National Audit Office

INFORMATION ASSURANCE SUMMARY REPORTS

Department of Health

The purpose and scope of this review

1 During the period September to December 2011, the National Audit Office (NAO) carried out an examination of a sample of the input and impact indicators and operational data systems of the Department of Health (the Department). This involved a detailed review of:

- the match between the indicators the Department publishes, the operational data they use to run themselves and the priorities and key business areas of the Department;
- the process and controls governing the selection, collection, processing and analysis of data; and
- the reporting of results.

2 This report provides an overview of the results of our assessment. It does not provide a conclusion on the accuracy of the out-turn figures included in the Department's public performance statements. This is because the existence of sound data systems reduces but does not eliminate the possibility of error in reported data.

3 Our conclusions are summarised as numerical scores and presented in **Figure 1** overleaf. The ratings are based on the extent to which departments have put in place and operated internal controls over the data systems that are effective and proportionate to the risks involved. Our assessment was of the data systems and assurance regime of the Department itself, and not those of individual data providers (such as arm's-length bodies, primary care trusts and hospital trusts).

Figure 1
A summary of the results of our validation exercise

Score	Meaning	Indicators we reviewed that received this score
4	The data system is fit for purpose and cost-effectively run	**No indicators**
3	The data system is adequate but some improvements could be made	**Nine Business Plan indicators** 16 Low birth weight of live births 17 Emergency admissions for conditions not usually requiring hospital admission 18 Unit cost of elective treatment for inpatients 19 Unit cost of emergency treatment for inpatients 20 Unit cost of patients visiting hospital for treatment 21 Unit cost of receiving community care 22 Unit cost of patients being treated for mental health problems 23 Unit cost of a prescription item dispensed in the community 24 Cancer waiting times[1]
2	The data system has some weaknesses which the Department is addressing	**No indicators**
1	The data system has some weaknesses which the Department must address	**Eight Business Plan indicators and seven estates and workforce indicators** 1 Breakdown of NHS spend by Programme Budget 2 Safety incidents reported by NHS/health care providers that lead to serious harm 3 Safety incidents reported by NHS/health care providers 4 Waiting times performance against the 18-weeks standard* 5 Waiting times in Accident and Emergency[1] 6 Ambulance response: eight minute response to scene[1] 7 Ambulance response: 19 minute transportation to hospital

Figure 1 *continued*
A summary of the results of our validation exercise

Score	Meaning	Indicators we reviewed that received this score
1	The data system has some weaknesses which the Department must address – *continued*	**Eight Business Plan indicators and seven estates and workforce indicators – *continued*** 8 Cancelled operations not rescheduled within 28 days 9 Total cost of the office estate 10 Total size of the office estate 11 Estate cost per full-time equivalent 12 Estate cost per m^2 13 Payroll staff (full-time equivalents) 14 Contingent labour (full-time equivalents) 15 Average staff costs
0	No system has been established to measure performance against the indicator	**No indicators**

NOTE
1 Four of the 24 indicators used in the Business Plan were also operational indicators used by the NHS Operations Executive Board to manage the NHS.

Source: National Audit Office analysis

Overview

4 We examined 24 of the 46 input and impact indicators included in the Department's Business Plan, of which four were also operational indicators used by the NHS Operations Executive Board to manage the NHS. Seventeen of the indicators cover the following business areas: better health outcomes; social care; and public health. The seven other indicators cover common areas of spending across government (estate costs and workforce size), which the National Audit Office is examining across all central government departments for comparative purposes.

5 We assessed how well the indicators and operational data systems covered the work of the Department of Health. The Department has, in part, the data it needs to manage its business effectively and to enable Parliament and the public to hold it to account for its performance and use of resources.

6 The five structural reform priorities in the Department's Business Plan account for almost all of the Department's resources, some £107 billion in 2010-11. The 46 indicators in the Business Plan cover four of these five priorities.[1] There are no indicators relating to the priority to revolutionise NHS accountability, which relies heavily on the changes provided for in the Health and Social Care Act 2012. The Department has, however, prepared an 'Accounting Officer System Statement' which sets out how the Accounting Officer will gain assurance and be held to account for the money voted to the Department by Parliament in the reformed NHS.

1 Forty-six indicators is an estimate as the Department does not clearly define how many common areas of spending indicators are included in the Business Plan.

7 We found strengths but also some weaknesses in the Department's data systems. Given the devolved nature of the NHS, the Department relies on external data providers to collect the majority of its core data. It requires each data provider to put in place appropriate systems and controls to ensure high quality performance data. Primary responsibility for data quality rests with the management of these organisations, but the Department should also obtain some degree of independent assurance over data quality. However, for 17 of the 24 indicators we reviewed (indicators 1 to 16 and 24 in Figure 1) the Department does not independently validate, or gain assurance about, controls operated during the collection and submission of data to its systems.

8 We also assessed the Department's wider data control environment against the following criteria:

- **An overarching business information strategy.** The Department has increased the amount of information it publishes as part of the coalition government's transparency agenda, and published its information strategy for health and social care in England in May 2012.[2]
- **The communication of data quality.** The communication of data quality standards within the Department is good, although it is unclear how effectively the Department fulfils its responsibility to communicate the required quality standards to data providers more widely across the NHS.
- **The allocation of clear roles and responsibilities.** Roles and responsibilities are clearly defined and communicated within the Department, but roles and responsibilities underpinning the quality of data provided by external bodies have not been clearly set out and communicated by the Department.
- **Monitoring of results.** Responsibility for monitoring data systems and performance is split between:
    - the Department's Audit and Risk Committee, which oversees all internal controls, including those relating to the integrity of performance information and reporting;
    - the Departmental board which receives detailed performance reports against the structural reform priorities and the Quarterly Data Summary which contains 25 indicators and other areas of spending taken from the Business Plan; and
    - the NHS Operations Executive board which is responsible for delivery against the NHS Operating Framework and receives operational performance information.

The Departmental board began receiving regular performance reports in 2011, and has noted that it has been impressed by the wide range of performance and management information received. On occasion, however, board members have found it difficult to engage fully with the information due to the format and volume of the material supplied. The Department is therefore developing a performance scorecard to summarise the information, while allowing members to drill down into the detail where they choose.

9 The Department has comprehensive processing and internal consistency checks in place to assess data quality once it has been submitted to its central databases. The checks include reviewing individual data providers' submissions to identify routine errors such as missing data and large volume changes. The Department also carries out additional more sophisticated analysis to provide assurance about the quality of waiting time data. This analysis is designed to identify, for example, where submissions have not been made in line with the rules or where unusual waiting list patterns may merit further investigation.

2 *The power of information: putting all of us in control of the health and care information we need.* Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_134181

10 The Department raises queries arising from its internal checks directly with data providers and is usually able to resolve issues before the data is published. Where complicated or serious issues arise, the Department has formal escalation processes in place, with strategic health authorities and/or Monitor asked to investigate and resolve issues as quickly as possible. The Department also covers data quality issues, in particular relating to waiting time data, in its regular discussions with strategic health authorities.

Issues arising in two or more data systems

11 The Department's good processing and internal consistency checks do not, however, mitigate the risks arising from the lack of independent assurance about the data systems of individual data providers. Thus:

- intentional or accidental errors introduced during data collection by NHS trusts, for example, are unlikely to be detected by the Department's checks. Although the checks should pick up discrepancies between current and past performance, they do not detect inconsistencies in interpretation or application of guidance, or intentional mis-reporting that remains within normal parameters, especially if such errors have been present over a number of years; and
- for 15 of the 17 indicators (Indicators 1 to 15 in Figure 1) which lacked independent validation of providers' systems and controls, the Department lacks assurance that the reported data is reliable and comparable. For the remaining two indicators (low birth weight and cancer waiting times), their design, the lack of perverse incentives and other controls compensate, in part, for the lack of independent assurance.

12 At present the Department relies on the Audit Commission to provide assurance about the quality of reference cost data and Hospital Episode Statistics. This work has driven improvements in data accuracy in recent years – for example, the Audit Commission reported that coding accuracy improved from an error rate of 16 per cent in 2007-08 to 11 per cent in 2009-10. The coalition government is proposing to abolish the Audit Commission and the future of this assurance work is currently uncertain. Without independent validation, the data systems used to generate hospital trusts' reference costs and emergency admissions data (Indicators 17 to 22 in Figure 1) would be considerably weaker.

13 The absence of source validation checks means the Department does not know whether the data aggregated and reported in the Quarterly Data Summaries is reliable and comparable between providers or over time. The governance statements (which replaced statements on internal control), signed by the Accounting Officers and Accountable Officers of arm's-length bodies and NHS organisations and included in their annual accounts, should detail known internal control weaknesses, including those relating to data quality.

Generic recommendations for improving the Department of Health's data systems

14 The Health and Social Care Act 2012 provides for a variety of structural changes to the NHS, including the replacement of primary care trusts with a larger number of clinical commissioning groups. Our recommendations reflect the need for good quality data systems and will be relevant to the reformed NHS as well as to the NHS as currently constituted.

15 The following recommendations are generic and relate to at least several of the indicators and systems we reviewed during our work. In taking forward our recommendations, the Department will need to consider the balance between the responsibility of data providers themselves for implementing robust data systems and the assurance that can be provided through independent validation. In addition, we recognise that the Department is endeavouring to keep to a minimum the burdens it imposes on local NHS organisations and arm's-length bodies. It may therefore opt to prioritise actions in areas which are higher profile and/or where the need for assurance is greater.

16 Going forward, the Department will need to work closely with the Information Centre for Health and Social Care, which the Health and Social Care Act 2012 established as the national source of health and social care information. The Information Centre will have a clearer role in assuring the quality of nationally submitted, aggregated data. It will publish its assessments and issued its first annual report on data quality in July 2012.

17 In the main the Department currently receives no formal assurance from the Chief Executives of data providers about the quality of the data submitted or their assurance processes. The Department should require Chief Executives to confirm formally that they have reviewed the quality of the performance and cost data they are submitting, and that they are content with the quality or are highlighting known weaknesses. (This approach is already used for trusts' monthly returns on health care associated infections.)

18 The Department lacks independent assurance about the reliability and consistency of the data that is reported for 17 of the 24 indicators we assessed. Should the Audit Commission's assurance work end in 2012-13, the number of indicators in this category will rise to 21. The Department should determine how best to obtain some degree of independent assurance over data providers' systems and controls. For example, the Department could:

- reiterate to arm's-length bodies and NHS organisations that governance statements should include information about control weaknesses which impact on the quality of performance data;
- consider the feasibility and cost-effectiveness of carrying out sample checks back to providers' systems to ensure that data is accurate, reliable and comparable;
- seek to influence the remit of external auditors work to include a review of the controls over the systems providers use to generate performance data. Currently, the Audit Commission sets the auditing framework for NHS trusts and Monitor sets the auditing framework for foundation trusts; and
- develop plans for alternative arrangements to replace and build on the Audit Commission's assurance work on the quality of reference cost data and Hospital Episode Statistics.

19 The quality of data systems is not adequately described and reported for 17 of the 24 indictors we reviewed. Where data quality statements exist (for 11 of the 17 indicators: Indicators 1, 2, 3, 9 to 15 and 17 in Figure 1), they do not cover the quality of the data systems of providers. For example, they do not typically report the level of error in the data or state that data is self-reported and not independently audited. To improve in this area, the Department should:

- develop a greater understanding of, and subsequently publish documentation outlining, the control system and processes for each data system from collection to final analysis and reporting. This should include any limitations to the reported data and areas for improvement; and
- ensure that it provides explanation and interpretation when publishing indicator results to help readers understand what the data is telling them.

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