



National Health Service in Scotland
Management Executive

St. Andrew's House
Edinburgh EH1 3DG

Dear Colleague

NHS COMMUNICATIONS SYSTEMS

Summary

1. As part of the programme to take forward the recommendations of the PA Study "Telecommunications: Improving Services to Patients" (January 1992) this letter sets out a number of actions which are to be taken by the Management Executive, Health Boards, the CSA and NHS Trusts. A discussion paper recently considered by the Management Executive Board adjusted to reflect that consideration and attached at Annex A explains the rationale for these actions.

Action

2. (a) Plans to integrate existing telecommunications networks currently managed by the Directorate of Information Services and CSA with the microwave backbone installed to carry the new mobile radio system to be operated by the Scottish Ambulance Service are to be brought forward urgently. These plans will include proposals for ensuring the operation management and forward planning of the integrated network from June 1993.
- (b) The Information Strategy for the NHS in Scotland will be augmented by DIS to include a policy statement covering the development, operation, management and planning of all telecommunications systems throughout the Service - to be agreed with the Service through Joint Working by July 1993.
- (c) Health Boards, CSA and NHS Trusts are to incorporate in their IS/IT Strategies a statement describing their objectives for the development, operation, management and planning of telecommunications systems in their organisations. These statements should be consistent with agreed national strategy to be published at (b) above, September 1993 is the target date for completion.

21 May 1993

Addressees

For action:

General Managers,
Health Boards

General Manager,
Common Services Agency

General Manager, State
Hospital

Chief Executives,
NHS Trust

For information:

General Manager,
Health Education Board
for Scotland

To be copied to Unit
General Managers

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COMMON SERVICES AGENCY	
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REFERRED TO	ACTION TAKEN

(d) Managers responsible for communications should seek to identify opportunities to achieve savings/greater value for money by exploiting telecommunications facilities. Such opportunities should be brought to the attention of the Management Executive for investigation and dissemination to the Service as appropriate.

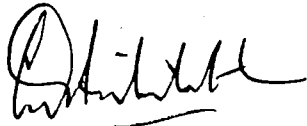
(e) Awareness of the issues involved should be increased throughout the Service. A programme of events involving potential suppliers/operators will be initiated by July 1993.

(f) Outline policies to bring maximum advantage to the NHS of increasing competition among commercial suppliers/operators to be developed by August 1993.

(g) Technical policies and mandatory standards to ensure a consistent approach throughout the service to the exploitation of communications systems, will be promulgated by the Management Executive in due course.

(h) DIS will divest itself of all provider functions in respect of communications as quickly as possible - target September 1993.

3. This letter should be copied to Unit General Managers for information.



for C B KNOX
Director of Information Services

NHS IN SCOTLAND : MANAGEMENT EXECUTIVE BOARD

TELECOMMUNICATIONS STRATEGY

INTRODUCTION

1. "Beam him up Scottie". While the de-materialisation of patients, their transportation at the speed of light, and re-materialisation at hospital or clinic is not yet achievable, existing telecommunications technology makes possible much that was but only recently pure science fiction. For instance closed circuit television can bring specialist, teaching hospital, guidance to a general surgeon operating on a patient at a remote hospital, or to a GP in his surgery; specialist analysis of X-Ray, CAT scanner or other diagnostic equipment can be carried out remotely in real time; from a patient's bedside a GP can access the patients' record back at the Health Centre, obtain quotes from a range of provider hospitals, book the patient in for an operation and arrange ambulance transport. Note the present tense, the technology to achieve these things is available now.
2. Greater exploitation by the NHS of such telecommunications capabilities would bring, not only considerable benefits to our patients, but also major implications for the structure of the NHS and how it operates. To realise the full potential of the opportunities at hand requires an overall strategy to be developed. Since the range of opportunities is as broad as are the activities of the NHS, a fundamental review is required of how the NHS should manage its telecommunications in future to ensure maximum cost-effectiveness. The scope for progress in this regard, even without considering innovative usage of telecommunications, is well illustrated by Greater Glasgow Health Board's project to install a new telephone system at a cost of £987,550 which is expected to yield annual savings as high as £1.37M. (GGHB Finance and Gen Purposes Committee Minutes of meeting on 5 January 1993)
3. The aim of this paper is to discuss the future management of telecommunications in the NHS in Scotland.

4. PURPOSE OF TELECOMMUNICATIONS

The purpose of telecommunications is to carry information. While the NHS uses a variety of "physical" communications systems (eg. messengers, courier services, the Royal Mail) an ever-increasing volume of information is transferred electronically using telecommunications. Choice of carrier will depend on the destination, nature and urgency of the information, on its bulk, on the cost of using different carriers both in financial and time terms, and on the cost, convenience and difficulty of processing or packaging the information into a form acceptable to the carrier. Telecommunications systems involve the translation of information into electrical signals, the carriage of these signals by fibre-optic, wire or radio "bearers" and their translation back into a usable form at the destination.

Until recently this translation process involved modulating a carrier signal to produce an analogue of the information being carried; increasingly, however, information is first converted into digital format before transmission, enabling a greater variety and volume of information to be handled more quickly.

5. MANAGEMENT FOCUS

Historically, the most widely used application of telecommunications in the NHS has been voice telephony, and management of telecommunications has centred on providing an internal telephone service in hospitals and other NHS premises, each connected to the public system, with occasional point-to-point private direct lines to fulfil particular needs. Local radio-paging systems, teleprinters, fax terminals and alarm systems, where adopted, have tended to be managed as an adjunct of the telephone system on a building-related basis. Accordingly telecommunications management grew up as part of the NHS Estates function as a general service akin to the provision of heat, light and power.

6. The increasing use of computer systems has meant that much information is now routinely stored and handled in a form requiring minimal further processing before being transferred through a telecommunications system. While this can be accomplished, via modems, over analogue telecommunications systems, this is less effective than to use digital systems. Thus as computer networking has developed, dedicated data telecommunications circuits have become established, both within NHS buildings and linking them. Accordingly data communications has become regarded as part of the information technology function, entirely separate from other aspects of telecommunications.
7. Now that digital systems are replacing analogue, and a suitable common "bearer" can handle voice and data traffic simultaneously, continuation of existing separate management arrangements for "voice" and "data" telecommunications is unsatisfactory. It leads to duplication of effort and of expensive facilities, to demarcation disputes and friction which impedes progress. Increasingly, modern telecommunications switches or exchanges are but special purpose computers. As the purpose of telecommunications is to carry information, and as that information must flow to wherever needed both in and out of the NHS Estate, logic suggests that telecommunications should be regarded as an aspect of Information Services. However such is the wide ranging relevance of opportunities which could be exploited that care needs to be taken to avoid any perception that telecommunications is wholly the business of the information technology specialist. Specifically Information Services must work closely with Estates function to ensure a consistent approach from "new-build" on.

MANAGEMENT PHILOSOPHY

8. The general principles of ownership and management of communications systems were stated a year ago in the PA Report "Telecommunications : Improving Service to Patients"

: "Each user should determine the communications necessary to discharge his particular functions. Managers at every level should be responsible for selecting, providing and managing the communications systems necessary to meet the needs of their users. Responsibility for managing communications should mirror overall responsibility for managing the achievement of NHS aims and objectives. Thus "ownership" of telecommunications should not differ from "ownership" of other NHS facilities" In short, so fundamental to the achievement of NHS aims and objectives is telecommunications that its management must be regarded as a central concern.

9. From these it follows that responsibility for managing telecommunications required by every "unit of management" into which the NHS in Scotland is divided should rest with the person accountable for the achievement of that unit's tasks. This is so whatever the size or role of a unit. It should apply to general medical and dental practices, chemist shops, NHS Trusts, directly managed units of all sorts, CSA Divisions, as well as to the headquarters of Health Boards, the CSA and Management Executive itself.
10. However so fundamental to the achievement of NHS aims the objectives is telecommunications that its management must be regarded as a central concern and the freedom of action of individual managers to manage their communications system must, necessarily, be limited. Firstly information needs to flow with minimum hindrance between different parts of the NHS, crossing lines of accountability, as well as to and from points outside the Service such as the NHS elsewhere in UK, our suppliers, local and other authorities and agencies with whom we must work and, most importantly, our patients in the community. This requires standards to be applied to ensure technical compatibility and connectivity of individual systems, in terms of format and medium in which certain classes of information are required to be presented, and in terms of system availability and security. Cost is another major constraint : collaboration is required between different NHS users so that common telecommunications requirements can be met on a co-ordinated basis to achieve economies of scale, and to minimise the overall need for expensive technical staff. Amplifying both constraints is geography. Units are not necessarily self-contained on a single site, for instance a hospital campus might contain most of one large unit, a couple of small ones and parts of various others.

MANAGEMENT EXECUTIVE ROLES

11. Like any other NHS "unit of management", the Management Executive itself requires the telecommunications necessary to support the cost-effective transfer of information to, from and between all involved in achieving its overall aims and objectives. Ensuring the effective management of its own use of telecommunications is part of the Management Executive's "managing itself" function and is best kept separate from its principal function - that of managing the NHS in Scotland as a whole.

12. The stated general principles of ownership and management of telecommunications (para 8 above) are entirely consistent with the way in which overall management of the NHS in Scotland is developing. Thus it must be for the Management Executive to lead on telecommunications policy and strategy, setting standards for mandatory application throughout the Service, and to leave managers locally with as much freedom of action as possible to manage their affairs.

NATIONAL INFRASTRUCTURE

13. It is also for the Management Executive to secure for the NHS as a whole those services more sensibly provided on a central basis. As indicated in the PA Report much scope exists for rationalisation in this area. The case is unarguable for a single national telecommunications network to bring together existing national data networks, operated by the Director of Information Services' Health Systems Division and by the Common Services Agency centrally (and those running separately in some of its Divisions too), with the now existing microwave backbone installed as a bearer for the new national mobile radio system for the Scottish Ambulance Service and associated users. Incorporation within this single national telecommunications network of inter-unit voice and data bearing circuits (wide area networks) procured by Health Boards, prior to their post reform concentration on the purchaser function, would also seem sensible.
14. The purpose of this national telecommunications network is to provide an efficient and economic means of transferring information to meet the needs of the NHS in Scotland as a whole. Since the NHS is neither attuned nor equipped to run such a facility, its detailed operation should be outsourced. Nevertheless overseeing the contractor(s), managing NHS usage, and planning provision for new applications of the sort mentioned in the introduction, requires a central NHS management team with appropriate skills and proposals covering this are to be developed within the policy statement for the development, operation, management and planning of telecommunications systems.

CENTRAL PURCHASING

15. The purchasing clout of the NHS in Scotland is enormous and in the case of telecommunications largely unused. Over £20M is spent by the Service each year with BT alone, making us by far their biggest customer here. Following the PA Report the CSA's Supplies Division has commenced to expand the range of telecommunications equipment available to the NHS under central, call-off, contracts. The advantages of so doing are well illustrated by their success in achieving a 75% reduction on list price for pagers. Further expansion of the range will continue as equipment specifications and standards are determined, and expertise is developed. In time the range is likely to embrace not only equipment but provision of services including maintenance.

LOCAL MANAGEMENT

16. The timing of the PA Report was perhaps unfortunate in that it reflected the pre General Election status quo. The pace at which Health Boards are reducing their direct management control of NHS Units in their areas has now increased markedly, and this has consequences for the local management of NHS telecommunications. In principle each "Unit of Management", whether NHS Trust, purchaser Board, CSA Detachment or General Practice must be responsible for its own telecommunications. Similarly each "unit" will require connection to the national network. Collaboration between the national network management and all NHS Units in a given geographical area is thus needed to develop a local strategy to most cost-effectively meet the needs of all.

MAKING IT HAPPEN

17. As was made clear in the PA Report, effective strategic planning and control of its telecommunications has been largely absent from the NHS in Scotland. Duplication, inefficiency, technical incompatibility and financial waste on a large scale have been the result. Following the PA Report, the Director of Information Services has formally become the Management Executive focal point for telecommunications, the Service has become more aware of the need for better telecommunications management and some progress has been made. This must be accelerated if the full potential impact of telecommunications is to feature as it should in deliberations on the future pattern of the Service overall, to satisfy changed information flows resulting from the NHS reforms, and to bring expenditure under control.
18. The roles, overall responsibility and structure of the Directorate of Information Services have recently been reviewed, and are to be adjusted to concentrate on matters of policy, strategy and standards. The National Emergency Planning Officer, a large part of whose time has become focussed on telecommunications matters, and his staff have now joined the Directorate. He will continue to lead on telecommunications strategy.
19. The Management Executive Boards, at its meeting on 31 March 1993, agreed in principle that:-
- (a) A single national telecommunications network should be established (as described at paragraph 13).

As a first step, the merger of DIS and CSA data networks, and of the microwave backbone, is now being examined. Rationalisation of national networks was delayed while the future of the Mobile Communications Project was in doubt. Now that it is to be extended from Grampian/Highland to the rest of Scotland the overdue need to effect proper operational management of the microwave backbone becomes daily more urgent. Firm proposals have been called for by the end of May.

- (b) Local telecommunications strategies should in future be described explicitly within CSA/Health Board/NHS Trust Information Services/Information Technology strategy documents.

To enable this, the NHS in Scotland Information Strategy requires similar enhancement. A target of July 1993 has been set to achieve this through Joint Working, making September the earliest date for the local strategy documents to be adjusted.

- (c) Specific opportunities to achieve savings/greater value for money by exploiting telecommunications facilities should be investigated and promulgated to the Service.

First stage is to widen awareness of what can be achieved. To this end an initial workshop, similar in concept to that held at Livingston last year, targeted at General Managers/Chief Executives, is being planned for the summer. Major suppliers have indicated a willingness to co-operate with us in staging similar events for smaller groups to consider particular telecommunications applications. In parallel, the need exists to develop "networking" among NHS telecommunications managers, use of the CSA Supplies Divisions' Commodity Advisory Panel as a vehicle for this is being considered.

- (d) Given the overall size of the NHS spend of telecommunications, policies designed to increase competition amongst suppliers must be developed.

Clearly we must maximise our purchasing clout, and CSA Supplies Division has a major role in this. Discussions with major suppliers are taking place, and with the NHS South of the Border with a view to bringing even more "clout" to bear.

- (e) In developing policy/standards, the Directorate of Information Services must involve other Management Executive Directorates, not least Estates, to ensure a consistent approach to telecommunications issues.

DIRECTOR OF INFORMATION SERVICES