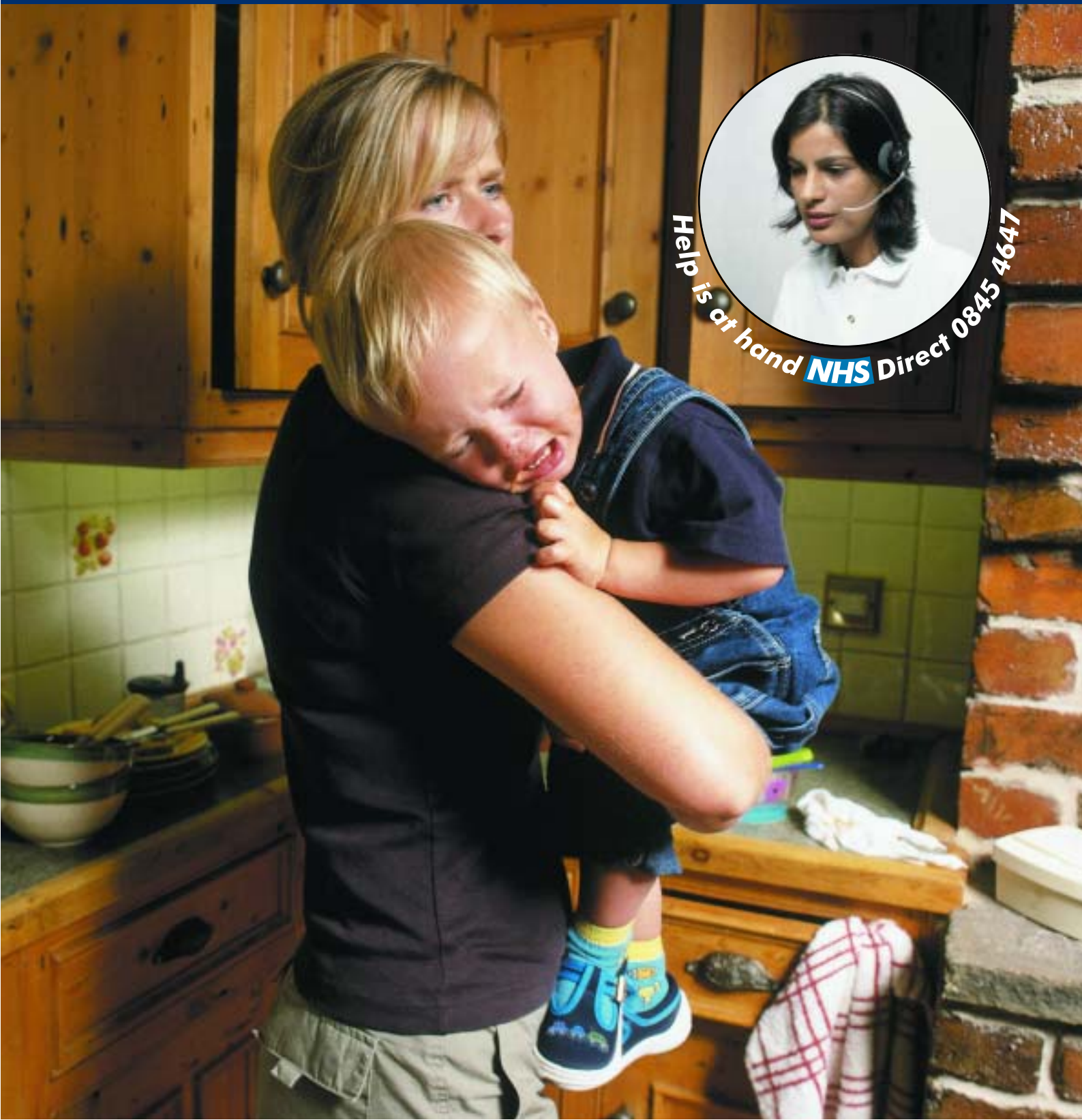


NHS Direct in England

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 505 Session 2001-2002: 25 January 2002



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This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act.

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Comptroller and Auditor General 11 January 2002

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IPSOS-RSL carried out a survey of the public's awareness of NHS Direct, and **Lorien Consulting** carried out research into the barriers to accessing NHS Direct's services.

We also convened a reference panel to advise us at key points throughout the study. It comprised:

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executive summary & recommendations

NHS Direct: At the forefront of modernising the NHS

- the remit is to provide easier and faster health advice and information to the public
- it was launched in 1998 as a 24 hours a day/7 days a week service; national telephone coverage was achieved in November 2000
- it is the world's largest provider of telephone healthcare advice, receiving 3.5 million calls in 2000-01 and costing £80 million to run - with call volumes set to double in 2001-02
- the full-time equivalent of 1,150 highly qualified nurses in 22 call receiving sites provide advice to callers using advanced computer clinical decision support software
- the Online service provides an e-mail health information enquiry service and web links to health information
- NHS Direct facilitates better access to NHS services and improvements in out-of-hours services

- 1 NHS Direct provides healthcare information and advice to the public in England (and Wales) through a telephone helpline (0845 46 47) and an associated Online service (see box).

Implementing and delivering NHS Direct

- 2 Ministers set the NHS Direct project team very demanding targets to introduce both the national telephone and Online services. Given the innovative nature and scale of NHS Direct, it was a very significant achievement that both targets were met.
- 3 Ministers decided that implementation would proceed alongside piloting, and were concerned with how rather than whether the service would be implemented. Short lines of communication between the project team and those implementing the service at the local level enabled lessons to be learnt quickly as the projects progressed.
- 4 A wide range of stakeholders was consulted during the development of NHS Direct, although delivering to a tight timetable meant curtailing some elements of the consultation. The strength of relationships between NHS Direct's call receiving sites and their local communities has been variable during implementation, but many sites have worked hard to build up appropriate links and to consult key stakeholders on developments. There is scope for further sharing of such good practice among sites. The Online service now has a strong consultative structure.
- 5 The procurement of a £70 million national computerised decision support system was well managed, and the system was in place at all sites by October 2001, six months later than specified in the contract to allow for better planning of the roll-out. The software system has worked well, though the target to reduce call length has yet to be met.
- 6 The management of the project as a whole has many strengths, particularly in terms of meeting deadlines and addressing risks in a practical manner. NHS Direct now needs to build on this successful implementation by developing longer term strategic and business plans. As the size and complexity of NHS Direct increase, there is also scope to strengthen senior management to provide further direction, prioritisation and management across the range of projects and services.

- 7 NHS Direct currently employs approximately 0.4 per cent of all full-time equivalent qualified nurses in the NHS, with 20 per cent of its nursing workforce coming from outside the NHS. Sites have taken a range of measures to minimise the impact of recruitment on other parts of the NHS, including nurses working part-time for NHS Direct and the NHS. Staff vacancy levels vary among sites, however, and there will be further pressure on recruitment if the increase in staffing levels necessary to meet the projected rapid increase in take-up of NHS Direct's services is to be achieved.
- 8 A comprehensive framework of detailed objectives for the service has yet to be set. Without them, it is difficult for NHS Direct to judge its overall success as an organisation. NHS Direct has made some progress in developing a framework of key performance indicators for both the telephone and Online services, and more work is in hand.

Impact of NHS Direct on the public

- 9 In implementing the service, NHS Direct's project team has balanced the need to publicise the service and its capacity to meet demand. It has already met its target for 60 per cent of the population to be aware of NHS Direct by March 2002.
- 10 NHS Direct has recognised that some groups - younger people, people over 65, ethnic minority groups, less advantaged social groups and people with disabilities - are either less aware of NHS Direct or use it less, but have equal or greater need for the service. A range of initiatives has been introduced to tackle this, though some sites have done more than others.
- 11 Public satisfaction with NHS Direct is consistently very high at over 90 per cent. Very few callers receive the engaged signal when telephoning, but in September 2001 only 64 per cent of callers were able to speak to a nurse adviser within five minutes compared with the current target of 90 per cent. Capacity is being increased, but there is scope to improve productivity in the number of calls handled per person across call receiving sites.
- 12 The clinical safety of NHS Direct is critical. NHS Direct has a good safety record, and there have been very few adverse incidents. Nurses must have considerable post-qualification experience to work for NHS Direct and are given training to satisfy a national core set of competencies. There are also a number of procedures in place to ensure the continued safety of the service.
- 13 NHS Direct's Online service seeks to ensure clinical quality through the application of a standard set of criteria to evaluate other websites before it links with them. Quality assurance procedures have also been developed for the introduction of the e-mail enquiry service.
- 14 There is some variation in consultation outcomes from the telephone service, which might reflect a tendency to err on the side of caution. Mystery shoppers are used to assess the quality of advice and a national model of clinical supervision is being developed. The national decision support software also provides facilities for monitoring the quality of advice provided.



Impact of NHS Direct on the NHS

- 15 Evidence indicates that NHS Direct can reduce demands on health services provided outside normal working hours. It has set a target to integrate with providers of general practitioner (GP) out-of-hours services covering 10 million people by March 2002. Local initiatives are also underway to integrate NHS Direct with general dental practitioners' out-of-hours services, which could make emergency dental services more widely available. And from 2002, everyone should be able to use NHS Direct to gain access to their nearest pharmacy. Integration with the emergency services promises significant benefits for accident and emergency departments and ambulance services, but is less advanced.
- 16 Past experience shows that achieving integration will be a significant challenge for NHS Direct. Sites will need to meet demanding service standards while handling a significant increase in the numbers of calls.
- 17 It is very difficult to accurately assess the impact of NHS Direct on callers' behaviour. However, the best estimate that can be generated from available data suggests that NHS Direct is off-setting around half of its running costs by encouraging more appropriate use of NHS services. This includes advising a significant number of callers who would otherwise have visited their GPs on how to care for themselves instead. In addition, NHS Direct also appears to be adding value by reassuring callers and saving them unnecessary anxiety.

Addressing key risks

- 18 NHS Direct has quickly established itself as the world's largest provider of telephone healthcare advice. If it is to meet the significant challenges associated with future expansion and development of its service, NHS Direct will need to address the key risks highlighted in the preceding paragraphs. In summary, these risks are:
 - **capacity** - having sufficient capacity to maintain and improve on service standards, while handling growing demand. This will depend on a number of factors, including: developing appropriate human resource strategies; achieving successful networking of calls between sites; improving productivity across sites; and being able to demonstrate a case for appropriate levels of funding to meet demand;
 - **safety** - maintaining a good safety record while dealing with increasing call volumes; and
 - **integration** - linking with other front-line healthcare services to capitalise on the benefits of integrated working, and to avoid possible duplication and inefficiency. This will require significant investment in consultation and communication with key stakeholders, and in development of compatible information systems and service standards.

Recommendations

- 19 The implementation of NHS Direct so far has been a success. The Department of Health and NHS Direct can build on this success by:
- i) strengthening senior management to provide further direction, prioritisation and management (including project management) across all projects and services, and drawing up business and strategic plans covering developments over three to five years. This would help provide clearer direction for the service and how this relates to policy priorities elsewhere in the NHS;
 - ii) supporting this with a staffing strategy, based on a clearer understanding of the factors affecting staff recruitment and retention across the service. This would reflect the effectiveness of initiatives by NHS Direct sites to minimise the impact of recruitment of nursing staff on the rest of the NHS, and the opportunity to use the forthcoming networking of calls between sites to focus capacity in those areas which have a relatively numerous nursing workforce; and
 - iii) developing more specific and measurable objectives for both the telephone and Online service, and building on its work in developing performance measures to create a more comprehensive performance management framework.
- 20 To build on its initial success in take-up and customer service, NHS Direct should:
- iv) target effort at both a national and local level to reach those groups with lower than average awareness and / or usage of NHS Direct - younger people, older people, ethnic minority groups and less advantaged social groups - and to build on and share good practice. In particular, the service would benefit from a nationally co-ordinated approach to raising awareness among the socially disadvantaged, and increased efforts to employ nurses who are bilingual;
 - v) take action to ensure that targets for the time taken for callers to speak to a nurse are met. This will require a package of measures including increasing resources in line with increases in take-up of the service, and tackling variations in productivity. Action is essential to retain public confidence in the system; and
 - vi) continue to monitor at a national level the appropriateness of advice given to callers and their compliance with it, and establish whether performance compares favourably with other front-line healthcare providers such as GPs.
- 21 So far, NHS Direct has had beneficial impacts on the rest of the NHS. To build on this, it should:
- vii) monitor carefully steps taken by NHS Direct sites to integrate with other healthcare providers as this is an established area of risk, in particular to ensure standards of service are achieved at the same time as handling the significant increase in numbers of calls, and that good practice is disseminated; and
 - viii) spread examples of other good practice initiatives undertaken by sites which have resulted in tangible benefits for local health communities.

Part 1

Implementing and delivering NHS Direct

- 1.1 The creation of NHS Direct was first announced in December 1997¹. The target was to put in place a telephone helpline providing information and advice on healthcare covering England (and Wales) by the end of 2000. Following four waves of roll-out (**Figure 1 on page 6**), the target was met in November 2000.
 - 1.2 The concept of an Online healthcare information and advice service was first introduced as part of an Information Strategy for the NHS launched in 1998², followed by a target to introduce a website companion service for the telephone helpline by Autumn 1999³. This target was met in December 1999.
 - 1.3 To meet such a demanding timetable was a considerable achievement. This part of our report examines the key success factors, lessons learned for future projects of this nature, and the arrangements for monitoring performance.
- Piloting was used effectively, but in future more formal evaluations might precede roll-out
- 1.4 Following the announcement of plans to introduce a national telephone helpline service⁴, three pilot call receiving sites were launched by the Department of Health within individual NHS Trusts. Ministers decided that implementation would proceed alongside piloting, and were concerned with how rather than whether the service would be implemented.
 - 1.5 A tight timetable for roll-out of the service in four waves between March 1998 and November 2000 provided little formal opportunity for lessons from either the initial three pilot sites, or from following waves, to be incorporated into the subsequent wave. However, the short lines of communication between the project team and those implementing the roll-out meant that the key lessons were taken forward, with central guidance provided at each stage. The project team also commissioned a review by consultants, undertaken between May and September 1999, in particular to advise on the development of an organisational model for NHS Direct⁵. This provided an opportunity to take stock of progress to date, and to draw out lessons for roll-out of the remaining sites.
 - 1.6 Allowing local site providers to develop their own models of local implementation was crucial to the successful achievement of the timetable. However, the resulting arrangements, whereby NHS Direct site staff are employed by the provider Trust, and site managers are accountable to both NHS Direct's central project team and local Trusts' management, has at times slowed down the development of consistent practice and the adoption in some areas of good practice.
 - 1.7 Development of the Online service focused on the implementation of an initial live website without piloting. An e-mail health information enquiry service was launched in November 2001, and was piloted initially with focus groups and then by opening the service to a small number of selected internet service providers. While there was no staging plan to enable the results to be fully evaluated and lessons learnt before roll-out, NHS Direct plans to manage publicity for the service in a way which allows it to be developed in the light of early operational experience, before the volume of demand becomes too great.

¹ Department of Health (1997). *The new NHS - modern, dependable*. The Stationery Office.

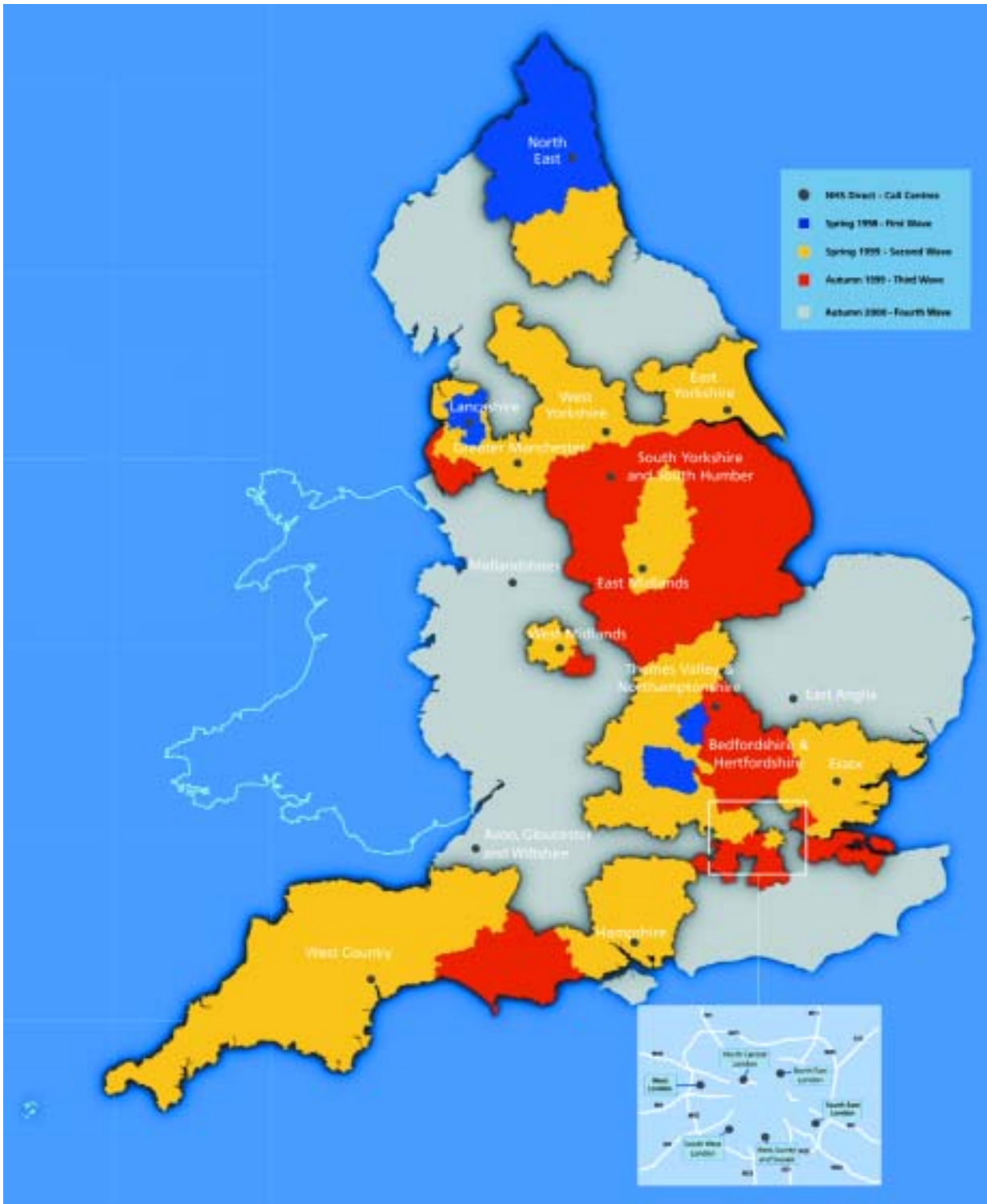
² NHS Executive (1998). *Information for Health: An Information Strategy for the Modern NHS*.

³ Department of Health (1999). Press release - "New opportunities for NHS Direct".

⁴ Department of Health (1997). *The new NHS - modern, dependable*. The Stationery Office.

⁵ KPMG (1999). *Evaluating and Developing NHS Direct*.

1 Map of geographical coverage under the four waves



Source: National Audit Office

A wide range of stakeholders was consulted during the development of NHS Direct, although delivering to a tight timetable meant curtailing some elements of the consultation

- 1.8 As NHS Direct is an initiative affecting access to NHS services, there are many stakeholders, ranging from GPs to voluntary organisations representing particular groups of potential users. To obtain their views, shortly after starting work in 1998 the NHS Direct project team set up two consultative groups - the National Advisory Group (involving a wide range of organisations), and the Primary Care Implementation Group (involving the main GP representative organisations).
- 1.9 Inevitably there was a trade-off between implementing NHS Direct and extending the consultation process. Members of the consultation groups were generally positive about the opportunities provided to give their views, but there was a consensus that their impact on the direction of development of NHS Direct had been limited. There was also general concern that meetings of both consultative groups have been discontinued since September 1999 and September 2000 respectively, although a range of other consultative groups have continued to operate.
- 1.10 The project team consulted a number of other key groups as specific NHS Direct initiatives (for example in dentistry and pharmacy) were developed. However, other representative organisations such as the British Medical Association and the National Association of GP Co-operatives felt excluded from some of the formal consultation processes, at least in the early stages of development of the service. The latter organisation has now joined forces with NHS Direct in taking forward integration between the telephone service and GP out-of-hours services.
- 1.11 NHS Direct sites need good working relations with local healthcare providers, because they can refer callers to them and they need to provide up-to-date information about local health services. Levels of consultation between the sites and local healthcare providers and users varied during the first two waves of roll-out. While the project team encouraged sites to consult key stakeholders, guidance on the minimum requirements for consultation was not issued until late 1999. Our survey of sites shows that consultation about the running of the telephone service at the local level is now generally good, although some sites acknowledge that their relations with local stakeholders need to be strengthened further.

- 1.12 Consultation with stakeholders was limited before the launch of NHS Direct Online, but a formal consultative structure was established with the setting up of an Advisory Group in July 2000. While NHS Direct's sites have been consulted during development of recent plans for an e-mail enquiry facility, the Online service recognises the need to develop relationships with nursing and clinical professionals, and with health information professionals. It now reports to a Board containing representatives of these and other key stakeholder groups. The Online service has also developed mechanisms for involvement of users in the future development of the service. These include: consumer representation on the service's Management and Editorial Boards; a Public Reference Group of 500 members of the public; and provision for user feedback to the Online website.

A national computerised decision support system is central to the operation of the NHS Direct telephone service, and procurement of this was well managed

- 1.13 NHS Direct's telephone service is supported by a computerised decision support system, which nurses use to assist them in advising callers on the appropriate course of action to take (**Figure 2 below**).

2

Mr Buhagjar called NHS Direct on behalf of his 70 year old mother who had slipped and fallen down the stairs on her way to a family wedding. By asking questions about the problem and medical history, the nurse receiving the call used the decision support software to provide assurance that there was no need for her to visit Accident and Emergency immediately, and it was safe for her to attend the wedding first.

- 1.14 Given timing constraints, procurement of a single national system was not possible initially. Three software suppliers were selected as a result of local procurement through the lead NHS Trust at each site. Guidance was given to prospective NHS Direct sites on the need for such systems, and although there was no official central approval of suppliers, the central project team was satisfied that each of the systems could do the job required of it. The use of three different systems also provided valuable information about the best type of system for use nationally.
- 1.15 The procurement of a national decision support system was thorough and involved evaluation of bids by a team of key interested groups, including a medical director and GP adviser from NHS Direct sites, an academic, a representative of the NHS Purchasing and Supply Agency, and consultancy support. In order to assure

themselves that the system chosen was clinically safe and could be refined in the light of experience, prospective suppliers were shortlisted for trials covering both 'dummy' calls and 'live' calls. The chosen system was tested by taking over 1100 'live' calls in one of the call centres. Suppliers also had to develop an enhancement for the system as part of the evaluation.

- 1.16 The decision to choose a new supplier, AXA Assistance (UK) Ltd (AXA), received support from across the evaluation panel. The total value of the contract amounts to £70 million, including technical support over a seven year period. The Treasury approved a full business case for the purchase of the AXA system in September 2000.
- 1.17 The AXA system was in place at all sites by October 2001, six months later than specified in the contract to allow for better planning of the roll-out. NHS Direct sites that had transferred to the AXA system at the time of our survey of sites (Appendix 1) told us they had seen improvements in call length, the system was easier to use, and they were receiving better support from the supplier. The main concerns focused on the propensity of the clinical software to err on the side of caution, and we look at this in Part 2, paragraphs 2.20-2.22. These issues are currently being addressed by NHS Direct's Clinical Reference Group⁶.
- 1.18 During the trials of the systems, the AXA decision support software was able to reduce call length from an average 12 minutes in October 2000 to an average of six and a half minutes per call, with more accurate and consistent advice. Data from a number of sites operating the new system shows that for the nurse advice element, call length varies from 5.1 minutes to 7.3 minutes, with an average of 5.7 minutes. Added to this is the time for the call handler to collect data about the caller, normally around 90 seconds. Overall call lengths are probably significantly longer at the moment due to time spent by nurses in 'wrapping up' the call. The project team are now focusing on this aspect of the call in order to achieve the projected call length.

There are three potential ways in which NHS Direct can build on successful implementation

- 1.19 Our work identified three main ways in which NHS Direct can build on successful implementation:
- introduce more strategic management, and develop a clear strategic plan;
 - develop a human resources strategy to deliver the increase in staffing necessary to achieve the NHS Plan targets without exacerbating shortfalls of experienced staff elsewhere in the NHS; and

- develop clearer and more integrated objectives, targets and performance measures to track progress against the NHS Plan, and identify the scope for further action.

- a) There is scope to develop strategic management, and a clear strategic plan to inform future business plans
- 1.20 The management of the project to deliver NHS Direct as a whole has had many strengths, particularly in terms of meeting deadlines and addressing risks in a practical manner. NHS Direct has adapted its organisational structure as it has developed, including the creation of a broader central management team, with the majority of members being drawn from individual sites and having both a local and national role.
- 1.21 So far, Ministers have provided the overall strategic direction and leadership on the priority to be given to competing projects and services. As NHS Direct increases in size and complexity, a permanent executive head such as a programme director may be better placed to take NHS Direct forward in its pivotal role within the NHS Plan, especially in view of the links between NHS Direct and a wide range of other services. NHS Direct could also benefit from a project steering group or board, to involve key external stakeholders in developing the service and reviewing progress. These steps would bring the project more closely in line with best practice in the management of technology-related projects⁷.
- 1.22 Now that a national service is in place, NHS Direct is in a position to develop a strategic plan for the next three to five years. A key aspect of such a strategy would be to set out how policy developments in various areas of the NHS, such as accident and emergency, primary care trusts or dentistry, dovetail with NHS Direct and each other. It would respond to stakeholder concern that NHS Direct operates in isolation from the rest of the Department until sudden announcements that NHS Direct will be used to fast-track the implementation of a particular policy.
- 1.23 A report produced jointly by Northumberland Health Authority, Leeds Community Mental Health Services Teaching NHS Trust and the West Yorkshire NHS Direct site in August 2000⁸ provides a starting point for producing a more comprehensive strategy for the service. It includes ideas on a service vision, with mapping of NHS Direct's contribution (where relevant) to the objectives contained within the accountability agreements of local health economies, and on a performance development framework.

⁶ The Clinical Reference Group's 60 members represent professional and medical bodies and users of the AXA decision support software.

⁷ Cabinet Office (2000). *Review of major government IT projects. Successful IT: modernising government in action.*

⁸ Northern and Yorkshire Region, NHS Executive (2000). *Excellence Direct.*

- 1.24 A comprehensive strategy would build on the first business plan for NHS Direct as a whole for 2001-02, which was presented to Ministers in August 2001. This drew on activity and development profiles produced by NHS Direct sites. The process encouraged sites to discuss longer term priorities with local healthcare providers, although it only required developments to be planned a year ahead. In the autumn of 2001, NHS Direct initiated a two year business planning process to be adopted from 2002-03.
- b) A human resources strategy would help deliver the increase in staffing necessary without exacerbating shortfalls of experienced staff elsewhere
- 1.25 In approving the business case for NHS Direct's national computerised decision support system, the Treasury expressed concern about the absence of an overall staffing strategy, with the risk that the location of NHS Direct sites could exacerbate nurse shortages locally. They expected to see co-ordination between NHS Direct and the Departmental policy leads on staffing issues. NHS Direct is planning to recruit a senior human resources lead to deal with the staffing strategy. In addition, consultants have undertaken some initial research into staffing needs, which will inform development of a strategy.
- 1.26 The NHS Direct nurse workforce currently constitutes approximately 0.4 per cent of all full-time equivalent qualified nurses in the NHS⁹. When the service was set up, the NHS saw it as an opportunity to encourage back into the workforce nurses who had left the NHS, especially those who had been obliged to leave because of an acquired physical disability. Research indicates that these groups now account for about 20 per cent of nurse advisers¹⁰.
- 1.27 While recruitment of nurses to deal with current call volumes has not generally been a problem for sites, the situation varies across the country, with some sites having higher vacancy levels than others. The projected rapid increase in take-up of NHS Direct's services means that staffing has to increase significantly in 2001-2¹¹.
- 1.28 One way of minimising the impact of NHS Direct on the wider supply of nurses is to encourage nurses to work part-time for NHS Direct and part-time for another part of the NHS. This also helps keep clinical expertise current.
- 1.29 Our survey of NHS Direct sites showed that in the two sites based in primary care trusts, the proportion of their nurses that also worked elsewhere in the NHS averaged more than 47 per cent of their staff. In contrast, at eight Ambulance Service sites the figure was less than 18 per cent.
- 1.30 Sites have taken a range of measures to minimise the impact of recruitment on other healthcare providers. The most popular initiatives have been to provide clinical placements and rotation of staff, staff secondments, and maintaining communications with other healthcare providers and the Regional Office. Of particular note was a fourth wave site that recognised the sensitivity of the issue by convening a human resources project group prior to its launch.
- c) There is scope to develop clearer and more integrated objectives, targets and performance measures
- 1.31 The remit of NHS Direct has been clear from the outset: "to provide easier and faster advice and information for people about health, illness and the NHS so that they are better able to care for themselves and their families"¹². More detailed objectives for the service have been slower to develop. Without clearly defined objectives, it is difficult to measure the success of NHS Direct.
- 1.32 At a workshop we facilitated for NHS Direct staff (see Appendix 2), they suggested three high-level objectives for the service: to raise awareness of and provide prompt access to NHS Direct; to deliver good customer care; and to provide appropriate information and advice. However, these objectives lack clarity and measurability, and leave some uncertainties about the role of NHS Direct. In particular, there is no explicit reference to the impact of NHS Direct on the wider NHS - for example the implications of its referral patterns on GPs. The effect of this uncertainty can be to create distance between NHS Direct and other parts of the local health community, hindering successful integration.
- 1.33 Despite the lack of detailed objectives, the telephone service has made progress in developing key performance indicators and measures, particularly covering customers' access to the service, and we look at performance against these in Part 2. There have been problems in collecting data on a consistent basis, and there has been debate within the service about the appropriateness of some of the indicators and associated targets.

⁹ Based on qualified nurse numbers shown in: Department of Health (2000). *Recruiting and retaining nurses, midwives and health visitors in the NHS - a progress report*.

¹⁰ University of Sheffield Medical Care Research Unit (2001). *Impact of NHS Direct on other services: the characteristics and origins of its nurses*.

¹¹ At 1 April 2001 NHS Direct employed the full-time equivalent of 970 nurses. Staffing levels are planned to increase to the full-time equivalent of 1,150 nurses by the end of March 2002.

¹² Department of Health (1997). *The new NHS - modern, dependable*. The Stationery Office.

Part 2

Impact of NHS Direct on the public

- 2.1 In Part 3, we look at the initial impact of NHS Direct on the NHS. In this part of our report, we look at the impact so far on the public, in terms of quality of customer service and appropriateness of advice given to callers. We then look at take-up, and the scope to increase further public awareness of the service.

While customer satisfaction remains high, NHS Direct needs to reduce the time taken for callers to speak to a nurse

- 2.2 National surveys conducted between December 1998 and January 2001 have consistently shown caller satisfaction levels between 90 and 97 per cent. This compares well with performance in private sector call centres and with similar services within the NHS¹³, despite the particularly demanding nature of NHS Direct's work. Among those who have not yet used the service, the commonest reason given for not planning to use it is a reliance on their GP for a wide variety of medical care.
- 2.3 NHS Direct measures the performance of its sites in progressing calls received in terms of:
- the number of callers that receive the engaged tone when calling - the target is to keep the number below 0.1 per cent of total calls;
 - the number of calls abandoned by callers before completion - the target is to keep the call abandoned after 30 seconds within 3-5 per cent of calls;
 - the time taken for callers to be able to speak to a nurse when required and the average time for a nurse to return a call when the caller could not be put through to a nurse straight away - the target is that 90 per cent of callers should speak to a nurse within five minutes.

Few callers receive the engaged tone when they contact NHS Direct

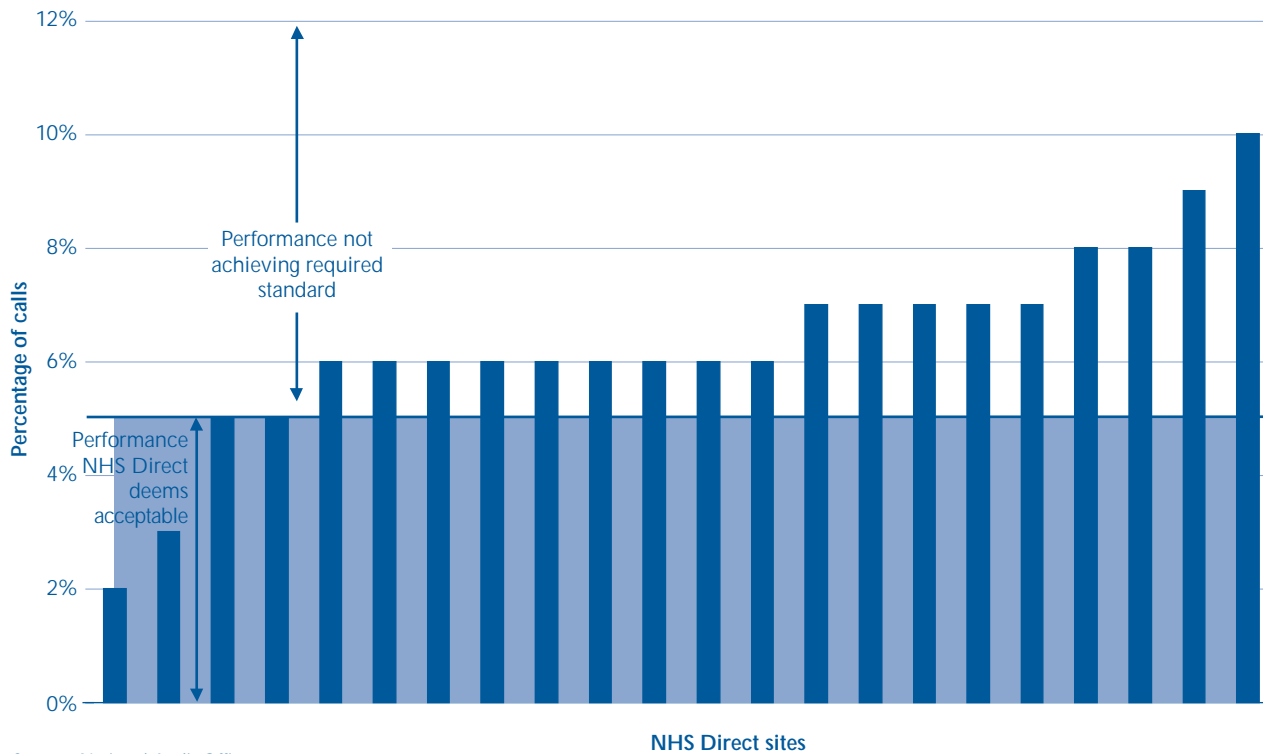
- 2.4 It is important for encouraging acceptability and usage of NHS Direct that callers get through quickly. NHS Direct's performance has been only very marginally outside their target - on average over the year to September 2001, 0.11 per cent of calls received the engaged tone. In the worst performing month, July 2001, the figure was 0.4 per cent - seven sites did not meet the target, but even then less than 1,800 calls out of over 400,000 received an engaged tone.

NHS Direct is taking action to reduce the number of calls abandoned before completion

- 2.5 Calls are often abandoned quickly if callers are connected to NHS Direct unknowingly, for example when they are trying to reach a GP outside normal working hours. NHS Direct has set a target to minimise calls abandoned after 30 seconds, since abandonment after this is likely to reflect dissatisfaction with the service provided.
- 2.6 Over the year to September 2001, four sites met the target of keeping calls abandoned after 30 seconds within five per cent of calls (see Figure 3 on page 12). A further nine sites were within one per cent of the upper limit of this target. The remaining nine sites had abandoned call rates over six per cent.
- 2.7 NHS Direct ascribed abandonments up to June 2001 primarily to the pressures of increasing levels of demand on sites with computer software that generates longer call lengths. It has aimed to address this through completing the conversion of all sites to the AXA software in October 2001, and by addressing staffing shortages identified in individual site business plans for 2001-2.

13 Medical Care Research Unit of the University of Sheffield (1998). Evaluation of NHS Direct first wave sites. First interim report to the Department of Health. NHS services evaluated were seven telephone-accessed nurse advice and information services in hospitals and general practice, and the handling of ambulance calls.

3 Percentage of calls abandoned after 30 seconds in the year to September 2001



Source: National Audit Office

2.8 However, a decline in performance after July coincided with the introduction of a message lasting around 40 seconds in length at the start of all calls. In compliance with legal requirements and best practice on patient confidentiality, in July 2001 NHS Direct introduced a standard national message to inform callers about the basis on which the service uses the personal information provided to NHS Direct. The message is played to all callers as soon as they get through to the service. This appears to have led to deterioration in performance on abandoned calls at all sites. The impact of the message was evaluated through analysis of the call data and through questions in NHS Direct's caller survey. Following evaluation of the operational impact of the message a new shorter version has been introduced from the end of December.

NHS Direct needs to improve the time taken to speak to a nurse adviser if caller confidence is to be maintained

2.9 Calls are initially taken by a call handler, who asks a number of questions about the caller's personal details and determines whether immediate emergency assistance is necessary. Calls are then put through to a nurse adviser if available, or arrangements are made to call customers back as soon as an adviser is free. The time taken to put the caller in direct contact with a nurse

adviser is an important element of customer service. NHS Direct advertising promises "instant access to health information and advice".

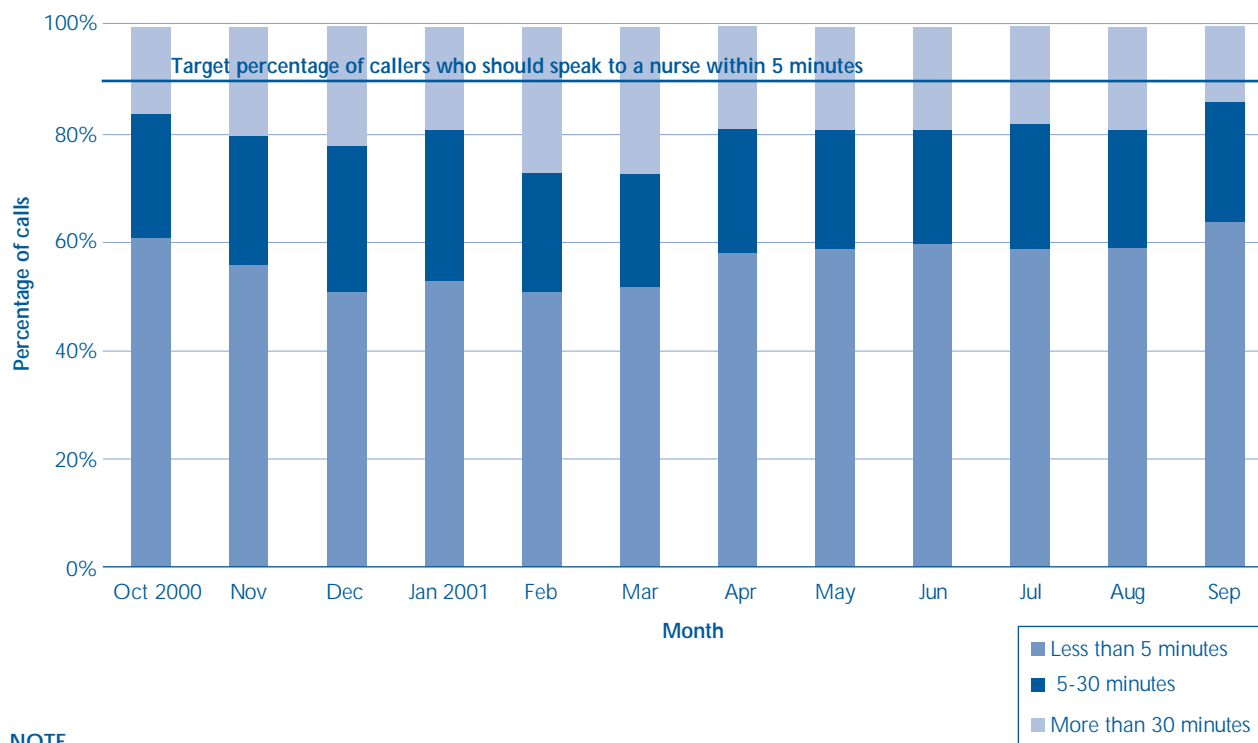
2.10 The time taken for callers to speak to a nurse adviser varied during the year to September 2001 (see Figure 4 on page 13), and many sites did not achieve the performance target. One in five callers had to wait more than 30 minutes, peaking at just over one in four calls during March and April 2001, equivalent to an estimated 260,000 callers. In September, the average call-back time was 19 minutes although this varied from seven minutes at one site to more than fifty minutes at another. Calls returned because of the delayed availability of a nurse adviser accounted for 70 per cent of calls which needed input from a nurse. Sixty-four per cent of callers who needed to speak to a nurse did so in five minutes and 86 per cent did so in 30 minutes¹⁴.

2.11 NHS sites have faced difficulty in meeting the targets because of:

- the particular impact of transferring to the new AXA system. This was a major undertaking for the service and meant that up to three sites at any given time were shut for training on the new system. Once operational again, sites have also needed time to become familiar with the new system;

¹⁴ Excluding sites who provided data for less than half of the month, because they were not operational for all or part of the period.

4 Time taken for callers to speak to a nurse in the year to September 2001



NOTE

Number of sites supplying data varied over time. Site not included if data supplied for less than half the days in a month.

Source: National Audit Office

- staff shortages at some sites; and
- some variation in staff productivity between sites.

2.12 NHS Direct has taken action to address staff shortages, and was close to full complement by December 2001. One area for potential improvement is the ability of sites to process calls. Based on the predicted number of calls to be handled per full-time equivalent nurse adviser in 2001-2, productivity varies considerably (see Figure 5 on page 14). Factors influencing productivity included how well established sites were during the period, and the learning curve associated with their transfer to the new AXA computer system. NHS Direct has recognised the need to improve on productivity, and a major focus of the revised business planning process will be on setting productivity targets for sites.

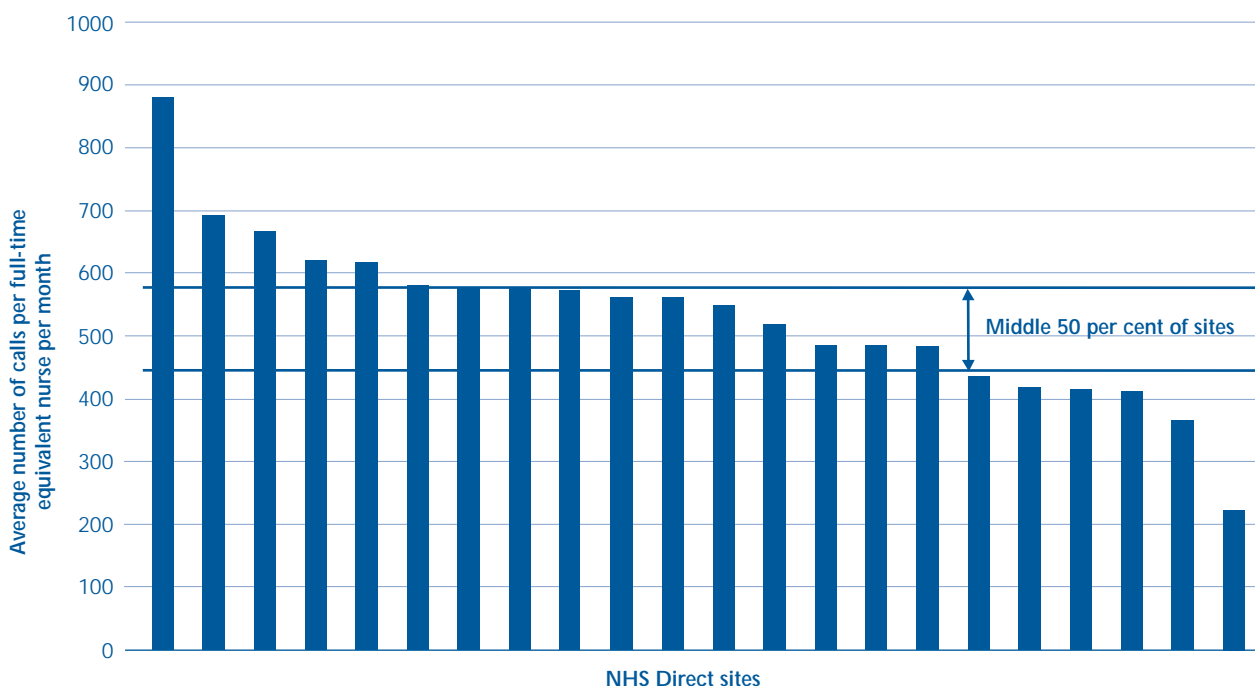
2.13 The target for callers to speak to a nurse when required is under further pressure because NHS Direct's call volumes are increasing rapidly as further integration with other NHS services and television advertising takes place. By March 2002 call volumes are expected to be 80 per cent higher than 12 months earlier. In addition to recruiting a full complement of nursing staff, capacity is being increased through:

- the development of the complete networking of sites from April 2002, which will allow workload to be spread evenly around sites irrespective of location; and
- procurement of an automated staff rostering tool.

2.14 However, given NHS Direct's operational experience of delivering a high volume service, there is some doubt as to whether the target that 90 per cent of callers should speak to a nurse within five minutes is achievable without disproportionate expenditure. The service is currently focusing its efforts on achieving the standards laid down in a review of GP out-of-hours services in England commissioned by the Department of Health¹⁵, to which the wider NHS is committed. These include that:

- ninety per cent of calls requiring nurse advice will be complete within 20 minutes; and
- all calls requiring nurse advice will be complete within 30 minutes.

5 Predicted average number of calls per full-time equivalent nurse per month in 2001-2¹



NOTE

1 Based on expected call volumes and employment levels contained in site business plans.

Source: National Audit Office

Evidence suggests that NHS Direct is operating safely

2.15 No clinical referral system can ever be perfect, and what counts is that errors are reduced to a minimum. NHS Direct's national advisers on nursing and medical issues review adverse events¹⁶ occurring within NHS Direct. Sites are required to report such events to the national advisers, and as an additional check, the advisers review any requests by sites to make urgent changes to NHS decision support software.

2.16 Twenty-nine adverse events cases were reported in the three years to June 2001 -fewer than one for every 220,000 calls. Although the proportion of incidents does seem to increase during the winter months, there is no evidence of a proportionate increase in the rate of adverse events as call volumes rise.

2.17 The procedures require each adverse event to be reviewed and actions recommended for individual sites and NHS Direct nationally. If the incident happened on one of the older computer software systems, the case was reconstructed to confirm that the new national decision support software would have avoided the problem. In any event the AXA system has been reviewed by the NHS Direct Clinical Reference Group¹⁷, through which clinical specialists refine aspects of the software relevant to their area of expertise.

2.18 As part of the investigation of each adverse event an action plan is developed covering both any action required at the site and nationally to help avoid a similar event in the future. As a result of the investigation of adverse events since April 2001 the following action has been instigated by NHS Direct:

- after one incident the AXA decision support system was amended;
- a paediatric distance learning pack has been commissioned;
- individual re-training programmes have been instigated;
- an analysis has been commissioned to identify how often, and for what reasons, nurses do not use particular aspects of the AXA system; and
- an electronic database has been set up to support the analysis of adverse events.

2.19 The University of Southampton's Health Care Research Unit has measured the safety of NHS Direct through an examination of the records of callers who had died within seven days of contacting NHS Direct's Hampshire site during a six month period in 1999-2000. Of the 18 cases, 17 had been advised at the time to, at the very least, contact their GP immediately. The eighteenth case was reviewed by the site's Senior Nurse and the advice given found to be appropriate in the context of information provided by the caller. They concluded that "the service was operating safely"¹⁸.

16 An adverse event is defined as an event or omission arising during clinical care and causing physical or psychological injury to a patient.
 17 The Clinical Reference Group's 60 members represent professional and medical bodies and users of the AXA decision support software.
 18 University of Southampton Health Care Research Unit (2000). NHS Direct Hampshire Evaluation - final report.

Advice given by NHS Direct staff can vary in similar circumstances and generally errs on the side of caution

2.20 A small-scale mystery shopper exercise reported in August 2000 by the Consumers' Association¹⁹ showed that NHS Direct advice could vary for different callers briefed to report similar symptoms. The findings were controversial, not least because clinical consensus is difficult to achieve in any healthcare setting. But NHS Direct re-thought its guidance on repeat prescriptions as a result. More systematic research commissioned by the Department of Health indicates that there have been variations in consultation outcomes between sites, and in some cases each site's ratio of referrals to particular types of care, for example to GPs or accident and emergency departments, diverged over time in relation to each other despite having similar populations of callers²⁰.

2.21 Sites have recognised the importance of these variations and a number of site-level investigations are underway. Results of three local evaluations are currently available, and these concentrated on referrals to accident and emergency departments, because of their perceived vulnerability to over-cautious referrals by NHS Direct. In one case²¹, GPs identified a tendency to over-caution in cases referred to accident and emergency departments, although nurses disagreed. Another evaluation observed that some "inappropriate" referrals were the result of callers accidentally or deliberately misrepresenting their symptoms²².

2.22 In 2002, as part of the planned introduction of NHS Direct's new performance management framework, an independent panel of clinicians will examine and review approximately 40 mystery shopper calls for clinical appropriateness. This group will feed back to the site by: identifying and acknowledging good practice; identifying training needs; and identifying where there has been poor clinical or professional practice. The group will then be available to advise each site when implementing any remedial action.

NHS Direct has defined national clinical standards for nurses working in the service and is taking steps to ensure they are met

2.23 NHS Direct defines what it requires of its nurses through a set of competency statements. Nurses can be recruited from any specialty provided they meet these competencies, although they must have a minimum of five years' post-qualification experience.

2.24 Some NHS Direct sites are piloting an assessment centre model for recruitment, which is commonly used in the call centre industry. Sites using this approach found it was producing higher quality recruits, whose suitability makes it more likely that they will stay with the service. A drawback was that recruitment was slower because of a higher rejection rate.

2.25 The National Training Team provided training when the national decision support software was installed at sites and continues to develop its role. Other staff training needs are the responsibility of individual sites and a number are pursuing with local further and higher education institutions the possibility of incorporating training modules tailored to the requirements of NHS Direct within wider nurse training qualifications.

2.26 The national decision support software has the capability of providing detailed feedback on individual nurse performance, and a working group is developing performance measures as part of the service's Continuous Quality Improvement programme. Nurse performance may be measured in a number of other ways by sites - through a combination of self-assessment, peer review or one-to-one review of taped calls, and supervisor review of a number of live calls. A national model of clinical supervision is being developed.

2.27 NHS Direct Online seeks to ensure clinical quality using a set of criteria to evaluate other websites before it links with them. These criteria have recently been developed further. Clinical governance and quality assurance policies and procedures have been developed for the e-mail enquiry service launched in November 2001. During 2002, the Online service will be developing a partner programme based on development of shared quality standards with patient organisations and other producers of health information on the web.

¹⁹ *Health Which? (2000). NHS Direct investigated. Three researchers made 10 calls simulating medical conditions.*

²⁰ *Medical Care Research Unit of the University of Sheffield (2000). Evaluation of NHS Direct first wave sites. Second interim report to the Department of Health.*

²¹ *King's College London - Lambeth, Southwark and Lewisham Immediate Access Project (2001). NHS Direct South West London: study of appropriateness of triage to A&E.*

²² *NHS Direct Essex (1999). Clinical audit of NHS Direct patients referred to A&E.*

The public generally comply with the advice they are given

2.28 On the assumption that advice given to callers is appropriate, an important outcome measure of the effectiveness of NHS Direct is whether callers follow the advice given. When asked in follow-up surveys, up to 97 per cent of callers say they have followed the advice²³. Evaluations based on monitoring medical records show a different picture, with compliance being between 58 and 73 per cent²⁴.

2.29 In its August 2001 evaluation²⁵, the University of Sheffield's Medical Care Research Unit examined why some callers had not complied with the advice given. They examined 27 calls where callers had not complied with the advice given. In half of these cases non-compliance was intentional, due to factors such as the caller's domestic circumstances, preconceived ideas of how the caller wished to be treated that conflicted with the advice given, and reluctance to engage with healthcare providers outside of normal hours.

2.30 On other occasions non-compliance is due to factors within NHS Direct's control. Interviews carried out by King's College London²⁶ found that callers wanted emotional and practical support, and the extent to which NHS Direct met this need contributed to the callers' actions after the consultation. Perceptions of the consultation itself were also very influential. It was clear that negative perceptions arose where the NHS Direct adviser failed to address and assuage any underlying uncertainties about consulting a nurse rather than a doctor. This emphasises the importance of advisers developing listening and communication skills alongside their continuing clinical development.

NHS Direct has met its current target for awareness of the service among the population

2.31 Awareness of NHS Direct increased from 14 per cent to 57 per cent between June 1998 and March 2001²⁷, by which time the service had national coverage. By June 2001, awareness had met the target of 60 per cent set by NHS Direct for March 2002. The NHS Direct project team was aware of the risks of not being able to meet demand for an over-promoted service, and this, as well as its limited geographical coverage when first introduced, accounts for low awareness early on.

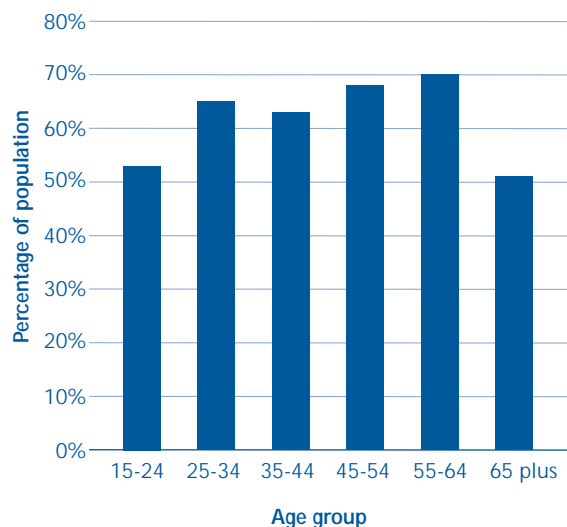
There is scope for some social groups to make greater use of NHS Direct

2.32 Surveys undertaken since 1998, including a survey commissioned by ourselves in June 2001 (see Appendix 1) show that: NHS Direct is not sufficiently promoted to younger people; older people use it less than other groups; black and ethnic minority groups are less aware of NHS Direct and its interpreting facilities; and less advantaged social groups are not as aware of NHS Direct, but are enthusiastic users.

Younger people

2.33 Awareness of NHS Direct varies within the community²⁸. Department of Health evidence shows that the 15-24 age group has a greater than average willingness to use NHS Direct - its easy access and confidentiality are attractive features. Against this, our survey²⁹ showed that those aged 15-24 had the lowest level of awareness of any age group within the population of working age (see Figure 6 below).

6 Awareness of NHS Direct by age group, June 2001



Source: Ipsos-RSL

2.34 NHS Direct has placed promotional material in popular culture publications. The Online service also offers a way of reaching younger people, and those without computer access, capitalising on their high level of internet awareness. An e-mail health information enquiry service has been operating since

23 NHS Direct (1999). *Local evaluation of NHS Direct: a study to evaluate compliance and outcome following advice given to contact a GP within 72 hours*; King's College London - Lambeth, Southwark and Lewisham Immediate Access Project (2000). *Lambeth, Southwark and Lewisham user satisfaction study*; Northumberland Community Health Council (2000). *NHS Direct (North East) audit of patient satisfaction and call outcome*; NHS Direct (2001). *Caller satisfaction survey*.

24 NHS Direct (1999). *A&E/NHS Direct Audit in East Midlands*; NHS Direct (1999). *Clinical audit of NHS Direct patient referral to A&E*; King's College London - Lambeth, Southwark and Lewisham Immediate Access Project (2000). *NHS Direct and primary care interface: GP follow-up study*; King's College London - Lambeth, Southwark and Lewisham Immediate Access Project (2000). *NHS Direct callers' compliance with advice to attend A&E*.

25 Medical Care Research Unit of the University of Sheffield (2001). *Evaluation of NHS Direct first wave sites. Final report of the phase 1 research*.

26 King's College London - Lambeth, Southwark and Lewisham Immediate Access Project (2000). *Primary care interface: qualitative study*.

27 Taylor Nelson Sofres/RSGB (2001). *Get The Right Treatment advertising awareness evaluation*.

28 Taylor Nelson Sofres/RSGB (2000). *NHS Direct awareness measurement report for Department of Health and Central Office of Information*.

29 Ipsos-RSL (2001). *NHS Direct omnibus survey*.

November 2001, and in 2002 the Online service will offer a fully-fledged e-mail health advice service. NHS Direct also aims to appeal to younger people, and those without computer access, through NHS Direct Information Points³⁰. However, it does not currently market itself through text messaging on mobile telephones.

Older people

- 2.35 Only some 51 per cent of those aged over 65 are aware of NHS Direct. And while 70 per cent of the population rates the service as useful, among over 65s this falls to 61 per cent³¹. This is despite the fact that older people are more likely than others to require healthcare advice, and they may benefit especially from telephone access from their domestic setting.
- 2.36 One reason for lower acceptability is that "healthcare reliant" people are keen to have face-to-face contact with their GP. There is nevertheless a need for NHS Direct to promote itself to older people. The project team has responded by setting sites a target for April 2002, to increase use of the service by people aged 55 or over by a fifth.



When you're feeling unwell, it's sometimes difficult to know what to do. Now you can call NHS Direct on 0845 4647 at any time of the day or night and speak to a nurse for reassurance, professional advice and information. Calls are charged at local rates.

GET THE BEST TREATMENT
NHS 0845
Direct 4647

www.nhsdirect.nhs.uk

- 2.37 At June 2001, sixteen sites had work underway to meet the target, three had specific plans, but three had neither. The most common steps involved meetings with, and presentations to, representative groups and co-operation with the Age Concern charity. Initiatives of particular note included a Saturday night newspaper column written by the local NHS Direct site and aimed particularly at older people, supermarket roadshows on pension day, and the appointment of a communications officer for under-represented groups.

Ethnic minority groups

- 2.38 Awareness of NHS Direct is also lower among ethnic minority groups - in May 2000 this stood at 45 per cent for ethnic minorities against 52 per cent of the population³². NHS Direct has produced guidelines for sites on raising awareness among ethnic minority communities, recognising that such communities might have limited exposure to mainstream media, accentuated by the likelihood of certain groups to be lacking the ability to communicate in English.
- 2.39 The deadline for implementing these guidelines was November 2001. The most popular initiatives involve presentations to, and other contacts with, community groups and centres. Nine sites had not undertaken any initiatives at the time of our survey in June 2001, although three had plans to do so. This partly reflects the fact that certain areas have very small minority populations.
- 2.40 Research has shown that people without English as a first language are significantly disadvantaged in discussions about medical conditions³³. NHS Direct has responded well to this, and all sites have arrangements to offer interpreting facilities. The Department has built on this by designating NHS Direct as the gateway to the whole NHS for non-English speakers by 2003. A national contract has been let for provision of translation services in over 200 languages.

30 Information Points are push-button kiosks that offer most of the features of NHS Direct's Online service, but are updated at regular intervals rather than being linked directly to the website. Five hundred will be in place by 2004. Some have a direct telephone link to NHS Direct.

31 Ipsos-RSL (2001). NHS Direct omnibus survey.

32 Taylor Nelson Sofres/RSGB (2000). NHS Direct awareness measurement report for Department of Health and Central Office of Information.

33 Journal of Accident & Emergency Medicine (2000: 17). Public understanding of medical technology: non-English speakers may not receive optimal care.

- 2.41 NHS Direct's interpreting facilities have been used sparingly to date - only about 1,000 times during 2000-1 out of a total of 3.5 million calls. Our estimates suggest that over 600,000 people prefer to receive medical advice in Asian languages alone³⁴, and there is scope for NHS Direct to increase its recognition of cultural diversity.
- 2.42 Anecdotal evidence suggests that callers are unaware of the NHS Direct translating service, as non-English speakers often access NHS Direct through a younger English-speaking friend or relative. Some sites have recruited bilingual nurses from ethnic groups represented in their area. Bilingual nurses cannot remove the requirement for interpreting services, because of the large numbers of languages involved, but their use for the most common languages helps to avoid some of the concerns about an interpreting service expressed to us by stakeholders³⁵.

Less advantaged social groups and people with disabilities

- 2.43 People in social groups D and E are less likely to be aware of NHS Direct - 49 per cent against 61 per cent for the population as a whole³⁶. However, they are also more likely than average to see NHS Direct as a useful

service (75 per cent against an average of 70 per cent). Indeed, preliminary research carried out in South East London indicates higher levels of usage of NHS Direct in council wards with high levels of social deprivation³⁷. This suggests that, if they can be made aware of the service and provided with access, this group are enthusiastic users of the service. Nine NHS Direct sites had no specific initiatives aimed at less advantaged social groups when we contacted them in June 2001.

- 2.44 NHS Direct is currently operating four pilots focusing on the use of digital television as a way of providing wider access to the health information produced online. In one pilot, users are able to see the NHS Direct nurse on their digital television screen while advice is given.
- 2.45 NHS Direct has recognised that a telephone service poses special problems for those people who are deaf or who have a loss of hearing, or who have learning difficulties, and that the Online service poses problems for those who are blind or who are partially sighted. A report³⁸ on the accessibility of NHS Direct for people with physical disabilities made a number of recommendations in these respects. The key ones, and action taken so far, are shown in **Figure 7 below**.

7 Recommendations on access for those with disabilities

Recommendation	Action taken
Special training for nurses on listening skills and the use of plain English.	Nursing staff recruited to NHS Direct are assessed on all aspects of communication. The need to be a skilled listener and adopt jargon-free language is fundamental, and is included in training as part of the Continuous Quality Improvement process.
Website compatibility with best practice for partially sighted users.	Part of ongoing website redevelopment by AXA.
Certain sites to have textphone capability.	Five sites have been nominated as textphone sites and handle all textphone calls on behalf of NHS Direct, with access via one dedicated number.
Sites to have Typetalk capability.	Since July 2001, Typetalk has been operating an intelligent network which has distributed calls to the relevant NHS Direct 'home' site for callers.
Sensitivity to disabilities should feature in the recruitment process.	NHS Direct sites are encouraged to work in collaboration with partner organisations to offer opportunities for suitably skilled staff with special needs.

Source: National Audit Office

34 Lorien Consulting (2001). *Overcoming the barriers to take-up of services*; Office of National Statistics (2000). *Estimates of the population by ethnic group and area of residence*.

35 These concerns were: difficulties in initial contact with a caller in the pre-interpreter phase; problems with the technical nature of discussions about symptoms; and people from certain cultures having qualms about involving third parties in discussions of health matters.

36 Ipsos-RSL (2001). *NHS Direct omnibus survey*.

37 King's College London - Lambeth, Southwark and Lewisham Immediate Access Project (2001). *A profile of NHS Direct South East London users: a study in social deprivation*.

38 RNID disability consultancy (2000). *The accessibility of NHS Direct for people with disabilities*.

Part 3

Impact of NHS Direct on the NHS

- 3.1 The NHS Plan envisions that NHS Direct will play a pivotal role in the provision of healthcare services to the public by 2004, especially through its function as the gatekeeper to out-of-hours care. As the usefulness of NHS Direct becomes clear to other healthcare providers, a range of additional initiatives are also unfolding at the local level.
- 3.2 This part of our report looks at the impact so far on the NHS, and in particular on general practices, emergency services, dental and pharmacy services, and wider local initiatives.

NHS Direct has not yet had a visible effect on demand for NHS services overall

- 3.3 NHS Direct redirects large numbers of callers away from the course of action they had originally intended, which has implications for costs and workload elsewhere in the NHS. NHS Direct received approximately 3.5 million calls in 2000-1, and a predicted 7.5 million in 2001-2. Questioning suggests that some 50 per cent of callers will be redirected to a form of care other than the one they would have chosen if left to their own devices.
- 3.4 An evaluation of the impact of NHS Direct nationally by the University of Sheffield's Medical Care Research Unit has concluded that, in its early phases prior to national roll-out, NHS Direct did not make a noticeable impact on the constantly rising demand for NHS services³⁹. The research did, however, suggest some possible reduction in demand for services provided outside normal working hours by GPs.
- 3.5 It will be some time before NHS Direct is achieving the sort of call volumes that will allow it to have a visible redistributive effect on the pattern of access to healthcare in England. In comparison with the numbers of calls received by NHS Direct, there are

approximately 15 million contacts with accident and emergency departments and ambulance services per annum, and 250 million contacts with primary care⁴⁰ (not including pharmacies). NHS Direct has to date only reached its desired state of integrated service delivery with a few healthcare providers in a few locations.

Integration with providers of GP services outside normal working hours is already yielding reductions in workload for GPs

- 3.6 The Prime Minister announced initial pilots for integration between NHS Direct and out-of-hours GP co-operatives in April 1999. Added impetus came from a study by the University of Southampton's Health Care Research Unit⁴¹, which suggested that there was scope for considerable reductions in workload and costs through the use of nurse telephone consultation. The NHS Plan stated in July 2000 that "by 2004 a single phone call to NHS Direct will be a one-stop gateway to out-of-hours healthcare".
- 3.7 A review of out-of-hours services in England commissioned by the Department of Health⁴² recommended a model putting NHS Direct at the hub of out-of-hours care (see Figure 8 on page 20). NHS Direct would use its position as a national service with universal clinical standards to provide a gateway to other services, either by people calling it directly or by automatic call transfer from a GP practice. The Government accepted the report's recommendations, and as a first step towards implementation of the NHS Plan, NHS Direct's project team aims to integrate with 22 GP out-of-hours providers, in addition to a further 12 providers already integrated with NHS Direct, by March 2002. Together these providers cover 10 million people. This is to be achieved through a programme of exemplar initiatives located throughout the country.

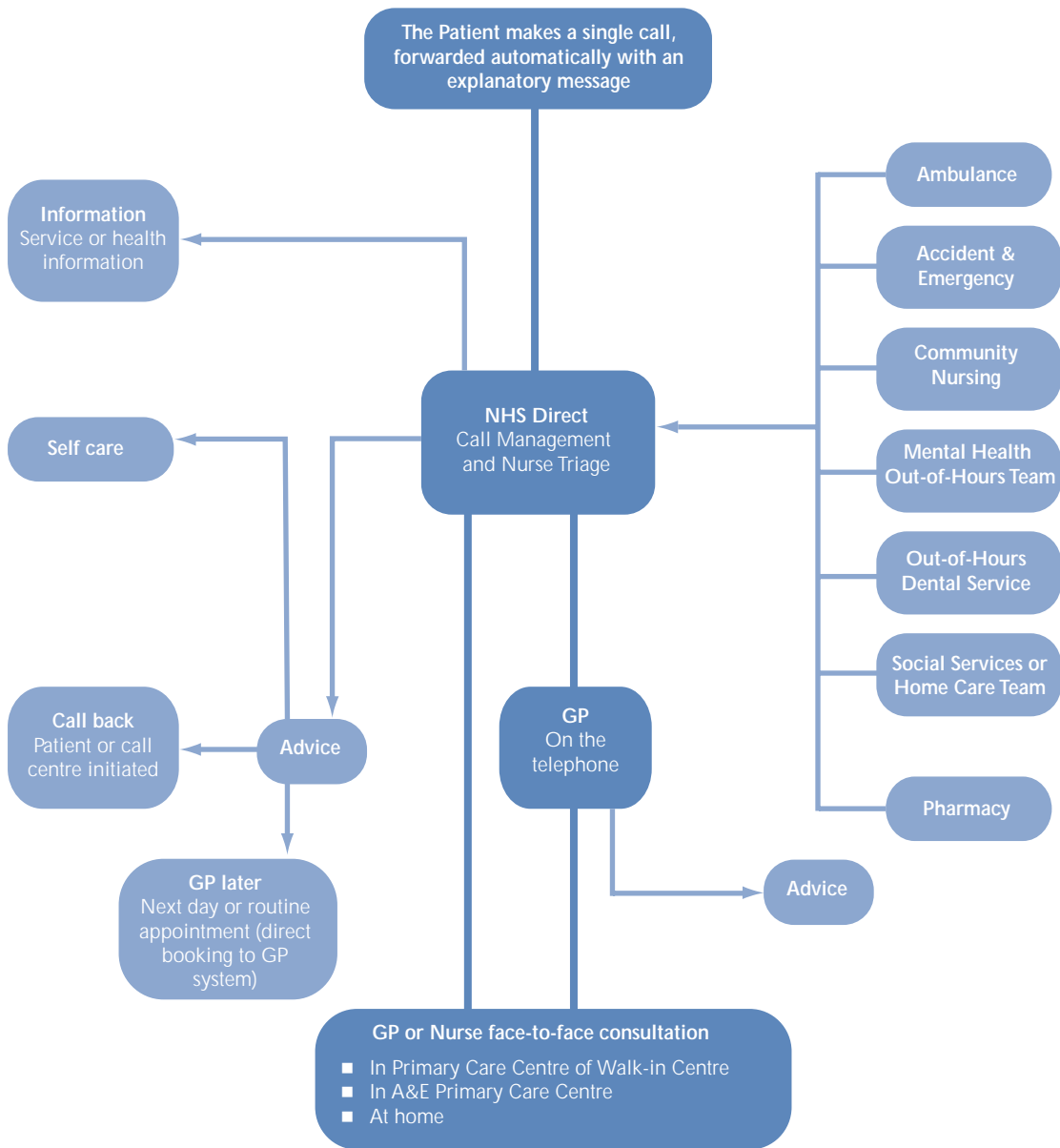
39 Medical Care Research Unit of the University of Sheffield (2000). *Evaluation of NHS Direct first wave sites. Second interim report to the Department of Health.*

40 *Family health services provided by a range of practitioners including family doctors (GPs), community nurses, dentists, pharmacists, optometrists and ophthalmic medical practitioners.*

41 *British Medical Journal (2000). Cost analysis of nurse telephone consultation in out-of-hours primary care: evidence from a randomised control trial.*

42 *Independent review of GP out-of-hours services in England (2000). Raising standards for patients - new partnerships in out-of-hours care.*

8 NHS Direct as a gateway to out-of hours healthcare



Source: Independent review of GP out-of-hours services in England (2000). Raising standards for patients - new partnerships in out-of-hours care.

3.8 Callers to providers of GP services out-of-hours, whether the provider is a co-operative, a single practice or a commercial provider, are automatically routed through NHS Direct who carry out an initial assessment of the caller's condition before forwarding them to the appropriate healthcare provider (or advising self care). NHS Direct has also begun to refer callers on to appropriate local NHS dentistry services.

3.9 The initial experiences of the NHS Direct sites which have integrated with at least one out-of-hours GP provider suggest that:

- the introduction of NHS Direct as an out-of-hours gateway generally reduces the number of night-time call-outs for GPs (see **Case Study 1**), although as call-outs become much more appropriate this can increase the intensity of their work;
- anecdotal evidence that the workload of some GPs has increased since the introduction of NHS Direct is not supported by any formal evaluation;
- since service level agreements between NHS Direct sites and out-of-hours providers require the stringent application of service standards laid down in the out-of-hours services review⁴³, these calls in effect receive preferential service over normal calls to NHS Direct;
- over time, callers start to telephone NHS Direct when they find their calls diverted there anyway, but it is not clear what happens to callers who ring off when they find their call is diverted but want to speak only to their GP;
- the impact of referrals on in-hours and emergency services is not clear;
- in most cases GPs involved in integration pilots have developed a much more positive attitude towards NHS Direct as a result; and
- NHS Direct's exemplar programme will reflect the fact that integration works much more efficiently when there is a direct electronic transfer of calls from the out-of-hours provider and NHS Direct, and callers referred to a GP by NHS Direct do not have to go through a second telephone consultation to confirm NHS Direct's advice.

3.10 There have, however, been some teething problems in achieving integrated working with GP out-of-hours providers. In response to our site questionnaire six sites (the second largest group) cited issues surrounding the linking-up process (such as complexity of relationships and compatibility of technology) as a major cause of difficulty. **Case Studies 2 and 3** illustrate these problems and **Case Study 3** illustrates how they might be handled.

43 *Independent review of GP out-of-hours services in England (2000). Raising standards for patients - new partnerships in out-of-hours care.*

44 *Modelled on the service standards laid down in the "Independent review of GP out-of-hours Services in England (2000). Raising standards for patients - new partnerships in out-of-hours care."*

CASE STUDY 1

The North East site is integrated with six GP co-operatives covering 28 per cent of the local population. In most cases a system of telephone consultation was already in operation before NHS Direct and there is direct electronic transfer of callers to NHS Direct. Five of the six co-operatives allow NHS Direct nurses to take the consultation to the stage where they make the decision whether to involve the GP, without getting a second opinion from the co-operative. Figures for 2000-1 show a fall of 18 per cent in the number of calls received by the co-operatives compared with 1999-2000, and, coincidentally, an equivalent reduction in the number of admissions to local treatment centres.

CASE STUDY 2

In Gateshead a GP co-operative integrated with the local NHS Direct site in October 2000, but withdrew from the arrangement two weeks later because of dissatisfaction with the level of service provided by the site. There were two main contributory factors to this:

- the decision to integrate coincided with the start of the busiest period of the year for NHS Direct, exacerbated by staff shortages. Calls to the site increased by one third between November and December; and
- the two parties differed on their interpretation of the service standards contained in the service level agreement⁴⁴.

CASE STUDY 3

NHS Direct's Hampshire site also experienced initial problems integrating with the GP co-operative on the Isle of Wight because of problems with the interface between NHS Direct's decision support software and the co-operative's data transfer software, although these were resolved with the site's transfer to the new AXA software. The site also experienced call demands in excess of expectations. It responded by setting up a dedicated team to deal with callers transferred from the GP co-operative, in order to meet the service standards required.

CASE STUDY 4

One NHS Direct site takes calls on behalf of a GP group practice. Callers who wish to see a doctor immediately, but where no same-day appointment is available, are referred to NHS Direct. The practice abides by, and acts on, the NHS Direct assessment. The result has been a 36 per cent drop in home visits compared with the same period of the previous year.

CASE STUDY 5

Telephone callers to Rochdale Healthcare Trust Accident and Emergency Department who had not previously been seen at the hospital were given the option of contacting NHS Direct instead. Of those that required health advice 72 per cent were redirected to an end-point other than Accident and Emergency. This indicates the potential for beneficial impacts on hard-pressed accident and emergency departments of taking these calls, especially with the introduction of automatic call transfer.

CASE STUDY 6

The Accident and Emergency Department at Queen Alexandra Hospital, Portsmouth estimates that transferring calls to the local NHS Direct site has saved the equivalent of two full-time equivalent staff posts over the course of 24 hours who can be released for face-to-face consultation instead of having to answer the telephone.

3.11 In addition to integration with GP out-of-hours services, some of NHS Direct's sites are taking steps to take calls on behalf of GP practices during normal working hours. One, in the West Midlands, has resulted in very positive feedback from the GP practice concerned, and is to continue indefinitely. The second pilot is described in [Case Study 4](#). The third pilot started in York in November 2001.

Integration with urgent and emergency services is planned to help reduce their workload and re-direct patients to more appropriate forms of care

3.12 NHS Direct has strong historic links with emergency services. The original trigger for the setting up of the service as it is today came from the Chief Medical Officer's review of emergency services⁴⁵, which saw potential benefits to over-stretched accident and emergency and ambulance services from providing, as an alternative, access to a high quality telephone advice service. More than half of NHS Direct sites are provided by NHS Ambulance Trusts.

3.13 There is scope for calls to ambulance services that are not deemed emergencies by call-takers to be transferred to NHS Direct for advice or information. The Reforming Emergency Care strategy⁴⁶ highlighted this as a priority and suggested that the handling of 999 calls will be brought together with calls to NHS Direct by 2004. It also set out plans to pilot a face-to-face version of NHS Direct's decision support software in 25 accident and emergency departments by March 2003.

3.14 NHS Direct has not yet been set any deadlines for integration with urgent and immediate care on a national basis. Integration so far has been limited to:

- integrated working between NHS Direct and accident and emergency departments. Researchers estimate that telephone advice accounts for three to five per cent of total accident and emergency workload. [Case Studies 5 and 6](#) show that the diversion of telephone enquiries to NHS Direct can have a beneficial impact for an accident and emergency department. So far, at least 13 NHS Direct sites are taking calls for a range of accident and emergency departments; and
- at least four NHS Direct sites are assessing calls on behalf of ambulance services that are initially categorised as not urgent enough to warrant ambulance attendance.

⁴⁵ Chief Medical Officer (1997). *Developing emergency services in the community*.

⁴⁶ Department of Health, (2001). *Reforming Emergency Care - practical steps*.

Early results indicate that initiatives to integrate NHS Direct with pharmacy and emergency dental services are resulting in improved access to these services

3.15 In line with the commitment in the NHS Plan and the associated implementation document on dentistry⁴⁷ for NHS Direct to be a one-stop gateway to out-of-hours healthcare by 2004, the Department of Health is currently scoping what kind of emergency dental services should be provided, particularly overnight, and the role that NHS Direct will play in their delivery. Early pilots have shown that this has the potential to make emergency dental services more widely available to the public (see **Case Studies 7 and 8**).

3.16 On pharmacy services, the NHS Plan states that from 2002 everyone will be able to use NHS Direct to gain access to their nearest pharmacist. NHS Direct has worked with community pharmacists to provide complete information on pharmacy availability. Changes in the day-to-day availability of local pharmacy services mean that information will need to be updated regularly if NHS Direct is to give up-to-date advice. From April 2002 the update of the database will become the responsibility of several hundred NHS primary care trusts.

NHS Direct has involved itself in a number of useful initiatives at local level in response to approaches from other healthcare providers

3.17 A number of other initiatives have been launched at particular NHS Direct sites, where a local healthcare provider has come forward with resources to mitigate the impact on the site's core business. Examples given to us by sites included:

- validation of in-patient waiting lists on behalf of acute hospitals in several areas of the country;
- reminding patients about outpatients clinic appointments in the North West, reducing non-attenders by 5-7 per cent;
- checking patient transport bookings for a district general hospital in the West Country, reducing bookings by 18 per cent;
- providing direct telephone support to prison nursing staff in West Yorkshire;
- carrying out telephone assessments of patients prior to elective surgery at a hospital in the Manchester area instead of them having to attend the hospital; and
- joint working with social services and voluntary organisations to provide robust support to child protection initiatives in North London.

CASE STUDY 7

NHS Direct is running an out-of-hours dental service pilot in conjunction with Newcastle and North Tyneside Health Authority in an area relatively well served by NHS dentists. Over 80 per cent of dentists questioned thought that out-of-hours provision had improved since the pilot started. The implementation of a consistent standard of initial advice for callers has meant that referral rates to dentists on-call in the area are now lower than in 1997-8, despite the fact that the service now also covers non-registered, community dental service and dental hospital patients.

CASE STUDY 8

The evaluation of a smaller pilot exercise in North Derbyshire found that the new service, although costing more, was cost-effective because it greatly increased access (total patients seen more than doubled). At the same time, the proportion of patients requiring treatment increased by 30 per cent, confirming the appropriateness of referral by NHS Direct.

47 Department of Health (2000). *Modernising Dentistry*.

3.18 Evaluation invariably shows that these initiatives have made a useful contribution to the local health community, and allow sites' development programmes to maintain a local flavour. They all have the potential for broader application and indicate the wide range of functions that NHS Direct could carry out without any constraints on its capacity.

NHS Direct is off-setting some of its running costs by encouraging more appropriate use of NHS services

3.19 NHS Direct cost £22 million in one-off start up costs, and £78 million to run in 2000-1. In 2001-2, running costs are expected to rise to £99 million, as usage of the service doubles.

3.20 As we explained in Part 2 and this part of the report, it is too soon to assess the full impact of NHS Direct on patients and on the various parts of the NHS. But positive impacts are beginning to emerge in terms of faster patient access to advice, and more efficient direction of patients to the most appropriate forms of care. As these impacts grow, they offer the prospect of reduced calls on GPs, the emergency services and NHS Trusts, thereby reducing existing pressures and enabling more patients to be treated.

3.21 Taking these factors into account, it is possible to begin making an initial assessment of the "value" provided by NHS Direct. This suggests that NHS Direct is off-setting around half of its running costs by encouraging more appropriate use of NHS services. Our methodology is set out in Appendix 3. This estimate needs to be treated with some caution, however, as it assumes that: all callers comply with the advice they are given by NHS

Direct (evaluations based on the monitoring of medical records show that this is not always the case); that all referrals made by NHS Direct are appropriate (research has shown that there have been variations in consultation outcomes for similar populations of callers); and that caller surveys give an accurate reflection of what they would have done if they had not contacted NHS Direct (this is difficult to assess, as callers may be influenced by the advice they have already received from NHS Direct, and there are an increasing number of repeat callers who call NHS Direct automatically).

3.22 The analysis also suggests that approximately half of all callers were referred to a different end-point than they would have chosen themselves, and that callers were on balance likely to be referred to a lower (and less costly) end-point than they would have chosen themselves. For example, around 72 per cent of callers said that, without NHS Direct advice, they would have contacted a GP. This compares to the 54 per cent of callers who were actually advised to contact a GP. The majority of the remaining callers were advised how to care for themselves.

3.23 In addition to directing patients to more appropriate forms of care, NHS Direct appears to be adding value by reassuring patients and saving them unnecessary anxiety. This is difficult to quantify, however, as are the health benefits resulting from NHS Direct's advice to callers. NHS Direct is considering these issues in developing a performance management framework for the service.

Appendix 1

Audit methodology

- 1 We interviewed staff belonging to the NHS Direct central project team and Online service management and reviewed relevant documentation and data. In addition we visited the following NHS Direct sites:
 - East Midlands
 - Kent, Surrey and Sussex
 - Manchester
 - North East
 - North West Coast
 - South West London
 - West London
 - West Yorkshire
- 2 We issued a questionnaire to sites as a means of gathering quantitative and qualitative information not available centrally within NHS Direct. This was completed by all sites.
- 3 We carried out literature searches and a review of published literature from the United Kingdom and abroad on all aspects of the study.
- 4 We convened a reference panel to advise and assist us at strategic points throughout the study, comprising:
 - Dilip Chakrabarti, Site Manager, NHS Direct South West London;
 - Dr Paul Cundy, Chair of a GP out-of-hours commissioning group and member of the British Medical Association's General Practitioners Committee;
 - Bob Gann, Director of NHS Direct Online;
 - Ewan Gowrie, Managing Director of Callpoint Europe, and Chairman of the Call Centres Association;
 - Mark Jones, Primary Care Practice and Policy Adviser, Royal College of Nursing;
 - Mike Lambert, accident and emergency consultant at Norfolk and Norwich Hospital, and member of the British Association for Accident and Emergency Medicine;
 - James Munro, consultant senior lecturer, University of Sheffield Medical Care Research Unit;
 - Michael Page, consultant specialising in diversity and access issues;
 - Liz Rowlands, Deputy Director of the Telephone Helplines Association;
 - Donald Roy, Chair of Wandsworth Community Health Council; and
 - Mike Stone, Director of the Patients' Association.
- 5 We met with academics from the following organisations and projects:
 - the University of Sheffield Medical Care Research Unit;
 - the University of Southampton Health Care Research Unit; and
 - King's College London - Lambeth, Southwark and Lewisham Immediate Access Project.
- 6 We met with the following representative bodies of clinicians and medical staff working with NHS Direct:
 - British Association for Accident and Emergency Medicine;
 - British Dental Association;
 - National Association of GP Co-operatives;
 - Representatives of community pharmacy organisations that make up the NHS Direct Pharmacy Support Network;
 - Royal College of General Practitioners; and
 - Royal College of Nursing.
- 7 We also met the following representatives of the Department of Health and the NHS involved in the commissioning of services and delivery of policy in areas covered by NHS Direct:
 - Dr David Carson, author of "Raising Standards for Patients - new partnerships in out-of-hours care" (2000) and "Reforming Emergency Care - practical steps" (2001);

- the Department of Health's Dental Access Project Team and lead on Community Pharmacy policy;
 - East Surrey Primary Care Group;
 - Leicester and Rutland Health Authority and Newcastle and North Tyneside Health Authority;
 - NHS Executive Eastern Regional Office;
 - NHS Executive Information Policy Unit;
 - Nottingham Emergency Services, North Derbyshire Doctors Ltd and HARMONI GP co-operative; and
 - Nottingham Queen's Medical Centre Accident and Emergency Department.
- 8 We met with the following bodies who have expertise in the area of telephone consultation:
- the Call Centres Association;
 - NHS 24; and
 - the Telephone Helplines Association (including attendance at a joint conference held with NHS Direct on "Meeting Challenges Together").
- 9 We commissioned an omnibus survey from Ipsos-RSL Limited to survey the public's awareness of NHS Direct and their willingness to use it.
- 10 In conjunction with a National Audit Office team examining the take-up of electronic services offered by the Inland Revenue, we commissioned Lorien Consulting to examine the barriers to accessing NHS Direct's services, both generally and for specific sub-groups within the population.
- 11 We facilitated a workshop in which a group of key NHS Direct staff members were taken through a cognitive mapping exercise in order to identify NHS Direct's key objectives and activities, and the extent to which performance in these areas was measured. The key results from this workshop are summarised in Appendix 2.

Appendix 2

Performance measurement workshop

In June 2001 we facilitated a workshop in which a group of key NHS Direct staff were taken through a cognitive mapping exercise in order to identify NHS Direct's key objectives and the extent to which performance in these areas was measured. The key results from this workshop are summarised below.

Objectives for NHS Direct

At the outset of the workshop, NHS Direct staff agreed on three broad objectives for the service:

- awareness and prompt access;
- good customer care; and
- appropriate information and advice.

Workshop participants then debated whether appropriate measures were in place or being developed to enable NHS Direct to assess its performance against each of the objectives. Their conclusions are set out below.

Awareness and prompt access

Regular population surveys provide reliable and meaningful results, and can be used to assess public attitudes to new aspects of the service.

More meaningful data is needed on access for particular sectors of the population - for example postcode analysis and comparison of take-up and awareness figures with the make-up of the population.

Occasional surveys of the awareness and attitudes of health professionals would be useful.

Measures are needed for call prioritisation.

Patient experience at various points in the care pathway could be measured through joint surveys with out-of-hours providers, and in co-operation with accident and emergency units (particularly where they have a similar computerised database to that used by NHS Direct).

Good customer care

Monthly patient surveys are an important way of getting customer feedback.

There have been a wide range of evaluations of the service, initiated at both the national and local level.

As trend data becomes available, standards will need to be set on what should be expected from patient and mystery shopping surveys.

Further consideration needs to be given to the action taken by patients (for example, what level of compliance is acceptable).

Monitoring of best practice / benchmarking should be developed.

Appropriate information and advice

There are a range of procedures in place to ensure clinical quality, for example: quality assessment tools; the National Clinical Reference Group and local clinical steering groups; the Joint Development Team; Trust governance and complaints procedures; feedback forms; comments from the public and medical practitioners; and records of adverse incidents.

Clinical quality indicators are being developed.

Specific performance measures are needed for health information services.

Tracking of referrals to voluntary organisations is needed.

Feedback from immediate care services on patients referred to them by NHS Direct should be developed as integration occurs.

Standard criteria are needed for evaluations and what needs to be done to ensure meaningful results.

Appendix 3

Calculation of cost savings generated by NHS Direct

Introduction

- 1 The NHS did not introduce NHS Direct with the objective of reducing costs. Nevertheless, it follows that, if NHS Direct is re-directing large numbers of callers to more appropriate forms of care, there must be cost implications. We attempt to assess these below.

Re-direction of callers

- 2 We have based our assessment on the 3, 419, 486 calls received by NHS Direct in England in 2000-1. Up to October 2000, callers were asked what they would have done if NHS Direct had not been available. This has now been discontinued because the information was not of any clinical benefit. Some of these calls did not require advice from a nurse, for example because the caller only required information about a particular service. NHS Direct's best estimate is that these calls account for between 20 and 30 per cent of the total.

Further analysis of NHS Direct referrals

- 3 The most recently available data on callers' responses to the question of what they would have done if NHS Direct had not been available shows that approximately half of all callers were referred to a different end-point than they would have chosen themselves, and that callers were, on balance, likely to be referred to a lower (and less costly) level of care than they would have chosen themselves, as shown:

The level of care advised by NHS Direct, and the route callers would have taken without NHS Direct

	If caller had not used NHS Direct	Level of care advised by NHS Direct
Self-care	17%	35%
Routine care:		
Routine referral to GP	29%	19%
Urgent referral to GP	22%	15%
Emergency care:		
Call 999	3%	3%
Attend A&E	8%	8%
Immediate referral to GP	21%	20%

NOTE

Answers given by callers to NHS Direct need to be treated with caution, as the question was answered in the knowledge of advice given by NHS Direct, and there are an increasing number of repeat callers who call NHS Direct automatically. The picture is further complicated by possible inappropriate referrals and non-compliance with advice (see Part 2, paragraphs 2.20-2.22 and 2.28-2.30).

Cost implications of NHS Direct referrals

4 In order to assess the cost implications, these calls need to be broken down further:

- calls need to be split between "in-hours" and "out-of-hours" because of differing GP costs. Analysis of calls for a typical month in 2000-1 indicates that call volumes split 30:70 between in-hours (8am - 6pm weekdays, 8am - 12pm Saturdays) and out-of-hours. As NHS Direct integrates with more out-of-hours GP co-operatives the proportion of business done out-of-hours will increase;
- NHS Direct had information on how "emergency care" referrals were divided between 999 calls, A&E attendance and immediate contact with a GP. However, this split was not available for how callers would have behaved without NHS Direct - only the total figure was available. We therefore split this figure in the same proportions as for actual referrals to emergency care; and
- the referral pattern also allows us to separate "routine referrals" between routine and urgent GP contacts. Again we have had to assume the proportions are the same with or without NHS Direct.

5 The cost to the NHS of a contact with the various levels of care is as follows:

	Cost without calling NHS Direct ¹ £	Cost including call to NHS Direct ^{1,2} £
Self-care	-	15.11
GP in-hours contact	15.70*	30.81
GP out-of-hours (co-op) contact	22.66	37.77
A&E attendance	64.96	80.77
Ambulance journey	141.54	156.65

NOTES

- 1 All costs calculated by the University of Sheffield's Medical Care Research Unit (Medical Care Research Unit of the University of Sheffield (2001). Evaluation of NHS Direct first wave sites. Third interim report to the Department of Health) except * which was calculated by the Department of Health's Operational Research Branch.
- 2 Cost of a call to NHS Direct is £15.11. If NHS Direct reduces call lengths, this cost will fall.

6 Applying these costs to the pattern of calls identified in paragraphs 3 and 4 above, gives the following cost of patient contacts made with and without NHS Direct, with the level of calls not requiring nurse advice at 20 and 30 per cent respectively (see paragraph 2):

Costings with 20 per cent of calls not requiring nurses	With NHS Direct £	Without NHS Direct £
Calls not requiring nurse advice (20 per cent)	10,333,684	-
In-hours	27,107,772	17,230,849
Out-of-hours	67,859,075	45,869,931
Totals	105,300,531	63,100,780
These are 1999-2000 prices. Uplifting them to 2000-1 prices* gives:		
Totals	108,785,206	65,188,953

Therefore, additional cost of NHS Direct is **£43,596,253**.

Costings with 30 per cent of calls not requiring nurses	With NHS Direct £	Without NHS Direct £
Calls not requiring nurse advice (30 per cent)	15,500,533	-
In-hours	23,719,297	15,076,990
Out-of-hours	59,376,682	40,136,183
Totals	98,596,512	55,213,173
These are 1999-2000 prices. Uplifting them to 2000-1 prices* gives:		
Totals	101,859,333	57,040,324

Therefore, additional cost of NHS Direct is **£44,819,009**.

* by using the retail price indices for the mid-points of the two financial years.

7 The additional cost to the NHS of carrying out a consultation with these callers through NHS Direct, as opposed to their theoretical actions in the absence of NHS Direct, therefore amounts to between £43 and £45 million. Since the cost of running NHS Direct in 2000-1 was some £80 million, this suggests that NHS Direct's interventions with callers saved approximately 45 per cent of its running costs. However, the assumptions and caveats listed in this Appendix should be borne in mind, which could have the effect of either increasing or reducing this figure.