

# Information and data quality in the NHS

Key messages from three years of independent review

**The Audit Commission** is an independent body responsible for ensuring that public money is spent economically, efficiently and effectively, to achieve high-quality local and national services for the public. Our work covers local government, housing, health, criminal justice and fire and rescue services.

As an independent watchdog, we provide important information on the quality of public services. As a driving force for improvement in those services, we provide practical recommendations and spread best practice. As an independent auditor, we monitor spending to ensure public services are good value for money.

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## Summary

This report is intended to help the Commission for Healthcare Audit and Inspection (CHAI), as well as the NHS and the Department of Health, by summarising messages and lessons from all of our work in this area over the last three years. It includes the findings from the 2003 round of spot checks on waiting list and waiting time data.

Those spot checks indicate that the overall level of accuracy is sufficiently robust to enable reasonable judgements to be made about national trends in the number of people waiting and the length of time for which they have been on the list. Perhaps unsurprisingly in a large and diverse organisation like the NHS, local inconsistencies can lead to some margin for error in assessing precisely how many patients have been waiting a specified length of time. While trusts should work to minimise these variations, they are relatively small and do not undermine overall confidence in the national figures.

While very serious when it does occur, we are encouraged to find that dishonest manipulation of waiting time data is rare and is a marginal problem when set against the wider array of challenges identified by our work over the last three years. For this reason, as first recommended in our 2003 report on waiting lists, we do not advocate large-scale spot checks as the best way to assess data quality of waiting list and other reported data, but suggest a more mainstream approach that builds this process into everyday management. We look forward to working with CHAI and the Department of Health to develop this new approach.

The rules and definitions for waiting list and waiting times data need to be reviewed and updated to reflect new ways of working, such as booked appointments. The advent of booking (including e-booking) and patient choice makes this necessary, as waiting lists and times (as currently perceived and defined) will disappear. We consider that this should be a medium-term objective for the Department of Health, partly because of the complexity of the task, but also to ensure consistency of measurement for the 2005 NHS Plan targets.

Since we first commented on NHS data quality in the mid-1990s, NHS performance in this area has improved and the amount of effort and priority given to improving data and information quality, at both national and local levels, continues to increase. Having said that, our programme of data quality reviews – carried out in a variety of settings since 2000/01 – has highlighted a number of recurring issues that the NHS, the NHS Information Authority (NHSIA), the Department of Health and others need to address if data quality in the NHS is to continue to improve to the extent, and at the pace, required for the future.

In 2002 the Audit Commission's management paper *Data Remember*<sup>1</sup> suggested a wide range of policy, operational and governance measures that would help to improve the status and effectiveness of information management within the NHS. These were summarised under the following headings:

- making more and better use of patient-based information;
- involving board members;
- training and developing staff; and
- keeping systems up to date.

It is clear that in many trusts, the points and the recommendations made in our 2002 report hold as true now as they did then. The suggested actions from that report can be found in full on our website at [www.audit-commission.gov.uk](http://www.audit-commission.gov.uk). We advise all trusts boards to review their performance using these recommendations.

In some areas, specifically mental healthcare, there has been less progress than we would have hoped. For largely historical reasons there seem to be particular problems in this sector and there is an urgent need for focused action to improve the reliability of information.

In relation to reference costs – used by the NHS to compare for example, the cost of particular procedures – auditors findings suggested a mixed picture across NHS bodies. Costs were generally identified and calculated reasonably accurately by most bodies reviewed, but activity information, particularly at Primary Care Trusts (PCTs) and mental health trusts, was generally unreliable. The reviews also identified the need for greater clarity of guidance from the Department of Health to ensure consistency in application by local health bodies.

Numerous organisations are engaged in trying to improve data quality in the NHS, including NHS bodies themselves, the NHSIA, the Department of Health, professional associations and regulators. However, this work has not always been integrated or the links between different issues made explicit. This means that from NHS organisations' point of view, any changes or recommendations arising from such work can seem unco-ordinated, diffuse and seen at best as marginal, or at worst, irrelevant to their core activity.

As a consequence, despite some improvement over recent years, we believe that the effort and expenditure from all agencies interested in data and information quality (including ourselves, NHSIA and others) have not yet delivered improvements of the scale or pace required. A more co-ordinated approach is needed from all concerned.

<sup>1</sup> *Data Remember: Improving The Quality of Patient-based Information In The NHS*, Audit Commission, May 2002.

We welcome the fact that CHAI intends to use its role as the lead regulator for health and healthcare to bring some co-ordination to future work in this area. The Department of Health will also have an important part to play in this process. Better strategic co-ordination will help all concerned to focus on their particular contribution to improvement and we look forward to playing our full part wherever required.

Our experience suggests that, at a local level, corporate leadership on data and information quality is vital, but is not in itself enough. It has to be carried through into the everyday activity of staff at all levels. However, one of the biggest factors underlying poor data quality is the lack of understanding among frontline staff of the reasons for, and benefits of, the information they are collecting. The information collected is too often seen as irrelevant to patient care and focused on the needs of the 'centre' rather than frontline service delivery. In particular, more effort is needed to involve clinical staff in validating and using the information produced.

Improving data quality should therefore be linked inextricably to developing a wider strategy for specifying, obtaining and using information in the NHS at local and national levels.

## Recommendations

Department of Health on data quality in general should:

- Use the implementation of initiatives such as the Information Quality Assurance programme to work with CHAI, as the lead regulator, and other relevant agencies to develop a more co-ordinated and strategic approach to data quality.
- Develop a clear NHS-wide strategy for specifying, obtaining and using both national and local information (in support of that for improving information technology infrastructure).
- Take specific action to drive up standards of data quality and information management in the mental health sector to an acceptable level by ensuring that trust boards understand the link between good information and effective service delivery.

On waiting lists and waiting times the Department of Health should:

- Set a medium-term objective to fundamentally review its guidance and definitions on waiting times and waiting list data – recognising the need to maintain consistent measurements, particularly in respect of the 2005 NHS Plan targets.
- Examine current processes for communicating policy guidance to the NHS, with a view to improving timeliness and consistency of implementation. In the mean time the Department of Health should reissue and reiterate guidance on short-notice appointments.

Trust boards should:

- Make improving data quality in all areas a key corporate priority by making it a regular agenda item and nominating a board member as overall lead for data quality.
- Develop strategies for involving clinical staff in validating and using the data that they produce.
- Ensure that national guidance is fully implemented, for example, on the use of short-notice appointments.
- Review their arrangements for producing waiting list and waiting times central returns to ensure that they are auditable, consistent and reliable.
- Ensure that policies and procedures for waiting list management are backed up by adequate staff training, monitoring and supervision of day-to-day operational practice.

Local auditors should:

- Take account of both the strength of management arrangements and the actual quality of data in their overall risk assessments of individual NHS bodies for audit work. No trust with poor data quality or poor use of information is likely to be in a satisfactory position to provide services efficiently, effectively and economically.

### CHAI should:

- Use its role as lead regulator in health to promote a more strategic and co-ordinated approach to information and data quality, including rationalising regulation to ensure that faster progress is made in this area. This should be in keeping with the development of the concordat that inspection bodies will be encouraged to follow.
- Explore with the Department of Health and others the introduction of a more regular and universal process of checking arrangements for producing waiting list and waiting times data at all trusts as an alternative to the programme of spot checks. Over time, such an approach could apply to data more widely.

### The public and media should:

- Note that national data on waiting lists and waiting times appear sufficiently accurate to make reasonable judgements about the overall level of performance of the NHS.

# Introduction, background and context

## Report structure

- 1 First the report gives some background information about our data quality programme – what it has covered and how it was done. It then identifies the recurring themes that auditors have reported in their work, drawing on the findings of all our various reviews to illustrate each one. Specific findings from the most recent work – waiting list spot checks and reference costs – are covered separately.

## Why we are publishing this paper

- 2 Whether being used by doctors to make decisions about patient care, or by managers to decide where to invest in new services, reliable information is a fundamental requirement in the NHS. Good-quality information about health services is also important to the public if they are to be reassured that taxes are being spent wisely or if they need to make choices about how and where they want to get treatment.
- 3 Examples of areas where reliable information is important include:
  - providing patient-centred services – for example, use of NHS number or recording ethnicity;
  - performance – for example, waiting times;
  - efficiency – for example, numbers of operations carried out or inpatient lengths of stay;
  - quality of care – for example, infection rates;
  - clinical effectiveness – for example, re-admission or complication rates; and
  - use of resources – for example, financial costs or staff numbers.
- 4 Government departments, the NHS and health regulators all understand the importance of this and regard the quality of information as a very high priority; but in the past there have been concerns about how dependable some of the information being produced really was. So in 2001 the Audit Commission set out to help the NHS to improve in this area by looking independently at the various processes used to produce information and highlighting where things could be done better.

- 5 The Audit Commission published a number of reports in the 1990s highlighting the importance of NHS data quality, but in 2001 it began a more concerted approach to the topic with a 'light touch' review of secondary care hospitals. In each subsequent year, the Commission has gone on to look at different aspects including more detailed reviews of data quality at all NHS organisations and in-depth audits of hospital waiting list information at a selection of NHS trusts. Most recently auditors have been assessing the quality of information used by NHS bodies to determine their costs.
- 6 Wherever this work has been carried out by auditors, detailed, individual feedback has been given to the NHS bodies concerned to help them make local improvements. In addition, the Audit Commission has produced two national reports<sup>I, II</sup>, making a range of recommendations for improvement aimed at both the government and local NHS bodies. As a result of this and other work, data quality is now given higher priority and auditors have seen improvement in many areas.
- 7 However, as our most recent work (covered in this report) and that of other regulators, such as the Commission for Health Improvement (CHI)<sup>III</sup> shows, work still needs to be done to improve the quality of information in the NHS to the required level. Service modernisation, which depends on better access to and use of information and an unprecedented investment in information technology, sharpens the need for better quality data. Recognising this, the Audit Commission's strategy for 2004-2007 continues to identify information management and technology as a key area for local auditors to consider<sup>IV</sup>.
- 8 Responsibility for independent, national commentary on NHS data quality passes to CHAI from 1 April 2004. This report is intended to help CHAI, the NHS and the Department of Health by summarising messages and lessons from all of our work in this area over the last three years. In addition, we will be providing CHAI with a baseline assessment of all NHS trusts derived from the findings from our 2003 programme at all NHS bodies.
- 9 This paper will be of use to anyone with an interest in improving the quality of NHS information, in particular executive and non-executive trust and strategic health authority (SHA) board members, the Department of Health and our partner regulators.

<sup>I</sup> *Data Remember: Improving The Quality of Patient-based Information In The NHS*, Audit Commission, May 2002.

<sup>II</sup> *Waiting List Accuracy*, Audit Commission, March 2003.

<sup>III</sup> *What CHI has found in: mental health trusts*, Commission for Health Improvement, December 2003.

<sup>IV</sup> *Strategy 2004-2007*, Audit Commission, November 2003.

# Audit Commission work on data quality

## What we mean by data quality

- 10 All information in the NHS is built up from facts and figures from a variety of sources. These 'data' form the basis of whatever information is used in the NHS. The information is used locally, but also nationally, to inform planning, performance management and to contribute to national statistics. To ensure consistency and comparability at a national level there are numerous rules and protocols about how, when and why certain data should be collected. If these rules are not followed closely or if data are missing or unreliable then the information itself will be more likely to be flawed (resulting in low data quality). Conversely, the higher the quality of these underlying data, the more likely it is that the resulting information is accurate and consistent between organisations.
- 11 In practice, most data in the NHS are gathered as part of the everyday activity of thousands of frontline and support staff working in a huge variety of settings. This means that unless NHS trusts have very well-managed systems and processes operated by appropriately supervised staff, errors can creep in and the quality of the data can decline.
- 12 By looking at these systems and processes, interviewing key staff and carrying out tests on samples of data, auditors can come to an assessment of how likely it is that a trust's data will contain errors. If their work suggests that there is a high likelihood of errors, auditors call this a high-risk system; if there appears to be a low likelihood of errors, a low-risk system. In general, auditors are not able to establish an absolute measure of overall data accuracy.
- 13 Basic principles (high or low risk of errors) are applied throughout this paper when commenting on data quality, although different terminology was used for some reviews (for example, in the case of waiting list spot checks, a three-point scale – one, two or three stars – was used to reflect high, medium or low risk of errors in the data).

## Other agencies' work in data quality

- 14 When it comes to data and information quality, there is no shortage of initiatives arising from different organisations and agencies with an interest in different aspects of it. **Appendix 1** shows some of the more significant approaches to data quality over recent years.

- 15 However, although many organisations are involved, the work has often not been co-ordinated and the links not made explicit. This means that in some cases, when seen from NHS organisations' point of view, any change or recommendations coming out of the work are unco-ordinated and diffuse and may be regarded as at best marginal or, at worst, irrelevant to their core activity.
- 16 Trust chief executives are ultimately responsible for the quality of all data. And so in addition to all these external agencies many NHS organisations carry out their own assessments of data quality as part of a balanced scorecard for performance management, although these tend to be fairly limited in scope.
- 17 And so, although the Audit Commission has found some improvement over recent years (for example, in our Data Quality Review 2002), we believe that that the effort and expenditure from all of the agencies focusing on data and information quality have not yet delivered improvements of the scale or pace required. The Department of Health has recognised this point and is developing an Information Quality Assurance Strategy. A key aim of this strategy must be to take account of, and where possible, co-ordinate all these various streams of work. However, we believe that data quality is inextricably linked to the need for clarity about what information is needed and how it will be used. Hence, there is a need for a NHS-wide strategy for information management to match that for information technology.
- 18 CHAI's role as the lead regulator for health will leave it well placed to play an important part in the co-ordination of this work.

## Our work in data quality

### 'Light touch' data quality reviews & *Data Remember* – 2001/02

- 19 The Audit Commission began to draw attention to the importance of information management issues in NHS trusts in the mid 1990s. Two national reports published in 1995 considered different aspects: *For Your Information*<sup>I</sup> was concerned with information systems and recommended a number of steps that trusts could take to improve data quality and manage the IT function more effectively; *Setting the Records Straight*<sup>II</sup> focused on the use of casenotes and suggested ways to improve the quality of care through better management of medical records.

I *For Your Information*, Audit Commission, 1995.

II *Setting the Records Straight*, Audit Commission, 1995.

- 20 In 2001 the Commission was asked by the Department of Health and CHI to develop and implement a 'light-touch' review of arrangements for managing systems for producing data in secondary care trusts. Auditors appointed by the Commission designed and undertook the first stage of the review, focusing on the quality of non-clinical data, between July and October 2001. The results provided a preliminary snapshot of the arrangements in place to ensure data quality in all but a handful of secondary care trusts in England. The second stage of the review would look in more detail at wider range of data in all NHS trusts.
- 21 The project team also made over 30 field visits to health authorities, NHS trusts, the Department of Health and other organisations, including universities and the Scottish Executive Health Department. Detailed discussions were held with a range of information managers and users, including clinicians, and preliminary findings were shared with an advisory group.

### Data quality reviews 2002

- 22 Building on the 'light-touch' reviews, in 2002 auditors looked in more detail at data quality in secondary care trusts and, for the first time, in PCTs and ambulance trusts. There was a sharper focus than in 2001 on data underlying the performance indicators (PIs) on which trusts' star ratings were based and on indicators measuring the effectiveness of patient care. In all, fifteen PIs were considered, compared with five in 2001. Auditors also reviewed whether the arrangements in place in PCTs were adequate to ensure the quality of data in key areas of activity.
- 23 *Data Remember* had identified the quality of clinical coding (the system for recording treatments carried out) as an area to which close attention needed to be paid. In parallel with the data quality review, therefore (following a checklist agreed with the NHSIA) auditors undertook a review of clinical coding arrangements at the majority of secondary care trusts and at a small number of PCTs where the quality of coding was a relevant issue.
- 24 Detailed reports were provided to each of the NHS bodies reviewed and each SHA received a report covering the bodies in its area.

### Waiting list spot checks 2002 and 2003

- 25 The National Audit Office (NAO) published a report in December 2001<sup>1</sup>, naming nine NHS trusts as having inappropriately manipulated waiting list information. Following this, the Department of Health announced that it had requested that the Audit Commission ask its appointed auditors to undertake a series of spot checks on individual hospitals. The Department went on to say that the aim of the spot checks was to:
- identify any further cases of bad practice or deliberate manipulation;
  - introduce a strong deterrent to any manager considering inappropriate action; and
  - reassure the public that the published statistics are robust.

<sup>1</sup> *Inappropriate Adjustments to NHS Waiting Lists*, National Audit Office, December 2001.

- 26 A programme of ‘unannounced’ checks at approximately fifty sites per year, over five years was agreed. In selecting the first year sites a ‘risk-based’ approach was taken, meaning that sites were selected if other information suggested that they might be at a higher risk of reporting problems.
- 27 In 2002, a total of 41 checks were completed. The method was designed by the Audit Commission and agreed with the Department of Health. Each spot check covered:
- the trust’s policies and procedures for reporting its waiting times;
  - whether the systems and processes used for gathering and reporting information were appropriate; and
  - on the basis of detailed testing, whether there was evidence that the data underlying reported information were inaccurate.
- 28 As with all such reviews, each trust received a tailored report on local findings with recommendations and an action plan for improvement.
- 29 In 2003, a further 56 trusts were selected for spot checks. The majority were selected at random rather than according to risk and so this could be regarded as a more representative sample. Some aspects of the method were changed in response to feedback from auditors, the Department of Health and trusts reviewed in the first wave. The final method was discussed in detail and refined with the Department of Health. Although the fundamental approach was similar, in 2003 auditors:
- used accepted waiting list management rules and guidelines as ‘standards’ (**Appendix 2**) against which to test performance, rather than looking at specific performance indicators;
  - wherever possible, looked at the same specialties to allow comparison between trusts;
  - reviewed bigger samples of casenotes (up to 1,500 in total per trust) using the most recently available data;
  - assessed trust performance across a standard range of management arrangements;
  - gave trusts a rating according to their level of risk of poor waiting list data quality; and
  - used an electronic reporting card for data tests to ensure consistency of rating between trusts.

The methods used for the 2003 programme are covered in more detail in **Appendix 3**.

- 30 This change in method means that the year one and year two cohorts are not directly comparable, although overall findings cover similar topic areas.

## Reference costs and Healthcare Resource Groups (HRGs)

- 31 Reference costs are extremely important because they enable comparisons to be made between the costs of individual clinical procedures within NHS trusts. Moreover, they will form the basis for the national tariff that will operate from April 2005 under the new 'Payment by Results' system being introduced into the NHS. Under this system, hospital trusts (and PCTs for their provider activity) will increasingly be funded for the actual work that they do (rather than funding being based on block contracts). NHS foundation trusts will have the great majority of their work funded under this system from 2004.
- 32 Auditors carried out reviews in every single NHS body. Therefore this project provides an invaluable baseline for assessing progress towards the new funding system and its likely local and national robustness.
- 33 The objectives of the review were to:
- assess the robustness of the total quantum of costs and activity used to calculate the reference cost index;
  - assess the arrangements for allocating costs to specific activities;
  - comment on the impact of any significant discrepancies on the value of the overall reference costs index;
  - comment on the implications for future financial flows based on national tariffs derived from reference cost information;
  - alert the Department of Health to issues that require greater clarification or new guidance; and
  - support trusts in improving the quality of their 2004 reference costs submissions.

## Findings

- 34 Since the 'light-touch' reviews of 2001, auditors have identified improvements. Between 2001 and 2002 auditors found that trust performance on a number of indicators had got better, for example:
- good progress was being made with data accreditation (the NHS-wide system for assessing arrangements for producing data);
  - four out of five PIs were based on improved quality data; and
  - of the indicators that were comparable, there had been an overall improvement in 20 out of 28 SHA areas.
- 35 Over the three years of work covered in this report, individual trusts' action plans will have been implemented to address problems identified by auditors. However, the most recent work carried out by auditors indicates that there is still considerable room for improvement.
- 36 While the Audit Commission has looked at a wide range of organisations and many aspects of data quality, it is striking that auditors' findings consistently highlight a relatively small number of themes that emerge as being crucial to producing high-quality information. This suggests that this section explores those themes. It also includes a summary of findings from our most recent work on waiting list spot checks and reference costs.

### Management arrangements

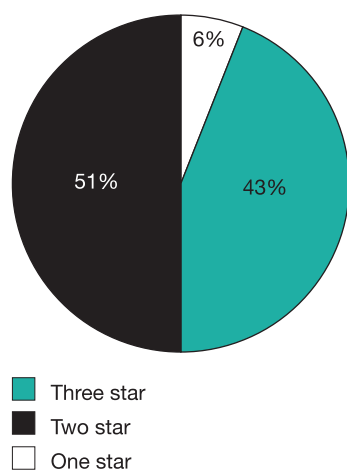
- 37 All organisations in the NHS spend huge amounts of time, effort and money collecting, sharing and using data. However, our work over the last three years has shown that data quality is too often seen as a function only of the IT Department. It is vital that data quality is managed as a function of the organisation's overall approach to delivering services and is reflected in the numerous systems and processes that produce, capture and use data.
- 38 Within the overall heading of management arrangements, a number of activities affect data quality. It should not be inferred from the heading that only managers are responsible for making them work. Information and data quality is everybody's concern.

#### *Leadership and accountability*

- 39 *Data Remember* identified the importance of strong corporate commitment to data quality. The trust board clearly needs to use – and be seen to use – the available information. Having a board member nominated with corporate responsibility for data quality does not always mean that it is recognised as an essential element of corporate governance. If this does not happen, some of the information may easily come to be seen as being produced for external needs only.

**Exhibit 1****Accountability and leadership for waiting list data quality**

Auditors found that data quality was a high priority for most boards.

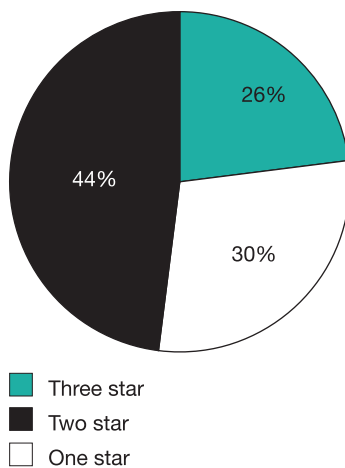


Source: Audit Commission

- 40 The fact that our 2002 work showed improvements in many areas from the previous year – such as a significant increase in the number of trusts making progress towards data accreditation – indicates that data quality was increasing in priority for boards. The 2003 waiting list spot checks confirmed this in relation to where auditors assessed leadership and accountability in terms of waiting list information. They found that only 6 per cent of trusts reviewed had significant room for improvement in this area (**Exhibit 1**).
- 41 However, even where trust boards do ‘own’ their data, non-clinical directors sometimes have difficulty sharing this ownership with clinicians. Ensuring that high-level data are of sufficient quality (and signing the annual declaration to that effect) is clearly a task for corporate management, but managers will need the assurance that the underlying data reflect actual patient experiences.
- 42 In particular, involving clinicians in validating data is an area where most trusts can improve. In a survey carried out by the Audit Commission in 2003 as part of the Acute Hospital Portfolio, medical staff reported low levels of involvement with clinical coding. Only 8 per cent of respondents answered yes to: ‘Are you involved in the validation of the clinical coded data? (that is, ICD-10, OPCS4 & SNOMED CT)?’. Further evidence of low levels of involvement comes from data collected from IT managers. In 62 per cent of trusts, IT managers reported that no clinical staff attend data quality meetings.
- 43 Disconcertingly, those doctors involved with the validation of clinical coding appeared to have a lower opinion of the accuracy of their trust’s data than those not involved. Of those involved, 41 per cent agreed with the statement: ‘The information on the trust’s IT systems is often inaccurate’, compared with 29 per cent of those not involved.
- 44 One way for trust boards to demonstrate their commitment to data quality is by taking the process of data certification as seriously as the process of signing off the annual accounts. At present, financial data are rigorously checked before publication, with a clear audit trail showing who has taken responsibility for accuracy and completeness of the accounts at each stage of preparation. In the Commission’s view, public service organisations should use equal rigour to validate the reports that they make of the outputs and outcomes they have delivered. This is all the more important where the reports are the main source of information on clinical governance.
- 45 Trusts with poor data quality or poor use of information are unlikely to be in a position to provide services efficiently, effectively and economically. Developing appropriate information systems, of which data quality is an important dimension, will increasingly be seen by the Audit Commission as a core requirement for effective corporate governance and auditors will continue to focus on this issue.

**Exhibit 2****Policies and procedures**

Unclear policies and procedures have been highlighted as a common system weakness.



Source: Audit Commission

*Policies and Procedures*

- 46 Gathering data in the NHS for any purpose is a difficult and complex process. As has been said, the reality of data collection in the NHS is that it is achieved through the work of thousands of frontline and support staff in the course of their day-to-day work. Add to this the fact that to ensure consistency, data are collected according to very strict rules and protocols and it is clear that unless trusts have clear and up-to-date policies relating to what information should be gathered, the potential for errors is very high. If this is the case, local inconsistencies will make it difficult to compare like for like and to be precise when looking at aggregated figures.
- 47 To do their jobs successfully, staff need robust procedures to follow so that their work is in-line with the policies and the right data are gathered in the right way. The absence of up-to-date policies and unclear procedures have been consistently highlighted by auditors as one of the most common system weaknesses that lead to trusts being at high risk of producing poor quality data. This remains an issue for many trusts and our most recent reviews underline this. For example, in the 2003 waiting list spot checks, auditors assessing policies and procedures found that nearly three-quarters of the trusts reviewed had room for improvement, with nearly one-third having significant room for improvement (**Exhibit 2**).
- 48 Clinical coding is an increasingly important aspect of data capture, both to support clinical audit, but also because it determines how particular procedures are costed. In 2002 auditors found wide variation between trusts in the quality and presence of clear policies and procedures for staff to follow when carrying out clinical coding. Overall they found that 72 per cent of acute trusts, 24 per cent of non-acute trusts and 44 per cent of relevant PCTs had a documented set of clinical coding procedures identifying the source data from which information should be extracted. A similar proportion (70 per cent of acute trusts, 21 per cent of non-acute trusts and 40 per cent of PCTs) had a clinical coding policy document.
- 49 In the 2002 data quality reviews, auditors reported that clear policies and procedures for clinical coding were lacking in many organisations. Clinical coding audit, as a tool for improvement, was only being applied in a limited way in a small number of acute trusts. Moreover, it was the perception of clinical coding staff that too few people have an interest in the quality of clinical coding and the underlying data on which coders rely.
- 50 Our most recent work carried out in autumn 2003 shows that the accuracy of coding is still an issue at many trusts, but the majority were putting measures in place to address issues previously raised by auditors.

51 Furthermore, some recent developments are more encouraging: the National Information Governance Programme, of which Information Quality Assurance forms a part, contains a requirement that:

*The trust should complete a regular audit of clinical coding, based on national standards, operated by appropriately trained staff and including the resolution and correction of miscoding wherever it has been recorded<sup>1</sup> NHSIA*

52 As a consequence, a considerable number of clinical coding staff are now receiving training in clinical coding audit, and many more trusts are now having external coding audits. Progress in this important area will need to be sustained.

*Data entry and operational practice*

53 While auditors have seen some signs that data quality is being awarded a higher priority in trusts, they continue to identify errors and incorrect practice by data collection staff as a common problem area. For example, the recent spot checks exercise identified problems with data entry as the most common part of management arrangements to fail, with only 9 per cent of trusts given a three star (low risk) rating. Twenty out of forty-nine acute trusts and five out of six mental health trusts achieved the lowest possible score for this area. In two examples, trusts were given low ratings by auditors because new Department of Health guidance on the use of short-notice appointments was not implemented on the ground, despite management instructions.

54 Other typical examples of this sort include delays in adding outpatient referrals to trust information systems (and, therefore, in starting the waiting time clock) and staff using the wrong date as the referral date when inputting patients' details. In general these errors were quite small (a few days) but in one case led to a delay of up to four weeks. Similar examples were found for inpatients being added to waiting lists; though again these delays were relatively short compared to the overall waiting time, they would make it difficult to be absolutely precise about the numbers of patients waiting for a specified length of time.

55 This indicates that although the issue of data quality is, in general, tending to be given greater priority in trusts at a corporate level, this is not always translated into improved data entry and operational practice on the ground.

56 The wider impact of this type of problem was highlighted in the 2002 reviews where auditors reviewed trusts' scores on the data quality indicator, which measures completeness and validity of Hospital Episode Statistics (HES). Fifty-six per cent of all trusts failed to reach an 'acceptable' score of 95 per cent or more, and were assessed as being at high risk overall. However, within this total, 75 per cent of mental health trusts failed to achieve an adequate score.

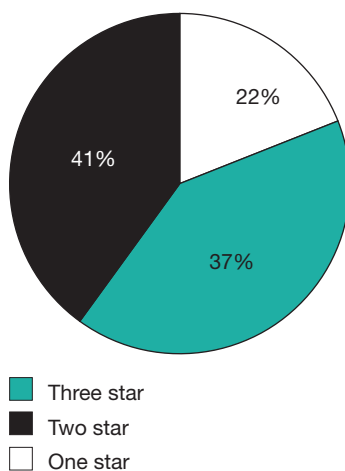
57 The three areas most frequently mentioned by auditors as contributing to low composite scores were:

- diagnosis (identified as a problem in 37 per cent of trusts assessed as high risk overall);
- new NHS number (36 per cent of trusts); and

<sup>1</sup> Information Governance Toolkit, Requirement 7302, NHSIA.

**Exhibit 3****Training**

Many trusts could improve staff training in data quality issues.



Source: Audit Commission

- ethnic coding (25 per cent of trusts).

- 58 All of these are important data to underpin clinical governance and address health inequalities. And the NHS number will be vital for implementing the NHS Care Record Service envisaged as part of the National Programme for IT.
- 59 These examples show that core management practices – organisation, supervision and monitoring of staff performance – remain fundamental to success in this area and trusts need to ensure that sufficient priority and resources are directed in these areas.

#### *Staff training*

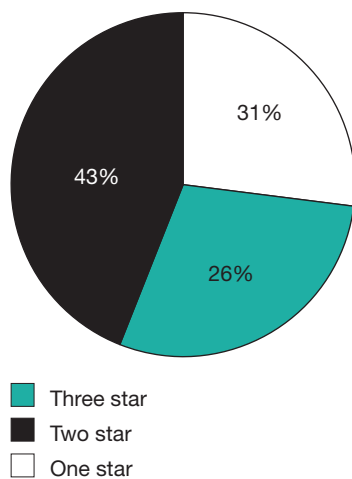
- 60 Part of ensuring that staff carry out procedures correctly depends on adequate training. This has to be a high priority for trusts and there remains further room for improvement.
- 61 In 2002 auditors were asked to look at the arrangements in place for clinical coding. They found that around one-half of trusts (but only around one-quarter of non-acute trusts):
- provided foundation level training for new staff;
  - provided refresher training at least once every two years for experienced staff;
  - made regular internal assessments of coders' accuracy and consistency;
  - provided clinical coding awareness training for non-coding staff; and
  - ran an internal helpdesk for clinical coding queries.
- 62 More recently, when looking at waiting list data quality, auditors found that over 60 per cent of trusts had room for improvement in their training arrangements (**Exhibit 3**).
- 63 This is an important, but difficult, area for trusts to address, because the staff group involved are most likely to be among the lower paid and to experience a high turnover. However, it is not an area where corners can be cut if data quality is to be improved.

#### *IT systems, controls and functionality*

- 64 As we have said, improving data quality is as much about the day-to-day practice of staff as it is installing the best IT systems. Nevertheless, quality problems can be aggravated by out-of-date or badly set up systems. In many trusts, the Patient Administration System (PAS) is more than ten years old and was never designed to process the range of data that is required today. Auditors have reported some systems becoming unacceptably slow under the weight of data they are now asked to collect and have found evidence of staff turning off automatic internal data validation checks in order to speed up system performance.

**Exhibit 4****IT systems, controls and functionality**

Data quality problems can be aggravated by out of date or badly set-up IT systems.



Source: Audit Commission

- 65 Another problem with some current information systems is that there are no immediate benefits for those who use them. In many trusts, it is difficult to extract even their own performance data from the PAS, and although increasing in availability, structured comparative information is not always easy to obtain. A further disincentive is the complicated extract routines and messaging processes required, which only specially trained staff can use. The spot check reviews in 2002 found that some trusts had contracted the writing of extract routines to their system supplier, but some system suppliers had insufficient understanding of the complex rules of waiting time calculations to enable the system to generate accurate reports.
- 66 In over one-half of the 2002 spot check sites, problems with the IT systems were identified as a potential contributory factor to reporting errors. These problems ranged in scale from being relatively minor to an inability to produce the data required. However, not all of the problems identified were with old systems. In some cases, new systems had been installed and were yet to produce all of the information required.
- 67 In 2003, auditors reported that 74 per cent of trusts had room for improvement in their IT systems, with 31 per cent having significant room for improvement (**Exhibit 4**).
- 68 Auditors have also found that problems with IT systems tend to be made worse where trusts had been formed from mergers and were trying to integrate information from a number of different systems. Typically, this led to trusts running parallel computer and manual systems that increased the likelihood of reporting errors. This is a common problem for mental healthcare trusts, but it is not restricted to this sector.
- 69 We hope that the position will improve as the National Programme for IT replaces such systems. However, the National Programme is both a driver and an enabler for better information and will itself sharpen the need for better data quality.

### Variation in data quality

- 70 A strong message to come out of our work on data quality is the big variation in achievement between the various sectors of the NHS, such as acute, primary care, community and mental health. In general, community-based information is of worse quality.
- 71 The reasons for this are mainly historical and include:
- the length of time for which an organisation has been established;
  - the critical mass available for investment and support;
  - the degree of national interest in the subject and the information provided; and
  - the usefulness of information for management or clinical purposes.
- 72 Overall, data quality tends to be highest in acute trusts. Early indications of this were identified in our 2002 reviews (**Exhibit 5, overleaf**), which found that, where there were comparable measures, PCTs appeared generally weaker than acute trusts, based on auditors assessments.

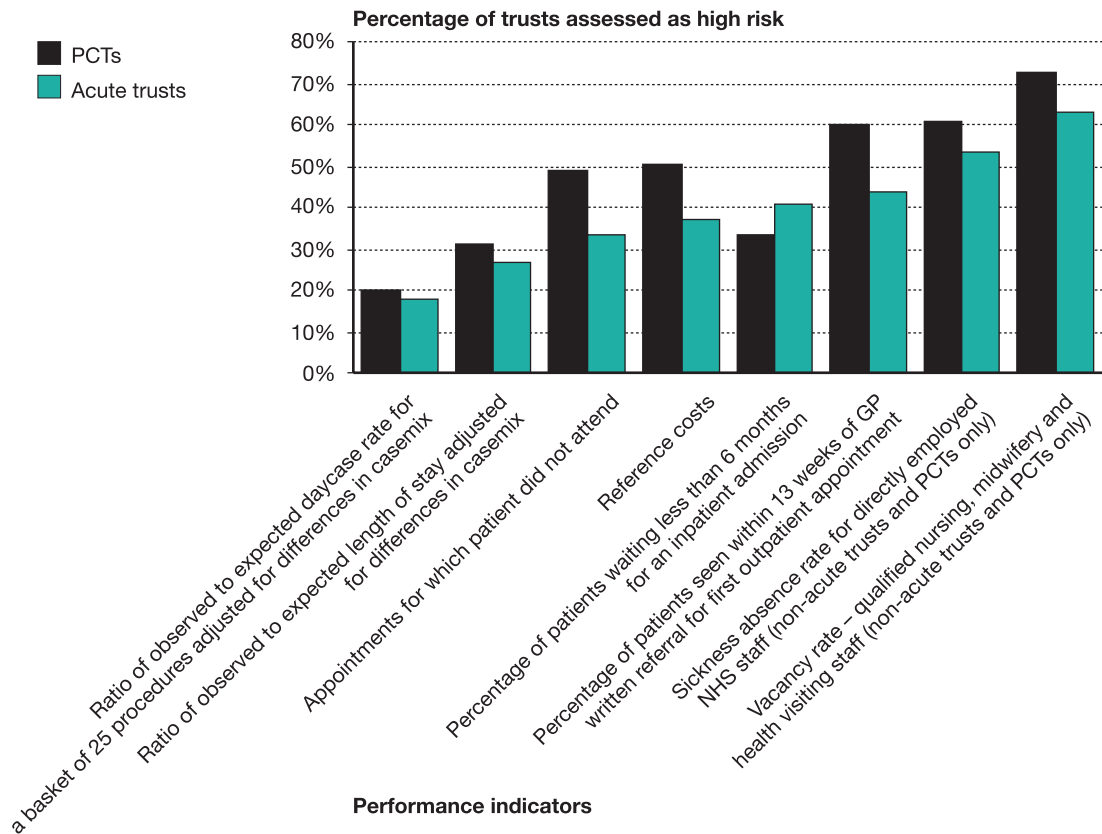
73 This may have partly been a reflection of fledgling organisations. However, our 2003 review of reference costs data quality suggests that this trend has continued with PCTs more likely overall to have errors than acute trusts, particularly in respect of activity data.

74 Auditor findings over the last three years show that the approach to data and its quality has a tendency to be particularly weak in mental health trusts. This was echoed in a recent report by CHI on mental health services, which pointed to a ‘significant lack of management capacity and poor information systems’<sup>1</sup> in mental health trusts. The fact that later this year the Mental Health Act Commission will carry out a national census of mental healthcare providers to find out the numbers of black and minority ethnic patients being cared for in the service is further evidence of the need for improvements.

### Exhibit 5

#### Comparison between PCTs and acute trusts

Based on auditors assessment, PCTs appeared generally weaker than acute trusts.



Source: Audit Commission

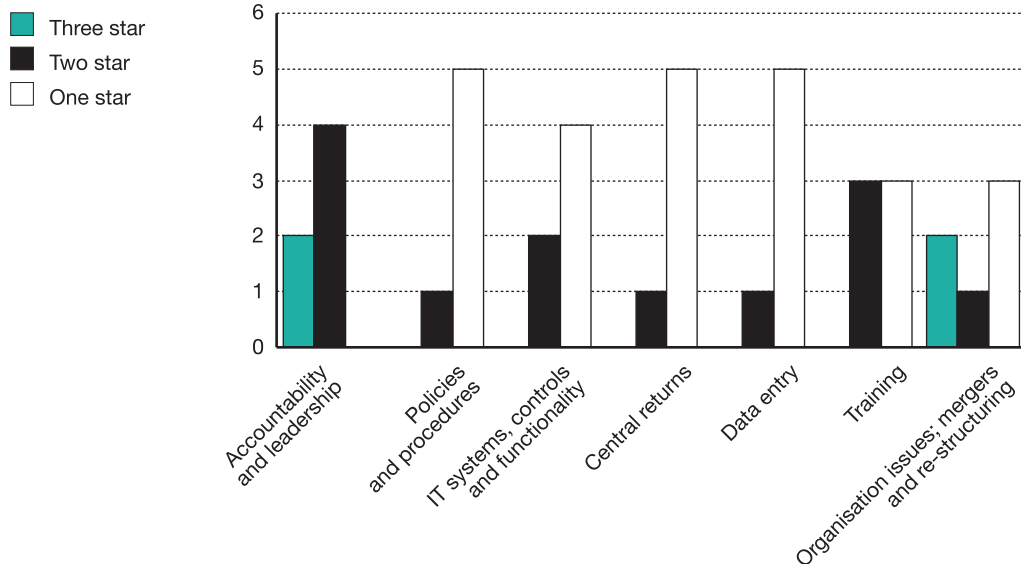
<sup>1</sup> What CHI has found in: mental health trusts, Commission for Health Improvement, December 2003.

75 In 2003 waiting list spot checks were carried out in six mental health trusts using a slightly modified method. While we recognise that this is a small sample and managing waiting list data is based on an acute healthcare model, the management arrangements ratings (**Exhibit 6**) suggest that there is substantial room for improvement – with a high proportion of one star scores.

**Exhibit 6**

**Management arrangements (mental health)**

There is substantial room for improvement in mental health trust management arrangements.



Source: Audit Commission

76 A new mental health minimum data set (MHMDS) was introduced in April 2000<sup>1</sup>. Designed to provide more relevant national and local data, its successful introduction is a national target for all trusts providing mental health services. NHS mental health trusts have been submitting these data to the centre via the NHS-wide Clearing Service (NWCS) since April 2003; on submission, data quality reports are automatically generated. This may itself stimulate improvement in the approach to data and its quality in mental health services, but for the benefits of this to be realised there is a need for a concerted drive at every stage to raise the level of priority given to information and data quality. This will depend on all staff recognising the importance of good information in providing high-quality care.

## Waiting list spot checks 2003

77 Auditors undertook waiting list spot checks at 56 trusts, including six mental health trusts. The general lessons on management arrangements, which emerged from the 2003 spot checks were similar to those of the previous year and are summarised earlier in this chapter. This section summarises the results (for a detailed breakdown of results by trust see **Appendix 4**) and gives the key messages specific to the exercise. Finally, we explore the possible future of waiting list spot checks given the changes in the regulatory regime for health and our experience of the last two years.

### *Summary of results*

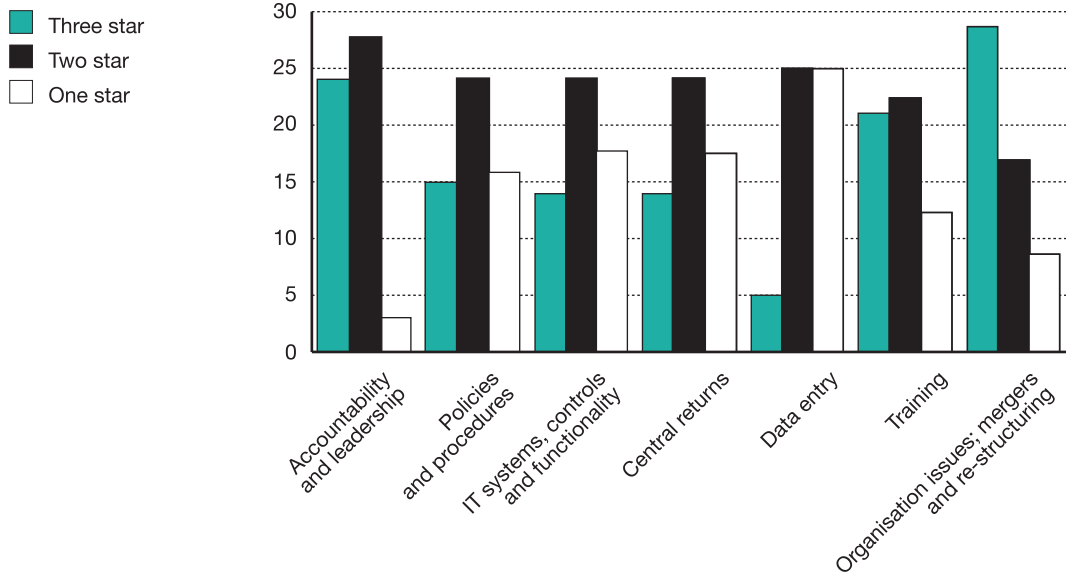
- 78 This report covers 55 trusts. From the original cohort of 56, one trust's review was delayed by agreement with the Audit Commission and the results were not ready for inclusion in this report.
- 79 One of the fifty-five trusts – Bolton Hospitals NHS Trust – is reported on separately because auditors believed that, based on the evidence of their review, waiting list 'breaches' (patients who had waited longer than the maximum target time), had been inappropriately and knowingly omitted from both internal and external reports. Following the auditor's report the SHA responded promptly by conducting an investigation. It concurred that there was evidence of improper recording practices and the trust has taken action accordingly.
- 80 As highlighted in our March 2003 report, waiting list management as such is less relevant to mental health trusts due to the very different way they operate. However, having access to good-quality information about patient progress along care pathways is as important for mental healthcare as it is for acute hospitals. Consequently trusts need to have robust management arrangements in place for gathering and recording information. As highlighted earlier, the mental health trusts were found to have considerable room for improvement.
- 81 Of the twelve acute trusts given one star, ten were automatically given this rating, irrespective of their overall performance, due to concerns about their arrangements for producing central returns. The rationale for this is explained in the methods section in **Appendix 3**. This means that many trusts received a lower rating than would otherwise have been the case if auditors had believed that arrangements for this particular part of the management process were more robust. This emphasises the importance of strong operational practice and suggests that very rapid improvement would be possible if trusts focused their efforts on improving this important aspect of waiting list management.

82 In looking at the ratings achieved in each element of the management arrangements, it is clear that overall corporate commitment (accountability and leadership) to data quality is relatively well regarded by auditors, whereas data entry, that is, the day-to-day practice of collecting data, is the key area of failure in that part of the review. **Exhibit 7** shows the distribution of ratings. This seems to indicate that the operational management, supervision and training of staff engaged in day-to-day capture of data are the important areas for trusts to concentrate on to secure improvement.

### Exhibit 7

#### Management arrangements (all trusts)

Data entry was the most common area of failure.



Source: Audit Commission

#### Key messages

83 The general messages from the spot checks were similar to those reflected elsewhere in this report. Key specific findings are:

- the scale of reporting errors identified does not undermine the reliability of overall trends reported nationally. Local inconsistencies lead to a small amount of error in assessing the precise numbers of patients waiting a given length of time;
- there was only one example of a trust consciously adopting inappropriate recording practices to give a more favourable picture of its waiting times;
- most trusts were following the Department of Health’s guidance on short-notice appointments. However, a small number of trusts were using unacceptable practices that disadvantaged patients to improve their waiting list position. Examples of this include offering patients nearing a waiting time breach short-notice appointments or appointments at times when they know they are unavailable and then resetting the waiting time clock to zero when patients

cannot attend. Given that most trusts are able to make progress against targets without recourse to this type of practice, we regard this as being more likely to be linked to poor management than undue pressure from the targets themselves;

- overall, senior managers in trusts are giving high priority to managing waiting lists and waiting times appropriately, but in some cases this is yet to feed through to day-to-day practice;
- linked to this: training of frontline staff needs to improve further and better supervision of day-to-day practice is also needed if the overall level of accuracy is to improve;
- the large majority of trusts that received the lowest rating would have done better if not for concerns about the actual process for producing their central returns; and
- many trusts continue to struggle with old and inadequate IT systems, but it is hoped that this will improve as anticipated investment unfolds.

#### *Future of spot checks*

- 84 In our March 2003 report, *Waiting List Accuracy*, we suggested that large-scale reviews were not necessarily the most efficient or effective way to achieve the required assurance and promote improvement in waiting list accuracy. The report recommended a change in the controls assurance framework to incorporate waiting list information. Specifically:
- Incorporating data quality standards into mainstream management by making it part of the controls assurance framework. Principles underpinning this would be:
    - a mandatory set of the key PIs to be produced by trusts;
    - a clear definition of each PI so that it really is practical for collection and validation; and
    - an agreement on what is meant by ‘accurate’. For example, ‘in agreement with underlying records,’ or within certain tolerances.
  - The involvement of internal audit or other review bodies in reporting on the arrangements in place (as they do currently each year on trusts’ performance against the controls assurance standards).
  - Formal acceptance of the PIs by the trust board.
  - External validation and reporting by the external auditor on the accuracy of all (or a sample) of the specified PIs.
- 85 Recognising the continuing need for an element of independent scrutiny, we believe that there are a number of compelling advantages to making the process of checking data quality part of routine management rather than a periodic, one-off process. Whether this is achieved through the controls assurance framework or by other means (for example, building on the Department of Health’s Information Governance Programme), the advantages are that it:
- removes the need for large one-off spot-check reviews – unless a specific problem is suspected;

- raises data quality arrangements underlying waiting lists to a similar status as financial information, requiring trust boards to take them equally seriously;
- allows internal and external auditors to incorporate arrangements checks into their routine programmes – making the approach ‘little and often’ rather than large set-piece reviews (if this included random checks of particular clinics or specialties this would maintain the deterrent effect);
- allows a local judgement to be fed into CHAI’s annual organisational assessment;
- immediately extends checking in this area to all NHS trusts (potentially including PCTs and mental health trusts), moving away from the sampled cohort approach that will take years to cover all sites; and
- allows CHAI to focus any in-depth data quality reviews on issues more directly impacting on patient care, for example, clinical coding or national service framework indicators.

86 The future approach to spot checks is currently under consideration by CHAI. The Audit Commission will assist in any way required to take forward this area of work.

### Reference costs and HRGs

- 87 To reflect the importance of this topic for the future management of health services, we intend to publish a separate report in early summer setting out our findings and their implications for the NHS and the Department of Health in introducing the Payment by Results system of funding.
- 88 However, emerging findings indicate that there is wide variation in performance (in particular between sectors) that will need to be addressed in preparation for implementing Payment by Results. These findings include the following:
- the accuracy of acute trust reference costs is mixed but considerably better in general than in PCTs and mental health trusts;
  - the quality of arrangements for Reference Costs Submissions varies considerably;
  - activity data in PCTs (in particular, community-based services), and mental health trusts are often unreliable;
  - the sophistication of methods for allocating costs varies but it tends to comply with NHS costing manual guidance;
  - cost data are generally robust; and
  - greater clarity is needed in guidance issued by the Department of Health to ensure consistency in application at a local level.

- 89 There is a need for improved strategic co-ordination of information at all trusts. Boards should review overall activity levels and ensure consistency between information streams. In doing this, they should recognise that activity information is reported historically (for example, Hospital Episode Statistics (HES) submissions and ref costs) and also projected forward for use in the Local Delivery Plan (LDP) and capacity plan. On a current basis it is also used by both the organisation itself to monitor ongoing activities and commissioners and other partners to monitor delivery of contracts and SLAs. While detailed reconciliations are not necessary at the strategic level, summary comparisons would aid understanding and serve to reinforce ownership and confidence in the underlying data.
- 90 For example, submissions to HES/NHSIA and reference costs indicated the following activity levels in the last period:
- elective inpatient;
  - non-elective inpatient;
  - daycases; and
  - outpatient attendances.
- 91 An understanding of potential and actual differences between these two submissions would increase confidence that the organisation understood its data. The reference costs reviews identified many trusts where no explanation for significant variances between reference costs and data submitted to NHSIA could be obtained.
- 92 This information on historic activity levels at a summary level should enable easy comparison by the board with current and future planned activity levels (LDP/capacity plan/SLAs) and would further demonstrate that the trust has a clear understanding of, and faith in, its information.

# 3

## Conclusion

- 93 Improving data quality is a complex issue. Poor data quality stems from a number of factors. There is no single intervention that will address it or one single organisation with improvement in its sole gift. Too often data quality is seen as an IT issue, but trust boards need to understand that it is a corporate issue. The factors affecting data quality can include:
- absent or inadequate operational controls;
  - lack of policies and procedures;
  - inadequate supervision of operational practice;
  - inadequate IT infrastructure leading to proliferation of 'off-line' parallel systems and databases;
  - unclear or out-of-date standards and definitions for data;
  - information systems and resources geared to reporting for accountability purposes not informing service delivery leading to lack of frontline ownership of data quality;
  - inadequate status and funding for clinical records and coding; and
  - poor management and leadership resulting in an overall lack of priority given to data quality.
- 94 This wide range of issues suggests that improvement in these areas will need a variety of responses and trust boards – especially in PCTs and mental health trusts – need to engage more fully in managing and taking responsibility for data quality.
- 95 Investment in IT can provide both a driver and a route to improve data quality. The National Programme for Information Technology, for which central funding of £2.3 billion was announced in December 2002, will create a modern information infrastructure. This will include:
- creating a NHS Care Records Service to improve the sharing of consenting patients' records across the NHS. Information will improve as patients have easier access to their records and can work with the NHS in making sure that their information is accurate;
  - providing faster facilities for GPs and other primary care staff to book hospital appointments for patients;
  - providing a system for electronic transmission of prescriptions; and
  - ensuring that the national IT infrastructure can meet the needs of the NHS now and in the future.
- 96 The Department of Health will need to make maximum use of the opportunities provided by this investment to drive improvement in NHS data quality.

- 97 Boards will continue to need support to improve data quality and the Department of Health, relevant agencies and regulators should co-ordinate their efforts to support trusts in a more sustained and targeted manner than has been the case to date.
- 98 Finally, we welcome the fact that CHAI has already signalled its recognition of the importance of data quality and has asked us to undertake further work on its behalf in 2004/05. We look forward to supporting local auditors as they help trusts to improve their performance in this area for the overall benefit of patients.

## Appendix 1: Examples of different organisations' initiatives aimed at improving data quality

CHI	<ul style="list-style-type: none"> <li>• Star ratings</li> <li>• Ambulance trusts review</li> <li>• Clinical governance reviews</li> </ul>
NHSMA	<ul style="list-style-type: none"> <li>• Waiting list management best practice guidance</li> </ul>
PRIMIS	<ul style="list-style-type: none"> <li>• Training and standardisation of primary care systems</li> </ul>
DH	<ul style="list-style-type: none"> <li>• National guidance</li> <li>• Code of conduct for managers</li> <li>• Information Quality Assurance Strategy and Work Programme</li> </ul>
Royal College of Physicians	<ul style="list-style-type: none"> <li>• Information laboratory</li> <li>• Good record keeping initiative</li> <li>• Communication of data</li> <li>• SHO training programme</li> </ul>
NHSIA	<ul style="list-style-type: none"> <li>• Data accreditation</li> <li>• Information Quality Assurance Component of the Information Governance Toolkit</li> <li>• Information Standards and data definitions (Information Standards Board)</li> <li>• Data Quality Reporting Service</li> <li>• Training</li> </ul>
National Institute for Mental Health in England	<ul style="list-style-type: none"> <li>• Intelligence in Progress</li> </ul>
Mental Health Act Commission	<ul style="list-style-type: none"> <li>• Black and Minority Ethnic patient census (planned for mid 2004)</li> </ul>

## Appendix 2: 2003 waiting list spot checks: standards used for data testing

Outpatients	All referral letters from the GP should be date stamped on the date of arrival and, other than for urgent cancer referrals, this date should be used as the date of referral.
Outpatients	All outpatient activity should be correctly accounted for within national returns, whether or not recorded on PAS.
Outpatients	All waiting times should be correctly calculated by appropriately recording the outcome of all appointments.
Cancer referrals	The date of referral should be recorded as the date on the referral letter or communication.
Cancer referrals	Urgent cancer referrals should be recorded on the system, with the correct referral type, within 24 hours of receipt of the referral request.
Inpatients	All requests for elective treatment should be added promptly to the waiting list with correct patient identifier and 'Decision to Admit' date.
Inpatients	All key dates during the period on the waiting list must be correctly recorded and substantiated.
Inpatients	All waiting times of patients on the elective admission list should be correctly calculated in accordance with national definitions.
Inpatients	All non-attendances for offers of admission should be correctly recorded with sufficient supporting evidence of reasons.
Inpatients	Patients should ideally be given six weeks' notice of the offer of admission, and at least two weeks' notice.
Inpatients	All removals from the Elective Admission List should be consistently recorded on the PAS and the patient case notes.
Inpatients	All waiting list removals with removal reason 'admitted electively' or 'emergency for same condition' should match with corresponding records on the admitted patient care (APC) commissioning minimum data set (CMDS). Equally, all electively admitted patients reported on the APC CMDS should have matching records on the waiting list.
Inpatients	Only patients who can be given a date or approximate date for treatment at the time of the decision to admit, usually as part of a planned sequence of clinical care determined mainly on social or clinical criteria, should be included on planned lists.

## Appendix 3: Waiting list spot checks 2003: methods

The review method identified two dimensions of performance for auditors to explore. The first was **management arrangements** which included:

- **Leadership and accountability** – whether waiting list accuracy is a key corporate priority, discussed at board level on a regular basis and whether there are clear lines of accountability for performance and reporting on waiting lists.
- **Policies and procedures** – whether there were clear and up-to-date plans and guidelines for managing the various processes used to produce waiting list and waiting time information, many of these relate to direct management of patients services.
- **Data entry** – whether the guidelines and procedures are being carried out in day-to-day operations by staff on the ground.
- **Training** – whether the training of relevant staff was well organised and resourced.
- **Central returns** – whether the processes for producing the external reports that eventually go to the government were robust and accurate – this also included reconciliation checks between internal and external databases.
- **IT systems, controls and functionality** – whether the extent to which the IT systems in use by the trust were able to match the demands of modern waiting list management.
- **Organisational issues** – whether organisational issues, such as mergers or internal re-structuring, were interfering with the trust management of waiting lists.

The second dimension of the review was **data testing** which involved looking at the underlying data that goes into waiting list reports. To do this, auditors tested against rules and guidelines used by trusts to manage waiting list information. For the purposes of the spot check these were referred to as ‘standards’ against which auditors were testing. These standards are set out in **Appendix 3**.

For each element of these two dimensions, trusts were given a rating from one to three stars. In the case of the data testing the rating was calculated automatically depending on the result of the testing. This was done on the basis of performance thresholds, for example, for a given test, above 95 per cent might be rated as 3 stars, between 90 and 94 per cent would be 2 star and below 90 per cent would be one star.

In the case of the management arrangements auditors gave trusts a rating for each element based on whether they were:

- generally strong – need to maintain performance (three stars);
- some strengths and some weaknesses – room for improvement (two stars); and

- generally weak – substantial room for improvement (one star).

Auditors were also asked to identify any areas where they believed that a trust had deliberately mis-reported their waiting list position.

Trusts received a score for each of the seven areas of management arrangements and for each of the four clinical specialties in which the data was tested. The trust's overall score was based upon the cumulative data test and management arrangement scores, with a proportionately higher rating of 60/40 applied to the data tests scores compared with the management arrangements scores.

Recognising that some failures could have a greater impact than others, a weighting system was used for each element of the assessment using a series of 'modifiers'. The most significant assessment modifier applied to the trust's score was that a 'one star' rating in the central returns section of the management arrangements would *automatically* result in an overall 'one-star' rating irrespective of other performance.

To test the reliability of the data in the trusts' central returns the auditors carried out a reconciliation of the most recently submitted waiting list reports against the source data in the trusts system, and checked the returns for consistency where applicable. The central returns tested were: QM08 and KH09 (outpatient returns); KH06, KH07 and KH07A (inpatient returns); and QMCW (cancer referrals). Auditors interviewed the information manager and analysts involved in the central returns' reporting, looking to see that:

- processes for production of the central returns were robust;
- systems for internal validation were sound;
- the trust used the national published guidance; and
- returns were submitted on time.

The decision to apply the modifier to trusts' performance in the central returns was designed to reflect the importance of trusts meeting their corporate responsibilities to report waiting list and waiting time information accurately. This led to many trusts receiving a lower rating than would otherwise have been the case.

Taking all of these modifiers into consideration the aggregate ratings for the two dimensions were combined to give an overall rating for the trust. Each trust received a detailed individual report with recommendations for making improvements. These will be followed up by local auditors to monitor progress.

## Appendix 4: Headline spot check ratings by trust

- 1 ☆ Generally weak – substantial room for improvement
- 2 ☆ Some strengths; some weaknesses – room for improvement
- 3 ☆ Generally strong – need to maintain performance

Trusts were scored for two areas:

- 1 Data tests in 13 different areas (see Appendix 3)
- 2 Management arrangements made up of: leadership & accountability; policies and procedures; data entry; central returns; training; IT systems; organisational issues (for example, mergers).

The scores for these two areas were aggregated to give the overall rating. However, a one-star rating for central returns led automatically to an overall rating of one-star irrespective of other performance (see Appendix 2). A one-star rating in the overall rating box may therefore relate specifically to the need to improve processes for producing central returns.

Acute healthcare trusts	Data tests	Management arrangements	Overall rating
Ashford and St Peters NHS Trust	☆☆	☆☆	☆
Barking Havering & Redbridge NHS Trust	☆☆☆	☆☆	☆☆☆
Barnsley NHS Trust	☆☆	☆☆	☆
Birmingham Heartlands and Solihull (Teaching) NHS Trust	☆☆	☆☆	☆☆
Bolton Acute Hospital NHS Trust	Inappropriate reporting practices		
Chelsea & Westminster Healthcare NHS Trust	☆	☆	☆
East Kent Hospitals NHS Trust	☆☆	☆☆☆☆	☆☆
Gateshead Health NHS Trust	☆☆	☆☆☆☆	☆☆☆☆
Good Hope Hospital NHS Trust	☆☆	☆☆	☆☆
Guy's and St Thomas' Hospital NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
Hull & East Yorkshire Hospitals NHS Trust	☆☆	☆☆	☆
Ipswich Hospital NHS Trust	☆☆	☆☆☆☆	☆☆
King's Lynn & Wisbech Hospital NHS Trust	☆☆	☆☆	☆
Kingston Hospital NHS Trust	☆☆	☆☆	☆☆
Leeds Teaching Hospitals	☆	☆☆	☆☆
Maidstone & Tunbridge Wells NHS Trust	☆	☆	☆
Mayday Healthcare NHS Trust	☆☆	☆☆	☆☆
Milton Keynes General NHS Trust	☆☆	☆☆	☆☆
Morecambe Bay Hospitals NHS Trust	☆☆	☆☆	☆☆
Newham Healthcare NHS Trust	☆☆	☆☆	☆☆
Norfolk & Norwich University Hospital NHS Trust	☆☆	☆☆	☆☆
North Bristol Trust	☆☆	☆☆	☆☆
North Cheshire NHS Trust	☆☆	☆	☆

North Cumbria Acute	☆☆	☆	☆
North West London Hospitals NHS Trust	☆☆	☆☆	☆
Northern Lincolnshire & Goole Hospitals NHS Trust	☆☆	☆☆	☆☆
Oxford Radcliffe Hospitals NHS Trust	☆☆	☆☆	☆
Pennine Acute	☆☆☆	☆☆	☆☆☆☆
Plymouth Hospitals NHS Trust	☆☆	☆☆☆☆	☆☆☆☆
Poole Hospitals NHS trust	☆☆☆	☆☆☆☆	☆☆☆☆
Queen Mary's Sidcup NHS Trust	☆☆	☆☆	☆☆
Queen's Medical Centre Nottingham University Hospital NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
Robert Jones & Agnes Hunt Orthopaedic and District Hospital NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
Royal Cornwall Hospitals NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
Royal National Orthopaedic	☆☆	☆☆	☆☆
Royal Shrewsbury Hospital NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
Royal Surrey County Hospital NHS Trust	☆☆	☆☆	☆☆
Royal West Sussex NHS Trust	☆☆	☆☆	☆☆
South Devon NHS Trust	☆☆	☆☆	☆☆
Southern Derbyshire Acute Hospitals NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
St Helens and Knowsley NHS Trust	☆☆	☆	☆
Surrey and Sussex Healthcare Trust	☆☆	☆☆☆☆	☆☆
Taunton and Somerset NHS Trust	☆☆	☆☆☆☆	☆☆☆☆
University College London Hospital	☆☆	☆☆☆☆	☆☆
West Dorset General Hospitals NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
West Middlesex University Hospitals NHS Trust	☆☆	☆☆	☆☆
Weston Area Health NHS Trust	☆☆	☆☆	☆
Whipps Cross University Hospital NHS Trust	☆☆	☆☆	☆☆
Worthing and Southlands NHS Trust	☆☆☆	☆☆☆☆	☆☆☆☆
<b>Mental healthcare trusts</b>	<b>Data tests</b>	<b>Management arrangements</b>	<b>Overall rating</b>
Pennine Care NHS Trust	☆☆	☆	☆
Bedfordshire and Luton Community NHS Trust	☆☆	☆	☆
Tees and North East Yorkshire Mental Health	☆☆	☆☆	☆☆
North Essex Mental Health Partnership NHS Trust	☆	☆☆	☆
Camden & Islington Social Care Trust	☆	☆	☆
Norfolk Mental Health Care NHS Trust	☆	☆☆	☆

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