of libraries and users, to inform relevant policy making and to promote collaborative effort between all providers of healthcare information;
- the undertaking of an audit of health science library and information services in Ireland;
- a study of the implications of the new nurse and medical education curricula and their effects on library and information services with a view to improving services for training and continuing education;
- the publication of directories of specialised information resources;
- the development of marketing skills and continuing education and training courses for all library and information staff;
- the development of library use and information skills training courses for all healthcare professionals;
- the promotion of information technology to all health professionals;
- the development of information networking including increased CD-ROM networks on local and wide area networks;
- the provision of examples of good practice;
- the development of services for specialised groups through national coordination and networking, with particular attention to the paramedical professions, dentists, environmental health officers and health service managers;
- the development of policy on the integration of management information systems with library systems in healthcare units;
- the fostering and improvement of communications and information exchange with voluntary organisations including self-help groups, charities and other information providers.

**Recommendation 3**

It is recommended that in order to address the central issue of lack of access by many healthcare staff to specialist information services in their region, as shown in section 2.3.1 of this report, that:
- a library and information service be established by all health boards or arrangements made to share resources
with an existing institution, to provide a library service to all healthcare professionals within the region; these should include a minimum of one full-time professional librarian, plus clerical and professional assistance as necessary, and a budget, in accordance with the Standards for Irish Health Care Libraries laid down by the Library Association of Ireland;

- all teaching hospital libraries should have a full-time professional librarian (where there is none at present) and that all teaching hospital libraries receive accreditation from the universities or colleges.

**Recommendation 4**

It is recommended that, in order to ensure the continuing development and quality of professional information and library services required by healthcare staff as evidenced by this research and best practice abroad, the Department of Health and the health boards recognise the professional status of librarians in health science libraries and provide appropriate grading, salary and career structure.

**Recommendation 5**

It is recommended that the restrictions to information access caused by lack of time, geographical dispersal and lack of computer equipment as shown in 2.3.1, be addressed through increased investment in information technology and the development of computer networking to healthcare units and practices, with a view to improving library and information services for all healthcare staff in rural areas and those with specialist needs.

**Recommendation 6**

It is recommended that as a result of the findings of this research (2.2.3), and in view of the proposed changes to nurse education and training, special consideration be given to the improvement of all nurse library and information services, particularly in the areas of increased resources to those institutions supporting the new nurse education courses.

**Recommendation 7**

It is recommended that the need for access to library and information services by all healthcare staff during and after training, as shown by the research (2.3.1 and 2.3.2) and evidenced in the review of best practice, be recognised. Increased investment in collection development and information technology in libraries is required from the Department of Health and health boards in order to build up professional services to support staff in their work and continuing education; particular attention should be paid to the needs of environmental health officers, the paramedical professions, dentists, health service managers and GPs, especially in rural areas.

**Recommendation 8**

It is recommended that, in view of the findings outlined in Chapter 3 and in the review of best practice, further research be done in the area of consumer health information to assess the demand for and provision of information by self-help groups, voluntary organisations and charities; to consider the adoption of a nationally coordinated dissemination policy and the development of a database of information sources of benefit to healthcare professionals, patients and the public. A feasibility study to assess the benefits of introducing a consumer health information service similar to Help for Health and others in the UK should be undertaken. The role of health sciences libraries, public libraries, the Department of Health and the voluntary organisations should be considered in any national policy or plan to increase access to this, the fastest growing area of healthcare information.
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APPENDIX A

Irish organisations contacted during the research

Academy of Medical Laboratory Science
31 Old Kilmainham Road
Dublin
Tel. 01 6775602

Age Action Ireland
St Andrews Resource Centre
Clare Street
Dublin
Tel. 01 6779892

An Bord Altranais
31-32 Fitzwillian Square
Dublin 2
Tel. 01 6760226

Association of Clinical Biochemists in Ireland
Beaumont Hospital
Dublin 9
Tel. 01 8377755

Association of Occupational Therapists of Ireland
Unit 4
Argus House
Greenmount Office Park
Harolds Cross
Dublin 6W
Tel. 01 4730320

Association of Physical Scientists in Medicine
c/o X Ray Department
St James's Hospital
Dublin 8
Tel. 01 4537941

College of Radiographers
c/o X Ray Dept
James Connolly Memorial Hospital
Blanchardstown
Dublin 15
Tel. 01 8213844

Comhairle na nOspideal
Dept of Health
Corrigan House
Fenian Street
Dublin 2
Tel. 01 6763474

Crosscare
The Catholic Social Service Conference
Programme for older people and carers
The Red House
Clonliffe College
Dublin 3
Tel. 01 8360011

Dental Council
57 Merrion Square
Dublin 2
Tel. 01 6762069

Department of Health and Information Studies
University College Dublin
Belfield
Dublin 4
Tel. 01 2693244

Department of Preventive Medicine/Cardiology Education and Research Centre
St Vincent's Hospital
Elm Park
Dublin 4
Tel. 01 2839444

Eastern Health Board
Dr Steevens' Hospital
Dublin 8
Tel. 01 6790700

Environmental Health Officers' Association
Markievicz House
Sligo
Tel. 071 60222

Faculty of Anaesthetists
Royal College of Surgeons in Ireland
St Stephens Green
Dublin 2
Tel. 01 4780200

Faculty of Occupational Medicine
Royal College of Physicians in Ireland
6 Kildare Street
Dublin 2
Tel. 01 6616677

Faculty of Pathology
Royal College of Physicians in Ireland
6 Kildare Street
Dublin 2
Tel. 01 6616677

Faculty of Radiologists
Royal College of Surgeons in Ireland
St Stephen's Green
Dublin 2
Tel. 01 6761176

Faculty of Radiologists
Royal College of Surgeons in Ireland
St Stephen's Green
Dublin 2
Tel. 01 4780200

Health Research Board
37 Lower Baggot Street
Dublin 2
Tel. 01 6761176

Institute of Chiropodists (Irish Branch)
56 St Columbas Rise
Swords
Co Dublin
Tel. 01 8401421

Institute of Community Health Nursing
Baggot Street Hospital
Dublin 4.
Tel. 01 6602689

Institute of Obstetricians & Gynaecologists
Royal College of Physicians in Ireland
6 Kildare Street
Dublin 2
Tel. 01 6616677

Faculty of Pathology
Royal College of Physicians in Ireland
6 Kildare Street
Dublin 2
Tel. 01 6616677
Institute of Public Administration
Health Services
Development Unit
57-61 Lansdowne Road
Dublin 4
Tel. 01 6686233

Irish Association of Orthoptists
c/o Mater Misericordiae Hospital
Eccles Street
Dublin 7
Tel. 01 8301122

Irish Association of Speech & Language Therapists
4 Argus House
Greenmount Office Park
Harold’s Cross
Dublin 6W
Tel. 01 4730398

Irish Association of Social Workers
114/116 Pearse Street
Dublin 2
Tel. 01 6774838

Irish Cancer Society
5 Northumberland Road
Dublin 4
Tel. 01 6681855

Irish College of General Practitioners
Corrigan House
Fenian Street
Dublin 2
Tel. 01 6763705

Irish Deaf Society
Carmichael House
North Brunswick Street
Dublin 7
Fax. 01 8735737

Irish Heart Foundation
4 Clyde Road
 Ballsbridge
Dublin 4
Tel. 01 6685001

Irish Health Services Management Institute
Hume Street Hospital
Dublin 2
Tel/Fax. 01 6619787

Irish Hospital Consultants Association
Lowell House
Herbert Avenue
Merrion Road
Dublin 4
Tel. 01 2838461

Irish Matrons’ Association
Our Lady’s Hospital for Sick Children
Crumlin
Dublin 12
Tel. 01 4558111

Irish Medical Organisation
10 Fitzwilliam Place
Dublin 2
Tel. 01 6767273

Irish Nurses Organisation
11 Fitzwilliam Place
Dublin 2
Tel. 01 6760137

Irish Nutrition & Dietetic Institute
17 Rathfarnham Road
Dublin 6
Tel. 01 4903237

Irish Society of Chartered Physiotherapists
Royal College of Surgeons in Ireland
123 St Stephen’s Green
Dublin 2
Tel. 01 4780200

The Medical Council
8 Lower Hatch Street
Dublin 2
Tel. 01 6613622

Mid-Western Health Board
31-33 Catherine Street
Limerick
Tel. 061 316655

Midland Health Board
Arden Road
Tullamore
Co Offaly
Tel. 0506 21868

National Association for the Mentally Handicapped in Ireland
5 Fitzwilliam Place
Dublin 2
Tel. 01 766035

National Council for the Elderly
Corrigan House
Fenian Street
Dublin 2
Tel. 01 6764971

National Drugs Advisory Board
63/64 Adelaide Road
Dublin 2
Tel. 01 6764971

National Rehabilitation Board
25 Clyde Road
Ballsbridge
Dublin 4
Tel. 01 6684181

National Social Service Board
71 Lower Leeson Street
Dublin 2
Tel. 01 6616422

North Eastern Health Board
Kells
Co Meath
Tel. 046 40341

North Western Health Board
Manorhamilton
Co Leitrim
Tel. 072 55123

Pharmaceutical Society of Ireland
37 Northumberland Road
Dublin 4
Tel. 01 6600699

Postgraduate Medical and Dental Board
Corrigan House
Fenian Street
Dublin 2
Tel. 01 6763875

Psychological Society of Ireland
13 Adelaide Road
Dublin 2
Tel. 01 4783916

Service for Carers
Baggot Street Community Hospital
Dublin
Tel. 01 6681577

South Eastern Health Board
Lacken
Dublin Road
Kilkenny
Tel. 056 51702

Southern Health Board
Cork Farm Centre
Dennethy’s Cross
Cork
Tel. 021 545011

Western Health Board
Merlin Park Regional Hospital
Galway
Tel. 091 751131

Information for Health
HEALTHCARE INFORMATION SERVICES RESEARCH PROJECT

Definition - the term information is taken here to mean any type of textual or statistical knowledge of relevance to your work and/or continuing education.

A. Background information
1. Please state job title
2. Present place of work
3. Place of training and year of qualification

B. Information needs
4. Please indicate your main reasons for seeking information (Please tick as many as appropriate)
   □ to keep up to date in your field
   □ for research purposes
   □ for teaching purposes
   □ preparation of papers/articles for publication
   □ preparation of talks/presentations eg, for conferences
   □ preparation for meetings
   □ continuing education/further qualifications
   □ to help with a particular case/condition/clinical problem
   □ administration purposes
   □ management purposes
   □ other (please specify):

5. Which of the above reasons are the most important to you? (in order of importance)
   i  
   ii  
   iii  

6. Do you ever need information quickly? (ie. within 24 hours). Please tick appropriate response.
   Yes _____ No _____
   If yes, approximately how often?
   Every week _____ Every 2 weeks _____ Every month _____
   Every 3 months _____ Less often _____

7. On the last occasion that you needed information quickly, what type of information was it? (please describe briefly):
   How did you obtain it?
   Did it arrive in time to be of maximum use? Yes _____ No _____

8. Do you ever require information out of normal office hours? (eg. weekends, at night)
   Yes _____ No _____
   Comment, if any: ________________________________

9. How successful generally are you in satisfying your main information needs?
   Completely _____ Nearly always _____ Frequently _____
   Occasionally _____ Rarely _____ Never _____

---

APPENDIX B

Questionnaire used for national survey of healthcare staff
C. Sources of information

10. Please tick how often you use each of the following sources for information:

<table>
<thead>
<tr>
<th>Source</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
</tr>
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<tbody>
<tr>
<td>Books</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspapers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleagues at work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleagues outside workplace</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meetings, conferences etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade/manufacturers literature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government publications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information produced in-house</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Browsing/chance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index/abstracting journals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advice from a librarian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medline or other computer system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialist bibliographies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>References in journals/papers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review articles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current awareness service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Do you personally buy any journals and/or books because you cannot see them at your place of work or library?
   Yes _____ No _____
   If yes please indicate how many in the last year:
   Books ______   Journal subscriptions ______ .

12. What type of information do you find is the most difficult to get access to? - please provide brief details:

13. Do you use any libraries regularly in connection with your work and/or research?
   Yes _____ No _____. If yes, please provide name(s) of library(s) and state how often you use it/them. If no, please give reasons.

14. Which is the nearest library/information service with a specialised collection relevant to your work? Please specify approximate distance from your workplace:

15. Have you ever had any training in library use or information handling skills?
   Yes _____ No _____. Comment, if any:

16. Do you use any library/information service by post ie. current awareness services, photocopy requests, inter-library loans? Please provide details.

D Information access problems

17. Are you ever restricted in your access to information by any of the following reasons?
   (Please tick as many as apply to you)
   □ lack of time
   □ geographical reasons/too far to travel
   □ information in a foreign language
   □ lack of specialised information
   □ lack of computerised systems/networking
   □ lack of librarian/information specialist
   □ restricted access to library
   □ other (please specify):
   Please say which of the above is the greatest problem and provide details.

18. Have you any suggestions and/or comments on improving access to information and library services in your area of work/interest and for continuing education purposes?

19. What are your views on the provision of health information for the public, patients and carers? Is appropriate information readily available? - at the right level? Please comment.

Please return this questionnaire in the prepaid envelope provided to the Library Association of Ireland, 53 Upper Mount Street, Dublin 2 by September 30th, 1994.

Enquiries should be directed to the Project Research Officer, Jennifer MacDougall.

THANK YOU FOR YOUR COOPERATION WITH THIS SURVEY
TELEPHONE SURVEY

The role of Public Libraries in the provision of Consumer Healthcare Information

One of the most important areas of the research is to investigate the levels of access by the public, patients and carers to healthcare information. Here the role of public libraries is crucial.

We would be very grateful for your help with this project by answering a few questions on healthcare information services offered by public libraries.

City/County Library:

1. Do you have a policy on health information for the public?
2. Is there a demand for information on health and related subjects in your area?
3. Do you have a budget or any funds set aside for health information provision?
4. Does the library systematically collect any of the following in relation to health and fitness, medical conditions, disabilities etc:
   books
   journals
   articles from newspapers/journals
   free leaflets/booklets
   newsletters of vol. groups/charities
   Health Promotion Unit publications
   Do you hold talks on health topics in the library?

5. Do you provide any information on local voluntary and self-help groups and health services? (Eg. local information file)
   Information on alternative medicine?
   Medical card application forms?

6. If yes to above, is this information held only in the central library or in the branches also?
   Is this service advertised in any library brochures or in any other way, eg. GPs’ surgeries?

7. Do you liaise on health information provision with local GPs, other health professionals, social workers, or local voluntary groups?

8. Do you get many enquiries from professionals such as GPs, nurses or social workers for books or journal articles etc?
   Do you, for example, make regular use of online searching and inter-library loan services on their behalf?

9. Are there any initiatives on a national or local scale which would help you in the provision of health information for the public?

   Further comments:

   With many thanks for your cooperation
APPENDIX D

Additional tables of research results

Table 1: **Response and sample size by professional groupings**

<table>
<thead>
<tr>
<th>Category</th>
<th>Population</th>
<th>Sample</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>6900</td>
<td>350</td>
<td>162</td>
<td>46</td>
</tr>
<tr>
<td>Nursing</td>
<td>46,620</td>
<td>412</td>
<td>164</td>
<td>40</td>
</tr>
<tr>
<td>Paramedicals</td>
<td>2,562</td>
<td>203</td>
<td>90</td>
<td>44</td>
</tr>
<tr>
<td>Senior Managers</td>
<td>293</td>
<td>97</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Environmental HOs</td>
<td>250</td>
<td>25</td>
<td>21</td>
<td>84</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>56,625</strong></td>
<td><strong>1,087</strong></td>
<td><strong>501</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>

Tables 2-4: **NUMBERS OF RESPONDENTS FROM THE DIFFERENT ORGANISATIONS**

Table 2: **Medical - Doctors and Dentists**

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Board hospitals</td>
<td>25</td>
</tr>
<tr>
<td>Voluntary hospitals</td>
<td>17</td>
</tr>
<tr>
<td>GP surgeries</td>
<td>68</td>
</tr>
<tr>
<td>Dental surgeries</td>
<td>37</td>
</tr>
<tr>
<td>Private institutions</td>
<td>4</td>
</tr>
<tr>
<td>Charities</td>
<td>2</td>
</tr>
<tr>
<td>Academic institutions</td>
<td>7</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
</tr>
<tr>
<td>Temporarily not working</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>162</strong></td>
</tr>
</tbody>
</table>

Table 3: **Nurses and matrons**

<table>
<thead>
<tr>
<th>Category</th>
<th>Health Board hospitals</th>
<th>Voluntary hospitals</th>
<th>GP surgeries</th>
<th>Dental surgeries</th>
<th>Private institutions</th>
<th>Charities</th>
<th>Academic institutions</th>
<th>Others</th>
<th>Temporarily not working</th>
<th><strong>TOTAL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>105</td>
<td>29</td>
<td>3</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td><strong>164</strong></td>
</tr>
</tbody>
</table>

Table 4: **Paramedical professions**

<table>
<thead>
<tr>
<th>Category</th>
<th>Health Board hospitals</th>
<th>Voluntary hospitals</th>
<th>GP surgeries</th>
<th>Dental surgeries</th>
<th>Private institutions</th>
<th>Charities</th>
<th>Academic institutions</th>
<th>Others</th>
<th>Temporarily not working</th>
<th><strong>TOTAL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35</td>
<td>35</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

**Senior managers** 46 in Health Boards
18 Voluntary sector

**Environmental health officers** - all 21 in health boards.
Table 5: **Perceived restrictions to accessing information for professional groups**

<table>
<thead>
<tr>
<th>Restrictions</th>
<th>Medics</th>
<th>Nursing</th>
<th>Parameds</th>
<th>Managers</th>
<th>EHOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of time</td>
<td>65%</td>
<td>64%</td>
<td>67%</td>
<td>75%</td>
<td>61%</td>
</tr>
<tr>
<td>Geographical reasons</td>
<td>54%</td>
<td>44%</td>
<td>50%</td>
<td>22%</td>
<td>57%</td>
</tr>
<tr>
<td>Foreign language</td>
<td>11%</td>
<td>5%</td>
<td>11%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Lack of specialised</td>
<td>17%</td>
<td>42%</td>
<td>47%</td>
<td>34%</td>
<td>67%</td>
</tr>
<tr>
<td>information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of computers</td>
<td>28%</td>
<td>17%</td>
<td>39%</td>
<td>41%</td>
<td>67%</td>
</tr>
<tr>
<td>Lack of librarian</td>
<td>19%</td>
<td>27%</td>
<td>31%</td>
<td>20%</td>
<td>43%</td>
</tr>
<tr>
<td>Restricted access</td>
<td>34%</td>
<td>30%</td>
<td>38%</td>
<td>12%</td>
<td>38%</td>
</tr>
<tr>
<td>to library</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Percentages refer to total numbers of respondents from each group.)