

Commissioning Assistive Technology Services

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Preface

Previous reports by the Audit Commission have emphasised the importance of the effective commissioning of AT services and accordingly the Commission has prepared commissioning guidance for wheelchair services, orthotics, and prosthetics services. These are included below.

The Audit Commission has also worked with the Department of Health's Integrating Community Equipment Services Team to produce similar guidance for community equipment services.

The RNID and NDCS have independently produced similar guidelines on service standards for adult and paediatric audiology standards.^{1 2}

So there are available a number of standards designed to help service managers and commissioners to commission and specify services more effectively than has been the case hitherto. Many services will be able to make use of these guidelines straightaway within existing service configurations.

As well as commissioning individual AT services, commissioners and service providers also need to consider the overall organisational arrangements to support the integration of AT services. A paper on this included below by way of introduction.

The guidelines are intended to be live documents for the use of users, carers, commissioners and service professionals.

Your comments on the guidelines are welcome, and should be addressed to Nick Mapstone at n-mapstone@audit-commission.gov.uk.

¹ http://www.ndcs.org.uk/information/professional_publications/qsipaedaudio.html
² <http://www.audiologystandards.org.html>

Organisational arrangements to support the delivery of integrated assistive technology services

Summary

1. Assistive technology (AT) can be defined as any piece of equipment that helps people to perform everyday activities. This broad definition incorporates a large number of devices, ranging from 'low-tech' mobility devices such as zimmer frames to 'high-tech' speech synthesizers or stair-climbing wheelchairs.
2. Previous reports by the Audit Commission have emphasised the importance of the effective commissioning of AT services and accordingly the Commission has prepared commissioning guidance for community equipment services, wheelchair services, orthotics, and prosthetics services. The RNID and NDCS have independently produced similar guidelines on service standards for adult and paediatric audiology standards. So there are available a number of standards designed to help service managers and commissioners to commission and specify services more effectively than has been the case hitherto. Many services will be able to make use of these guidelines straightaway within existing service configurations.
3. But as well as commissioning individual AT services, commissioners and service providers also need to consider the overall organisational arrangements to support the integration of AT services. That is the subject of this paper.
4. The organisation of AT services varies greatly throughout the country. Some parts of the country are served by regional centres of excellence while others no longer have any regional specialist resource. Thus there is no universal model for the integration of AT services across the country. More often than not, organisational arrangements are the product of accretion rather than conscious design.
5. A single, common model of commissioning or provision of AT services will never be possible, especially in view of the Government's express policy of set out in *Shifting the Balance* which states that local arrangements are the desired way of organising services. This observation jars with many people in service provision, commissioning, industry and many users groups who search for a simple, elegant organisational model.
6. Nevertheless, it is important that service users have access to an integrated service for a number of service and clinical reasons. Integration secures the necessary critical mass, helps to provide clinical leadership and provides improved clinical governance arrangements. But the most important reason is that many users of AT services have multiple needs and require a holistic assessment. The NHS Plan has at its heart the imperative to design services around users' needs and there can be few better examples than AT services where such redesign is possible and desirable.

7. There is no evidence that one particular organisational form is the best. The search for a uniform template will fail because the effectiveness of most services will be the product of local circumstances, not least the strengths and weaknesses of the available personnel. All this paper seeks to do is elaborate on a number of possible organisational models for integration. Local health communities should then weigh the issues outlined below and apply the solution (or combination of solutions for none of the options need necessarily be mutually exclusive) which most appropriately fits their local circumstances.

Background

8. In March 2000, the Audit Commission published *Fully Equipped*, a report on the provision of some forms of equipment to older or disabled people by the NHS or social services in England and Wales.³ The report concluded that assistive technology provides the gateway to the independence, dignity and self-esteem of some 4 million older or disabled people and for 1.7 million informal carers. But the current services were found to be unsatisfactory:
 - there were unexplained variations in all aspects of service provision, which in turn bears little relation to underlying levels of need;
 - the quality of services owed more to custom and practice, rather than to a considered view of the contribution that equipment services could make to the overall needs of the population; and
 - eligibility criteria were often unclear to users, carers, voluntary organisations and staff, and they were often applied inconsistently.
9. In June 2002, the Audit Commission reviewed progress in a follow-up report, *Assisting Independence - Fully Equipped 2002*.⁴ It found that while there had been significant activity around some AT services (such as community equipment services and audiology) there was little actual achievement in other areas mainly because of the concentration on short-term acute hospital activity targets and continuing financial pressures.
10. The report identified the commissioning of all AT services as a key weakness. This view has been confirmed by the social services inspectorate which reported: 'Joint Reviews continue to find that good strategic commissioning is the main factor which divides those councils which are delivering better outcomes for older people, from those which are not'.⁵
11. In order address these shortcomings, the Audit Commission has produced commissioning guidance in four service areas:
 - wheelchair services;
 - prosthetics;

3 Audit Commission, *Fully Equipped – The provision of disability equipment services to older or disabled people by the NHS and social services in England and Wales*. 2000, Audit Commission

4 Audit Commission, *Assisting Independence - Fully Equipped 2002*. 2002, Audit Commission

5 Social Services Inspectorate/ Audit Commission, *Tracking the changes in social services in England: Joint review team sixth annual report 2001/02*. Audit Commission. 2002: 20.

- orthotics; and
 - community equipment services (available at www.icesdoh.org);
12. The RNID and NDCS have independently produced similar guidelines on service standards for adult and paediatric audiology standards. So there are a growing number of standards designed to help service managers and commissioners to commission and specify services more effectively than has been the case hitherto. It is hoped that the guidance will be relevant to all those with an interest in AT services, and be used in the absence of locally agreed standards. It is also intended that service commissioners and providers will use the guidance to examine and audit their current performance against the standards and best practice/innovation contained in the guidance.

The complexity of commissioning assistive technology services

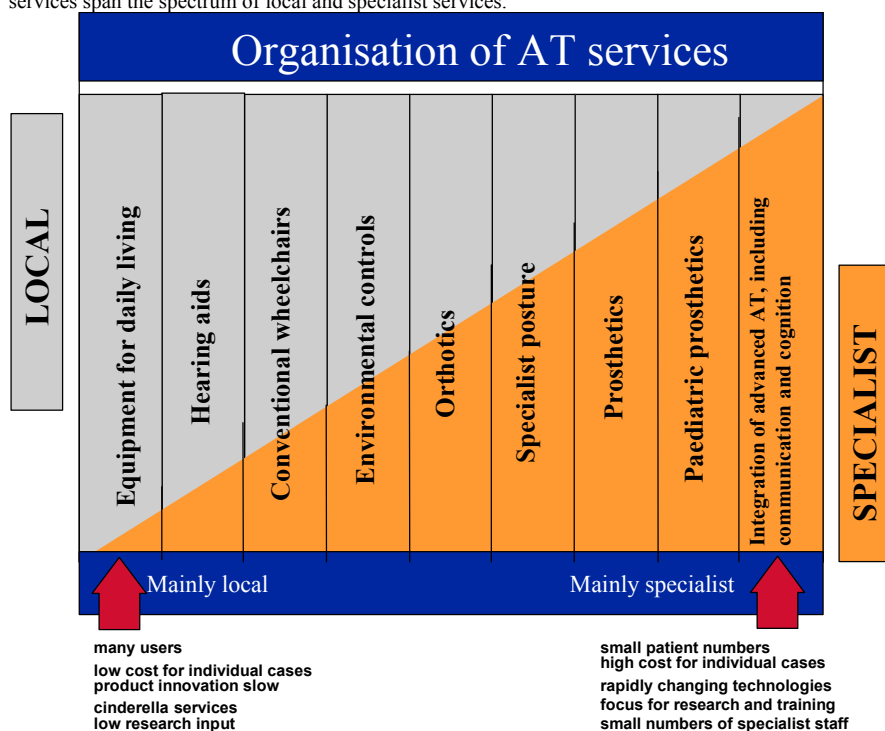
13. PCTs and social services are the main commissioners of AT services. Their task is far from straightforward for a number of reasons:
- Commissioners have to work closely with several other agencies to deliver integrated services. These other agencies may include: housing, education and both voluntary and private sector providers.
 - Responsibility for AT has many government sponsors: the Department of Health, the Department of Education and Skills, the Department of the Environment, and the Office of the Deputy Prime Minister each have a role to play and their efforts may not always be fully co-ordinated.
 - There is sometimes a lack of professional integration: some practitioners see themselves as narrow specialists rather than members of a ‘broader church’ of professionals whose role it is to promote independence.
 - Many existing structures have not promoted co-ordination, or facilitated close professional collaboration which is needed to reflect the growing expertise around AT.
 - Users will often need provision of AT throughout their lifetimes. Commissioning arrangements should therefore provide the resources to review and maintain equipment for a population requiring services on a continuing basis in order to accommodate the changing needs of service users.
 - Some AT services (for example, communication aids) are small-scale specialised services, whilst others (for example, equipment for daily living) are large-scale simpler services where local accessibility is of paramount importance to the users of the service.
 - AT services are commonly not being sufficiently integrated into the user’s broader treatment or care plan. For example, the NHS often gives patients very expensive surgery but then doesn’t pay for the essential technology that bridges the gap between being medically stable and functionally able and then restoring functional independence. (*Assisting Independence* referred to the example of one individual who underwent a surgical procedure costing £35,000 to correct his posture but the local wheelchair service was unable to afford the £500 to provide appropriate seating to match the new posture.)

14. AT services span the commissioning spectrum (Exhibit 1).

Exhibit 1

The organisation and characteristics of commissioning of AT services

AT services span the spectrum of local and specialist services.



Source: Audit Commission

15. The range of service users often do not fit conveniently into the boxes of the current commissioning/providing structures. Many users have multiple needs and so need access to a range of different technologies. In consequence, there is no clear or single organisational home or identity for the provision of AT services. Thus both commissioning and provision of AT services is often confused.

16. For all AT services, it is the expertise of the patient assessment process that determines the specialised nature of the service. Ideally it would be possible to describe the specialised elements of the service by the level of complexity of the assessment process. However, there are no standard tools available to do this and therefore AT services are identified by the nature of the equipment prescribed rather than by the assessment process. Unlike any other part of the health service, the generic name is derived from the technology used, rather than the service user's need to establish independence.

17. The Department of Health (DH) has sought to provide greater clarity by publishing a Specialist Commissioning Definition on 7th August 2002.⁶ This definition is subdivided into five main areas:

- prosthetics and complex orthotics;

- specialised wheelchair provision including complex postural seating/postural management systems and specialised powered wheelchair controls;
 - communication aids (excluding all forms of hearing aids and cochlear implants);
 - environmental controls and other electronic assistive technology;
 - specialised aspects of telecare.
18. The services included in this definition involve the provision of equipment to adults and children and are characterised by:
- the complexity of service user needs (complex physical/cognitive/language/sensory disability);
 - the complex and expert nature of the assessment and by implication the complexity of solutions;
 - the need for effective training and on-going maintenance and user support;
 - the scarce expertise in these services
 - the opportunity to maximise procurement economies of scale.
19. The guidance doesn't include equipment for daily living, meaning that the specialised pieces of equipment may be provided separately from the more general equipment, meaning that the user's continuum of needs may not be met.

Principles underpinning assistive technology services

20. Actions to improve AT services need to be based on a series of underpinning principles which should:
- involve users and carers and their supporting groups in the planning, delivery and evaluation of initiatives and services that directly affect them;
 - provide equitable access to AT by responding to the particular needs of different groups or communities;
 - be sustainable, going hand in hand with social, economic and environmental development;
 - work in partnership to assess needs, plan actions, share investment, deliver services and evaluate outcomes;
 - be based on evidence based practice where such information is available;
 - be included as an integral and essential element of the treatment plan / care package
 - recognise not only that AT enables independence but can impact positively on reducing dependence and associated care costs
21. A number of commentators have described AT as 'everyone's distant relative but no body's baby.' The commissioning and provision of AT services is fragmented (Table A).

Table A

Commissioners	Providers
PCTs	PCTs
Social services	Social services
Education	Acute / tertiary hospitals
Housing	Social landlords
Private purchasers	

Organisational models for AT services

22. Hub and spoke arrangements have been recommended as an effective service delivery model for the AT services.⁷ They provide the combined benefits of centralised expertise and critical mass at the hub and local access along the spokes to people who more than most will find travelling to services problematic. In general, people living in rural communities and in some deprived urban communities find travelling difficult: around 27% of people who have no access to a car, face difficulties travelling to hospital.
23. Commissioners will place contracts with the centre ('the hub') for all aspects of care, including parts of the service provided at local hospitals or clinics ('the spokes'). The guiding principle of hub and spoke arrangements is that as much care as possible should be provided close to the patient's home in satellite clinics, with specialist support and resources at the centre (Exhibit 2). This model offers clear benefits in terms of improved cost-effectiveness, avoiding duplication of skills and facilities, and responsiveness to patient needs. It also gives scope for the controlled diffusion ('roll-out') of new technologies, through planned links between the specialist centre and local services. The Calman-Hine report for cancer services⁸ used a similar approach on a national scale, with designated centres and units. Thus the hub is a specialist satellite that local services can access when appropriate.

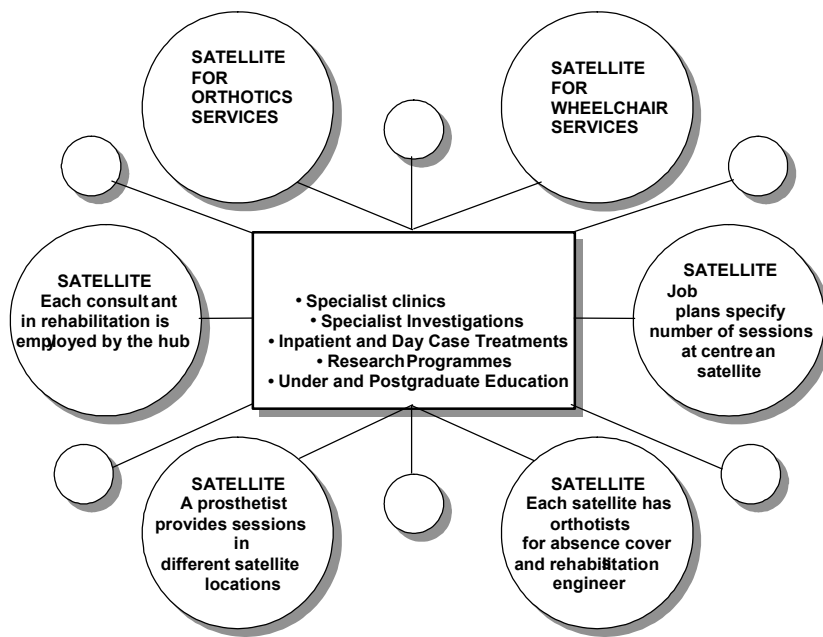
Exhibit 2

Hub and spoke models of care

The hub and spoke model provides scope for central expertise with convenient local access.

⁷ Audit Commission, Fully Equipped – The provision of disability equipment services to older or disabled people by the NHS and social services in England and Wales. 2000, Audit Commission

⁸ Department of Health and Welsh Office, A Policy Framework For Commissioning Cancer Services: A Report by the Expert Advisory Group on Cancer to the Chief Medical Officers of England and Wales, 1995.



Source: Audit Commission

24. There are, however, several permutations of the hub and spoke model, and possible variations about what comprises the hub and what comprises the spokes. There are four main possibilities:

- establish the hub around specialist prosthetic centres
- establish the hub around community equipment services
- establish a virtual hub and spoke arrangement
- establishing clinical networks

Establishing the hub around specialist prosthetic centres

25. There are 29 SHAs and 33 specialist prosthetic centres in England. Thus there is a fairly close, though obviously not perfect, match between the two. The existing specialist prosthetic centres in England could therefore be established as the hubs of the hub and spoke model in the case of a limited service configuration integrating prosthetics, orthotics and wheelchair services. These could be commissioned directly a lead PCT across a health community (Box I). Out of area treatments would be dealt with in the usual way.

Box I

Match of SHAs with Prosthetic Centres

Strategic Health Authority	Main specialist prosthetic centre to be established as SHA hub for Assistive Technology
Birmingham and Black Country	Birmingham, Wolverhampton
Coventry, Warwick, Hereford and Worcester	Birmingham

Trent	Derby
South West Peninsula	Exeter, Plymouth
Essex	Harold Wood
North East London;	Harold Wood
North and East Yorkshire and North Lincolnshire	Hull
Leicestershire, Northampton and Rutland	Northampton, Leicester
Norfolk, Suffolk and Cambridgeshire	Norwich, Cambridge
Cumbria and Lancashire	Carlisle, Preston
Surrey and Sussex	Brighton
Avon, Gloucester and Wiltshire	Bristol
North Central London	Charing Cross
County Durham and Cleveland	Cleveland
South East London	Crystal Palace
Dorset and Somerset	Dorset Prosthetic Centre
Kent and Medway	Gillingham
West Yorkshire	Leeds
Cheshire and Merseyside	Liverpool, Wirral
Bedfordshire and Hertfordshire	Luton and Dunstable
Greater Manchester	Manchester
Northumberland, Tyne and Wear	Newcastle
Trent	Nottingham
Thames Valley	Oxford
Hampshire and IOW	Portsmouth
South West London	Roehampton
South Yorkshire	Sheffield
North West London	Stanmore
Shropshire and Staffordshire	Stoke

Source: Audit Commission

26. Lead PCTs would have a key role in coordinating the various local services and monitoring the delivery of high standards throughout. The critical mass of patients that hub and spoke models generate provide sufficient scale of activity for multi-professional staff to develop the skill sets required to deal effectively with the needs of service users. The spokes allow the experienced staff to take their skills out to a wider group of patients while offering appropriate referral back to the hub for those patients requiring the full services of the multi-professional team.
27. The competence and skills of staff are maintained and enhanced by working through contact with the centre. Links are strengthened by joint staff appointments, staff rotation and collaboration in research and audit. Agreed guidelines and protocols are essential to facilitate seamless care and keep patients from having to return unnecessarily to a specialist 'hub'. In the case of AT, the hub and spoke model can run from a tertiary centre through to a district general hospital and with spokes in the community.
28. However, this model will not suit all circumstances. It seeks to build on existing organisational configurations rather than start from first principles. The model has several shortcomings:
- Hub and spoke arrangements can imply that users are transferred to a more central unit when no local specialist is available. This model does

not encourage expertise at the spokes, nor does it include exchanges of staff for training and the maintenance and enhancement of competence.

- This model is much less appropriate if all the AT services included in Exhibit 1 are to be integrated, especially if the prosthetics discipline (which has the smallest user population) predominates.
- The hub and spoke concept is one in which the ties between the same speciality in different hospitals are more prominent than inter-specialty links on site.
- The very term 'hub and spoke' can sometimes be unhelpful due to the implied subordinate status of the spoke and the model does not readily reflect the key role of primary care in health services delivery.

29. An organisational arrangement that based on hub and spoke principles needs to promote outreach rather than a centralisation of care: the predominant force needs to be centrifugal rather than centripetal.

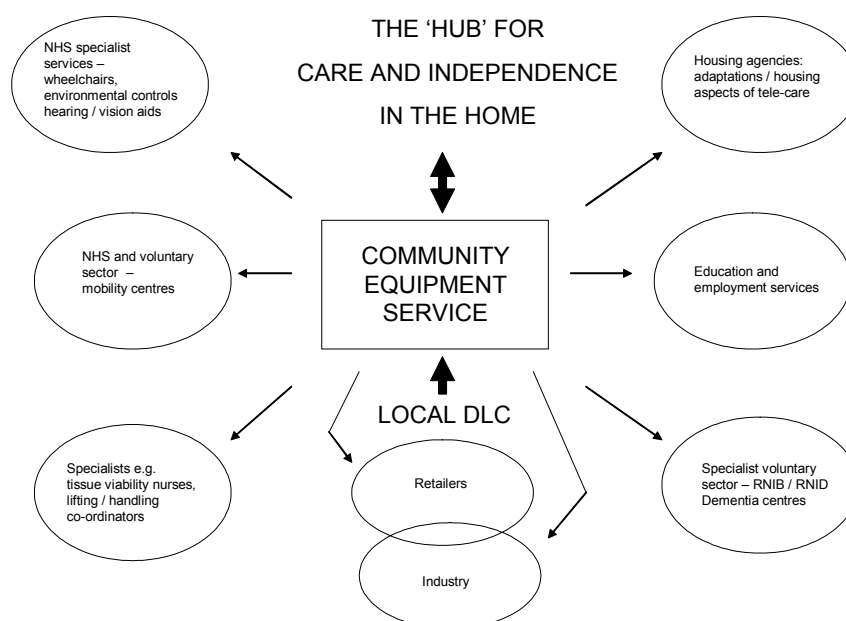
Establishing the hub around community equipment services

30. Some believe that basing services around prosthetic centres would be a retrograde step, simply recreating the old Artificial Limb and Appliance Centres that failed to deliver a uniform quality of care prior to their abolition in 1991. Moreover, this model of organisation some would say is over-medicalised. An alternative model is to establish the hub around community equipment services (Exhibit 3).

Exhibit 3

Community equipment services as the 'hub' for Assistive Technology

One model is to establish a hub around community equipment services.



Source: Ref.⁹

31. This model is closely in tune with the prominent place given to user convenience and access emphasised in the NHS Plan, and closely reflects the emphasis on local access included in the DH's latest thinking about configuring hospitals.¹⁰ In addition, the model offers several advantages as it:
- builds around local, integrated community equipment services as the first point of contact for the vast majority of people who require AT solutions to promote their independence and participation;
 - seeks to build upon and improve local networks to improve co-ordinated approaches and professional collaboration;
 - offers a potential focus for different service solutions, for example in collaboration with a disabled living centre allowing a one stop shop approach with self selection and the promotion of local independent contractor services;
 - offers the scope to access and refer on to specialist secondary and tertiary resources.
32. One variation on this model is option of making a user-led Disabled Living Centre (DLC) the hub of the service, which can provide a one-stop shop for service users to gain advice and direct service provision. The DLC supported by Sandwell MBC and the local health community offers a practical example of this approach.

Establishing a virtual hub and spoke model

33. The hub of the hub and spoke arrangement does not have to be constructed of bricks and mortar. Instead, the opportunities created by developments in ICT offer the potential to create a 'virtual' hub and spoke arrangement with lead commissioning organised at several levels (Box II).

Box II

Virtual configurations of clinical and social networks

Commissioner:	Strategic Health Authorities	PCTs
Number:	28	320
Services	Electronic assistive technology Prosthetics	Manual wheelchairs
	Electrically powered wheelchairs Communication aids	Community equipment
		Orthotics

Source: Audit Commission

34. This model reflects the growing need for close integrated links between AT services. Developments in electronic technology make it possible for some users with complex needs to have communication aids, environmental control

⁹ Richards, S. Presentation to the ICES conference, November 2002. Available from www.icesdoh.org.uk

¹⁰ Department of Health, *Keeping the NHS local – a new direction of travel*, Department of Health February 2003, www.doh.gov.uk/configuringhospitals

and wheelchair control functions provided by a single system. There are also those who do not require such sophistication but who can be expected to benefit from telecare or 'smart house' technology. Some assessments for environmental controls are likely to result in the provision of a telecare solution.

35. Such arrangements will become more popular in coming years with the development of telecommunication and computer links. For instance, developments in rapid image transfer enable specialists at the tertiary centre to offer advice and interpret the results of a foot scan from a local centre without the patient having to travel to the hub. Super-specialisms may develop, providing 'virtual centres' for a very wide catchment population. Specialist trusts may be able to 'franchise' an approach or package of care to other trusts, without direct involvement in the day-to-day management of the patient.
36. The potential of this model will become greater with the delivery of the latest national ICT programme,¹¹ which includes the provision of a uniform health and social care record.

Developing managed clinical networks

37. The development of virtual networks is supported by the concept of managed clinical networks proposed in the review of acute services in Scotland.¹² It is still an emerging concept which allows services to be developed across traditional boundaries. Managed clinical networks are consonant with the current emphasis on the role of primary care in acute hospital care. Far from favouring centralisation, such distributed networks will promote the delivery of acute services in new collaborative organisations, transcending traditional boundaries between hospitals, community hospitals and primary care.
38. A model of clinical networking could complement hub and spoke arrangements. The emphasis in clinical networking is on the connection and partnership rather than centralisation, and on maximising the benefits for all service users rather than the fortunate few. The system allows for some strands of the 'net' to be thicker and stronger than others, with much of the power and influences lying at the interstices of the net as 'knowledge' or resource centres. This model has significant implications for service management, particularly where networks have to develop across traditional boundaries such as those between SHAs.
39. Specialists, whether they be medical consultants or specialist engineers or therapists may be viewed as 'collegiate' resources if service networks are to be developed across the country. The term 'network' implies that care is delivered seamlessly by a chain of interconnected people and operations, and it is the relationship between these people which forms the very structure of the network and governs its operation. It follows that the professional relationships have to be carefully and clearly defined if individual staff

¹¹ Department of Health (2002) Delivering 21st Century IT support for the NHS, The Stationery Office

¹² Scottish Office, *Acute services review*. Edinburgh: Scottish Office, 1998.

members are to function effectively, realise their full potential and feel valued. Networks can therefore be characterised as ‘virtual’ service organisations, where the skills of the professionals concerned are grouped around service needs, and may not be co-terminus with PCT, local authority or SHA boundaries. Erosion of unhelpful barriers between primary and secondary care is seen as an important objective. From a service user’s perspective, the network should deliver seamless care with smooth transition from one part of the service to another.

40. The network should be seen as a dynamic system, the design and function of which can change as relationships develop. But there needs to be clarity about the leadership of the clinical network and the flow of money. Pathways of care are essential to allow for the proper costing of procedures.
41. Managed clinical networks are consonant with a renewed emphasis on the role of primary care in acute hospital care. Far from favouring centralisation, such distributed networks will promote the delivery of acute services in new collaborative organisations, transcending traditional boundaries between hospitals, intermediate and primary care. Managing and operating the networks will require all of the clinicians concerned to collaborate in developing detailed descriptions of services, integrated protocols and pathways.
42. The development of clinical networks is a concept that can be added on to any organisational form. In particular, such an integrated approach offers one way to integrate the work of sensory specialists into AT services.

Next steps

43. The organisational arrangement chosen for the delivery of AT services will vary depending upon local circumstances and preferences. There will no one perfect model. But whatever model is adopted locally the application of clear commissioning guidelines is of paramount importance and the following points are strongly recommended:
 - Service commissioners need to recognise the contribution that AT can make to top priorities (e.g. reduced admission; faster discharge from hospital.)
 - PCTs and social services need to establish a commissioning confederation, working in a networked way across the health and social care community, using funding flexibilities available under the 1999 Health Act.
 - A lead commissioner is appointed who specifies levels of service from providers from within / outside the SHA boundary and from within / outside public provision.
 - Integrated patient care pathways are established as the basis for quality standards and costs.

- Service commissioners need to undertake an analysis of what they have, and appreciate the principles of economies of scale and critical mass for the effective delivery of some elements of these services.

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- 1 Commissioning models.ppt chart 2
 - 2 Commissioning models.ppt chart 4
 - 3 Sheelah Richards's model.ppt