Converting data into information

Proposals formulated by members of two workshops held in March 1982 about the management arrangements required for collecting valid clinical data and providing a district information service

e King's Fund on behalf of the NHS/DHSS
Information Steering Group

The first in a series of occasional papers which will be produced by the NHS/DHSS Health Services Information Steering Group and published on its behalf by the King's Fund.

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Contents

Statistics like 'mathematics may be compared to a mill of exquisite workmanship, which grinds you stuff of any degree of fineness; but, nevertheless, what you get out depends on what you put in; and as the grandest mill in the world will not extract wheat-flour from peasecods, so pages of formulae will not get a definite result out of loose data'.
T H Huxley, Quarterly Journal of the Geological Society of London, Vol 25, 1869.

Preface

The Health Services Information Steering Group has, throughout its deliberations, been acutely aware of three equally important dimensions of its task: the management context which broadly determines the content of data to be collected; the behavioural issues which are involved in the collection of data and the use of information for management; and the technical aspects of converting data into usable information. Each of these dimensions not only presents its own formidable difficulties but strongly interacts with the others; to neglect one means to put our whole enterprise into jeopardy. It therefore falls to us to underpin and buttress our formal recommendations about the data to be collected and processed by promoting a greater awareness of the place of information in decision making, by developing skills to use it and methods to organise it.

We know that the reality of management information systems in the NHS has been disappointing. Among the reasons adduced for this are the content and quality of the data currently collected which are seen as inadequate for the decisions which have to be made, particularly at the level where care is delivered. We conceive of decision making in health service management as a continuum ranging from national policy making and strategy to operational control; and are in the process of proposing data which, properly maintained and intelligently manipulated, can make a powerful contribution to it at every level.

It is also widely accepted that potential users are not aware of what is available and how it can be used. There is no simple, universal solution to this problem: to try and contain the multiplicity of needs, organisation, management styles and situations in a centrally designed prescriptive framework would indeed be counter-productive. We believe that proposals about the tactics needed to achieve the necessary reforms must come directly from those who will be responsible for them.

This is the spirit which informs the present discussion paper. It is the first in a series which, we hope, will help to promote the better use of information. It is being published in response to questions posed to us from within the NHS. Our respondents share our conviction that, unless we and they can bridge the gap between data and information, and between collection and use, the most important part of our task will be left undone.

The proposals about good practice which this occasional paper contains are made by members of two workshops which were sponsored by the Steering Group, in March 1982: one, held in Harrogate in collaboration with the Association of Health Care Information and Medical Records Officers, for medical records officers, patients services officers and information personnel; the other, held at the King's Fund College, embracing the major management disciplines. Mrs Lorna Wainwright and Dr Alastair Mason were responsible for the organisation and running of both events. The names of those who took part are listed in the Appendix, and this paper was prepared by Dr Mason. We are indebted to all of them.

We commend the paper to the NHS as a constructive approach to information issues which districts must resolve urgently if they are to fulfil the expectations and hopes reposed in them, and concurrently cope with the constraints on resources generally and management costs in particular.

We take particular pleasure in the knowledge that this paper is being published under the distinguished aegis of the King's Fund. The help which we have received over the past two years from its Secretary and officers has given us great encouragement: for we know that, like ourselves, they wish to contribute to the gradual shift away from the inertia of mere incrementalism towards a more sensible,.balanced and rational approach to health service decision making.

E Körner *Chairman* Health Services Information Steering Group

Chapter 1: Introduction

Types of health service information

1.1 Information is the life blood of health service management. Without it resource allocation degenerates to a process of bazaar bargaining, control is a fiction and planning of resources has to rely on myths and hearsay. Despite the crucial and central importance of information to the processes of management, few health districts have made specific management arrangements to facilitate the production, dissemination and use of information.

1.2 The intelligence required to manage a health district effectively can be obtained from two main sources:

a *Statistical data* This includes not only data about what is happening in the district, but also comparative statistics from other districts, and information from voluntary and other statutory agencies.

b *Documentary data* This includes management literature contained in health notices and circulars as well as policy planning documents produced within the district and relevant articles about the delivery of health care in the general literature.

1.3 Health service information may also be categorised as:

a *Strategic* Information related to the needs for and effectiveness of health care interventions and so drawn predominantly from data about health, health status and the effectiveness of services.

b *Operational* Information relating to the efficiency with which health care interventions are carried out and so derived predominantly from data about the processes of health care and the disposition and efficient use of resources.

1.4 In any discussion of health services information it is important to distinguish between data and information. For the purposes of this discussion paper, information is data meaningful to the recipient. Thus to become information, data normally have to be collated, processed, analysed and presented to satisfy a defined need. Information should have the capacity to make the recipient review his options and when appropriate change his course of action.

Data collected in the district

1.5 In this paper the concern is with statistical data about clinical services and although many of the comments and recommendations may apply to hotel services, the latter have not been considered specifically. Statistical data about the clinical services in a district are drawn from three main sources, namely:

a activity data: what facilities were used, how many patients used them, what sort of patients were seen;
b health services manpower data: how many and what type of staff were involved in caring for different categories of patient; and
c financial data: how the money was spent.

1.6 The management arrangements within a district which ensure the production of health services manpower and financial data are reasonably straightforward. One discipline, that of finance, is responsible for financial data, and manpower data may come either from the payroll administered by finance staff or from personnel records maintained by a personnel department. The major organisational problem concerns the production of data about clinical activity and this topic is discussed in chapter 3.

Extra-district data

1.7 In addition to the data collected within a district, data may be required regularly from extra-district sources. These include:

a Data about activity, manpower and finance from other districts. These are usually obtained from region or central government.

b Data about population estimates, census statistics and vital statistics. These are obtained from OPCS or local authorities.

c Data about catchment areas, bed complements and norms. These are obtained from region.

d Data about services administered by family practitioner committees. Services such as vaccination/immunisation, child health, maternity and family planning may be delivered in part by general practitioners.

e Data about services provided by the private health sector. Apart from the minimal requirements for registration, no data are routinely available about private health institutions.

f Data about services provided by local authorities and voluntary organisations. These bodies may complement the NHS provision for various care groups including the mentally ill, mentally handicapped and the elderly.

A district information service

1.8 In order to provide information for health services management, data collected within the district normally need to be processed and the organisational implications of computer processing are noted in chapter 4. Data analysis and information presentation are two vital steps towards the effective use of information and the organisational arrangements and manpower skills required in a district to carry out these tasks effectively are also discussed in chapter 4.

Chapter 2: The philosophy and work of the steering group

Health authority responsibilities

2.1 The Steering Group is concerned with operational statistical information about clinical services and has concentrated primarily on the information required by a district health authority and its officers. In formulating information requirements, assumptions have been made about the competence and political will of authorities and their officers. Thus the Group has assumed that health authorities not only have the responsibility for managing health services, but in future will be influencing decisively the allocation of resources.

2.2 District health authorities and their senior officers will be concerned with reviewing options, and this task will include studies of the equitable allocation of facilities and manpower for different activities, the preparation of future resource plans, the adequacy of control over currently available resources and the identification of constraints and bottlenecks. These reviews will culminate in the selection and management of changes to patterns of resource use.

2.3 Data will be required not only about the authority's district but also about the allocation and use of resources in other districts. Such comparative statistics are invaluable in making good judgements about the adequacy of local clinical services.

The district minimum data set

2.4 The Steering Group's approach to information for NHS management has been that the needs of the district tier are paramount. It has been assumed that if data are not required at district level, it is extremely unlikely that they are required by regions or the DHSS.

2.5 The Group has concentrated on identifying a minimum set of data to be collected in each district, from which district managers can obtain the information they require. The district minimum data set has been developed as a standard requirement with the implication that district managers who do not use regularly information derived from the data set are not informed adequately to perform their tasks and thus cannot fulfil their responsibilities competently. The Group's recommendations are however only a minimum and most district authorities and their officers will require additional data to allow the production of information pertinent to local needs.

2.6 Although the district minimum data set should be collected as a by-product of operational procedures and be relevant to the needs of operational managers, no attempt has been made to specify all the data that might be required by an individual departmental or unit manager. The wide variety of management arrangements within a district preclude the development centrally of a minimum data set for each department. The effective operational management of the services within a district will thus require the collection of more data than those specified as the district minimum data set. Those responsible for the work should derive data sets for given activities as they judge best.

2.7 The desirability of obtaining strategic health service data about the need for health care and the clinical and social outcomes of the use of health services is fully appreciated; however the Steering Group has had to conclude that methods of measuring these variables have not yet reached a stage at which they can be generally commended to the NHS. As further research and development identify indicators which are not only desirable but capable of routine collection, such data will be considered for inclusion in the district minimum data set.

2.8 The content of the minimum data set required at district level is determined by a compromise between what is desirable, feasible and affordable. Each data item must be:

a required for the purposes of providing information at district level;
b capable of collection, encoding and processing; and
c affordable in that in the next 3–5 years every health district will be able to afford to collect it and have it processed.

2.9 Although NHS computing policy is the primary concern of another committee, the NHS Computer Policy Committee, the Steering Group has had to make judgements about the speed and extent of the introduction of information technology into the NHS. The processing of detailed data about patients can only be carried out effectively using computers, and thus the inclusion of such items in the minimum data set depends on how quickly appropriate data processing procedures will be available to all health districts. The development in each district of a computing facility has major implications for the organisation of district information services and this is noted in chapter 4.

2.10 The Steering Group's work has involved district personnel as closely as possible. The majority of working group members hold district posts, recommendations are piloted in four districts, district staff are involved in consultation on all recommendations both formally and informally at the seminars which have been held throughout the country. The minimum requirements to be achieved in each district have thus been formulated primarily by district managers, and this process should produce not only realistic recommendations but also the major impetus for their implementation. More generally, data will no longer be collected solely because central government has asked for them; the minimum data set will be collected because a consensus of district managers consider that a failure to collect it and to use information derived

from it raises questions about the commitment and competence of a district health authority and its senior officers to manage their resources effectively.

Improving the environment

2.11 The implementation of the Steering Group's recommendations about data content will not of itself ensure the effective use of information for health services management and work has been put in hand to encourage the creation of an appropriate environment to improve data quality and information use. Four specific areas are of prime concern to the Steering Group:

a developing good administrative practice which ensures that patient and staff data are kept confidential;
b developing standards against which to check the accuracy and timeliness of data collection;
c promoting the education and training of data collectors and information users; and
d identifying the management arrangements, manpower and skills required to provide a district with an effective information service.

2.12 In each of these areas the Steering Group will determine which recommendations are minimum requirements in that any failure to comply reflects adversely on district managers; or are administrative good practice which may or may not be implemented at local discretion. The presence or absence of a minimum requirement has implications for the management arrangements set up in a district and this point is discussed further in chapter 3.

2.13 The Steering Group has identified that there is a need not only for the promotion of district information services but also the dissemination of news about successful and innovative practices and the introduction of appropriate training. Therefore the Group aims to:

a work with a number of districts to put into practice the proposals outlined in this discussion paper;
b publish further papers, describing in detail how different districts have gone about the task of developing information services; and
c discuss with appropriate professional bodies and education centres the training requirements for the staff of a district information service.

Chapter 3: Data about clinical activity

Introduction

3.1 The production of accurate, complete, timely data about clinical activity in a district is beset by a number of organisational problems, namely:

a Data are recorded by a variety of staff, including health professionals as well as administrative personnel.

b Data for management purposes are captured in many different locations within the district.

c Data are collated by different staff and at a variety of locations both within the district and outside. Data about child health services, for example, have been collated at area level.

d There are no explicit organisational arrangements to achieve satisfactory data quality.

3.2 Before considering the management arrangements required to ensure the production of data of adequate quality, it is of interest to review how data about different clinical activities are currently recorded and collated. The major clinical services provided by a district health authority can be categorised as:

a Services provided in hospital:
- hospital wards
- operating theatres
- accident and emergency departments
- radiotherapy departments
- diagnostic services

b Services provided in or outside hospital:
- consultant outpatient clinics
- day care facilities

paramedical services
family planning services
maternity services

c Services provided outside the hospital:
community nursing
preventive services including those for child health
school health services

Data recording and collation

3.3 Data about *ward* activity may be recorded amongst others by doctors, nurses, clinical support staff, social workers or clerks. Data sources include admission slips, ward listings and clinical records. Although medical records staff have the task of collating and processing data about ward activity, at present they have little authority to influence the quality and timeliness of the data provided.

3.4 *Operating theatre* activity is usually recorded by doctors or theatre nurses in a register. At present there is no requirement for these data to be aggregated although the Steering Group's recommendations about clinical activity include the provision of data about operating theatre activity as a minimum requirement.

3.5 Data about activity in *an accident and emergency department* is recorded by doctors, nurses or clerks. Data sources include departmental registers and clinical records. Medical records staff are usually responsible for the collation and processing of any aggregated statistics derived from these sources.

3.6 *Radiotherapy department* activity may be recorded by doctors, nurses, clerks, medical secretaries or radiographers. Data sources include clinic lists, treatment lists, appointment books and patients' medical records. The Steering Group has not yet recommended the

content of a minimum data set for this area of activity. Medical records staff are usually responsible for the collation and processing of any aggregated statistics about the activity of this department.

3.7 Data about activity in *diagnostic services* may be recorded by doctors, scientists, radiographers or clerks and data sources include day books, appointment books, clinic lists and request/report forms. Aggregated statistics for pathology departments are usually collated by scientists, and in radiology departments this task is commonly done by clerical staff.

3.8 *Consultant outpatient clinics* may be held on or off hospital premises. Data about activity may be recorded by doctors, nurses or clerks and the data sources include clinic lists, appointment books, nursing diaries and patients' medical records. Data about the number of patients attending or failing to attend the clinic are invariably collated and processed by medical records staff.

3.9 Data about *day care facilities* may be recorded by nurses or clerks and the major data source is the departmental register. Aggregated statistics may or may not be collated and processed by medical records staff.

3.10 The term *paramedical services* has been used to cover the activities of disciplines such as physiotherapy, chiropody, clinical psychology and dietetics. Data about activity are usually recorded by members of the discipline or clerks. Data sources include appointment lists, waiting lists, treatment record cards and the patients' medical records. Medical records staff are sometimes involved in preparing aggregated statistics.

3.11 *Family planning services* may be provided on or off hospital premises. The recording of activity may be done by doctors, nurses

or clerks. The data sources are clinic lists, family planning record cards and the patients' medical records. The production of aggregated statistics is usually the responsibility of the administrator in charge of community services.

3.12 Data about the activity of *maternity services* may be recorded by doctors, midwives or clerks. The data sources include clinic lists, antenatal cooperation cards, patients' medical records and birth notifications. There is no common pattern of responsibility for data collation and processing.

3.13 *Community nursing* and health visitor activity data is initially recorded by the health professionals. A variety of data sources may be used and collation of the data is usually done by clerical staff accountable to a community services administrator.

3.14 *Vaccination and immunisation* activity is recorded by the doctors and nurses responsible. The data were collated by area health authority staff and most authorities used the standard child health system which involves computer processing of the data.

3.15 Data about clinical activity to promote and maintain *child health* are recorded by doctors, nurses and health visitors. The data source is usually a clinical record but different professions may maintain their own records. Data collation is by clerical staff who were based at an area health authority. The development of a computerised child health record is one of the objectives of the Child Health Computer Committee.

3.16 *School health service* activity is recorded by doctors, nurses, health visitors and teachers. The data source is usually the child health record.

Management arrangements – a district base

3.17 The Steering Group's recommendations about clinical activity data are dependent on a health authority having the capability of linking and merging data on a district basis. Thus different stays in hospital should be linked to form a district spell; and when an outpatient moves from one outpatient clinic to another in the district but stays under the same consultant, the first attendance at the second clinic should be counted as a re-attendance.

3.18 Although the day-to-day operational handling of activity statistics can be organised on a unit basis, there is a need for a district policy concerning the production of valid clinical activity data and an administrative mechanism to ensure the smooth flow of data between units and up to the district level. Therefore it is *proposed* that each authority designate an individual to have specific responsibility for ensuring that activity data capture and collation within the district are coordinated and that coverage is complete.

3.19 Some clinical activity data have been collated and processed outside the district at area level. The demise of area has left districts with the option of organising services such as child and school health on a district or supra-district basis. Other arguments more directly concerned with the organisation and provision of care will determine which option is chosen. However, from the information viewpoint it is *proposed* that, as far as possible, the collation and processing of all data about clinical activity concerning patients treated in a district should occur within the district. This allows the merging of complementary data collection systems (eg, maternity and child health), and permits managers ease of access to information derived from the data.

Management arrangements – ensuring data quality

3.20 The discipline with greatest experience of capturing and collating clinical activity data is medical records, but the extent to which these staff are involved with community services, diagnostic services or paramedical services varies greatly from district to district. A possible rationalisation of the current situation would be to employ all clerks responsible for clinical data capture and collation within the medical records function and to outpost them to the various clinical departments. Although this arrangement might ensure tighter administrative control there are drawbacks to this solution. Few clinical departments have clerks who spend all their time on data capture and collation, and the ability of a departmental manager to deploy staff effectively would be impaired by such an arrangement. As districts differ enormously in size and management arrangements, it should be left to local discretion to what extent clerks handling activity data are part of the medical records function.

3.21 A departmental manager is responsible for the production of valid data about the activity of the department. Data production is an integral part of the management process and not an optional extra which a manager may decide to do or not do. When minimum standards have been laid down, the manager is bound to keep them and indeed can be called to account for failing to meet them.

3.22 The setting of minimum standards allows the possibility of checking to ensure that they have been complied with and it is *proposed* that administrative arrangements be made to monitor the validity and timeliness of the data coming from all the clinical departments. Specified individuals within the district should be given the responsibility to check that minimum standards are maintained. When the data produced are outside the limits prescribed, such an individual may inform the departmental manager and give

advice and help to make the necessary improvements. If the departmental manager fails to comply, such an occurrence can be reported to a senior officer for further action.

3.23 The expertise to monitor standards of data content and any standards that might be laid down about completeness, timeliness and confidentiality lies mainly in the medical records discipline. However, if members of medical records departments take on this important role, many will require further training particularly in those areas, such as community services data, with which they are not familiar currently. The Steering Group will be collaborating with the Association of Health Care Information and Medical Records Officers to produce training packages which will meet this need, and the content of the district minimum data set will be published in detail in manuals and other guidance material.

3.24 However good the intra-district arrangements for producing valid data about clinical activity, two possible sources of difficulty have to be recognised, namely:

a the systematic error which is so ingrained in the data collection system that nobody in the organisation identifies it; and
b the deliberate falsifying of data.

3.25 To counter these problems and to ensure comparability between districts, it is *proposed* that external audit procedures be set up. Some regions currently have arrangements for the external checking of diagnostic coding in their HAA systems. The external audit of activity statistics should be organised on a regional basis and should involve personnel both from region and from districts, other than that being reviewed, as auditors. Such an arrangement would also allow the cross fertilisation of ideas and would help to identify any requirements for further training of staff in the district being audited.

3.26 Formal management arrangements instituted to promote the production of valid data about clinical activity are no substitute for the best way of verifying data, namely the use of information derived from the data for health services decision making. The scrutiny given to the production of activity data invariably improves when departmental managers and clinicians know that decisions about resource allocation from region and within the district will be based on facts and not anecdotal fiction.

Chapter 4: A district information service

Introduction

4.1 The Steering Group has commenced the task of laying down minimum standards of data content and specifying data outputs which should be available nationally. No attempt has been made to identify the precise format of the information, derived from the minimum data set, to be used at district level. Health districts differ greatly in style of management and in the range and complexity of problems they face. The development of centrally designed minimum information packages would thus be inappropriate and would tend to inhibit flexible use and local innovation. However, as experience is gained with using the minimum data set for management purposes, the Steering Group recognises it has an important role in disseminating interesting and useful practices to the health service.

4.2 To enable a district health authority and its senior officers to exploit fully the wide range of available statistical and documentary data, it is *proposed* that authorities should set up or make arrangements to have access to an information service. Data normally need to be processed and analysed to be turned into information, and if information is to be used at all, it must be presented intelligibly. At this stage of the development of district information services, it is not possible to lay down a blueprint which can be commended to all districts. For the reasons given in the preceding paragraph, this approach may also be inappropriate. However it is possible to identify:

a the functions which might be performed,
b the manpower skills which might be required, and
c the management arrangements which should be instituted.

4.3 Although the setting up of a district information service is to be commended, there is little purpose in embarking on sophisticated data analyses and information presentation if the data collection systems in the district are not producing valid data. An essential prerequisite to the establishment of an information service is the introduction of management arrangements, such as those discussed in chapter 3, which ensure that accurate, complete and timely data about activity, manpower and finance are obtained. Money spent on special skills and techniques to analyse data and present information will be wasted if the basic data are not adequately complete, accurate and timely for the management task for which they are required.

4.4 The Steering Group is aware of the current financial climate and the desire of central government to reduce management costs. Any development of an administrative function must take into account these facts of NHS life. However, effective health service management requires valid, timely information and the current emphasis being placed on better operational control and the more explicit accountability of the health service makes the development of a district information service a high priority. The recommendations made in this chapter would not be expensive to implement and should produce considerable benefits in terms of better health service decision making.

Functions performed

4.5 Ideally a district information service should be able to perform the following functions:

a be a repository of statistical data collected in the district;
b be a repository of statistical data obtained from relevant local authorities, voluntary organisations, the appropriate family practitioner committee and private health institutions;
c contain regionally or nationally produced data about activity,

manpower and finance in other districts to allow comparison with local performance;
d provide a library of internally produced and external policy and planning documents and health services research data from professional journals and other sources;
e have the capability to mount ad hoc data collection exercises;
f have the capability to analyse statistical data; and
g have the capability to present information drawn from both documentary and statistical sources which is relevant to the needs of management and prepared to a timetable appropriate to the management tasks.

4.6 The introduction of district computing will have major implications not only for data collection but also for the organisation of a district information service. Experience of district computing is very limited but it is possible to identify a number of practical sequelae, namely:

a the storage of local activity, financial and manpower data on computers in a format allowing linkage between data sets and easy access for analysis;
b the availability of computer tapes containing nationally available data about activity and manpower which permit interactive analysis of the data; and
c access through computer terminals to large bibliographic data bases (such as Medline) and, as they are developed, other data bases containing research or policy information.

4.7 Information technology is only exploited to the full when developments are information led, so that the information requirements must be identified first and only then a choice made from the wide range of technology available. Thus it is *proposed* that the development of a district computing capability should be within the

context of a strategic plan for developing a district information service rather than as a separate exercise as has often been the case with the development of regional computer services.

Manpower skills

4.8 To carry out all the tasks outlined in paragraph 4.5 a district would need access to a wide range of manpower skills, prominent among which are:

a epidemiology and statistics including data analysis and survey design;
b systems analysis and operational research;
c health economics and management accounting;
d library development, storage and retrieval;
e computer systems design and programming; and
f information presentation and management education.

4.9 However, before specialised appointments are contemplated, it is worthwhile finding out what skills are already available in the district. The district medical officer will be a trained epidemiologist, administrative, scientific or technical staff may hold qualifications in operational research, health economics or computer sciences, and health professionals may frequently have information skills in addition to their traditional clinical ones. When such skills exist, they are worth harnessing and formal or informal management arrangements should be made to associate personnel with the requisite skills with the work of the district information service.

4.10 Three other sources of such skills should be considered namely:

a Regional library services and management services divisions. The great majority of the requisite skills are available at region and a variety of arrangements are in operation to permit districts access to these common services.

b Universities and polytechnics. Senior staff and students may be involved on a permanent or ad hoc basis.

c Commercial organisations. In the last ten years a plethora of organisations has sprung up; many of them now have considerable health service experience.

Management arrangements

4.11 Management arrangements should be made that ensure:

a the equitable determination of priorities and procedures for the work of the district information service;
b ease of access to information or data processing facilities for all those in the district who require it; and
c the effective operational management of the district information service.

4.12 An information service is a multidisciplinary activity in that it will involve contributions from a number of disciplines as well as provide a service to all the senior managers in the district. No one discipline should own the district information service and this should be explicit in any management arrangements instituted. It is *proposed* that the determination of priorities for the service and decisions about policy concerning access to information or data processing facilities should be the responsibility of the district management team.

4.13 To assist the DMT in discharging this responsibility, it is *proposed* that an information users' group be set up which can ensure that the major information users in the district have an equitable share of the information service's help and assistance. As noted in paragraph 4.7 there is advantage in considering district information and computing services as a single entity and such a user group should also advise the DMT on the development of the district computing capability.

4.14 It is *proposed* that the effective operational management of the district information service is best carried out by a designated officer. This may be a full or part time job depending on the volume and complexity of work to be done. The original discipline from which such an officer comes is unimportant; competent individuals exist among the health care professions as well as the medical records, administrative and finance disciplines. A development to be avoided is each of the major disciplines appointing its own information officer as has occurred to some extent in the planning sphere. The district information service should serve all disciplines equitably thus obviating the need for setting up separate information empires which would lead inevitably to data hoarding and limited access to information.

4.15 It is *proposed* that the appointment of a district information officer should involve all members of the district management team. Information production is an integral part of the management process and an appointment of such importance, touching on most spheres of district activity, merits the full attention of the most senior district managers.

4.16 However, it is unsatisfactory to arrange for an individual officer to be accountable on a day to day basis to a group. Thus it is *proposed* that one of the officers on the DMT or an immediate subordinate should take on the responsibility of ensuring that the information officer carries out his tasks within the policies laid down by the DMT. Although some professional groups have laid sole claim to running a district information service, no particular discipline on the DMT has any particular advantage in this respect and thus each DMT should decide which of the team officers has the competence, time and interest to oversee the work of the district information service.

4.17 The care of patient groups such as the mentally ill and elderly involves close collaboration with the relevant local authorities. The effective planning and operational control of such services thus involves considerable interchange of information between health and local authorities. A few area health authorities made joint information officer appointments with local authorities and it is *proposed* that appropriate arrangements be explored further in the context of the 1982 restructuring.

Appendix

INFORMATION STEERING GROUP/AMRO WORKSHOP HELD AT HARROGATE 1–5 MARCH 1982

Attenders

Mr D Baldwin	District Medical Records Officer West Berkshire Health District
Miss M Beechinor	District Patient Services Officer Blackburn Health District
Mr A Brown	District Patient Services Officer Hull Health District
Mr N Campion	District Medical Records Officer Cornwall & Isles of Scilly District Health Authority
Miss M Cherryman	Acting Clinical Information Officer Southampton & South West Hampshire Health District
Miss M Chiverton	Information Officer Eastbourne Health District
Miss S Cooper	Information Officer West Sussex Area Health Authority
Mr W Cowan	Patient Services Manager North Staffordshire Health District
Mrs M Dawson	District Medical Records Officer York Health District
Miss M Forbes	District Medical Records Officer South Hammersmith Health District
Mrs S Gormley	Medical Records Officer Selly Oak Hospital, Birmingham

Mr D Green	District Records/Information Officer North Birmingham Health District
Mrs B Jestico	District Patient Services Officer Sheffield Southern Health District
Mr V Kempner	Area Information Officer East Sussex Area Health Authority
Miss J Konstankewecz	Medical Records Officer County Hospital, Hereford
Miss F Martin	Senior Statistical Assistant North Western Regional Health Authority
Dr A Mason	Health Services Information Steering Group Secretariat
Miss J McClintock	Patient Services Officer Addenbrooke's Hospital, Cambridge
Mr N Moss	Patient Services Officer Southend Hospital
Mr J Myson	Regional Systems Development Officer South East Thames Regional Health Authority
Mr R Nutt	District Medical Information Officer South Nottingham Health District
Mr C Peskett	District Patient Services Officer Tower Hamlets Health District
Miss H Raybould	District Patient Services Officer Hounslow Health District
Mr F Sargeant	District Patient Services Officer Bristol & Weston Health District
Mrs C Thomson	District Patient Services Officer Warrington Health District

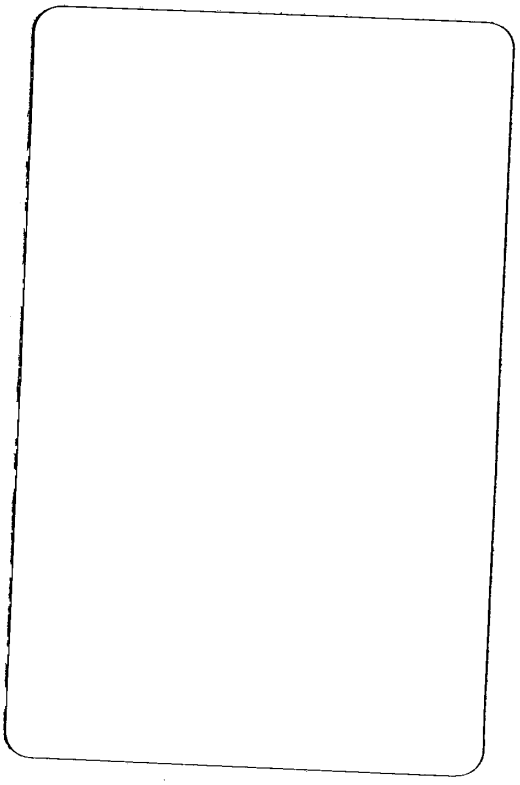
Mrs L Wainwright	Health Services Information Steering Group Secretariat
Mr B Webb	District Patient Services Officer Salisbury Health District
Mrs I Wellard	District Medical Records Officer Canterbury & Thanet Health District
Mr C Willsher	District Medical Records Officer Colchester Health District

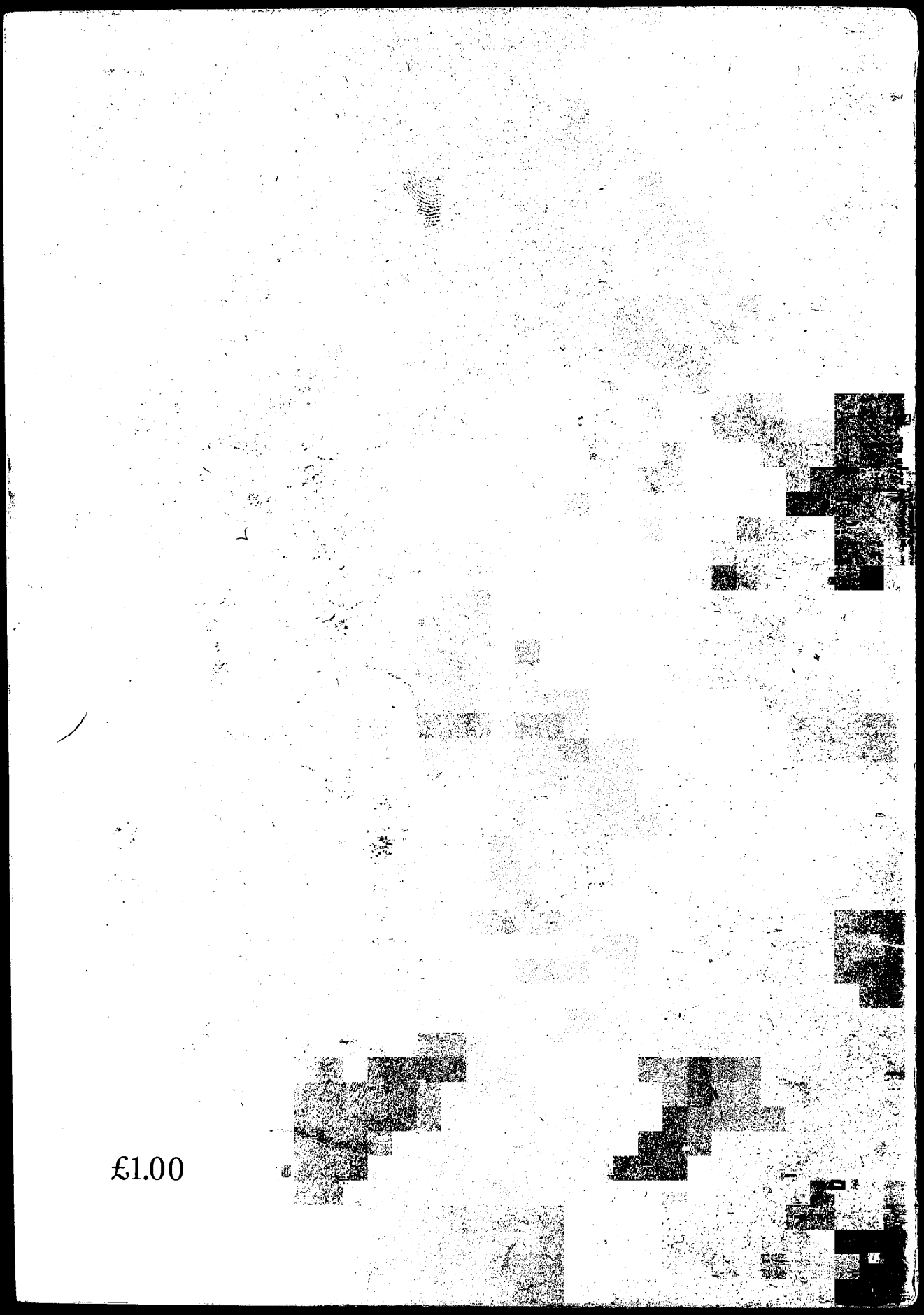
INFORMATION STEERING GROUP/KING'S FUND COLLEGE WORKSHOP HELD IN LONDON 9–10 MARCH 1982

Attenders

Dr J Ashley	Senior Medical Officer OPCS
Miss M Beechinor	District Patient Services Officer Blackburn District Health Authority
Miss J Bryant	District Nursing Officer Enfield District Health Authority
Mr N Campion	District Medical Records Officer Cornwall & Isles of Scilly District Health Authority
Dr S Cang	Acting Director, Institute of Organisation & Social Studies, Health Services Organisation Research Unit, Brunel University
Mr I Carruthers	Support Services Manager Southend District Health Authority
Dr G Guest	Regional Management Services Officer Wessex Regional Health Authority

Dr A Jennings	Consultant Anaesthetist Northampton District Health Authority
Miss D Juniper	District Nursing Officer Harrow District Health Authority
Mr D King	District Administrator Exeter Health Care District Authority
Dr A Mason	Health Services Information Steering Group Secretariat
Dr R Morris	District Medical Officer West Lambeth District Health Authority
Mr H Nattrass	District Administrator Winchester District Health Authority
Mr A Pearce	General Administrator Bath District Health Authority
Mr V Peel	District Administrator Bolton District Health Authority
Mr D Russell	District Finance Officer City & Hackney District Health Authority
Miss J Sear	District Nursing Officer Barnet/Finchley Health District
Mr R Spurgeon	District Finance Officer Mid-Surrey District Health Authority
Mrs L Wainwright	Health Services Information Steering Group Secretariat
Dr I Wickings	Project Coordinator CASPE





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