The role of health literature services in the national health care system in Sierra Leone: towards a plan for their development

This item was submitted to Loughborough University’s Institutional Repository by the/an author.

Additional Information:

- A Master’s Thesis. Submitted in partial fulfilment of the requirements for the award of Master of Philosophy at Loughborough University.

Metadata Record: https://dspace.lboro.ac.uk/2134/27979

Publisher: © L.G.Y. Hunter

Rights: This work is made available according to the conditions of the Creative Commons Attribution-NonCommercial-NoDerivatives 2.5 Generic (CC BY-NC-ND 2.5) licence. Full details of this licence are available at: http://creativecommons.org/licenses/by-nc-nd/2.5/

Please cite the published version.
This item was submitted to Loughborough University as an MPhil thesis by the author and is made available in the Institutional Repository (https://dspace.lboro.ac.uk/) under the following Creative Commons Licence conditions.

For the full text of this licence, please go to: http://creativecommons.org/licenses/by-nc-nd/2.5/
THE ROLE OF HEALTH LITERATURE SERVICES
IN THE NATIONAL HEALTH CARE SYSTEM IN SIERRA LEONE:
TOWARDS A PLAN FOR THEIR DEVELOPMENT

by

Lucilda G Y Hunter, BA. A.L.A.

A Master's Thesis
submitted in partial fulfilment of the
requirement for the award of
MASTER OF PHILOSOPHY
of the
Loughborough University of Technology

October 1991

Supervisor: Dr A J Meadows
Department of Library and Information Studies
Loughborough University of Technology

Dedicated to my husband Kobina
and my children Jessie and Mark
# Table of Contents

## Abstract

## Declaration

## Statement of Originality

## Acknowledgements

## Tables

## Figures

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th></th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>Purpose, scope and outline of study</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Definitions</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Situational statement</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Background</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Methodology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>References</td>
</tr>
<tr>
<td>II</td>
<td></td>
<td>HEALTH LITERATURE SERVICES FOR HEALTH WORKERS IN DEVELOPING COUNTRIES: A LITERATURE REVIEW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>References</td>
</tr>
<tr>
<td>III</td>
<td></td>
<td>THE STUDY AREA</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>General information</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Health situation and health services</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Health literature services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>References</td>
</tr>
<tr>
<td>IV</td>
<td></td>
<td>INFORMATION NEEDS OF HEALTH AND MEDICAL WORKERS IN SIERRA LEONE - A SURVEY</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Purpose and scope of survey</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Data collection</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Analysis and discussion of results</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Conclusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>References</td>
</tr>
<tr>
<td>CHAPTER</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONCLUSIONS AND RECOMMENDATIONS</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>References</td>
<td>104</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANNEXES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (A &amp; B)</td>
<td></td>
</tr>
<tr>
<td>Questionnaires</td>
<td>106</td>
</tr>
<tr>
<td>2 (A &amp; B)</td>
<td></td>
</tr>
<tr>
<td>Categories of Health Personnel Surveyed</td>
<td>114</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIBLIOGRAPHY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>119</td>
</tr>
</tbody>
</table>
Health literature services are needed to support not only the education and training of health workers, but also the delivery of health care.

In the context of the drive towards the achievement of social target of Health for All by the year 2000, this study examines how health literature services could be established and developed in Sierra Leone to support the day-to-day work of all levels of personnel involved in health care delivery whatever their location within the country and at an affordable cost.

The author's conclusions were reached after a review of the relevant literature, a survey into the information needs and service requirements of a representative sample of health care workers, and an investigation into existing health literature resources.

Based on the findings of the various surveys, it is recommended that a hierarchical network of health literature access points be established under the direction of a strong National Focal Point library. As a first step towards the realisation of this goal, the Sierra Leone government should set up a Steering Committee to formulate a national health literature services policy and prepare a detailed plan of action for submission to international donor agencies.
I wish to express my deep gratitude to my supervisor at Loughborough University of Technology, Dr A J Meadows and my external supervisor, Dr E R A Forde. Without their guidance, constructive criticisms and encouragement, this work would never have been completed.

My thanks also go to the following individuals:

Mrs Shola Barlatt and the Monitoring Team at the Bo District Health headquarters for their assistance in distributing and administering the questionnaires;

Mrs Gloria Dillsworth, Chief Librarian, Sierra Leone Library Board, Mrs L N Mjamtu-Sie, Librarian, College of Medicine and Allied Health Sciences,

Dr Clifford Kamara, Dr George Komba-Kono and Mr Paul Sengeh of the Ministry of Health who supplied various pieces of information needed.

Thanks are also due to Mrs Nancy Alidjah and Mrs Sylvia Boyle who typed drafts of this work.

TO GOD BE THE GLORY
LIST OF TABLES

SURVEY OF SENIOR HEALTH PERSONNEL (FREETOWN)

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Frequency of need to seek work-related information</td>
<td>63</td>
</tr>
<tr>
<td>Table 2</td>
<td>Reasons for seeking information</td>
<td>65</td>
</tr>
<tr>
<td>Table 3</td>
<td>Success/failure in obtaining information</td>
<td>66</td>
</tr>
<tr>
<td>Table 4</td>
<td>Reasons for failure if unsuccessful</td>
<td>67</td>
</tr>
<tr>
<td>Table 5</td>
<td>Sources of information if successful</td>
<td>69</td>
</tr>
<tr>
<td>Table 6</td>
<td>Frequency of use of information sources</td>
<td>69</td>
</tr>
<tr>
<td>Table 7</td>
<td>Number of journals received by satisfied respondents</td>
<td>70</td>
</tr>
<tr>
<td>Table 8</td>
<td>Number of books obtained by satisfied respondents in two years</td>
<td>70</td>
</tr>
<tr>
<td>Table 9</td>
<td>Reasons for not using Medical Library at the Connaught Hospital</td>
<td>72</td>
</tr>
</tbody>
</table>
**LIST OF TABLES** (cont'd)

**SURVEY OF PRIMARY HEALTH CARE PERSONNEL (DO DISTRICT)**

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Place of employment</td>
<td>73</td>
</tr>
<tr>
<td>11</td>
<td>Learning aids available during training</td>
<td>74</td>
</tr>
<tr>
<td>12</td>
<td>Day-to-day occupation since training</td>
<td>75</td>
</tr>
<tr>
<td>13</td>
<td>Reasons for seeking work-related information</td>
<td>76</td>
</tr>
<tr>
<td>14</td>
<td>Reasons for failure to obtain information</td>
<td>77</td>
</tr>
<tr>
<td>15</td>
<td>Sources of publications</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>(successful respondents)</td>
<td></td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Map of Africa showing location of Sierra Leone</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>Map of Sierra Leone showing administrative boundaries</td>
<td>32</td>
</tr>
<tr>
<td>3</td>
<td>Diagram of proposed network of Health Literature Services</td>
<td>89</td>
</tr>
</tbody>
</table>
1 Purpose, Scope and Outline of the Study:
The aim of this study was to examine how health literature services could be established and developed in Sierra Leone in order to provide adequate bibliographic information support to all levels of health and medical personnel whatever their location within the country and at a cost the country could afford.

The study is presented in three parts. In the first part, two chapters contain an introduction to the topic and a review of the relevant literature. Details on the Study Area and results and analysis of a survey carried out are presented in Chapters III and IV of the second part. In the third part, a final chapter deals with the author's conclusions and recommendations, including a conceptual design for health literature services in Sierra Leone.

2 Definitions:
For the purposes of this study, the definition of the term "Health literature services" is that to be found in a document by Weitzel entitled: National Planning of Health Literature Services.

"Health literature services comprise the entirety of those facilities, resources and services through which the processing, collection and dissemination of the literature in the health and medical sciences is achieved. This includes:

1
- facilities such as libraries, documentation and information centres;

- resources such as human resources and equipment;

- bibliographic services such as abstracting and indexing services, union catalogues and databases."

In the generic term "health literature", Weitzel includes all means of purveying health and medical information such as audiovisual material and microforms. Health literature is one category of health-related information, the others being factual information needed for planning, implementation and evaluation of health programmes and statistical data collected through regular reporting or special surveys.

3 Situational Statement:
It has been said that knowledge is power. Dowling and Ritson² have warned of the danger of a gradual decline in competence when health personnel have no reference materials to consult and Tabor, in a British Library Research and Development Report³, observes that ignorance leads to poor or inadequate planning of services and use of resources. A World Health Organization report on the training and utilisation of auxiliary personnel for rural health teams in developing countries lays great stress on the provision of opportunities for continuing education, pointing this out as one important factor in maintaining all-important motivation among health workers⁴. Access to recent and relevant information is also of vital importance to the activities of health-related research. Health literature services therefore have a major role to play in improving the quality of health care the population receives, yet in many developing countries, and Sierra Leone is no exception, this role is still so poorly appreciated that little provision is made for their development.
During the last decade Sierra Leone adopted a strategy for health care delivery aimed at achieving a social target of health for all its citizens by the year 2000. This strategy known as Primary Health Care, emphasizes the preventive and promotive aspects of health care, laying great stress on community participation, appropriate technology and innovative and inexpensive approaches. A full description of the intended structure of the health care system is given in Chapter III, but in brief, the health services are gradually becoming integrated into a system of upward referral from village level to urban level with increasing sophistication of facilities. In terms of manpower, there are cadres of auxiliary health workers at the base of the health care pyramid rising through the para-professional cadres to the professional and specialist cadres.

In order to enhance the quality of the decision-making team and other human resources responsible for making the health system function well, health literature services need to be established, developed and vigorously promoted as an integral part of the health care delivery system. An important step towards the establishment of health literature services is the formulation of a national plan. In order to have any hope of being realized, this plan must be realistic, taking into account the socio-economic conditions in the country, available resources and any likely additional resources.

4 Background:
International concern for removing inequities in the area of health care began in the early 1950s when the Member States of the World Health Organization advocated strongly the establishment of health services in rural areas to deal with day-to-day work in the control and prevention of diseases and the promotion of health. The prevailing state of affairs was that health services were centred in cities and towns, were
dominantly curative in nature and accessible to small and privileged sectors of the community only. By 1953, the Executive Board of the Organization, in a resolution later endorsed by the Sixth World Health Assembly (the supreme governing body of the World Health Organization), stated that assistance in the health field should be designed primarily to strengthen the basic health service* of the country and to meet the most urgent problems affecting large sections of the population6,7.

The development of basic health services however, remained either lamentably slow, or at best provided only a partial answer to meeting the needs of rural populations, thus causing the Director-General of the World Health Organization to remark in 1974 that:

"The most signal failure of WHO as well as Member States has undoubtedly been their inability to promote the development of basic health services and to improve their coverage and utilisation8."

*.

Basic health services consist of a network of institutions, run by the government as part of the country’s administrative system, that provide certain indispensable medical care and preventive services to individuals. The services are rendered by professional and non-professional staff who have been selected without prior consultation with the community they serve, and the community itself is not necessarily involved in the action taken to improve its health. Moreover, basic health services usually start from the centre and extend out to the periphery; they do not concern themselves with the socio-economic aspects of health and the related intersectoral action.

Concern continued to mount and to be forcefully expressed for the plight of the millions of people the world over who had no access to health care facilities and in 1977 the World Health Assembly passed another resolution that: "... the main social target of governments should be the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life."

This target became the popular slogan "Health for All by the Year 2000". By now the need for concerted international action to achieve this goal was recognised and expressed as part of the same resolution.

One of the first manifestations of international collaboration was a conference held in Alma-Ata, USSR, in September 1978. Jointly organised and sponsored by the World Health Organization and the United Nations Children's Emergency Fund (UNICEF), the conference was attended by one hundred and thirty-four government delegates and by representatives of sixty-seven United Nations organizations, specialised agencies and non-governmental organizations. On 12 September 1978, the conference produced the historic Alma-Ata Declaration, two key articles of which are Article V in which it is stated that Primary Health Care is the key to attaining the social goal of Health for All by the Year 2000 and Article VI in which Primary Health Care is defined as: "essential health care based on practical, scientifically sound and socially acceptable methods of technology made universally accessible to individuals and families in the community through their full participation and at a cost the community and country can afford ... It is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work ...".
The Alma-Ata Declaration inspired fresh enthusiasm for tackling the problem of bringing health care within reach of everyone no matter how poor they were or how remotely located within a given country, and the World Health Organization was called upon to play a leadership role in promoting the implementation of Primary Health Care.

The relevance of the preceding history to the subject of this study lies in the manner in which the library division of the World Health Organization interpreted its own role in supporting the parent body's drive towards achieving the Health for All objective.

The HFA/2000 campaign would mean a major rethinking of health policies and priorities with such very high priority areas as:

- planning of health services based on identified needs;

- training of health personnel, especially the large-scale training of paramedical staff and health auxiliaries;

- provision of up to date guidance to isolated health professionals.

The supply of appropriate information to the right people at the right time was considered a key factor in ensuring the success of the HFA campaign; therefore it was concluded that library services as channels for the communication of information had a vital role to play in the overall strategy.

Not that the WHO headquarters library had hitherto confined itself to meeting the information needs of WHO staff members only. According to Ruff, since the 1960s there had been growing concern for upgrading library and information services for health and medical workers and researchers, particularly those working in the developing countries. WHO Library staff had made some exploratory visits and between 1974 and 1978, extensive surveys were undertaken of medical libraries in the
Eastern Mediterranean, South-East Asia, Western Pacific and African Regions of WHO. The Chief Librarian at the headquarters library studied the health and biomedical library situation and needs in twenty-two countries of the Middle East, Africa and Asia, visiting many libraries and making recommendations on actions that could be taken to effect improvements. In order to encourage and support such actions, the library had established a Health Literature Services Programme; but it was the Health for All target that produced the momentum which resulted in a literature services component being included for the first time in the Organization's programme of work.

The preamble to the relevant section in the Seventh General Programme of Work for 1984-1989 states:

"Health and health-related publications, documents and other literature, whether produced by WHO or by others around the world have a vital support role to play in building national health system infrastructures and in providing information about the latest and most appropriate developments in science and technology."

Objective 14 of the section is therefore stated as being: "To ensure the availability to the Member States of valid scientific, managerial and other information relating to health in printed and other forms ... WHO will assist countries in formulating policies and drawing up plans for the development of national health literature services as an integral part of the health system infrastructure".

The formulation of national policies for health literature services was considered fundamental to this issue since the WHO surveys of the 1960s and 1970s had revealed that, broadly speaking, health libraries in developing countries had been established only in institutions such as medical schools.
and research Organizations which were expected to have them. Libraries were not always considered necessary for training nurses and health support staff, and each library was expected to serve only users associated with the parent body. Since the advantages to be gained from having access to information are not measured easily enough to be clearly perceived, librarians were expected to run their service units on minuscule budgets and with a minimal number of staff who were often minimally trained as well\textsuperscript{20}.

Clearly, this state of affairs had to improve if libraries and information centres were ever to play their part in attaining the Health for All objective, and such improvement could best be brought about through the formulation of a definite government policy for establishing or improving health literature services as a major support element for all those working or preparing to work in the health sector\textsuperscript{21}.

The formulation of a national policy would suggest the existence of the political will to draw up a plan and execute it. Benge has stated that once those two elements exist "the money will look after itself"\textsuperscript{22}, though this is perhaps an oversimplification of the matter in the circumstances of a poor developing country where it would probably be necessary to seek external financial aid. Dowling points out that not all projects, no matter how worthwhile in themselves, are popular with donors\textsuperscript{23}. This is especially true of projects whose overall success is difficult to evaluate because results are not clearly measurable. Health literature services would fall into this category. There are, however, agencies, such as the Canadian International Development Research Centre (IDRC), which are known to be particularly interested in information support for development. A well formulated proposal could probably convince such an agency to fund the establishment or improvement of at least some of the components of an effective health literature service.
In order to encourage governments of Member States to formulate policies and draw up plans for national health literature services, in 1986, the WHO headquarters library commissioned the preparation for wide dissemination of a manual entitled: National planning of health literature services.  

5 Methodology:
In October 1988 the author spent three weeks at the Loughborough University of Technology where she studied publications on survey methods and carried out a literature search covering the period 1978-1988 on health sciences libraries and information services in developing countries using indexing and abstracting works available in the library of the University. Copies of relevant articles were obtained by means of inter-library loan services and photocopying on the spot. This literature search was updated to 1990 during a second visit to Loughborough early that year.

Between November 1988 and January 1989, two questionnaire surveys were carried out among representative samples of various categories of health and medical workers within Sierra Leone’s system of health care delivery to assess their job related information requirements.

The surveys were also a means for the objective determination of the extent to which present health literature services were meeting the requirements of health workers. One survey was carried out in Freetown, the capital of Sierra Leone and the other in Bo district in the southern province of the country. The results of the surveys are analysed and discussed in Chapter IV.

Data on Sierra Leone, its health services and health literature resources was collected using primary and secondary sources ranging from standard reference works and published documents to
unpublished documents such as minutes of library committee meetings and official correspondence obtained from the Ministry of Health and the Medical Library at the Connaught Hospital in Freetown. Information was also obtained through personal correspondence, interviews and visits to officers in charge of non-governmental, health-related agencies, government health institutions and health sciences libraries and information centres.
REFERENCES


2 Dowling, M A C; Ritson, R. Learning materials for health workers. WHO Chronicle 1985; 39: 212-218


7 WHA 6.27 In: Opus Cit. p.246


11 Opus Cit. p.3-4


17 Ruff, B. Opus Cit.


20 Ruff, B. Opus Cit.


24 Weitzel, R. Opus. Cit.
CHAPTER II

HEALTH LITERATURE SERVICES FOR HEALTH WORKERS IN DEVELOPING COUNTRIES - A LITERATURE REVIEW

Health literature services are needed to support not only the education and training of members of the health team, but also the delivery of health care - what Forget has described as the knowledge and action information streams. At a time when continuing education is receiving great emphasis, the distinction is not so clear cut, but, in terms of requirements for service provision, it remains valid. In Africa and other developing areas of the world, some attempt has usually been made to provide for the knowledge acquisition stream in medical schools and to a lesser extent in paramedical training institutions, but the action stream was largely neglected until 'Health for all by the year 2000' became a global target. Even so, catering for this population of potential users of health literature services seems to be the exception rather than the rule; so that, writing in 1988, Weitzel observes:

"National health plans contain few references to bibliographic services, libraries or documentation centres. By no means all ministries of health can count on the support of such facilities; and the services that exist are rarely efficient". In his opinion, "The solution probably will be to create outreach services in existing libraries...."

Providing information support for the action stream through health literature services is likely to be much more challenging than providing it for the knowledge acquisition stream where clients are fairly homogeneous (students and faculty) and are conveniently located in institutions. In Sierra Leone, the primary health care approach to health care delivery has been adopted. The potential clients of nationwide health literature services will therefore range from the policy-makers at
ministerial level to the health workers involved in implementing health programmes in the community and in providing baseline health care as indicated in the job descriptions for primary health care workers in Sierra Leone (Chapter III p.41/42). A diversity of educational levels is to be expected in the action stream, and since it will also comprise people with little time to spend poring over weighty texts, consideration must be given to the form and substance of the literature provided in order to enhance its usefulness.

In this chapter, the author reviews the literature on attempts made by Third World countries to address this problem of providing health information for all their workers with a view to identifying approaches and strategies which could be adopted in the Sierra Leone setting.

It was decided to concentrate the investigation on Asia and sub-Saharan Africa, but without ignoring any relevant information retrieved on developments in other Third World countries outside these continents. Data collection began with a search of secondary sources covering a period of approximately ten years, then continued with an investigation into primary sources, including any information that could be retrieved through correspondence, recognizing that much valuable information on developing countries never finds its way into international data bases.

As expected, the results of the literature search of secondary sources was disappointing in terms of the number of references retrieved; but it was also disappointing as far as the contents of the references were concerned. Certainly authors 4, 5, 6, 7, 8, expressed an awareness of the need to improve health literature services and to cater for all groups of health personnel requiring information, but they only suggested steps that needed to be taken, such as providing collections of literature in hospitals. As previously indicated, the author did not attempt
a systematic literature search on health literature services in the developed world, thinking that socio-economic conditions in those regions were too different to offer ideas applicable in the Sierra Leone setting. In the event, two interesting ideas originating from the developed world, emerged serendipitously from the literature. The first was networking or systematic resource sharing, discussed by Okwuowulu, Belleh and Miah\(^9,10,11\).

Networking in the field of health sciences librarianship came into prominence in the 1970's through the influence of the U S National Library of Medicine\(^12\). In the 1980's the Office of Health Literature Services at the World Health Organization vigorously promoted the idea as a means of solving some of the problems of health literature provision in developing countries\(^13\).

No doubt this was an excellent recommendation, but as we enter a new decade, it has hardly been implemented in sub-Saharan Africa. Even the preliminary step advocated by the Organization of designating a National Focal Point has been taken in only seventeen out of some forty-five countries in the region\(^14\) and so ill-understood has been the concept that a number of these national focal points are not even libraries or documentation centres. There are known economic, political social, technical and human barriers to the successful implementation of library networks in developing countries, some of which have been described by Bouazza\(^15\) and McCarthy\(^16\). It seems, however, that willingness on the part of library professionals, and the political will to promote resource sharing in this way, are crucial factors in the success of such an endeavour. In the South-East Asia region of the World Health Organization, a decision to establish a regional resource sharing network for health literature services was taken in 1979\(^17\) and, at a regional level, the network appears to be prospering in the relationship among the National Focal points\(^18\).
This author, however, required information in-country activities and this was lacking in the indexed literature with only one reference being retrieved\(^\text{19}\). Since it described a network involving several established libraries, it was not considered useful. Yet the concept of a network remained appealing.

The second idea which interested the author was that of the circuit rider librarian cited by Belleh\(^\text{20}\). The concept was developed in North America and involves using a professional librarian based in a substantial library to provide services and advice to service points in outlying districts, where the employment of a full-time professional is not feasible for one reason or another.

Since the field of the health sciences had yielded such a paucity of helpful ideas, the author decided to widen the search to include the field of agricultural science. Parallels exist with the health sciences in the diversity of potential beneficiaries of agricultural information services, from the highly sophisticated researchers to the village worker, and also in the need to provide services for both knowledge acquisition and action in the field. This search, too, was not as fruitful as had been hoped; the thrust of the references retrieved being largely the same as in those dealing with health literature services. Three more ideas emerged which seemed pertinent to the author's quest. The first, discussed by Oladele\(^\text{21}\), was the idea of repackaging information in forms and media appropriate to the needs and level of various users. The second, mentioned by Gregorio and Sison\(^\text{22}\), was the idea of village reading centres, and the third was the idea of a centralized literature service, using that phrase in its narrowest sense (i.e. the distribution by post or otherwise of contents pages of journals to alert workers about new information and the subsequent provision of photocopies of articles requested). This idea was the subject of an article by Cooney.\(^\text{23}\)
One example cited by Cooney was that of the Tanzania Literature Service (TALIS) which grew out of the defunct East African Literature Service. Operating TALIS has not been problem-free since the end of a three-year donor/consultancy period, but the concept is attractive since requirements for its operation are few. They include a small collection of journals, tailor-made, as far as possible, to the needs of users, a high volume photocopying machine and two staff. Experience in Tanzania underscores the importance of assured continuity of funding and the availability of servicing facilities and spare parts for the photocopying machine, if the service is to be sustainable over a long period.

The author now focused her attention on that category of primary literature designated 'fugitive' or 'grey'. Correspondence was decidedly unfruitful and a search through conference proceedings and other documents yielded, for the most part, papers similar to the type retrieved earlier, among several others. Two papers thus retrieved described interesting networking activities within countries with several health sciences libraries and thus a different set of circumstances to overcome. Finally, there were four papers describing and discussing health literature service activities in two countries which were extremely pertinent to the author’s information needs. The first country was Papua New Guinea and the second, Zimbabwe.

Hoare, in a dissertation and later in a paper presented at the 5th International Congress on Medical Librarianship, describes and discusses attempts to develop a national medical library service in Papua New Guinea, a poor developing nation whose government has adopted the Primary Health Care approach to health care delivery. Its population is largely rural, for the most part either illiterate or poorly educated, and internal communication is difficult. At the start of its programme of health information for all, there was only one health sciences
library worthy of the name. This was the Medical School Library at the University of Papua New Guinea. It was designated the National Focal Point for biomedical information and, as such, adopted a policy of providing "a range of learning materials and information services relevant to the health care needs of the whole country and at a level appropriate to national resources." One of the library's first projects was the provision of core library stock, normally about fifty titles suitable for different levels of readership. The medical library maintains a master core collection from which new cores can be constructed, items replaced, or the subjects covered altered slightly to suit personal or provincial needs.

The core library concept was presented in the United States about twenty years ago in answer to the need of scientists to deal with the proliferation of biomedical literature. The philosophy is that this model should provide the minimum number of books and journals of a high quality that will satisfy the average needs of the clientele of an institution. The strategy has been criticised as being inappropriate for developing countries, where the problem is a dearth rather than a surfeit of information. Developing countries, however, also suffer from a dearth of financial resources with which to acquire literature. It is in this context that core collections have been advocated as a means of improving the availability of relevant information. Summing up the discussions of a 1979 Bellagio conference, Bruer states succinctly that core collections are "highly appropriate under conditions of scarcity".

The National Focal Point Library in Papua New Guinea has been particularly concerned about the relevance of literature provided for health workers in the country. Hoare observes that "not only is the type and level of health care different in Papua New Guinea ... from that offered in developed countries, but we are dealing with health care professionals whose general educational attainments may be more limited than their Western
The acquisition of suitable multi-media materials has therefore been a major concern of the National Focal Point. Since experience in Papua New Guinea has shown that multi-media packages produced for the international market have tended to lose relevance when used locally, are often expensive to purchase and subject to inconvenient copyright laws, it has been the policy of the National Focal Point to develop them locally. In Papua New Guinea, health learning materials are produced by means of a close collaboration between health workers and library staff. The whole presentation of slide/tape and video programmes is suited to the promotion of basic health improvement in rural communities, and is thus completely relevant to the particular health needs of the country or even to an individual region.

This question of the relevance of learning materials for the health care team has been recognised for some time. In Africa, there have been for a number of years two major agencies devoted to the development of materials for African health workers. In French-speaking Africa there is the Bureau d'Etudes et de Recherche pour la Promotion de la Santé in Zaire, and in English-speaking Africa there is the African Medical Research Foundation in Kenya. The World Health Organization has also taken a keen interest in this field of endeavour. Recognising the importance of local relevance and national self-reliance it has, since 1981, maintained a programme, jointly with the United Nations Development Programme, to help developing countries to produce their own teaching and learning materials adapted to their special needs and to encourage them to build up networks for sharing materials and expertise.

At one time, the Papua New Guinea National Focal Point also produced a newsletter containing contents pages of selected periodicals, new acquisitions, bibliographies, photocopies or summaries of articles considered to be of particular importance, and Hoare attributed to the distribution of the newsletter an increase in requests for literature searches and photocopies.
This service appears to have lapsed since he presented his paper, due to dwindling resources; for, although the library was designated a National Focal Point by the Department of Health, funding for its outreach activities has been entirely by the University of Papua New Guinea. This situation again highlights the importance of continuous funding if information services that have been developed are to remain effective. Regrettably, Barrett reports in 1989 that there are now only infrequent communications with institutions which have received core collections and with health workers throughout the country.

Like Papua New Guinea, Zimbabwe has only one well established health science library which has been designated the National Focal Point for biomedical information. Even given the size of the country and its population, the librarians at the National Focal Point have been undaunted by the challenge of providing health information for all, though it is evident that Zimbabwe has one tremendous advantage over many developing countries: internal communications systems are apparently quite satisfactory. Thus in 1987, health workers were entitled to borrow books by registered post.

One health literature services project still in the planning stages in 1987 was the provision of core collections to all health institutions in the country.

The National Focal Point was also concerned with providing access to the information in periodical literature. Realising that the high cost of journals would militate against being able to ensure continuity of supply if core collections of journals were instituted, it set about finding an appropriate solution to the problem. The approach adopted was the institution of a literature and information service. After three unsuccessful attempts to find external financial support for the project, a locally based charitable organization agreed to fund the
production of the newsletter on which the service would be based. It is called Current Health Information Zimbabwe (CHIZ) and contains SDI profiles requested by health workers and executed through Medline searches. Contents pages of seven major journals, news from the Ministry of Health and news from the National Focal Point Library are also included. According to Patrikios\textsuperscript{53}, this publication has been greatly appreciated by rural doctors, health inspectors, educators and others with the desired result of an increase in the use of the library's resources. Patrikios presents the newsletter as:

"a simple source of information relevant to health personnel in a developing country, mediating the low-cost dissemination of information drawn from sophisticated resources of industrialised countries. Countries whose priorities are, like Zimbabwe's, preventive medicine and primary health care may find it a useful example of information technology appropriate to their needs and resources."\textsuperscript{54}

Patrikios further expects that with the recent advent of CD-ROM technology and the promise of having the necessary equipment installed in the National Focal Point Library, the SDI profiles will in the long run become less expensive to produce, further reducing the cost of the newsletter, and that it will even be possible to produce supplements as well as the present quarterly issues.

Indeed, CD-ROM technology has opened up the possibility of rapid access to major international databases whose interrogation was precluded for most developing countries on account of expensive and/or non-existent telecommunications links.\textsuperscript{54,55,56} African medical libraries had to depend on printed bibliographies and indexes for literature searches in response to specific subject requests and, since abstracts were not included in all indexes (eg Index Medicus), the librarian or inquirer was obliged to
gauge the relevance of an article from its title. When photocopies had to be requested from abroad, they sometimes turned out to be irrelevant. Access to international databases in Europe and the United States was sometimes possible through donor agreements, but receiving a response to requests for literature searching could take several weeks.

In summary, the author considered that the following ideas gleaned from the literature could perhaps be pursued in connection with the establishment of a health literature services system in Sierra Leone:

- networking based on a suitable model;
- circuit rider librarians;
- centralised provision of photocopies;
- village 'reading' centres as part of the system of literature provision;
- repackaging information to make it relevant to local needs and users;
- selective information provision in the form of core collections;
- reaching health workers through the medium of the specially designed newsletter or information bulletin;
- exploitation of CD-ROM technology.

Their possible application in the Sierra Leone setting will be discussed in the final chapter of this study.


3 Weitzel, R. Opus Cit


5 Okwuowulu, A O. The role of libraries in the health service in Nigeria. *International Library Review*, 1979; 11: 163-174


7 Makhlira, G G. The role of medical libraries to the health personnel in Malawi. *The MALA Bulletin*, 1982; 3: 14-15


9 Okwuowulu, A O. Opus cit.

10 Belleh, G S. Opus cit.

11 Miah, M F. Opus cit.


14 Information obtained from Regional Office for Africa of the World Health Organization.


18 Anand, S K. Opus cit.


20 Belleh, G S. Opus cit.


22 Gregorio, L B; Sison, J C. Agricultural information provision in developing countries. IAALD Quarterly Bulletin, 1989; xxxiv: 7-11

24 Cooney, S. et al. Opus cit

25 Mbwana, S S; Gessesse, K. The scientific literature service in Tanzania. Focus on International Comparative Librarianship, 1988; 19: 30-31

26 Dixit, R P. Improving delivery of health sciences literature/information through resource sharing in India. In: Medical Libraries - One world: resources, cooperation, services. 5th International Congress on Medical Librarianship. Proceedings 1. Tokyo: Japan Organizing Committee ... 1985 p.196-202

27 Gozo, A J. Appropriate health sciences library services for the Third World. In: Opus cit. p.239-244

28 Kannike-Martins, P A. Responsibility of medical librarians to their library users - the Nigerian scene In: Opus cit. p.334-342

29 Patrikios, H. Socio-Political changes in developing countries the concerns of the medical librarian? In: Opus cit p.510-518


34 Hoare, E P. Core libraries, AV productions and the operation of a National Focal Point. In: Opus cit. supplement p.1-4


38 Hoare, E P Opus cit. (34)

39 Hoare, E P Opus cit. (35)

40 Hoare, E P Opus cit. (35)
41 Carmel, M. Opus cit


43 Bruer, J T. Opus cit

44 Hoare, E P. Opus cit (35)


48 Hoare, E P. Opus cit (35)

49 Barrett, A. Opus cit.

50 Barrett, A. Opus cit.

51 Mabaso-Kwalo, S A N. Opus cit.

52 Patrikios, H. Opus cit. (36)
Patrikios, H. Opus cit. (36)


Ali, S N. CD-ROM databases as an alternate means to online information: the experience of a university library in developing countries. Microcomputers for Information Management, 1988; §: 197-202

CHAPTER III

THE STUDY AREA

1 General Information:

Sierra Leone covers an area of 27,925 square miles (73,326 square kilometres), and is situated on the West Coast of Africa between longitude 10°-13° West and latitude 7°-10° North. It is bordered on the North and East by the Republic of Guinea and on the South by the Republic of Liberia. Its 210 mile coastline along the Atlantic Ocean constitutes its Western boundary. Its capital, port and seat of government is the City of Freetown.

Climate and Geography:

Sierra Leone's climate is tropical with two well-defined seasons - a rainy season from approximately mid-April to mid October, and a dry season. Rainfall is fairly consistent during the rainy season and amounts to 150 inches per year in the coastal areas and some 30 inches less in the inland plateau. The mean temperature varies from 72°F (22°C) at night to about 92°F (33°C) during the day. Humidity is extremely high and energy-sapping, especially during the rainy season.

Lofty hills rise near the sea and the crests immediately behind Freetown reach an elevation of 3000 feet. There are numerous rivers and lakes, and the wide stretch of coastal belt of low-lying lands provides fine rice growing swamps.
SHOWING LOCATION OF SIERRA LEONE ON AFRICAN CONTINENT
MAP 2

MAP OF THE REPUBLIC OF SIERRA LEONE

SHOWING ADMINISTRATIVE BOUNDARIES IN SIERRA LEONE

32
Administration:
The country is divided into three Provinces (Northern, Southern and Eastern) and the Western area where Freetown (Pop 469,796, 1985 census) is located. The Provinces are subdivided into twelve districts; Port Loko, Kambia, Bombali, Koinadugu, Tonkolili in the Northern Province, Kono, Kailahun, Kenema in the Eastern Province and Bo, Bontha, Moyamba and Pujehun in the Southern Province. Each district is further divided into chiefdoms. There are one hundred and forty-eight chiefdoms which are divided into sections headed by section chiefs, as well as villages and hamlets.

Economy:
Sierra Leone is predominantly an agricultural country with rice as the basic crop and staple food of the country. However, insufficient rice is grown to feed the population and a large amount has to be imported using up a great deal of scarce foreign exchange. Cash crops are palm kernels, cocoa, coffee, ginger and cassava. Although agriculture is the dominant sector of the economy, it accounts for only about 30-35% of the Gross Domestic Product. Mineral exports have accounted for more than 70% of the country's total foreign earnings. Sierra Leone is well endowed in terms of natural resources but, like the majority of countries in sub-Saharan Africa, the present economic situation is one of high inflation, falling real incomes, inadequate social and other amenities, chronic shortages of foreign exchange and scarcity of basic commodities such as petroleum products.

Transport and Communication:
In 1986 there were some 7,400km of roads of which only about one-fifth were hard-surfaced with bitumen. There are no commercially operated railways, the government having finally closed the railway in 1974. The international airport is at Lungi, North of Freetown.
Radio and telecommunications services were all in dire need of rehabilitation by 1988, but progress is now being made on the rehabilitation of the national telephone network to make internal communication easier. A new national digital exchange is being introduced by the Sierra Leone National Telecommunications Company and it is expected that in the next ten years, telephone coverage in the country will increase from the present 40% to approximately 80% reaching all provincial centres. Solar power systems are replacing conventional generators on remotely located radio, relay sites which will greatly improve telecommunication between Freetown and the rural areas. In 1990, the general public could only make international telephone calls and send telexes and facsimiles from the Sierra Leone External Telecommunications headquarters in Freetown, though some private organizations, embassies and commercial enterprises operate their own machines. Now efforts are under way to improve external communications as well. In June 1991, Sierra Leone External Telecommunications Limited, successfully placed into service a new standard Satellite Earth Station to allow the company to integrate its services into a digital network. International Direct Dialling from subscribers is expected to become possible in the very near future.

Demography and Human Ecology:
The provisional figures in the 1985 census indicated a population of 3,517,530, including a few thousand Europeans, Americans, Indians and Lebanese. This population comprises some fifteen to twenty ethnic groups, each with its own language and customs. The Mende in the South and the Temne in the North together make up about 60% of the population.

In 1989 there were only ten towns in Sierra Leone Leone with populations of over 10,000 people. Most of these towns are hundreds of kilometres away from each other and the roads which link them are in poor condition for the most part, a situation which must be given due consideration when health literature services are being planned.
Subsistence farming and fishing constitute the main occupations and means of livelihood of the rural population which forms approximately 70% of the total. According to recent estimates the illiteracy rate is 71.2%. English is the official language, but the majority of Sierra Leoneans speak a lingua franca known as Krio.

Education:
In 1984 there were over 1267 registered primary schools. Primary education is partially free, but not compulsory, and school attendance varies in different parts of the country. There are some 180 secondary schools, over 70% of which are fully assisted by government. Technical education is provided in four Technical Institutes, two trade centres and in the technical training establishments of the mining companies.

Fourah Bay College (founded 1827), Njala University College (founded 1964), and the College of Medicine and Allied Health Sciences (founded 1988) are the constituent colleges of the University of Sierra Leone.

The Institute of Education which is part of the University is responsible for teacher education, educational research and curriculum development. There are six teacher training institutions.

In the field of health, apart from the College of Medicine and Allied Health Sciences, there is a National School of Nursing in Freetown. In Bo, which is some 160 miles from Freetown, there is a Paramedical Training School and the School of Hygiene which reopened in 1990. All these institutions suffer from severe financial constraints which seriously affect the quality of education they are capable of providing. Individuals have to depend on their own efforts in order to improve their education, but they are hindered by the dearth of adequate library services.
Public Library services in Sierra Leone were started by the British Council, but in 1959, on the eve of independence, a national (legal deposit) library was established, operated by the Sierra Leone Library Board. It was given the additional mandate of providing nationwide public library services. There is a Central Library in Freetown, three regional libraries and some twelve branch libraries, eleven of which are to be found at district level in the Provinces.

There are libraries at Fourah Bay College and Njala University College, a few secondary school libraries and a few special libraries attached to government ministries. In 1990 a library was established at the College of Medicine and Allied Health Sciences. As is the situation with other educational institutions, all libraries in Sierra Leone have been badly affected by the current financial stringencies, especially since there is hardly any indigenous publication of books and periodicals. Any improvements will, for the foreseeable future, have to depend heavily on external donations and funding.

In 1983, Dr Havard-Williams of Loughborough University visited Sierra Leone as a UNESCO consultant to evaluate the state of library services in the country and to prepare a long-term plan for the development of the country's public libraries. In the light of UNESCO's policy on information, first formulated at the NATIS conference in 1974, and of the financial stringencies mentioned above, Dr Harvard-Williams's chief recommendation was that:

"There should ... be provision for an integrated service of national public, school, college, university and special libraries."

36
No action was taken on the Havard-Williams report until 1987, when the Sierra Leone Library Association held a two-day conference to consider its implications in terms of legislation, management and manpower.

After the conference a special Task Force was appointed to propose a plan for further action to government. There has been no further progress on the matter, but since the possibility now exists of the establishment in the future of a national information network, any system for the provision of nationwide health literature services would have to be structured in such a way that linking it to the total information network of the country could be accomplished smoothly.

2 Health Situation:
The predominant causes of mortality and morbidity in Sierra Leone are, as they have always been, inadequate nutrition, inadequate antenatal care, overcrowded housing, and communicable diseases, as well as a lack of basic environmental health conditions (ie safe drinking water supply and sanitation). In 1987, it was estimated that less than 10% of the rural population had access to a safe water supply.

Major communicable diseases like measles, malaria, tetanus, whooping cough and tuberculosis still account for the bulk of infant and child mortality which remains at very high levels by comparable international standards. Respiratory diseases, skin ulcers, leprosy, helminthic infections, anaemia, schistosomiasis and diarrhoea also constitute serious health problems.

Vital Statistics:

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude birth rate</td>
<td>47 per 1000 population</td>
</tr>
<tr>
<td>Crude death rate</td>
<td>23 per 1000 population</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>130-180 per 1000 live births</td>
</tr>
<tr>
<td>Child mortality rate (0-5 yrs)</td>
<td>336 per 1000 population</td>
</tr>
<tr>
<td>Maternal mortality rate</td>
<td>45 per 1000 deliveries</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>47 years for males</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>49 years for females</td>
</tr>
</tbody>
</table>
Health Services

Western-style health services started in Sierra Leone in the late 19th and early 20th centuries as a function of government and have largely remained so, though missionary societies have been operating voluntary health services for many years. Health services are also provided privately, mainly in connection with mining activities.

Until 1927, there were no hospitals at all outside the colony area, even though the Protectorate had been declared in 1896. When government hospitals finally came into being, for administrative convenience they were located in the twelve district headquarters towns, though, by the eve of independence, twenty-three health centres, thirty-six treatment centres and twenty-five government dispensaries had been built throughout the country from funds provided under the Colonial Development and Welfare Scheme for the control of endemic diseases. Modern or scientific health care, however, still remained beyond the reach of most of the population, who depended on the often haphazard ministrations of traditional healers.

Another negative aspect of Sierra Leone’s health Services at the dawn of independence was that successive colonial governments, like most governments in developed countries, had laid the greater emphasis on the provision of curative care. The practice of preventive medicine was largely ignored except in times of epidemics, and it was only in 1959 that the colonial government constituted a Council of Health Education to formulate a health education policy.

In 1962, a plan for the development of health care services in Sierra Leone was prepared in which the existing system was severely criticized.
"The health organization of Sierra Leone has not made possible an efficient and adequate health care organization to meet the needs of the mass of the population. It is now imperative for an independent Sierra Leone to recognize that there exists the need for a changed and improved health organization with proper coordination of all those measures which tend to improve or preserve public health but which often extend far beyond the fields of curative and preventive medicine."

The plan called for decentralization and greater community participation in tackling health problems and recommended several other important changes in the way health care was delivered in the country. When a ten-year health plan appeared in 1965 its tone was much more cautious than the 1962 plan and its general orientation was still towards the provision of curative care, with much emphasis being placed on hospitals\textsuperscript{15}. By 1974, however, the shift towards integrated health services had begun, and in the section on health in the National Development plan 1974/1975 - 1978/1979 the policy is stated as being:

"To raise the level of health of all people by providing a network of sound health facilities capable of reducing diseases, protecting health, increasing productivity and ultimately promoting well-being in the shortest possible time\textsuperscript{16}."

This was to be achieved by the expansion of medical and health care facilities in order to reach a greater percentage of the population, thus creating a basic health infrastructure to act as a framework for the prevention of major diseases. Hospitals would be largely referral centres.

Despite these lofty ideals, health services remained inequitable. In 1981 two WHO/UNDP short-term consultants observed:

"The distribution of health facilities is disproportionately in favour of the privileged few in urban areas\textsuperscript{17}".
In 1983 a senior physician lamented: "There are still 14 chiefdoms in Sierra Leone with an area of 2,455 square miles and a population of 104,349 people with no facilities of any description whatsoever"¹⁸, and again, in 1985, the speaker delivering the keynote address at the Annual Congress of the Sierra Leone Medical and Dental Association was obliged to say:

"The bulk of the population have no access to medical care"¹⁹.

Clearly, the government had been unable to carry out its health policies satisfactorily, and a new strategy was called for. In fact, by 1985 the strategy advocated by the Alma-Ata conference in 1978 had already been incorporated in a Primary Health Care National Action Plan.²⁰ While curative services would be maintained for the sick and disabled, the government's main objective became assisting communities to prevent diseases and promote healthy living - in other words, Primary Health Care. Interestingly enough, this was the very approach so strongly recommended in the health care services development plan of 1962; but it took a global movement to bring about any serious attempt to implement it in Sierra Leone.

Essentially, the objectives of health care services have not changed, but it has been recognised that in the country's socio-economic situation the preventive and promotional aspects of health care need far greater emphasis than the curative. Decentralization must be encouraged to permit the bulk of local health problems to be dealt with at a local level with the full participation of the community and the cooperation of other sectors which impinge on health, such as agriculture and education.

Three levels of care constitute the primary health care delivery system, which is intended to be pyramidal in structure.
1 Village level, organised and controlled primarily by the community itself, with a peripheral health unit serving a population of about 500.

2 Chiefdom level, with a health unit located in the chiefdom headquarters town to serve a population of between 10,000 - 20,000. This constitutes the first referral level.

3 District level constitutes the third level of health care, with the district hospital forming the second referral level where patients who cannot be adequately treated at the lower levels of care can be managed.

Health Manpower
The manpower requirements for the new system are as follows:

At village level there are teams of village health workers (VHWs) appointed by the community they serve. They are trained by Community Health Officers (CHOs) and State Enrolled Community Health Nurses (SECHNs) in cooperation with extension workers in agriculture and social welfare to perform the following tasks:

- identify health needs and facilitate resource utilisation to meet those needs;

- promote good nutrition;

- promote maternal and child health care;

- identify and manage common clinical problems, such as vomiting and diarrhoea, and assist in the follow-up of patients (TB, Leprosy, etc) as required:

- promote personal hygiene and healthy life-styles;

- assist health teams in controlling disease outbreaks.
At chiefdom level, there is a health team comprising some or all of the following: a Community Health Officer (CHO) or nurse/dispenser, a State Enrolled Community Health Nurse (SECHN) assisted by a Maternal and Child Health Aide, a Sanitarian and an Endemic Diseases Control Assistant. CHOs and SECHNs are expected to be able to:

- diagnose and manage common clinical problems;
- diagnose and manage common trauma, acute medical and surgical emergencies;
- provide maternal and child health services;
- train village health workers;
- manage the health unit and the activities of the health team (CHOs only).

At district level, the health team comprises a medical officer with training in community health, a health sister, a health inspector and a Community Health Officer. This team is expected to carry out the following:

- provide leadership for, and supervision of primary health care activities in the district;
- manage transport, drugs and other supplies;
- collect and interpret health data;
- provide in-service training for lower levels of staff.
There are further referral levels which complete the new health system - the Provincial hospital with its facilities for providing more sophisticated care and, finally, the Central hospital where specialist care is available. At these levels, the lines of demarcation are not rigid.

One of the major areas of concern to ensure the successful functioning of the health care system is the education and training of the manpower needed. As a preliminary step towards improving the manpower situation, in 1986, the Department of Community Health at Fourah Bay College carried out an evaluation study of health manpower in Sierra Leone.

Among the findings reported by the Gage Report were that there exists a shortage of trained manpower at every level of the health system, a problem exacerbated by the shortage of training institutions. There exist in Sierra Leone the following institutions for training health personnel:

- College of Medicine and Allied Health Sciences (established only in 1988 with an annual intake of 20 students, not all of whom are nationals);

- National School of Nursing with an annual intake of 100 students, 50% to be trained as State Registered Nurses and 50% to be trained as State Enrolled Community Health Nurses;

- School of Midwifery with an annual intake of 25-35 students;

- Paramedical School in Bo with an annual intake of 30 students to be trained as Community Health Officers;

- The Department of Community Health at Fourah Bay College with an annual intake of 25-28 students to be trained as Community Health Officers. Entry is restricted to health professionals such as SRNs, SECHNs and Health Inspectors;
School of Hygiene to train Public Health Inspectors reopened in Bo in September 1990.

Other categories of health personnel - Druggists, and Endemic Diseases Control Unit Assistants - seem to be trained in an ad hoc manner in batches, while Maternal and Child Health Aides receive more regular training in the three provincial hospitals - Bo, Kenema and Makeni.

Training:

In the Primary Health Care National Action Plan, it is stated that training objectives for potential community health workers are to be determined by the tasks they will be expected to perform. Thus the training programme for Maternal and Child Health Aides includes the basic principles of hygiene, child health and midwifery. Endemic Disease Control Unit Assistants are trained in the diagnosis, treatment and prevention, by vaccination and other means, of locally endemic diseases. The Community Health Officers' course is designed to retrain nurses and other health personnel for work at the village, chiefdom or district level. It emphasises the team approach to health care and the interdisciplinary nature of health problems, and includes such peripheral topics as epidemiology, demography and nutrition. In his report, Gage expresses satisfaction with the course for Community Health Officers offered at the Department of Community Health at Fourah Bay College but criticizes other courses either for their content or for the method of teaching. For instance, the course for State Enrolled Community Health Nurses is, in his opinion, far too hospital-oriented for personnel being trained to work in the community. He also laments the lack of demonstration and other learning materials.

One area of the report which was of particular interest to the author was its findings, if any, on the role of health literature in the training of health personnel.
Gage describes health literature resources as "woefully inadequate" in all training institutions except the Department of Community Health at Fourah Bay College. "Textbooks are neither available for students to purchase nor made available in the library in sufficient numbers. The course has to rely on some old editions of textbooks which were received as donations several years ago," and regarding training resources for midwives, he also observes, "There are no library facilities."23 His findings entirely support the observations of Dowling and Ritson24 that "in many developing countries, training schools for health workers have no libraries, no textbooks, no teacher guides or teaching aids. Even after health personnel have been trained, they have no reference materials to consult ... In these conditions, their competence gradually declines as does the health care they provide".

Unless health literature services are provided after basic training, such a decline in competence is even more likely in Sierra Leone where Gage found that: "In the majority of instances the health workers could not recall when the last supervisory visit occurred".

The Gage report concludes that the whole question of manpower, including training, will have to be reviewed in order to take the remedial steps necessary to make the new system of health care delivery in Sierra Leone work satisfactorily. It is the author's position that the role of health literature services as an important support element should also be given serious consideration. Health literature services could then be integrated in the health infrastructure in such a way that they would contribute to the development of health manpower of the quality required.

The next section of this chapter therefore reviews the existing health literature services resources as a first step towards suggesting how they might be integrated into any future plans for the development of human resources for health care delivery.
3 Health Literature Services:

The Medical Library at the Connaught Hospital, Freetown:
In colonial times, the Medical Department (what was to become the Ministry of Health after independence) operated a medical and sanitary circulating library. This service collapsed after the retirement of the officer-in-charge and the collection of books and journals remained on the floor of a room in the Registry of Births and Deaths in a state of increasing disorder and decay until 1966, when a small group of senior medical practitioners met to discuss ways and means of organising a new library service.

The Medical Reference Library, the outcome of those discussions, opened at the Connaught hospital in 1967 with an expatriate volunteer as librarian in charge. It was originally thought that the library could be operated by means of subscriptions paid by local physicians and supplemented by other donations. The Ministry of Health, meanwhile, continued to subscribe to a number of medical journals. The first donation was £100 sterling, received from the University of Newcastle-Upon-Tyne, and the British Medical Association donated seventeen of their own periodical publications.

Subscriptions were never a viable source of funding for the library, which therefore depended solely on donations until 1975 when the Ministry of Health voted a small subvention for its upkeep. The Ministry had, however, paid the salary of the librarian from the start. Borrowing privileges were introduced early in the 1970s. In 1980, small collections of standard textbooks and monographs in the major specialties were made available, through the good offices of the British Council, to personnel located in the provinces, since, for the reasons of poor communication, it was only in exceptional cases that they were allowed to take books outside the capital city. The author found no evidence that this core collection project had been followed up since its initial implementation.

46
Foreign exchange constraints became a major problem after 1980, just when overseas donors, such as the British Council and the British Medical Association, found it necessary to cease their donations. The development of the library service would have come to a virtual standstill but for the fact that the World Health Organization, in pursuit of its Health for All objective, had (as described in Chapter I) intensified its health literature services programme to strengthen biomedical libraries in developing countries.

As part of this programme, a workshop for senior medical librarians from Eastern and Southern Africa was held in Arusha, Tanzania, in 1982. One outcome of the Arusha workshop was a recommendation that each Ministry of Health should identify a medical or health sciences library which could function as the National Focal Point for the development of that country's health literature services network\(^2^5\). The recommendation was supported by the African Advisory Committee for Medical Research, as a result of which, in 1983, a circular letter was sent by the Regional Director of WHO to the ministries of health in all Member States in the African Region requesting governments to designate a National Focal Point.

In Sierra Leone, the only library meeting the selection criteria drawn up by the Arusha workshop was the Medical Library at the Connaught Hospital. It was accordingly designated the National Focal Point on 29 August, 1985\(^2^6\). One immediate result of this designation was that the WHO Regional Office for Africa donated to the Medical Library a photocopying machine, which was considered an essential piece of equipment for the new functions envisaged. The Ministry of Health also increased the library's financial allocation considerably, but the worsening economic situation in the country made it impossible to utilize the funds to upgrade the library so it could function as a National Focal Point.
Up until January 1988, the Medical Library was run by a professional librarian, but when the author paid a visit late in 1988 no professional staff were in charge. In 1988, the collection was made up of just over two thousand books plus some six hundred bound volumes of periodicals. Only the World Health Organization continued to donate books and periodicals on a regular basis. The current journal collection was therefore practically nonexistent. Indexing and abstracting publications, such as Index Medicus and the Tropical Diseases Bulletin, had not been recently received and the photocopying machine, while busy, was hardly ever used for copying library materials. In theory, membership of the Medical Library was open to all employees of the Ministry of Health, but a quick glance through the records of borrowers showed that there were very few borrowers who were not doctors at the Connaught Hospital. The resources of the library were, however, frequently being consulted by students from the Department of Community Health at Fourah Bay College.

The Library at the National School of Nursing, Freetown:

The premises of this library, which is open to nurse tutors and to both trainee and qualified nurses, are quite impressive, but the stock is disappointing, comprising a limited number of books and outdated periodicals. No audiovisual material was visible. The author interviewed the sister tutor who ran the library on a part-time basis and learned that there was no budgetary allocation for the library. That the situation was not worse was due to the generosity of the British Council and other agencies which had donated a number of books. The British Council also donated the periodical Nursing Times, the only periodical received regularly. Asked about resources at the School of Midwifery which exists in the main maternity hospital, the sister tutor revealed that there was only a small reading room to which she sent suitable duplicates from time to time.
Information about health literature services outside Freetown was obtained mainly by correspondence. The two services worth mentioning are to be found in the town of Bo in the Southern Province where there is a library attached to the Paramedical School there, and also what is known as the Health Information Centre attached to the District Health Administrative Office.

This last, an extremely new unit in 1988, is at present small, but contains a valuable collection, since it also serves as the documentation centre for the Primary Health Care project run by the Ministry of Health in collaboration with the GTZ (a Federal Republic of Germany Aid Agency). The Health Information Centre also contains a small audiovisual collection with health-related slides and audio cassettes. There is no fixed budgetary allocation for the centre, and the book and periodical collection is made up mostly of material donated by the World Health Organization, the United Nations Children's Emergency Fund and the United States Agency for International Development. The Centre is operated by a non-professional who is receiving in-service training from a professional librarian from the University College nearby. He helped to establish the Centre. Only exceptionally is material allowed out on loan to users of the Centre. These include researchers, health educators, medical and paramedical workers and staff of the Endemic Diseases Control Unit.

The library at the Paramedical School in Bo was started with the establishment of the school in 1983. In August 1988 it had a collection of under two thousand books, a few WHO periodicals and a few newsletters to serve a population of seventy-four students, eleven full-time lecturers and fifteen part-time lecturers. It contained four slide projectors and two tape recorders, though only a few slides on various topics were available. Staff comprised five non-professionals who had received in-service training. As was the case for all other
libraries, except for the Medical Library at Connaught Hospital, there was no budgetary allocation for new acquisitions or for maintenance of the collection. The school has to depend on donations, mainly from the Overseas Development Association, a United Kingdom government agency. The library is open only to staff and students of the institution.

An attempt was also made to discover what non-governmental sources of health literature existed in the country. In the Freetown area, visits were paid to the offices of WHO, UNICEF, the Planned Parenthood Association of Sierra Leone and the Leprosy Control Programme.

The WHO documentation centre contained mainly WHO publications and documents with some Ministry of Health publications. It was staffed by a non-professional who was also responsible for the organization's in-country public relations and therefore had little time for documentation. An effort had obviously been made at one time to organise the collection, but it was rapidly falling into disarray.

At the UNICEF Office there was only a small reading room cum documentation centre open to staff and students. There were, however, plans to employ a professional librarian to develop the centre.

The Planned Parenthood Association of Sierra Leone Headquarters could not boast of even a reading room. Various International Planned Parenthood Federation publications were received regularly and used as teaching materials for workshops. When they were not in use, they were locked away in a cupboard. It was however planned to start a collection on Family Planning at the Institute of Public Administration library, which is manned by a professional librarian. The author wondered about the wisdom of this proposal, since the Institute of Public Administration is a good distance away from the headquarters of the Planned Parenthood Association. Hardly any literature was
available for the training of field workers, but there was a manual in the making intended specifically to meet the needs of field staff in Sierra Leone.

At the headquarters of the Leprosy Control Programme, three special subject journals and two journals on general medicine were received regularly and recorded. Leprosy health workers were allowed to borrow these journals, but had expressed a need for more adequate literature services. Health workers in leprosy received continuing education by means of regular refresher courses and workshops.

The author also visited the Freetown headquarters of the Christian Health Association Sierra Leone (CHASL), a non-governmental, all-denominational coordinating agency for missions and churches active in health care in Sierra Leone. Missions provide an estimated 30% of health care services. At an interview with the Executive Secretary, it was discovered that CHASL has been involved with the training of State Enrolled Community Health Nurses at the Nixon memorial hospital (Methodist Mission) and at the Serabu Catholic Hospital, both in the provinces. At these hospitals small libraries exist for students: they are considered well-organised, though manned by non-professionals. In the remaining six mission hospitals, there are reading rooms containing publications, but no attempt has been made to organize them in any formal way.

At the CHASL Office itself, there is a library service of sorts operated by the Executive Secretary. The only journals received are those distributed free of charge by all non-governmental organizations in health care which produce journals - the World Health Organization and other UN agencies and the World Council of Churches. All material may be borrowed. Current journals are put on display during the three general meetings of members held each year and new publications are mentioned in the association's biannual publication CHASLETTER. CHASLETTER also contains short articles on health topics of current importance. Three times a year CHASL runs continuing education seminars for its health workers.
Both in the government and non-governmental sectors, health literature services were found to be generally inadequate in terms of resources both material and human. There was one interesting development in the form of the Health Information Centre attached to the District Health Office in Bo, but the lack of any regular budgetary allocation for its development and maintenance did not augur well for future progress.

Health literature services in Sierra Leone not only need to be upgraded and provided for in a systematic way, but considerable expansion would have to be undertaken for them to have any noticeable impact on the continuing education of health workers.

Experience in Sierra Leone has shown that enthusiasm for the improvement of library resources on the part of librarians, documentalists and potential users will achieve little without political support; and political support in an area whose importance is as difficult to quantify as library and information services is only mobilized by pressure from within as well as from outside the country. It is therefore greatly to be regretted that, in presenting his report, Gage did not use the opportunity to lay sufficient emphasis on the role of health literature services in the education and training of health workers, not only at basic, but also at post-basic levels, and the need to make adequate provision for them. This is an all too common oversight.
REFERENCES


2 Personal Communication

3 Personal Communication


13 Opus Cit.


19 Marcus-Jones, W S. Keynote address delivered at the Twelfth Annual Congress of the Sierra Leone Medical and Dental Association, 6 November 1985. Unpublished.


21 Gage, G N. Health manpower and training evaluation study, Sierra Leone. Freetown: Department of Community Health, University of Sierra Leone, 1986. Unpublished.
22 Primary Health Care. Opus Cit.

23 Gage, G N. Opus Cit.


26 Correspondence. Ministry of Health, Sierra Leone/WHO Regional office for Africa. 15/19/82, 29 August 1985.
CHAPTER IV

INFORMATION NEEDS OF HEALTH AND MEDICAL WORKERS
IN SIERRA LEONE – A SURVEY

1 Purpose and scope of survey:
One of the recommendations of the Weitzel manual¹ as to
preliminary steps to be taken towards the formulation of a
national health literature services plan is that the information
needs of health personnel should be assessed. In this chapter,
the author reports the results of an exploratory investigation
into the information needs and service requirements of middle
and high-level health and medical personnel in an urban setting,
and primary health care workers in a rural setting in Sierra
Leone. The purpose of the investigation was to compare the
findings with information obtained about existing health
literature services within country, to arrive at some conclusion
as to their present usefulness. The comparison was also
expected to help determine what improvements, changes of
direction or innovations would be necessary in order to make
medical and health-related information more accessible to those
needing it.

This part of the research project was embarked upon with
trepidation since financial resources for an investigation of
this kind were severely limited, yet the author was aware that
for the results of the survey to be valuable the sample should
be representative numerically and also in terms of the
categories to health personnel surveyed.

It had been decided that the investigation would be by
questionnaire so the cost of paper, typing services, replication
and hiring assistants had to be considered. There were also a
variety of socio-economic problems to be addressed:
Surveys are uncommon in Sierra Leone and people tend to be wary of answering many questions, fearing to compromise themselves in some way. The method of approach was therefore important;

English not being the mother-tongue of Sierra Leoneans, the wording of questions might be misunderstood. Pre-testing the questionnaire was particularly desirable in this case;

Postal services are slow and unreliable and Sierra Leoneans have an unfortunate tendency to ignore correspondence considered to be of low personal importance. As far as possible, the questionnaires would have to be hand delivered. This was not a great problem in the city area but would require considerable assistance at district level were distances to be covered are great and the roads generally poorly maintained.

As will be shown, some compromise had to be reached between the desirable and the practical in order to complete the survey within a reasonable time and at an affordable cost. The author nevertheless considers the data thus obtained to have provided a sound enough basis for her final conclusions.

1.1 Survey Population
To make the survey widely representative of middle- and high-level personnel, having identified the various categories from the annual budget (1988/89) of the Ministry of Health, the following were selected for the urban survey: specialists (physicians, surgeons, gynaecologists, paediatricians, etc) medical officers, dentists, Ministry of Health officials and programme directors, physiotherapists, radiographers, dispensers, laboratory technologists, nurse educators, nursing sisters and staff nurses. No attempt was made to obtain a proportionally representative sample as there were tremendous
differences in manpower strength within the various categories of personnel. In some categories, for example, physiotherapists and nutritionists, one individual represented the staff strength for the entire country.

Given the financial and other constraints outlined earlier, the author decided to distribute one hundred and fifty questionnaires among middle- and high-level personnel in Freetown, ensuring that as many as possible of the categories identified were represented in the survey.

Four main categories of health worker had been identified for the primary health care group - Community Health Officers, State Enrolled Community Health Nurses, Maternal and Child Health Aides and Dispensers who are State Registered Nurses with training in dispensing medicines. Since the level of education was generally lower in this group, though there was a certain amount of overlapping, it was decided to prepare a slightly different questionnaire and distribute one hundred copies in a single district. In the event, all the primary health care staff in the district chosen, excluding the medical officer, received questionnaires as their number totalled only eighty-three.

1.2 Survey Areas
The data was collected from the city of Freetown, representing the information needs of more sophisticated potential users of health literature services, and from Bo district in the Southern Province, representing the needs of primary health care workers.

Bo district was selected because primary health care is now well established there following a joint Ministry of Health/German Technical Aid Agency (GTZ) initiative in 1981; but there were practical reasons as well. The district headquarters town itself (Bo), is only 160 miles from the author's place of residence, Freetown, and easily accessible by road, and the
local offices of the Ministry of Health, the government-run general hospital for the district and province, the Bo Paramedical Training School, and the School of Hygiene are all located there.

Covering an area of about 2000 square miles, with a population of approximately 270,000 (1985), Bo district is divided into fifteen smaller administrative units or chiefdoms.

As in the rest of the provinces, the road network within the district is poor and other means of communication, such as telephone services do not exist outside the headquarters town.

2 Data Collection:

2.1 Survey of middle- and high-level health and medical workers

The questionnaire for this survey (Annex 1a) was designed to elicit the following information:

- personal and professional characteristics;
- frequency of need for work-related information;
- purpose for which information was sought;
- success in obtaining information required;
- sources of information;
- failure rate and barriers to success;
- use of existing services;
- sources of documentary supply;
- felt needs for services to meet their information needs.
For reasons mentioned earlier, it had been the author's intention to pre-test each questionnaire in order to avoid any misunderstanding. When, however, an opportunity presented itself to survey a "captive" sample composed of participants at the Annual Congress of the Sierra Leone Medical and Dental Association in November, 1988, it was gratefully seized. Surveying these participants added a group of general practitioners and private dentists to the sample.

The questionnaires were then distributed among all other categories of staff selected for this sample. Whenever possible, they were distributed personally, with the help of one voluntary assistant. This ensured a satisfactory response despite the refusal of a number of nurses to cooperate without some financial inducement. The fact that responders could remain anonymous made them more willing to complete the questionnaire.

Ninety physicians, surgeons and dentists registered for the Congress and forty-one (45%) returned the questionnaires. Forty of the questionnaires provided usable returns. The unusable questionnaire had been completed by an individual working with the United States Peace Corps and thus outside Sierra Leone's health care system. Sixty questionnaires were distributed among nurse educators, hospital based support staff, administrators and programme managers at the Ministry of Health. Forty-three (71%) of the questionnaires were completed, of which thirty-eight (63%) provided usable returns. Two of the unusable questionnaires contained flippant answers and the others had inadvertently been completed by junior nurses.

Survey of Primary Health Care Workers in Bo District
The questionnaire for this survey (Annex 1b) was designed to elicit the following information:
- personal and professional characteristics;
- the role of learning aids in training, apart from lecture notes;
- frequency of need for work-related information;
- purposes for which information was sought;
- success in obtaining information required;
- sources of information;
- failure rate and barriers to success;
- opportunities for continuing education;
- felt needs for information services to assist their work.

It was pre-tested by interviewing seven individuals selected from among the levels of staff known to be involved in primary health care delivery. From this exercise, it became obvious that even with changes in the wording of questions to improve clarity, the questionnaires would need further explanation at the time of distribution if usable returns were to be obtained. The questionnaire was discussed with the Primary Health Care Programme Monitor at the Bo District health headquarters and with the help of his team of investigators, the survey was carried out in January 1989. Seventy-three questionnaires, representing an 88% response by the team were returned duly completed.

3 Analysis and Discussion of Survey Results
3.1 Questionnaire 1

Personal and professional characteristics
The first part of the survey provided demographic information. Some 68% of the doctors and dentists surveyed were aged between 30 and 50 years and had been trained in Western Europe, the United States of America or Australia. Eleven respondents,
(about 25%) had received their basic training in Eastern Europe. Thirteen respondents (32%) were hospital-based specialists, seven were non-specialist medical officers working in hospitals, nine were dental or medical general practitioners, four were hospital-based dentists and seven were health service administrators or programme managers attached to the Ministry of Health. Eight-five per cent of the sample were based in the capital, Freetown, and presumably had easy access to what information services existed. Of the five respondents from outside Freetown, four worked in urban settings and had very easy access to the city.

Of the other personnel surveyed using the same questionnaire, 29% were under 30 years old, 50% between 30 and 50 years old and the rest over 50 years. Twenty respondents (52%) were trained in Great Britain, continental Europe or the United States and the rest in Sierra Leone. Some 47% were ward sisters and the rest, nurse educators (5 respondents), administrators or programme managers attached to the Ministry of Health (4 respondents), laboratory technologists (4 respondents), radiographers (2 respondents), the physiotherapist, a senior dispenser and three staff nurses. One of these respondents was normally based outside Freetown but her questionnaire was used because she worked in Bo Town, an urban setting with health literature resources.

Approximately 82% of doctors and dentists were involved in patient care, while 88% of the others surveyed were involved in patient care. Forty-five per cent of doctors and twenty-one per cent of the others indicated that they were involved in some research. It was assumed that the Ministry of Health officials, seven out of nine who gave this answer, would be involved in institutional research directed towards planning, implementing, monitoring and evaluating health programmes, whereas the others would be involved in research related to patient care and based on their personal interests. A further inquiry would however, be necessary to cast more light on the matter. Other notable activities among doctors and dentists sampled were preparing
papers (52%), policy and decision-making (40%), and administration (50%). In the other sample of middle- to high-level workers, only the last two figures were comparable, being 42% and 50% respectively.

**Frequency of need to seek information**

The questionnaire asked about the frequency of need to seek work-related information. Of the seventy-five replies to this question, 30% said they needed to seek information weekly. This future represented about 44% of doctors and dentists and 33% of the others. Table 1 details replies to this question.

**Table 1**

| FREQUENCY OF NEED TO SEEK WORK-RELATED INFORMATION BY PERCENTAGE OF RESPONDENTS | N = 75 |
|---|---|---|
| 1 WEEKLY | TOTAL | DOCTOR/DENTISTS | OTHERS |
| | 39 | 44 | 33 |
| 2 MONTHLY | 28 | 30 | 25 |
| 3 OCCASIONALLY | 25 | 20 | 37 |
| 4 SELDOM | 8 | 5 | 11 |

It occurred to the author that there might be a correlation between where respondents had received their training and their felt need for work-related information, but this was not so. There was no difference between those who had studied in Africa or Eastern Europe and those who had been trained in the West. There was, however, a definite correlation between the age of the respondent and the frequency of his need to seek information. Thirty-six per cent of those who needed information more frequently were in the under 40s group as opposed to 16% of the over 40s.
An unexpected finding was that a full quarter of the respondents felt only an occasional need to seek information in connection with their work; but a further analysis of the results suggested a partial explanation. In the sample of doctors and dentists, those who gave this answer were surgeons (two respondents), a gynaecologist (one respondent) and general practitioners or non-specialist medical officers (six respondents). Busy surgeons and gynaecologists would probably only seek information when faced with problems, and non-specialist medical officers and general practitioners would refer problem cases to specialists. In the other sample, the majority of those who gave this answer - a nurse educator, a midwifery tutor, twelve ward sisters, a senior dispenser, two radiographers and three laboratory technologists are perhaps engaged in routine work or the passing on of basic knowledge which hardly changes. The author could, however, find no satisfactory explanation for this response coming from two senior planners at the Ministry of Health, since as an information provider she had always assumed that such personnel were in great need of information on developments and trends in the field of health care delivery.

Table 2 details replies to a question about reasons for seeking information. Respondents were asked in the following question to state the most important reason for needing information, and 64% of those who gave an answer said it was to update their knowledge.
Table 2

<table>
<thead>
<tr>
<th>Reason for Seeking Information</th>
<th>Total</th>
<th>Doctors/Dentists</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update Knowledge</td>
<td>94</td>
<td>97</td>
<td>88</td>
</tr>
<tr>
<td>Research</td>
<td>46</td>
<td>66</td>
<td>25</td>
</tr>
<tr>
<td>Teaching</td>
<td>50</td>
<td>38</td>
<td>23</td>
</tr>
<tr>
<td>Writing Papers</td>
<td>26</td>
<td>48</td>
<td>2</td>
</tr>
<tr>
<td>Preparing Talks</td>
<td>33</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Postgraduate Studies</td>
<td>14</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Planning Health Services</td>
<td>44</td>
<td>38</td>
<td>44</td>
</tr>
<tr>
<td>Administration</td>
<td>41</td>
<td>30</td>
<td>52</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

One respondent indicated that he needed information on drugs. This was a more specific answer than required, but a further analysis of replies revealed that an inquiry as to specific types of information sought could have increased the usefulness of the survey results. Two respondents gave as another reason for seeking information, patient management. The author had assumed that the purpose of updating knowledge included the management of patients and had not therefore considered it necessary to include that as a separate reason. Had there been an opportunity to pre-test the questionnaire, such misunderstandings could, perhaps, have been avoided.

Two questions concerned respondents' success and failure rate in seeking information, and what respondents who considered themselves to be mostly unsuccessful perceived as the reasons for their failure. Table 3 details the success and failure rate.
of respondents. This was another rather surprising finding, as
the author had expected a higher negative response in the Sierra
Leone environment. Indeed, analysis of the replies to subsequent
questions about information sources gave good reason to call in
question respondents' perception of success. (Answering 'nearly
always' or 'frequently' to this question indicated satisfaction
and answering 'sometimes' or 'seldom' indicated dissatisfaction.)

**TABLE 3**

| SUCCESS/FAILURE IN OBTAINING INFORMATION REQUIRED BY PERCENTAGE OF RESPONDENTS |
|---------------------------------------------|-----------------------------|
| N = 78                                      |                             |
| 1 NEARLY ALWAYS                            | 14                          |
| 2 FREQUENTLY                                | 39                          |
| 3 SOMETIMES                                 | 29                          |
| 4 SELDOM                                    | 18                          |

A correlation was sought between the frequency of respondents' need to seek information (Table 1) and their success/failure rate (Table 3). Those respondents who sought information less frequently were also less often satisfied. The significance of the finding would, of course, depend on the types of information sought by respondents and on how they tried to obtain it. Table 4 shows that 'lack of guidance about information sources' was considered by several of these respondents to be a reason for their failure to obtain the information they required.

Thirty-five respondents, of the thirty-seven to whom it applied, answered the question on reasons for failure. Table 4 details the findings.
As shown in Table 4, lack of time was given by as many as 35% of doctors and dentists as a reason for not being able to obtain information when it was required. This reason can be considered valid since the doctor/patient ratio in Sierra Leone is on average over 1:18000, a ratio which is much higher for dentists. In addition, most of the respondents who gave this answer were general practitioners who often work late hours. Some 41% of doctors and 47% of the others in the sample also attributed their failure to obtain information to a lack of guidance as to sources of information. These replies indicate the importance of health literature services and the key role librarians and other such intermediaries would have to play in ensuring their effectiveness. The implications for the manpower required for such a service are considerable. Twenty-three per cent of doctors and twenty-three per cent of the others in this sample gave distance from possible sources of information as one reason for their failure. Since almost all respondents gave Freetown as being their place of work and Freetown is a very small city, the author felt that this reply could be discounted as an important reason for failure, unless distance from sources was coupled with lack of time. Respondents may also have interpreted the question to mean overseas sources.

<table>
<thead>
<tr>
<th>REASONS FOR FAILURE BY PERCENTAGE OF Respondents</th>
<th>TOTAL</th>
<th>DOCTORS/DENTISTS</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 LACK OF TIME</td>
<td>23</td>
<td>35</td>
<td>11</td>
</tr>
<tr>
<td>2 DISTANCE FROM SOURCES</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>3 LACK OF GUIDANCE ABOUT SOURCES</td>
<td>43</td>
<td>41</td>
<td>47</td>
</tr>
<tr>
<td>4 OTHER</td>
<td>40</td>
<td>52</td>
<td>29</td>
</tr>
</tbody>
</table>
Of the fourteen respondents who gave other reasons for failure besides those suggested in the questionnaire, thirteen said that there was either not enough literature available on the subject, or the information did not exist in Sierra Leone. Nine of these respondents indicated that they were members of the Medical Library in Freetown. This suggests a significant level of dissatisfaction with existing information resources — either because of an actual lack of resources, or of a lack of information about resources. In either case, the service provided by the Medical Library is perceived by a number of its clientele as ineffective. This conclusion, tentative at this point, will be shown to be supported by replies to the final set of questions.

Two questions were directed at those respondents (52% of the sample) who expressed satisfaction with their ability to obtain information when they needed it. The first question enquired about their sources of information, and the second about the frequency of use of those information sources. The two questions which followed those, while asked of the entire sample, were actually a means of determining whether apparently satisfied respondents were, indeed, adequately supplied with medical literature, or whether they were being a little too complacent. Table 5 details the replies received to the question about information sources. The other documentary sources of information worth noting were case-records, which were mentioned by two nurse tutors. Tables 6, 7 and 8 show replies given to questions about the frequency of use of information sources and access to them.
### TABLE 5

**SOURCES OF INFORMATION BY PERCENTAGE OF RESPONDENTS**

*(RESPONDENTS COULD INDICATE MORE THAN ONE SOURCE.)*

\[N = 40\]

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>DOCTORS/DENTISTS</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 BOOKS</td>
<td>87</td>
<td>95</td>
<td>76</td>
</tr>
<tr>
<td>2 JOURNALS</td>
<td>90</td>
<td>91</td>
<td>88</td>
</tr>
<tr>
<td>3 COLLEAGUES</td>
<td>65</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td>4 MANUFACTURERS' LITERATURE</td>
<td>37</td>
<td>34</td>
<td>41</td>
</tr>
<tr>
<td>5 OTHER</td>
<td>12</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>

### TABLE 6

**FREQUENCY OF USE OF SOURCES OF INFORMATION BY PERCENTAGE OF RESPONDENTS**

\[N = 40\]

<table>
<thead>
<tr>
<th></th>
<th>WEEKLY</th>
<th>MONTHLY</th>
<th>OCCASIONALLY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Drs</td>
<td>Others</td>
</tr>
<tr>
<td>1 BOOKS</td>
<td>57</td>
<td>56</td>
<td>58</td>
</tr>
<tr>
<td>2 JOURNALS</td>
<td>35</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>3 COLLEAGUES</td>
<td>22</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>4 MANUFACTURERS' LITERATURE</td>
<td>10</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>
TABLE 7

NUMBER OF JOURNALS RECEIVED BY SATISFIED RESPONDENTS
N = 31

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>DOCTORS/DENTISTS</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 0</td>
<td>6</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>2 1-3</td>
<td>55</td>
<td>43</td>
<td>80</td>
</tr>
<tr>
<td>3 4-6</td>
<td>23</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>4 6+</td>
<td>16</td>
<td>14</td>
<td>20</td>
</tr>
</tbody>
</table>

TABLE 8

NUMBER OF BOOKS OBTAINED IN TWO YEARS BY SATISFIED RESPONDENTS
N = 36

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>DOCTORS/DENTISTS</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 0</td>
<td>22</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>2 1-3</td>
<td>28</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>3 4-6</td>
<td>28</td>
<td>23</td>
<td>36</td>
</tr>
<tr>
<td>4 6+</td>
<td>22</td>
<td>27</td>
<td>14</td>
</tr>
</tbody>
</table>

The author had hoped to be able to determine how many respondents were receiving top quality journals either through personal subscription or by donation, using, as an indication of high quality, inclusion in the United States National Library of Medicine’s Index Medicus. In the event, it proved impossible to arrive at an accurate percentage, since most respondents who said they received more than six journals failed to list them as requested. The indications were, however, that the figure would
be under 40%. The majority of journals listed were of the kind distributed free of charge to doctors in developing countries. These journals are usually digests or short reports and include such titles as Africa Health, Medicine Digest, and Postgraduate Doctor, or else they are newsletters, such as Diarrhoea Dialogue. All of them are useful as far as they go, but would be considered rather inadequate for any serious attempt at keeping up to date, especially at the level of teaching, research, or writing scientific papers for publication. It was therefore difficult to escape concluding that, except in a few cases, access to information resources by these respondents could be much improved.

This conclusion can be supported further. When asked whether they were members of the Medical Library, only 40% of these respondents replied in the affirmative and, of those who did, almost 70% admitted to using the library facilities only occasionally. The author was therefore left wondering how these respondents could possibly be satisfied with their success in obtaining required information when their access to the established information sources in the health and medical sciences seemed so inadequate. However, among the 50% of this group who indicated that they were engaged in teaching, research or both were to be found most respondents who were receiving some journals indexed by the U S National Library of Medicine. Again, a further question asking for specific types of information required might have shed more light on the significance of these findings. It could well be that the type of publications mentioned above are, in fact, considered by some working doctors to be quite adequate for meeting their information requirements.

The next two questions concerned membership and use of the existing Medical Library. All respondents completed this section. About 41% had registered themselves as members of the Medical Library while 58% had never done so. Of those who were members, nearly 70% used the library only occasionally and gave as their reasons those detailed in Table 9.
TABLE 9

| REASONS FOR NOT USING MEDICAL LIBRARY AT THE CONNAUGHT HOSPITAL |
|---------------|-----------------|----------------|
|               | TOTAL | DOCTORS/DENTISTS | OTHERS |
| 1 DISTANCE    | 23    | 23              | 20     |
| 2 LACK OF TIME| 54    | 52              | 60     |
| 3 SELDOM SATISFIED | 27  | 23              | 40     |
| 4 OTHER       | 23    | 29              | 0      |

The reasons noted under 'other reasons' for not using the Medical Library were that they had no need to (2 respondents), the lack of special journals (2 respondents), the lack of books in his speciality (1 respondent). One of the respondents who said he did not need to use the Medical Library had listed the journals he received regularly and the author concluded that his needs were probably quite well catered for.

Of the six doctors who had given lack of time as one of the reasons for their failure to obtain information (Table 4), five were among registered members of the Medical Library who used it only occasionally. They also gave lack of time as their reason for not using the Medical Library more often. As indicated earlier, the author considers this a valid reason in the Sierra Leone setting.

The final section of the questionnaire asked for suggestions for services and/or facilities which respondents thought would improve their access to work-related information when it was needed. Only fifty-one respondents completed this section. The replies were grouped into categories, and of those given by a large enough number of respondents to make quantification worthwhile some 32% wanted access to more current journals, especially subject-specific publications. Seven respondents
thought there should be libraries in each district hospital; seven respondents wanted access to more up-to-date reference books in their speciality; and another seven respondents wanted access to international data bases backed by efficient document delivery. Three respondents, all of whom were involved in teaching, mentioned an audiovisual collection; three respondents suggested that an information centre should be established at the Ministry of Health (presumably for empirical data), and another three respondents, without going into details, desired a general upgrading of the existing library.

3.2 Questionnaire 2

Personal and professional characteristics

Sixty per cent of the sample were aged between 30 and 40 years, 26% were under thirty and only some 14% over forty years old. More than half of this sample were women. Fifty-eight per cent were trained on the job at the Bo Government Hospital, some 20% at the Bo Paramedical School, some 10% at the National School of Nursing in Freetown and the rest at various mission hospitals in the area. Only one respondent was trained outside Sierra Leone (an expatriate nursing sister trained in the United States). Nineteen per cent were Community Health Officers, (all of those trained at the Bo Paramedical School), 7% were nurses, 8% were nurse-dispensers, 15% were vaccinators and 50% were Maternal and Child Health Aides. Table 10 details the spread of the sample among the three types of primary health facility found at district level.

<table>
<thead>
<tr>
<th>PLACE OF EMPLOYMENT BY PERCENTAGE OF RESPONDENT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNITY HEALTH CENTRE</td>
<td>51</td>
</tr>
<tr>
<td>COMMUNITY HEALTH POST</td>
<td>22</td>
</tr>
<tr>
<td>MATERNAL &amp; CHILD HEALTH POST</td>
<td>27</td>
</tr>
</tbody>
</table>

73
Training
The purpose of this section of the questionnaire was to determine to what extent these respondents had been exposed to health literature during their training. It must be borne in mind that Weitzel's broad interpretation of health literature is the definition used throughout this study. All respondents replied that they had been trained by a combination of lectures, practical work indoors and some field work and had had access to the learning aids indicated in Table 11.

**TABLE 11**

<table>
<thead>
<tr>
<th>LEARNING AIDS AVAILABLE TO RESPONDENTS DURING TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>(RESPONDENTS COULD INDICATE MORE THAN ONE ITEM.)</td>
</tr>
<tr>
<td>N = 73</td>
</tr>
<tr>
<td>1  TEXTBOOKS</td>
</tr>
<tr>
<td>2  MAGAZINES</td>
</tr>
<tr>
<td>3  VIDEOCASSETTES</td>
</tr>
<tr>
<td>4  SLIDES</td>
</tr>
<tr>
<td>5  PICTURES (POSTERS, DIAGRAMS, ETC)</td>
</tr>
<tr>
<td>6  OTHER</td>
</tr>
</tbody>
</table>

The questionnaire asked how often these learning aids were used, and of the seventy-one replies to this question, some 77% said they had used textbooks many times and some 78% said they had used pictures many times. Of the 41% who said they had had access to magazines, some 20% said they had used them many times. These were the only notable learning aids among those suggested by the author. However 38% of respondents said they had had access to models and some 76% of those had used them many times. By an overwhelming majority (67%), textbooks were considered the most helpful learning aid, but 38% of the sample gave pictures as their second choice. No other single item seems to have made much of an impact, probably because access to them is limited. Even textbooks and pictures as significant
learning aids could be questioned for, it will be recalled that in a 1986 evaluative study on health manpower and training in Sierra Leone, Gage has this to say about resources for the training of these very categories of personnel: "Text books are neither available for students to purchase nor made available in the library in sufficient numbers. The course has to rely on some old editions of text books which were received as donations several years ago. There is an equal shortage of demonstration materials."2 And elsewhere, regarding training resources for midwives: "There are no library facilities (not even a quiet reading room for students). Text books and demonstration aids (e.g. dolls for obstetrical demonstration) are almost nonexistent and both students and teachers have to make do with whatever crude stuff they could muster".

The next section of the questionnaire sought to determine the day-to-day occupations of participants in the sample and Table 12 details the findings.

**TABLE 12**

<table>
<thead>
<tr>
<th>DAY-TO-DAY OCCUPATION BY PERCENTAGE OF RESPONDENTS (RESPONDENTS WERE ALLOWED TO INDICATE MORE THAN ONE OCCUPATION.)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 LABORATORY DIAGNOSIS</td>
<td>1</td>
</tr>
<tr>
<td>2 HEALTH INSPECTION</td>
<td>4</td>
</tr>
<tr>
<td>3 CONTROLLING EPIDEMICS</td>
<td>27</td>
</tr>
<tr>
<td>4 MANAGING HEALTH CENTRE</td>
<td>40</td>
</tr>
<tr>
<td>5 TRAINING VILLAGE HEALTH WORKERS</td>
<td>63</td>
</tr>
<tr>
<td>6 TREATING PATIENTS</td>
<td>79</td>
</tr>
<tr>
<td>7 HEALTH EDUCATION</td>
<td>90</td>
</tr>
<tr>
<td>8 MATERNAL &amp; CHILD HEALTH</td>
<td>79</td>
</tr>
<tr>
<td>9 OTHER</td>
<td>11</td>
</tr>
</tbody>
</table>
Of the eight respondents who indicated that they had other occupations than those suggested, four said they were involved in outreach programmes, but did not elaborate. It is probably safe to interpret 'outreach' as health-related activities outside the health centres where they work; for example persuading mothers to bring their infants for inoculations.

In the context of their activities, the questionnaire asked how often respondents felt a need for more information and why. More than fifty per cent indicated a weekly frequency while some 43% indicated a monthly frequency. This was a much greater frequency than was indicated in the Freetown survey (Table 1); and in this sample there was no correlation with the age of the respondents. Table 13 details the reasons for which information was sought.

| TABLE 13 |
|-----------------|-----------|
| REASONS FOR SEEKING WORK-RELATED INFORMATION BY PERCENTAGE OF RESPONDENTS. (RESPONDENTS WERE ALLOWED TO INDICATE MORE THAN ONE REASON.) |
| TOTAL |
| 1 TO IMPROVE KNOWLEDGE | 94 |
| 2 TREATING PATIENTS | 44 |
| 3 TO KEEP UP TO DATE | 96 |
| 4 TO GIVE HEALTH EDUCATION | 53 |

It will be observed that in this survey, the author separated treating patients and keeping up to date as reasons for seeking work-related information. This was as a result of experience gained from the earlier survey. One respondent sought information for reassurance and another wished to exchange experience, which could also be interpreted as a need for
reassurance. In response to a question about their success in finding information when it was needed, replies were almost evenly balanced between those who were successful (50.6%) and those who were not (49%), quite similar to the Freetown survey. The lower percentage represented thirty-six respondents, and they were asked to choose (from among suggestions given in the questionnaire) reasons for their failure to find information when they needed it. Table 14 details the findings.

TABLE 14

<table>
<thead>
<tr>
<th>REASONS FOR FAILURE TO OBTAIN INFORMATION WHEN REQUIRED BY PERCENTAGE OF RESPONDENTS. (RESPONDENTS WERE ALLOWED TO GIVE MORE THAN ONE REASON.)</th>
<th>N = 36</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 LACK OF TIME TO SEEK INFORMATION</td>
<td>22</td>
</tr>
<tr>
<td>2 LACK OF KNOWLEDGE ABOUT SOURCES</td>
<td>8</td>
</tr>
<tr>
<td>3 DISTANCE FROM POSSIBLE SOURCES</td>
<td>88</td>
</tr>
<tr>
<td>4 OTHER</td>
<td>5</td>
</tr>
</tbody>
</table>

The reason indicated by the majority of respondents was entirely as expected, given the difficulties of travel in the interior of Sierra Leone. Significantly only 23% of respondents to the Freetown questionnaire gave this as a reason for failure (Table 4).

The thirty-seven respondents who perceived themselves as successful in their quest for information were asked to indicate their sources. About 89% said that they used text books or manuals, 72% said they used their old lecture notes and 53% that they consulted their colleagues. Bearing in mind Gage's disparaging remarks about the text books on which courses were based, and also the fact that individuals' lecture notes are not
always entirely accurate or comprehensive, the author had strong reservations about their adequacy as information sources. Other sources mentioned were home visits (one respondent), seminars and workshops (three respondents), the Health Information Centre in Bo (one respondent) the Monitoring Unit at the District health headquarters in Bo (one respondent). As observed in the case of the sample of high and middle-level health personnel, it would have been useful to know the specific types of information sought, for home visits and the Monitoring Unit would provide factual rather than educational information. These same respondents were asked to indicate their documentary sources. The findings are shown in Table 15.

<table>
<thead>
<tr>
<th>TABLE 15</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>SOURCES OF PUBLICATIONS BY PERCENTAGE OF RESPONDENTS. (RESPONDENTS GAVE MORE THAN ONE SOURCE THOUGH NOT ASKED TO DO SO.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
</tr>
<tr>
<td>1 BORROWING FROM COLLEAGUES</td>
</tr>
<tr>
<td>2 MINISTRY OF HEALTH</td>
</tr>
<tr>
<td>3 FROM A LIBRARY</td>
</tr>
<tr>
<td>4 PURCHASE</td>
</tr>
</tbody>
</table>

As shown, publications were obtained from a variety of sources. The author was at first puzzled by the high percentage of respondents who said they obtained publications from the Ministry of Health, as this seemed highly unlikely. A conversation with the Medical Officer in charge of primary health care clarified the situation by revealing that a visitor from overseas had arranged for donations of text books and manuals to be distributed among some of the health centres. Health workers would naturally perceive of these publications as originating from the Ministry of Health.
The last two questions were asked to determine what other avenues were open to respondents to improve their knowledge and competence. A large majority (87%), replied that they attended seminars and workshops in connection with their work, but 52% said these took place only irregularly. These seminars are organised either by the Ministry of Health or the Christian Health Association of Sierra Leone. It is known (Chapter II, p. 51) that CHASL organises continuing education seminars for health workers in mission centres three times a year. The seminars referred to here would therefore be mainly those organised by the Ministry of Health. It would appear that seminars and workshops are not at present an important means of continuing education for health workers in the government sector, and since supervisory visits are also infrequent, the need to make good manuals available to health workers assumes greater importance.

Sixty-nine respondents completed the final section of the questionnaire which asked for suggestions for materials that would help them in their work. The replies were grouped into categories with the following results: some 24% of respondents merely said they needed teaching/learning aids, without giving specific examples. About 29% suggested visual aids, specifying audio and video cassettes, pictures, flannelographs and dolls. Twelve per cent of respondents suggested the provision of manuals, 9% thought more seminars and workshops would be useful and 6% suggested the establishment of libraries in each health centre, expressing, one would assume, a felt need for suitable literature to assist them in their work.
4 Conclusion

As observed earlier, a post-survey analysis of both questionnaires revealed a shortcoming in their design in that respondents were given no opportunity to indicate some of the specific types of information they needed in connection with their work. Such data could have important implications for the final configuration of health literature services for medical and health workers in Sierra Leone. On the whole, however, this exploratory investigation is considered to have served its purpose, in that the results have suggested to the author a conceptual framework for a national health literature service. This will be dealt with in the concluding chapter.
REFERENCES


2 Gage, G N. Health manpower and training evaluation study, Sierra Leone. Freetown: Department of Community Health, University of Sierra Leone, 1986. Unpublished.

3 Opus Cit.

4 Opus Cit.
CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

As stated at the beginning of this study, its aim was to examine how health literature services could be developed in Sierra Leone in order to provide effective information support to all categories and levels of health and medical personnel, whatever their function, and wherever they may be located, at an affordable cost.

To achieve this end, an extensive literature search was carried out to discover what health literature services were operating in other developing countries. The intention was to determine which, if any, might be successfully instituted in the Sierra Leone environment. An exploratory survey was carried out into the information needs of a sample of health personnel in Sierra Leone, and existing resources in this area were investigated.

In this concluding chapter, the author will discuss the information needs and service requirements of health personnel in Sierra Leone as revealed by the survey, and suggest ways in which they could be satisfied. Finally, recommendations will be made as to further steps to be taken at governmental level towards the formulation of a national plan of action.

Categories of Potential Users of Health Literature Services Surveyed:

Though the sample in the survey of middle- and high-level health personnel was admittedly a small one, it covered a wide spectrum of potential users of health literature services in this category. Details of respondents to the author's questionnaire in this group are supplied in Annex 2A. The vast majority of these respondents were based in the city of Freetown and employed either in hospitals, or at the Ministry of Health and its agencies.
In the second survey, which was of a typical primary health care team, all respondents worked in rural areas. Details of respondents to questionnaire in this group are supplied in Annex 2.

Review of Information Needs and Service Requirements of Health Personnel Surveyed:
As expected, the results of the two surveys showed that the majority of respondents sought information in connection with their day-to-day occupation, whether it involved treating patients, planning health services and programmes, teaching in terms of training, or teaching in terms of providing health education. Some 45% of doctors and 21% of the rest of the middle- and high-level personnel indicated that they were engaged in research, but the author concluded that such research would be of a personal rather than institutional nature except in the case of Ministry of Health officials. At the time of the survey, the College of Medicine and Allied Health Sciences had not yet been established, nor was there known to be any other national institution or agency involved in medical or health-related research, apart from the statistical data routinely collected by the Ministry of Health. A further investigation into the areas of such research would therefore be necessary before attempting to provide health literature services tailored to the needs of researchers.

Only some 12% of respondents were engaged in post-basic studies in a formal way, but replies suggested that the need for continuing education and keeping up to date was well perceived by the majority.

Having access to relevant literature is but one element in continuing education. Indeed, it could be argued that in Sierra Leone, in-service seminars and workshops are of greater value since they provide opportunities for useful interaction among participants who often have to carry out their work in
isolation. The author is, however, of the opinion that in a poor country, providing access to relevant and appropriately packaged 'health literature' has to be the chief element in ensuring continuing education for health workers. Apart from the fact that the preparation of seminars and workshops requires access to appropriate literature, seminars and workshops are costly to run, so when the number of personnel to be continually trained is large and the country is poor, the cost may be prohibitive. The prohibitive cost of organising workshops is the probable explanation of the finding that health personnel employed by the Sierra Leone government are seldom invited to attend them. In such a situation, the alternative is the provision of health literature services and the encouragement of health personnel to make use of them. By this means, conscientious health workers may learn to perform their daily tasks with greater efficiency, undertake different tasks, and redirect their thinking towards new concepts, priorities and techniques in health care delivery.

As stated in the conclusion of Chapter IV, it would be of additional value to determine the specific types of information required by various potential users of health literature services before making detailed plans to provide for them. However, analysis of the various wishes expressed by respondents in the questionnaires, in terms of facilities and services which would assist them in their work, already begins to suggest the overall requirements of a health literature services system.

In the survey of middle- and high-level health and medical personnel, the suggestions coming from respondents for services and/or facilities to improve their access to information reinforced the author's own perception of what should be available. Apart from the central hospital in Freetown, where the National Focal Point library is housed, several respondents expressed a wish for libraries in each district and provincial hospital, with each service unit containing up-to-date books and journals in the clinical disciplines practised there.
Health and medical workers at this level wished to have access to international databases for bibliographic searches and rapid access to the required literature once it had been identified. Also required was audiovisual material to aid the teaching/learning process. Some 8% of respondents also expressed a wish to have an information centre established at the Ministry of Health. They gave no indication as to what they expected such a centre to contain, nor did they say how its existence would help their work. Since, however, the Ministry of Health is the institution in the country which is in a good position to collect and collate data on the health status of the population and all other country-specific information relevant to the planning of health care strategies and the management of health programmes, a reasonable conclusion is that it is to this type of information that they would wish to have access. The author's investigations revealed that exactly the type of unit required was established at the Ministry of Health in 1987. Going under the name of the Planning, Management Information and Statistics Unit (PMISU), its stated objective is: "the provision of timely, accurate information needed for planning and programming".1.

Data is entered in computer files and, since 1990, the unit has from time to time issued statistical bulletins though the author was unable to determine how widely these bulletins are distributed at present. The National Focal Point library would need to collaborate with the PMISU to ensure that health personnel have ready access to this type of information. The library could preserve all the data issued in printed form, but with a microcomputer of its own, could be sent the current information on diskette and be made responsible for disseminating it.

In the past, this would hardly have been considered the function of a library service, but such an attitude is inappropriate in 1990, when librarians are increasingly being encouraged to review their role and consider themselves managers and communicators of information in whatever form it exists. Five years ago, based on experience in Western Australia, Proud
pointed out that when managers of health literature services succeed in integrating them into a wider information system, they are more usually successful in their bid to obtain from decision-makers in health care, the additional funds required to improve further the effectiveness of their services².

As stated above, the suggestions from respondents, in response to the first questionnaire, for desirable services and facilities were not unexpected. Indeed, any experienced health sciences librarian could arrive at a more than tentative conclusion about health personnel’s requirements from information about their daily activities. Replies to a similar question put to the second group surveyed were therefore analysed with greater interest since the needs and requirements of most of the categories of personnel in this sample were unknown to the author. Maternal and Child Health Aides formed 50% of this group. They work at the base of the health care pyramid and play an important role since they are the first point of contact between village communities and the national health services. Their work includes treating patients at a very basic level, providing maternal and child health care and, encompassing all of these activities, providing health education. The author was particularly interested in discovering what this group perceived as the teaching and learning materials which would best assist them in their work. It was therefore quite disappointing that most respondents merely agreed that they would need both teaching and learning materials without specifying what types they thought most useful. There were, however, enough specific replies to provide some clues as to what was required.

The expressed need of this category of health personnel is for presentational audiovisual aids, such as pictures, dolls and flannelographs, rather than for literature in the conventional sense. Where members of this group mentioned literature, it was in terms of pamphlets and other material suitable for handing out. Such material would have to be copiously illustrated in view of the high illiteracy rate in the country. It is not
unreasonable to conclude that they would also need a basic information kit for themselves covering various aspects of providing maternal and child health care, and simple curative measures for common ailments.

Community Health Officers and vaccinators were two other groups of personnel which were well represented in the survey. A greater number of them expressed a need to have access to text books and manuals, but the majority also expressed a wish to have access to audiovisual aids. It was interesting to note that in this entirely masculine group, projectional audiovisuals such as motion pictures, slides and filmstrips and material on audio cassettes were the desired items. Experience from Papua New Guinea points to the need for locally produced multimedia packages to ensure relevance of the material to the local situation. A discussion of the subject with the Health Education Officer attached to the Ministry of Health supported this view.

It had been his experience that when films conveying health messages had been shot in foreign settings (with a different style of building or of dress) local communities often failed to relate the unfolding events to themselves. The film became simply another story.

Members of what might be termed the "operations" group of the primary health care team seem to require health literature services which would provide them with basic manuals, simple well illustrated instructive pamphlets in the local language, locally relevant presentational and projectional audiovisual aids and the equipment for using them. The basic manuals, information kits and the cheaper audiovisuals should be available at each health care service point. If health workers at this level wish to develop their professional skills and knowledge beyond the range of such materials, they should have access to literature suitable for this purpose. Such material should be made available at a higher level of literature provision, ie at the District Hospital and the District Health
Office where items like films and projectors could be stored. In turn, the kind of information requirements which cannot be satisfied at this level should be referred first to the Provincial Hospital Library and then to the National Focal Point. From there, in an ideal situation, it would be possible to have access to any information required, either directly or through international sources of information.

The concept suggested from the foregoing is a hierarchically structured network of health literature access points corresponding with the tiered system of upward referral which has been adopted by the Sierra Leone Government for the curative services within the health care delivery system. {Diagram on next page}.

As defined by the World Health Organization, health involves the total well-being of the individual in his social setting. Thus it cannot be separated from the general development of the community. It is to promote community development at the rural level that the government of Zimbabwe is establishing 'culture houses' which are defined as rural focal points for the collection, preservation and dissemination of knowledge and information. The Zimbabwean scheme is quite ambitious with a typical 'culture house' being a complex including a library, museum, oral archive, an all purpose hall, printing workshop, etc. In the same context, but on a much more modest scale is the idea of 'village reading centres' mentioned by Gregorio and Sison. These facilities are established and managed by local communities to meet their particular information needs with the assistance of development agents such as agricultural extension workers and adult educators. It is expected that the National Focal Point library would seek to collaborate in the establishment of village level information access points taking an active interest in the health information component.
SCHEMATIC DIAGRAM OF POSSIBLE HEALTH LITERATURE SERVICES NETWORK

INTERNATIONAL LINKS

NATIONAL LINKS

WESTERN AREA
NATIONAL FOCAL POINT

NATIONAL LINKS

NORTHERN PROVINCE
ACCESS POINTS

MAKENI
HOSPITAL

DISTRICT
ACCESS POINTS

PORT LOKO KAMBIA BOMBALI TONKOLILI KOINADUGU

EASTERN PROVINCE
ACCESS POINTS

KENEMA
HOSPITAL

DISTRICT
ACCESS POINTS

KENEMA KONO KAILAHUN

SOUTHERN PROVINCE
ACCESS POINTS

BO
HOSPITAL

DISTRICT
ACCESS POINTS

BO PUJEHUN MOYAMBA BONTHE

HEALTH CARE SERVICE POINTS

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ ^---
Approaches to Establishing a Health Literature Services Network in Sierra Leone:

It is the author's opinion that, for truly effective health literature services in Sierra Leone, a hierarchical network of access points needs to be established. The implications of this conclusion are, however, daunting. There exist at present only two governmental facilities for the provision of health literature services to practicing health workers in Sierra Leone; these being the very small Health Information Centre attached to the District Health Office in Bo, and the Medical Library at the Connaught Hospital. The Health Information Centre, only fairly recently established, still had no regular funding in 1989 and was managed by a functionary who had not been systematically trained to manage information. This situation remains unchanged. The Medical Library at the Connaught Hospital was designated the National Focal Point for health literature services by the Ministry of Health in 1985. However, its situation has been one of steady deterioration since that time.

The author has obtained recent information that the services of the librarian at the College of Medicine and Allied Health Sciences are being retained on a part-time basis for the Medical Library, but there has been no fundamental improvement in a bleak situation. The author's investigations have also revealed a situation in libraries attached to training institutions which is not promising enough for there to be any advantage to be gained by transferring the designation of National Focal Point to one of them. It is therefore quite clear that a network system for providing health literature services would have to be created almost from the very beginning, the only available resources being suitable premises in Bo and Freetown, each containing the nucleus of a collection.

The present economic situation in Sierra Leone is such that the financial inputs necessary to establish a network are quite beyond the capability of the government to provide. This is
not, however, to say that the matter cannot be pursued any further when there is ample evidence that development agencies, bilateral international organizations and foundations respond positively to feasible and well-formulated development plans. Attention will therefore now be paid to that important component of a development plan - the statement of general policy. In this case, the policy statement would be expected to contain the following elements:

- goal and objectives of the national health literature services system, and the means of achieving it;
- its scope and coverage;
- its organization and structure;
- human resources required;
- the role of information technology;
- national and international activities;
- financing;
- short and medium term targets.

While it would be impractical for the author to attempt any firm statements on these elements of policy as this early stage, it is possible to make certain observations on each of them.

Goals and Objectives of the National health Literature Services System:

The goal of a national health literature services system is to ensure the transfer to all health and medical personnel of information relating to health and medical research, the practice of medicine and the delivery of health care. The objectives concern those activities which must be undertaken in order to achieve the stated goals, i.e. selecting, acquiring, organising and processing appropriate collections, establishing and operating a network of access points in strategic areas of the country, establishing links between the National Focal Point and the Planning, Management Information and Statistics unit at
the Ministry of Health and with other related sources of information both inside and outside the country.

Even at this stage, it seems clear that the aim should be to develop core collections as a cost-effective means of making international health literature widely available. A Master core would be developed by the National Focal Point and appropriate subsets therefrom sent to provincial and district level access points, as was done in Papua New Guinea. If another justification for the establishment of a hierarchical network is required, it could be this. A hierarchical network would facilitate the monitoring and development of these core collections at Provincial and District levels. Assistance with developing core collections is available internationally and with the collaboration of potential users of the collection, the staff of the National Focal Point should experience no great difficulty in this regard. As concerns making the literature more fully accessible, apart from having access points, both the University of Papua New Guinea and the University of Zimbabwe have instituted information services whereby bulletins containing copies of the contents pages of selected journals and references to pertinent literature are widely circulated within the respective countries. Photocopies are supplied on request, in the case of the University of Zimbabwe, for a token fee. There is also the example of the Tanzania Literature Service, which supplies photocopies on request from a carefully selected core collection of journals.

Providing effective information and literature services from a central access point would be problematic in Sierra Leone, where serious infrastructural deficiencies exist at present, in contrast with Zimbabwe where the necessary elements of infrastructure, such as roads, fuel, telephones and postal services, are said to be quite adequate. Planners of the system would therefore need to address these problems very thoroughly and seek innovative solutions.
Scope and Coverage:

A definite policy on the scope and coverage of the system could only be arrived at after a more detailed review of the information requirements of the health services, including all the different categories of potential users of health literature, their level, numbers, location and the types of information they require. In principle, services should be provided to any person or institution having legitimate health literature and information needs. Promotion of the services by the initiation of user education programmes and the issuing of publicity brochures and bulletins should be included in the policy statement.

Even today, there is a good deal of useful material available in the Medical Library, but the results of the survey of middle- and high-level personnel show that its existence and services have not been sufficiently publicised. Not all respondents, even those based in the Freetown area, realised that they were entitled to use the library. Some respondents had simply assumed that the information they needed would not be available in the library, while others did not realise that by contacting the librarian they could receive guidance about obtaining information. The need for the services to be proactive rather than reactive should also be written into the policy statement.

One characteristic common to most health and medical workers, as revealed by the surveys, is that time or opportunity to visit a service point is severely limited. Also, as the author earlier observed, a certain amount of complacency could be inferred from answers to a question about respondents' success in obtaining information. A proactive health literature service might be a means of combating such complacency, though the danger of information overload must be recognised, since this would have the opposite of the desired effect.

It is expected that the scope of the collections will embrace medical and health sciences with emphasis on tropical and
communicable diseases. It will also embrace maternal and child health, family planning, toxicology, housing and nutrition, water supply and sanitation, health education, various aspects of health management and planning and will include audiovisual material. Unlike the National Focal Point in Papua New Guinea, the National Focal Point in Sierra Leone need not be directly responsible for producing the kind of multimedia information packages required for the district level. It should, however, seek to collaborate in their production with the national agencies responsible for such activities - for example, the Health Education Unit of the Ministry of Health - by helping to identify material suitable for adaptation to local needs. It should also promote the replication, distribution and use of such packages once they become available.

**Organization and Structure:**
A possible structure for the national health literature services system has already been suggested. Weitzel\textsuperscript{13} has recommended that since the Ministry of Health would be the central agency responsible for the system, an official from the ministry should be designated chairman of a Health Literature Services Steering Committee, which would be the policy-making body. The author supports this recommendation, since the presence of a government official on the Steering Committee would tend to strengthen government commitment to the development of the system.

The following should also be invited to be members of the Steering Committee:

- the Chief Librarian of the library of the College of Medicine and Allied Health Sciences, the Chief Librarian of the Sierra Leone Library Board, representing information providers;

- officials of the Sierra Leone Medical and Dental Association and the Sierra Leone Nurse's Association, representing potential users of the services;
an official from the Ministry of Education;

an official from the Ministry of Social Welfare and Rural Development.

As is usually the practice, the Chief Librarian of the National Focal Point will serve as Secretary to the Steering Committee. An important requirement for membership of the Steering Committee is a conviction of the benefit to the health care system of providing information support and continuing education for its workers.

**Human Resources Required:**
The manpower implications of developing an effective health literature services system are somewhat disheartening since, to a large extent, the success of the system will depend on the quality of its staff, which should correspond to the best available professional level. At present, Sierra Leone enjoys the services of only one trained health sciences librarian, who is employed at the College of Medicine and Allied Health Sciences. To begin with, it would probably be necessary to recruit an expatriate health sciences librarian to be system manager. A Sierra Leonean librarian could be recruited to understudy the expatriate colleague for a couple of years, after which the expatriate should be able to depart and a second Sierra Leonean librarian recruited. Ideally, there should be, as well, trained paraprofessionals managing each provincial and district access point. While desirable, such a staff establishment, which would number some twenty-nine persons, cannot be expected in Sierra Leone at present. It would be practicable to aim immediately at the following:

- National Focal Point - 2 Assistants and 2 Librarians
- Northern Province - 1 Assistant at the Provincial Hospital
- Eastern Province ditto
- Southern Province ditto
The three provincial assistants should be systematically trained for a period of three months, assuming that they have already completed the course for library paraprofessionals run at the University of Sierra Leone. These assistants would be expected to oversee the access points in the hospital, and also the district level access points. The latter would managed by clerical staff, who already exist there. The ultimate aim should be to have professional librarians at each of the provincial hospitals and paraprofessionals at the district level access points.

In a staffing situation such as has been outlined above, the concept of the circuit rider librarian\textsuperscript{14} should be explored. One of the librarians at the National Focal Point should be in a position to make regular provincial visits to provide supervision and encouragement for the paraprofessionals who, as suggested earlier, could pay similar visits to the lower level service points. A suitable vehicle and a driver would have to be provided for the National Focal Point library.

From the standpoint of a librarian from a developed country, it might seem ridiculous to expect two librarians to manage health literature services for an entire country. But there exists the example of the National Focal Point in Zimbabwe, where it would appear that effective services are provided by just three professionals in a country much larger in area and total population than Sierra Leone. The advantage of having an adequate infrastructure has already been mentioned, but the commitment of these librarians must also be an important factor in the success of the system, coupled with the active moral and financial support of their Ministry of Health. Here it should be stressed that every effort should be made to maintain a good working relationship between the manager of the network and the chairman of the Steering Committee. Personality clashes must be avoided at all costs as they will only hinder progress. A proper career structure for librarians in the civil service including the Ministry of Health would also have to be created as this still does not exist.
The Role of Information Technology:

New information technology is revolutionising the organization of libraries and information management. There now exists software which is simple to use and suitable for small libraries. Two examples are the Cardbox Plus software enhanced for library applications by the World Health Organization, and the CDS/ISIS developed by UNESCO. Cardbox is currently the software used for information management at the library of the WHO Regional office for Africa, and CDS/ISIS is already being used to create a database of nationally issued health literature in Malawi. The challenge for librarians in developing countries, such as, Sierra Leone is to harness new information technologies not only to do things better (such as speeding up library housekeeping), but also to do better things (such as exchanging information and disseminating it more widely). The equipment (microcomputer, monitor, printer) is expensive, but its acquisition through donors is often possible.

The National Focal Point should aim at electronic management of its entire collection. It should also be possible to access the information which is now being electronically managed at the Planning, Management Information and Statistics Unit at the Ministry of Health by copying part of its databank on diskettes. It would also be highly desirable to obtain a CD-ROM drive and to subscribe to CD-ROM disks of such databases as Medline and Popline. Apart from carrying out bibliographic searches for individuals by means of CD-ROM searches, it would be a fairly simple matter to produce an information bulletin, similar to Current Health Information Zimbabwe, for distribution within Sierra Leone. The question of local hardware maintenance capabilities should, however, be thoroughly investigated before any computers are acquired. Meanwhile, CD-ROM search facilities are already available at the WHO Regional Office for Africa and searches are carried out free of charge in response to requests coming from member countries.
National and International Activities:

At national level, three activities are envisaged:

- cooperating in an effort to establish an integrated national system for the provision of information;

- cooperating in the establishment of village reading centres;

- establishing bibliographic control of the health literature issued in the country.

At international level, links should be established with the WHO Regional Office for Africa, not only to benefit from the bibliographic services it provides to its member countries, but also to cooperate in the development of a database of regional health literature, which remains largely unindexed in the international databases.

Financing:

It has been recognised that the establishment of a national network for health literature services would require strong financial support from donor agencies. One of the tasks of the Steering Committee would therefore be to raise funds from development agencies and other potential sources. Since donor agencies are these days encouraging self-reliance and do not usually provide funding for indefinite periods, the Ministry of Health should be prepared to allocate a percentage of the country's allocation from the WHO Regional Office for Africa to health literature services in order to ensure sustainability of services. The importance of ensuring continued funding is underscored by the example of Papua New Guinea, where many of the core collections had stagnated by 1989 on account of a lack of funds.15
It is estimated that once the service is established, it would require approximately 60,000 US dollars per annum to keep it going on a very modest scale (with a periodicals collection of about 100 titles). In the 1992/93 biennium, WHO's country allocation for Sierra Leone will amount to US$1,408,000.16 120,000 dollars would represent about eight per cent of the total. No doubt, this would be considered far too much to allocate to health literature services. Part of the requirement could be met from the annual budget of the Ministry of Health, and it is possible that donor agencies would continue to support certain components of the service.

**Short and Medium Term Goals:**

Once the policy for health literature services has been established, the short-term goal should be the establishment of a health literature services network in a pilot district within a province. Once this network is functioning satisfactorily, then medium-term goals could be finalised. It would, however, be necessary to make some general statements on medium-term targets for the development plan, indicating that within a given time frame the network should cover the entire country, that access points at provincial level should be managed by professionally qualified librarians and at district level by paraprofessionals, that all health literature issued in the country will be bibliographically controlled, and that an information bulletin will be issued regularly for wide distribution. In more detail, it might be required that access to information and documents should attain a satisfaction rate of 60%.
Recommendations:

In view of the potential benefit to the health services in Sierra Leone of organised health literature services, and in view of the present inadequacy of national resources for the provision of health literature, the Ministry of Health, the Sierra Leone Medical and Dental Association, the Sierra Leone Nurses' Association and other agencies and organizations concerned are invited to consider the following recommendations:

A That the Ministry of Health initiate a Health Literature Services project and establish a Steering Committee to plan the project and prepare a funding proposal. The composition of the Steering Committee should include potential users of health literature services, such as physicians and nurses, as well as information providers, such as librarians, and officials of related ministries, such as the Ministries of Education and Social Welfare and Rural Development.

B That the immediate activities of the Steering Committee should include the following:

- collecting further data on the types of information various categories of health personnel need and lack at present as they carry out their daily work;
- compiling an inventory of health-related and medical research in progress within the country;
- mapping the location of all potential users of health literature services;
- preparing a complete needs review based on the analysis of all available data.

C That the Steering Committee should formulate a national Health Literature services policy based on the needs review. This policy should contain a clear statement on the goal and objectives of national Health Literature Services and the means of achieving them.
D That the Committee should supervise the design of an appropriate system including:

- scope and coverage;
- organization and structure;
- human resources required;
- the role of information technology;
- national and international activities;
- financing;
- short and medium-term targets.

E That the Steering Committee should, prepare a detailed Plan of Action for submission to potential sources of the funds required.

Even with the utmost in commitment, action on the above recommendations would require several months. Given the present deficiencies of resources in the National Focal Point Library, it is therefore further recommended to the Ministry of Health that the following immediate measures be taken:

i) to recruit a full-time, professionally qualified and experienced health sciences librarian and at least one trained library assistant for the National Focal Point Library at the Connaught Hospital. The Librarian should be given these specific tasks:

- to prepare core lists of periodicals, monographs and text books for the National Focal Point Library and the libraries at the National School of Nursing and the Paramedical School and School of Hygiene in Bo and a core list of suitable publications for the Health Information Centre in Bo;
- to prepare realistic budgets for all the above institutions to enable them to acquire basic collections;

- to supervise the management of the above institutions, and, in particular, the library at the National School of Nursing, which is located close to the National Focal Point;

- to re-establish links with the library service of the Regional Office for Africa of the World Health Organization in order to benefit from any assistance available.

ii) to recommend to the Establishment Office a career structure for librarians within the civil service of Sierra Leone.

iii) to institute an appropriate budgetary allocation in the annual estimates for libraries and information centres falling within the purview of the Ministry of Health.

iv) to seek potential donors of a heavy-duty, plain paper photocopier for the National Focal Point and desk-top machines for the National School of Nursing and the Paramedical School in Bo. Libraries in these institutions should be open to health workers for reference purposes, and individuals who may not borrow library materials should be able to make photocopies of documents they require.
v) to start small information centres, similar to the Health Information Centre in Bo, at all District health offices. There is a good deal of material suitable for this level, which is available for free distribution to developing countries. Like the Health Information Centre in Bo, such small units could in time be developed into the district level access points in a health literature service network.

In concluding this study, the author would like once again to emphasise the need for commitment on the part of the national authorities to the development of literature services for its health and medical workers. Ultimately, such commitment is the key to success.
REFERENCES

1 HFP Situation Report - PMISU. Unpublished.

2 Proud, B J. Provision of a comprehensive information service to support isolated health workers by metamorphosing the traditional librarian into an information manager. Theme Speech (Services) In: 5th International Congress on Medical Librarianship, Proceedings 2. Tokyo: Japan, Organising Committee ... 1985. p.18-23


5 Gregorio, L B; Sison, J C. Agricultural information provision in developing countries. IAALD Quarterly Bulletin, 1989; xxiv: 7-11.

6 Hoare, E P. Opus Cit.

7 Brandon, A N; Hill, D R. Selected list of books and journals for the small medical library. Bulletin of the Medical Library Association 1989; 77: 139-169. Published every two years.

9 Hoare, E. P. Opus Cit.


November 1988

The information I am seeking from the following questionnaire is part of a research project I have undertaken for academic purposes. Every effort has been made to ensure that answering the questions will take very little time. In anticipation of your cooperation, I thank you most sincerely in advance.

Mrs Lucilda Hunter

Questionnaire for medical and dental practitioners and senior support staff in the health system in Sierra Leone

1. To which age group do you belong? (Please tick one of the boxes below)

Under 30 years
30 - 40
40 - 50
50 and over

2. Where did you receive your training?

3. Please state your job title if any and your speciality or special interests in connection with your work.

4. Please give your present place of work.

5. What does your present occupation entail? (Please tick one or more of the boxes below)

1. Treating patients
2. Teaching
3. Research
4. Preparing papers for publication
5. Preparing talks
6. Studying for further qualifications
7. Decision making (policies, etc)
8. Administration
9. Other (Please specify below)
6. How often do you need to seek information in connection with your occupation? (Please tick one of the boxes below)

1. At least once a week
2. At least once a month
3. Occasionally
4. Seldom

7. What are your main reasons for seeking information in connection with your occupation? (Please tick as many of the boxes below as you wish)

1. To bring myself up to date
2. Research purposes
3. Teaching purposes
4. Preparing papers for publication
5. Preparing talks
6. Studying for further qualifications
7. Planning purposes
8. Administration purposes
9. Other (Please specify below)

8. Which of the reasons you have ticked are most important to you. (Please list them as indicated below)

1. 
2. 
3. 

9. How often are you successful in obtaining the information you require? (Please tick one of the boxes below)

1. Nearly always (90 - 100%)
2. Frequently (60 - 89%)
3. Sometimes (40 - 60%)
4. Seldom (Under 40%)

10. If you ticked sometimes or seldom in question 9, what prevents you from obtaining the information you need? (Please tick one or more of the boxes below)

1. Lack of time to look for information
2. Distance from possible sources of information
3. Lack of guidance about where to find the information
4. Other (Please specify below)
11. If you ticked nearly always or frequently in question 9 from what sources do you obtain information? (Please tick one or more of the boxes below)

1 Books
2 Journals or magazines
3 Colleagues
4 Manufacturers' Literature
5 Other (Please specify below)

12. Please indicate in the boxes below how often you use each of the sources of information you ticked in question 11. Weekly Monthly Once or twice a year

1 Books
2 Journals or magazines
3 Colleagues
4 Manufacturers' Literature
5 Other (as specified)

13. How many journals do you subscribe to or receive from professional organizations of which you are a member? Please list them.

14. How many books have you bought in connection with your occupation in the last two years? (A rough estimate will do)

15. Please indicate in one of the boxes below whether or not you are a member of the Medical Library at the Connaught Hospital.

Yes
No
16. If yes, how often do you make use of the Medical Library?

1. Weekly
2. Monthly
3. Occasionally
4. Seldom

17. If you ticked occasionally or seldom in answer to question 16, please indicate in the boxes below a reason or reasons why you do not make use of the Medical Library more often.

1. Distance from where I work
2. Lack of time to go there
3. I have seldom obtained information needed from library
4. Other (Please specify below)

18. If you are not a member of the Medical Library, please indicate why in the boxes below.

1. I don't know anything about it
2. Distance from my place of work
3. I use my own books and journals
4. Lack of time to go there
5. Other (Please specify below)

19. Have you any suggestions for facilities which would help you when you need information in connection with your occupation. (Imagine yourself in a position to make your wishes become a reality)

----------------------------------------
----------------------------------------
----------------------------------------
----------------------------------------

Thank you again
The information sought from the following questionnaire is part of a research project that has been undertaken for academic purposes. Every effort has been made to ensure that answering the questions will take very little time.

Thank you for your cooperation.

Questionnaire for survey of information needs of Primary Health Care Workers in the Health System of Sierra Leone

1. To which age group do you belong (please tick one of the boxes below).
   - Less than 30 years
   - 30 - 39
   - 40 - 49
   - 50 and over

2. Please tick one of the boxes below to indicate whether you are male or female.
   - Male
   - Female

3. Please give your present place of work.

4. Please state your job title, for example, Nurse, Dispenser, MJH Aide.

5. Where did you receive your basic training, for example, National School of Nursing, Bo Paramedical School, etc.

6. In what way were you trained? (Please tick one or more of the boxes below)
   - Lectures
   - Practical work indoors
   - Field work
   - Other ways (please be specific in the space given below)
7. Apart from lecture notes, did you have any other materials to help you in your training such as those listed below? (please tick one or more of the boxes)

Textbooks
Magazines
Videocassettes
Slides
Pictures
Anything else (please be specific in the space given below)

8. If you ticked some of the items in Question 7, how often were you able to make use of them? (please tick one or more boxes below)

Many times A few times Twice

Textbooks
Magazines
Videocassettes
Slides
Pictures
Anything else (as specified in Question 7)

9. Which of the items you ticked helped you the most in your studies? (please list them below in order of importance)

1. 
2. 
3. 

10. Now that your training is over, what is your day to day work? (please tick one or more boxes)

Laboratory diagnosis
Health inspection
Controlling outbreaks of infectious diseases
Managing a health centre
Training village health workers
Treating patients
Health education
Maternal and child health care
Other (please specify in the space given below)
11. How often do you need extra information to help you with your work? (please tick one of the boxes below)

1. At least once a week
2. At least once a month
3. Not very often
4. Never

12. If you ticked any of the first three boxes in Question 11, why do you need extra information? (please tick one or more of the boxes below)

1. To improve my knowledge
2. To attend to patients
3. To bring myself up to date
4. To give health education
5. Another reason (please specify in the space below)

13. How often are you able to obtain the information you need? (please tick one of the boxes below)

1. Nearly always (90 - 100%)
2. Often (60 - 89%)
3. Sometimes (40 - 60%)
4. Seldom (Under 40%)

14. If you answered Sometimes or Seldom in Question 13, what difficulties do you experience when you need information? (please tick one of the boxes below)

1. Lack of time to look for information
2. Lack of knowledge about where to find information
3. Distance from possible source of information
4. Any other reason (please specify in the space below)

15. If you answered Nearly always or Often in Question 13, how do you usually obtain information? (please tick one or more boxes below)

1. I use textbooks or manuals
2. I consult my colleagues
3. I use my old lecture notes
4. Any other way (please specify in the space given below)
16. If you use textbooks or manuals to look for information, from where do you get them?
   1. From a friend or colleague
   2. From the Ministry of Health
   3. From a library (if so, which library)
   4. Any other way (please specify in the space given below)

17. Do you attend seminars and workshops in connection with your work?
   1. Yes
   2. No

18. If yes, how often do you attend?
   1. Irregularly (now and then)
   2. Once a year
   3. Twice a year
   4. Every three months

19. Do you have any suggestions for teaching or learning materials which would help people like yourself to understand the work more easily during training and to perform your duties afterwards? (please mention anything that comes to your mind)
### Annex 2

#### Respondents to Questionnaire for Senior Health Personnel - 1

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 Surgeon Specialist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>102 Surgeon Specialist</td>
<td>Government Hospital, Bo</td>
</tr>
<tr>
<td>103 ENT Specialist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>104 Paediatrician</td>
<td>Republic of Sierra Leone Military Hospital, Freetown</td>
</tr>
<tr>
<td>105 Paediatrician</td>
<td>Children's Hospital Freetown</td>
</tr>
<tr>
<td>106 Radiologist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>107 Gynaecologist/Obstet.</td>
<td>Government Hospital, Lungi</td>
</tr>
<tr>
<td>108 Gynaecologist/Obstet.</td>
<td>Princess Christian Maternity Hospital, Freetown</td>
</tr>
<tr>
<td>109 Pathologist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>110 Neurologist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>111 Physician Specialist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>112 Physician Specialist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>113 Hospital Administrator</td>
<td>Nixon Memorial Hospital, Segbwema</td>
</tr>
<tr>
<td>114 Physician Specialist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>115 Medical Officer</td>
<td>Maternal &amp; Child Health Clinic, Freetown</td>
</tr>
<tr>
<td>116 Medical Officer</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>117 Medical Officer</td>
<td>Republic of Sierra Leone Military Hospital, Freetown</td>
</tr>
<tr>
<td>118 Medical Officer</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>119 Medical Officer</td>
<td>Hill Station Hospital, Freetown</td>
</tr>
<tr>
<td>120 Medical Officer</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>121 Medical Officer</td>
<td>Oral Rehydration Unit, Freetown</td>
</tr>
<tr>
<td>122 General Practitioner</td>
<td>Freetown</td>
</tr>
<tr>
<td>123 General Practitioner</td>
<td>Freetown</td>
</tr>
<tr>
<td>124 General Practitioner</td>
<td>Freetown</td>
</tr>
<tr>
<td>125 General Practitioner</td>
<td>Freetown</td>
</tr>
<tr>
<td>126 General Practitioner</td>
<td>Freetown</td>
</tr>
<tr>
<td>127 General Practitioner</td>
<td>Freetown</td>
</tr>
<tr>
<td>128 General Practitioner</td>
<td>Freetown</td>
</tr>
<tr>
<td>129 Dentist</td>
<td>Government Hospital, Makeni</td>
</tr>
<tr>
<td>130 Dentist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>131 Dentist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>132 Private Dentist</td>
<td>Freetown</td>
</tr>
<tr>
<td>133 Dentist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>134 Chief Medical Officer</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>135 Epidemiologist</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>136 Primary Health Care Consultant</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>137 Director, Maternal and Child Health</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>138 Programming Management Inf &amp; Statistics Unit</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>139 Programming Management Inf &amp; Statistics Unit</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>140 Principal Medical Officer</td>
<td>Ministry of Health, Southern Province, Bo</td>
</tr>
</tbody>
</table>

114
### Respondents to Questionnaire for Senior Health Personnel - 2

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Educator, Principal</td>
<td>National School of Nursing, Freetown</td>
</tr>
<tr>
<td>Nurse Educator</td>
<td>National School of Nursing, Freetown</td>
</tr>
<tr>
<td>Nurse Educator</td>
<td>National School of Nursing, Freetown</td>
</tr>
<tr>
<td>Nurse Educator</td>
<td>Fourah Bay College, Freetown</td>
</tr>
<tr>
<td>Midwifery Tutor</td>
<td>Midwifery School, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Bo Government Hospital</td>
</tr>
<tr>
<td>Sister</td>
<td>Children's Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Children's Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Fourah Bay College, Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Freetown</td>
</tr>
<tr>
<td>Sister</td>
<td>Oral Rehydration Unit,</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>Oral Rehydration Unit,</td>
</tr>
<tr>
<td>Sister</td>
<td>Under Fives Clinic, Freetown</td>
</tr>
<tr>
<td>Chief Nursing Officer</td>
<td>Ministry of Health</td>
</tr>
</tbody>
</table>
**Annex 2**

**Respondents to Questionnaire for Senior Health Personnel - 3**

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>301 Physiotherapist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>302 Senior Dispenser</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>303 Radiographer</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>304 Radiographer</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>305 Laboratory Technologist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>306 Laboratory Technologist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>307 Laboratory Technologist</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>308 Forensic Analyst</td>
<td>Connaught Hospital, Freetown</td>
</tr>
<tr>
<td>309 Senior Health Planner</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>310 Senior Nutritionist</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>311 Senior Health Educator</td>
<td>Ministry of Health, Freetown</td>
</tr>
<tr>
<td>Job Title</td>
<td>Location</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Health Sister</td>
<td>Manjaiama Health Centre</td>
</tr>
<tr>
<td>State Enrolled Community Health Nurse</td>
<td>Jimmi Health Centre</td>
</tr>
<tr>
<td>State Enrolled Community Health Nurse</td>
<td>Telu Community Health Post</td>
</tr>
<tr>
<td>State Enrolled Community Health Nurse</td>
<td>Manjaiama Health Post</td>
</tr>
<tr>
<td>State Enrolled Community Health Nurse</td>
<td>Koribondo Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Ngelehn Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Ngelehn Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Nengbema Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Ngalu Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Koribondo Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Koribondo Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Jimmi Bagbo Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Jimmi Bagbo Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Sumbuya Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Sumbuya Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Bumpeh Community Health Centre</td>
</tr>
<tr>
<td>Community Health Officer</td>
<td>Yandam Community Health Centre</td>
</tr>
<tr>
<td>Dispenser</td>
<td>Telu Community Health Post</td>
</tr>
<tr>
<td>Dispenser</td>
<td>Giema Community Health Post</td>
</tr>
<tr>
<td>Dispenser</td>
<td>Mano Jaiama Community Health Post</td>
</tr>
<tr>
<td>Dispenser</td>
<td>Fanma Community Health Post</td>
</tr>
<tr>
<td>Dispenser</td>
<td>Sembehun Community Health Post</td>
</tr>
<tr>
<td>Dispenser</td>
<td>Taninahun/ Bumpeh Community Health Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Mokpendeh Maternity Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Kpetema Maternity Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Yanda Community Health Centre</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Yanda Community Health Centre</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Gerihun Maternity Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Mbudorbu Maternity Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Tikonko Community Health Centre</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Taninahun/ Bumpeh Community Health Centre</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Sembehun Community Health Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Sembehun/7 Community Health Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Bumpeh Community Health Centre</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Fengehun Maternity Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Mattru Maternity Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Bama Maternity Post</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Sembehun Community Health Centre</td>
</tr>
<tr>
<td>MCH Aide</td>
<td>Mano Yorgbo Maternity Post</td>
</tr>
</tbody>
</table>
**Annex 2**

**RESPONDENTS TO QUESTIONNAIRE FOR PRIMARY HEALTH CARE TEAM**

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>442 MCH Aide</td>
<td>Kasseh Maternity Post</td>
</tr>
<tr>
<td>443 MCH Aide</td>
<td>Moinajo Maternity Post</td>
</tr>
<tr>
<td>444 MCH Aide</td>
<td>Niagolehun Maternity Post</td>
</tr>
<tr>
<td>445 MCH Aide</td>
<td>Yambana Maternity Post</td>
</tr>
<tr>
<td>446 MCH Aide</td>
<td>Kpetewoma Maternity Post</td>
</tr>
<tr>
<td>447 MCH Aide</td>
<td>Sumbuya Community Health Centre</td>
</tr>
<tr>
<td>448 MCH Aide</td>
<td>Upper Jaiama Maternity Post</td>
</tr>
<tr>
<td>449 MCH Aide</td>
<td>Koribondo Community Health Centre</td>
</tr>
<tr>
<td>450 MCH Aide</td>
<td>Aboyama Community Health Centre</td>
</tr>
<tr>
<td>451 MCH Aide</td>
<td>Fanima Community Health Post</td>
</tr>
<tr>
<td>452 MCH Aide</td>
<td>Bathurst Maternity Post</td>
</tr>
<tr>
<td>453 MCH Aide</td>
<td>Mans Jaiama Community Health Post</td>
</tr>
<tr>
<td>454 MCH Aide</td>
<td>Grima Maternity Post</td>
</tr>
<tr>
<td>455 MCH Aide</td>
<td>Gondama Maternity Post</td>
</tr>
<tr>
<td>456 MCH Aide</td>
<td>Sahu Maternity Post</td>
</tr>
<tr>
<td>457 MCH Aide</td>
<td>Mongabere Maternity Post</td>
</tr>
<tr>
<td>458 MCH Aide</td>
<td>Mamboma Maternity Post</td>
</tr>
<tr>
<td>459 MCH Aide</td>
<td>Gbaama Maternity Post</td>
</tr>
<tr>
<td>460 MCH Aide</td>
<td>NA</td>
</tr>
<tr>
<td>461 MCH Aide</td>
<td>Ngalu Community Health Centre</td>
</tr>
<tr>
<td>462 MCH Aide</td>
<td>Nengbema Community Health Centre</td>
</tr>
<tr>
<td>463 Vaccinator</td>
<td>NA</td>
</tr>
<tr>
<td>464 Vaccinator</td>
<td>Ngelehum Community Health Centre</td>
</tr>
<tr>
<td>465 Vaccinator</td>
<td>Njala Kumbaya Community Health Centre</td>
</tr>
<tr>
<td>466 Vaccinator</td>
<td>Nenbema Community Health Centre</td>
</tr>
<tr>
<td>467 Vaccinator</td>
<td>Ngala Community Health Centre</td>
</tr>
<tr>
<td>468 Vaccinator</td>
<td>Koribondo Community Health Centre</td>
</tr>
<tr>
<td>469 Vaccinator</td>
<td>Jimmi Community Health Centre</td>
</tr>
<tr>
<td>470 Vaccinator</td>
<td>Yamandu Community Health Centre</td>
</tr>
<tr>
<td>471 Vaccinator</td>
<td>Sembehun/7 Community Health Post</td>
</tr>
<tr>
<td>472 Vaccinator</td>
<td>Taninahun Bumpah Community Health Post</td>
</tr>
<tr>
<td>473 Vaccinator</td>
<td>Bumpah Community Health Centre</td>
</tr>
</tbody>
</table>
SELECTED BIBLIOGRAPHY

Books, Published Documents and Proceedings


Medical Libraries - one world: Resources, Cooperation, Services
5th International Congress on Medical Librarianship, September
Japan Organising Committee. 5th International Congress on
Medical Librarianship, 1985.

Official Records of the World Health Organization No 38 WHO
1951. Annual Report of the Director-General to the World Health
Organization, 1952.


Primary Health Care. Report of the International Conference on
Primary Health Care. Alma-Ata, USSR, 6 - 12 September 1978.
Series; No 1)

Proud, B. Provision of a comprehensive information service to
support isolated health workers by metamorphosing the
traditional librarian into an information manager. Theme speech
(Services) In: 5th International Congress on Medical
Librarianship, September 30 - October 4 1985 Tokyo, Japan.
Proceedings 2. Tokyo: Japan Organizing Committee ... 1985
p.18-23.

Report of the medical and health services, 1959. Freetown:

Report on the medical and health services for the period 1961 -

Saracevic, T ed. Selective Libraries for medical schools in
less-developed countries. A Bellagio Conference, October 3 -

Seventh general programme of work covering the period 1984 -

Sierra Leone country profile (Health). 2nd ed. Freetown:

Sierra Leone. Development and Economic Planning. The
Ministry. Central Planning Unit. National Development Plan

Sierra Leone. Health. The Ministry. National Health Plan 1965 -


Tabor, R B. Libraries for health: the Wessex experience.
Southampton: Wessex Regional Library and Information Service,
1978.


Periodical Articles


---------- Communications potentials of the library for non-literates - an experiment in providing information services in a rural setting. Libri 1984; 34: 243 - 262.


Ali, S N. CD-ROM databases as an alternate means to on line information: the experience of a university library in developing countries. Microcomputers for Information Management 1988; 5: 197 - 202


Core lists of serials. 2: methods and criteria of their compilation. *WHO Health Literature Services Programme Newsletter* 1984; 8: 2 - 4.


Gann, R. Information services and health promotion. what libraries can do. *Health Education Journal* 1986; 45: 112 - 115

Gooch, P S. Agricultural information transfer within and between less developed countries. *Quarterly Bulletin of the International Association of Agricultural Librarians and Documentalists* 1987; 32: 151 - 155

Gregorio, C B, Sison, J C. Agricultural information provision in developing countries. *Quarterly Bulletin of the International Association of Agricultural Librarians and Documentalists* 1989 34: 7 - 12

122
Hague, H. Medical libraries in Ghana. Focus on International and Comparative Librarianship 1983; 14: 29


Makhliva, G G. The role of medical libraries to the health personnel in Malawi. The MALA Bulletin 1983; 3: 14 - 15

Mbwana, S S, Gessesse, K. The scientific literature service in Tanzania. Focus on International and Comparative Librarianship 1988; 19: 30 - 31


Mahler, H. An international health conscience. WHO Chronicle 1974, 28: 207 - 211


Munn, R F. Appropriate technology and information services in developing countries. International Library Review 1978; 10: 23 - 27

Neelameghan, A. Some issues in information transfer: a Third World perspective. IFLA Journal 1981; 7: 8 - 18


Okwuowulu, A O. The role of libraries in the health services in Nigeria. *International Library Review* 1979; 11: 163 - 174

Oladele, B A. Toward an integrated agricultural information consolidation scheme for farmers in the Nigerian rural areas. Quarterly Bulletin of the International Association of Agricultural Librarians and Documentalists 1987; 32: 97 - 101

Osiobe, S A. A selected list of journals for medium-sized medical libraries in developing countries, based on a user study. *Health Libraries Review* 1988; 5: 166 - 177


124
Unpublished conference papers, documents, minutes, official correspondence


Correspondence Ministry of Health, Sierra Leone/WHO Regional Office for Africa, Brazzaville, Congo 15/19/82 29 August 1985

Correspondence WHO Regional office for Africa, Brazzaville, Congo/Ministry of Health, Sierra Leone. ICP/HLT/002 5 5 January 1983

Correspondence WHO Regional office for Africa, Brazzaville, Congo/Ministry of Health, Sierra Leone. ICP/HB1/000 3 April 1985


Gage, G N. Health manpower and training evaluation study, Sierra Leone. Freetown: Department of Community Health, Fourah Bay College, University of Sierra Leone, 1986


125
HPP situation Report - PMISU


Mabaso-Kwalo, S A N. Zimbabwe's first steps towards the year 2000: establishing a National Focal Point (NFP) for health information services. Paper presented at First Congress and General Assembly of the African Medical Library Association, Dakar, Senegal, 22-25 February 1987

Medical Library Management Committee. Minutes 1966-1986

Musoke, M G S N. Health care library services in Uganda: an examination of the present state and an indication of needs with recommendations. A dissertation submitted for the degree of M.Lib. College of Librarianship, University of Wales, 1985

Namponya, C L. Agricultural libraries and information in Malawi. A dissertation submitted for the degree of M Phil. Loughborough University of Technology, 1982

National focal points for health science information services in Africa. Prepared at a workshop of senior medical librarians from Eastern and Southern Africa .... Arusha, Tanzania, 26 July - 6 August 1982


Sinriasamy, J. Information provision and current awareness service for the medical profession with reference to Malaysia. A dissertation submitted for the degree of M A Loughborough University of Technology 1986