National Audit Office

MEASURING UP
HOW GOOD ARE THE GOVERNMENT'S
DATA SYSTEMS FOR MONITORING PERFORMANCE
AGAINST PUBLIC SERVICE AGREEMENTS?

JUNE 2010

Comprehensive Spending Review 2007 covering the period 2008-2011

Review of the data systems for Public Service Agreement 12 led by the Department for Education:

'Improve the health and well-being of children and young people'

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Summary

Introduction

1. This report summarises the results of our examination of the data systems used by the Government in 2009 to monitor and report on progress against Public Service Agreement (PSA) 12 "Improve the health and well-being of children and young people".

The PSA and the departments

2. PSAs are at the centre of the Government's performance measurement system. They are usually three-year agreements, set during the spending review process and negotiated between departments and the Treasury. They set the objectives for the priority areas of the Government's work.

3. This PSA is led by the Department for Education – formerly the Department for Children, Schools and Families - (the Department), with data provided by a range of sources. Each PSA has a Senior Responsible Officer who is responsible for maintaining a sound system of control across departmental boundaries that supports the achievement of the PSA. The underlying data systems are an important element in this framework of control.

4. The most recent public statement provided by the Department of progress against this PSA was in its 2009 Autumn Performance Report in December 2009.

The purpose and scope of this review

5. The Government invited the Comptroller and Auditor General to validate the data systems used by Government to monitor and report its performance. During the period October to November 2009, the National Audit Office carried out an examination of the data systems for all the indicators used to report performance against this PSA. This involved a detailed review of the processes and controls governing:

    - The match between the indicators selected to measure performance and the PSA: the indicators should address all key elements of performance referred to in the PSA.

    - The match between indicators and their data systems: the data system should produce data that allows the Department to accurately measure the relevant element of performance.

    - For each indicator, the selection, collection, processing and analysis of data: control procedures should mitigate all known significant risks to data reliability. In addition, system processes and controls should be adequately documented to support consistent application over time.

- The reporting of results: outturn data should be presented fairly for all key aspects of performance referred to in the target. Any significant limitations should be disclosed and the implications for interpreting progress explained.

6. Our conclusions are summarised in the form of traffic lights (Figure 1). 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; and

   - explained clearly any limitations in the quality of its data systems to Parliament and the public.

7. The remaining sections of this report provide an overview of the results of our assessment, followed by a brief description of the findings and conclusions for each individual data system. Our assessment does not provide a conclusion on the accuracy of the outturn 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.

Figure 1: Key to traffic light ratings

Rating	Meaning …
GREEN (Fit for purpose)	The data system is fit for the purpose of measuring and reporting performance against the indicator.
GREEN (Disclosure)	The data system is appropriate for the indicator and the Department has explained fully the implications of limitations that cannot be cost-effectively controlled.
AMBER (Systems)	Broadly appropriate, but needs strengthening to ensure that remaining risks are adequately controlled.
AMBER (Disclosure)	Broadly appropriate, but includes limitations that cannot be cost-effectively controlled; the Department should explain the implications of these.
RED (Systems)	The data system does not permit reliable measurement and reporting of performance against the indicator.
RED (Not established)	The Department has not yet put in place a system to measure performance against the indicator.

Overview

8. The Government's vision is to improve the physical, mental and emotional health and well-being of children and young people from conception to adulthood. The aim of the PSA is to improve the health and well-being of children and young people. This PSA is supported by six indicators. There is a named officer within the Department responsible for each of these indicators who is supported by a lead analyst. Performance against the indicators is monitored quarterly within the Department as part of its internal PSA performance reporting.

9. For this PSA, we have concluded that the indicators selected to measure progress are consistent with the scope of the PSA and afford a reasonable view of progress. However, the indicators relating to health are limited to obesity and mental health only and may not give a full view of health improvements in children and young people.

10. Figure 2 summarises our assessment of the data systems:

Figure 2: Summary of assessments for indicator data systems

No	Indicator	Rating
1	Prevalence of breast feeding at 6-8 weeks.	RED (Systems)
2	Percentage of pupils who have school lunches.	AMBER (Disclosure)
3	Levels of childhood obesity.	GREEN (Disclosure)
4a	Child and adolescent mental health services (CAMHS)	GREEN (Fit for purpose)
4b	Emotional health and wellbeing	AMBER (Systems)
5	Parents' experience of services for disabled children and the 'core offer'.	AMBER (Disclosure)

11. The Department has worked to integrate the above six indicators within this PSA into its operational and performance management activities, for instance by integrating them into its business plan and performance reports.

12. The Department has a Data Services Group, chaired by its Head of Profession for Statistics. This Group acts as a central point within the Department for the review of the data systems underpinning the majority of the Department's PSAs.

13. The Head of Profession for Statistics has day to day responsibility for data quality issues, with direct access and accountability to the Department's Accounting Officer as required.

14. The Department's Director Generals are responsible for data quality in their respective areas of activity and take a proactive role in promoting high quality performance information, for example through the review of indicator definitions and involvement in the design of data systems. Furthermore, the Department's relevant members of staff receive training within this area appropriate to their roles, with regular reviews of their performance management needs.

15. The Department has formal mechanisms for identifying and assessing areas of risk and reporting these to its Performance Board. The Department's risk management processes include consideration of issues related to its PSAs.

16. The Department undertakes internal monitoring and analysis in respect of its performance against its PSAs and the underlying indicators which support them, including the preparation of detailed reports which set out (per indicator): current performance, significant risks to performance and further action to be taken in order to mitigate the risks identified and to further achieve the Department's objectives. The Department reports performance against its PSAs to its Board on a monthly basis.

17. Full performance is reported externally twice a year in the Department's Autumn Performance Report and the Departmental Annual Report.

18. Our main conclusions on the Department's overall arrangements with respect to the PSA and the indicators that it encompasses are as follows:

    - The Department is currently in the process of developing a Data Quality Strategy. This document will be used to codify its overall approach to data quality, the roles and responsibilities of officers involved in data collection, data analysis and reporting. This document will then be used as the basis for ensuring data quality is embedded throughout the Department.

    - Quality control processes are undertaken either by individual Data Owners (officers responsible for data compilation), who complete these checks on their respective indicator, or through the Data Services Group). However the Department does not have a standardised quality control methodology which can guide and inform Data Owners on the processes which they must follow to ensure that data is of the required quality prior to it being used for the calculation of indicators. For example some Data Owners undertake reconciliation checks to ensure data which is transferred across IT systems is consistent; however this process may not be undertaken by another Data Owner for a data system which has a similar IT element.

    - Performance against the Department's PSAs reported within the published 2008 Autumn Performance Report contained performance reporting errors. These errors were identified after publication and corrected in subsequent versions. They were primarily due to performance data not being cleared for publication by the Data Owner. We were informed by Data Owners that they were not

aware that the data which they were producing would be featured within the Autumn Performance Report. A revised process has been implemented for the publication of performance data for the 2009 Autumn Performance Report which is intended to ensure that data reported is accurate and has been authorised for publication by the Data Owner.

- The Department has agreed measurement annexes for all of its PSA indicators, setting out the definition of the indicator and the data sources to be used. The current National Indicator Set (NIS) was introduced following the Government's Comprehensive Spending Review 2007. In the majority of cases in respect of indicators defined through the NIS, a target which measures performance has not been set. However we noted that in some cases, internal targets have been set and performance reported to the Department's Board.

- The Department does not in all cases have detailed written procedure notes in place explaining how each indicator is to be calculated and how any outliers or missing data are to be addressed. While the Department's current procedures are in most cases robust, the fact that they are not all recorded formally may make it difficult for the Department to ensure the comparability of data over time, particularly if responsibility for the calculation of performance against a given indicator is passed to a different member of staff. Where this finding has implications for individual indicators, we explore it in the next section of this report. We recommend that for each indicator the Department develops formal procedure notes setting out how the indicator is to be calculated and reported, so that this can be undertaken consistently over time and by different members of staff.

- The Department's Data Services Group has a remit to ensure robust processes are in place over the Department's data collection processes. However we noted that in some instances there are data streams which are used to compile indicators which are not reviewed by the Data Services Group. This occurs in some cases where data is provided directly to a Data Owner by another government body or an external contractor. This means that data which is used to compile indicators has not undergone an independent review to ensure it is of the required quality to support the indicator calculation.

Assessment of indicator set

19. In undertaking the validation we reviewed the documentation associated with the PSA and considered whether the indicators selected to measure progress are consistent with the scope of this PSA. We conclude that the indicators selected afford a reasonable view of progress. However, the indicators relating to health are limited to obesity and mental health only and may not give a full view of health improvements in children and young people.

Findings and conclusions for individual data systems

20. The following sections summarise the results of the NAO's examination of each data system.

Indicator 1: Prevalence of breast feeding at 6-8 weeks

21. The data systems underpinning this indicator are managed by the Department of Health. Unless stated, 'the Department' refers to the Department of Health.

Conclusion: RED (Systems)

22. In our 2009 validation review (report reproduced below) we noted significant weaknesses in the data system with respect to data quality and completeness. The Department set a target of receiving data which covers 85 per cent of children in order to have sufficient breastfeeding prevalence figures. At the time, the most recent figures showed that only 52 of 152 PCTs (34 per cent) had achieved 85 per cent coverage.

23. Since that point, the Department has made considerable progress in improving the coverage of the data. The latest data set available was the 2009-10 Quarter 3 data, published in February 2010. This showed that 109 of 152 PCTs (72 per cent) met the data quality requirements for breastfeeding prevalence.

24. Whilst we still consider that this level of coverage still presents significant risks to the quality of the data, we recognise the significant progress the Department's has made in the period since our last review.

25. The specification of the system is broadly appropriate for collection of breastfeeding data. However, there are currently significant issues surrounding the operation of the data system relating to data quality and completeness of the population. The Department has yet to set a baseline and there has been no reporting of progress against the indicator. The Department acknowledged these issues in the Department of Health Autumn Performance Report 2008.

Characteristics of the data system

26. Information on prevalence of breastfeeding is recorded at the infant 6 to 8 week health check carried out by a GP or health visitor. Feeding behaviour is recorded in the parent-held, Child Health Record ('Red Book') and a copy of the results is transferred onto the local GP's computerised child health systems. Primary care trusts (PCTs) are responsible for obtaining the data from the local systems within the relevant population and submitting quarterly returns to the Department within the Vital Signs Monitoring Return.

Findings

27. There is a lack of uniformity and consistency in the recording of breastfeeding information across different PCTs. Each PCT publishes its own version of the 'Red Book' and while the content is broadly the same, the formats can differ, with some

PCTs requiring only a Yes/No response. This prompted the Department to obtain detailed information from PCTs as to how breastfeeding data was currently recorded and the different variants in use were mapped against the format to be used in the local delivery plan returns to the Department (i.e. feeding occurs 'totally', 'partially' or 'not at all'). We are satisfied that the guidance and mapping ensures that data will be submitted in a standard format. PCTs not recording status as 'totally', 'partially' or 'not at all' have been encouraged to amend their 'Red Books' to match these definitions as soon as is practically possible.

28. For PCTs not currently collecting data through a choice of three options that can be translated into 'totally', 'partially' or 'not at all', the Department will consider returns to be incomplete and not capable of being used for reporting purposes. In the second quarter of 2008-09 this affected 4 PCTs (an improvement from 8 in quarter one).

29. The performance measure is clearly defined with the numerator being the number of infants 'totally' and 'partially' breastfed over a denominator based on the number of children who should have attended a 6 to 8 week health check. PCTs must also supply figures relating to the number of children who did not attend a health check and the number of children who attended a health check but breastfeeding status was not recorded. From these figures a coverage percentage can be obtained. For the Department to be able to place sufficient confidence on the prevalence data, coverage must be at least 85 per cent of children expected to attend a healthcheck.

30. Unless PCTs meet the set coverage standards, their returns cannot be used to assess prevalence progress. The Department has implemented a number of initiatives to ensure PCTs meet the requirements of the indicator and there is evidence of improvement in coverage, but at the time of our review, data was not sufficiently robust to measure prevalence. In quarter two of 2008- 09, only 52 out of 152 PCTs achieved 85 per cent coverage. This was an improvement from the quarter one figure (45/152) of PCTs achieving the required coverage which is disclosed in the Department's Autumn Performance Report 2008.

31. The Department also performs further validation checks on the submitted data by carrying out consistency checks with other available data sources to corroborate the accuracy of the denominator. This includes maternity data and ONS live birth data. Any returns not passing the validation checks are rejected and not included in the prevalence indicator. In the second quarter of 2008-09 only 36 PCTs passed all validation and data quality checks as well as achieving the 85 per cent coverage, so the data is incomplete.

32. Other risks to data completeness have arisen from some PCTs being unable to extract the necessary data from the information systems within their GP population. The Department has made it clear that PCTs have a responsibility to submit accurate and complete data and must work with service providers in order to achieve this.

33. At the time of our review in 2008 there was no baseline data established from the PCT returns as data collection only started in April 2008. The Department intends to use fourth quarter data to set national baselines. Until actual baseline data is known in July 2009, any baseline data currently used to benchmark progress will be estimates derived from breastfeeding initiation rates and conversion factors based on statistics from the Infant Feeding Survey carried out in 2005. Definitions of success against the target will be set once the baseline setting process has been completed.

34. No reporting of progress against the PSA has yet taken place. Quarterly prevalence figures, broken down by PCT, are published on the Department's website and suitable reference is made to limitations in data quality and completeness. The technical note could be updated to include a link to such outturn data which may aid the reader when progress is reported in the future.

Indicator 2: Percentage of pupils who have school lunches

35. The data systems underpinning this indicator are managed by the Department for Education (formerly the Department for Children. Schools and Families) - DfE. Unless stated, 'the Department' refers to the DfE.

Conclusion: AMBER (Disclosure)

36. We have concluded that the data system underlying this indicator is broadly appropriate, but the Department had not explained fully the implications of limitations that cannot be cost-effectively controlled in its 2009 Autumn Performance Report. These limitations include the difference in coverage between local authority and non-local authority school meal provision and the consistency application of methodology between secondary schools. We note the Department and the School Food Trust are taking steps to improve the impact of these limitations.

Characteristics of the data system

37. The indicator is defined under the National Indicator Set (NIS 52) 'Take up of school lunches'.

38. School lunch take up refers to the number or percentage of full-time pupils on roll at maintained primary, secondary or special schools who have a lunch at school that is provided either by the school or the local authority. From April 2009 the scope has been widened so that local authorities have been required to collect data from all schools within the area. School food must meet standards which have been set in legislation and which require all food provided by schools to be healthy.

39. The data used to measure the number of school meals consumed is derived from an annual survey developed by the Schools Food Trust in collaboration with the Local Authorities Caterers Association (LACA) and administered by the School Food Trust. The survey covers all local authorities in England.

40. In the 2009 survey, respondents were asked to provide information on the number of meal equivalents served in schools and the average number of pupils on roll from April 2008 - March 2009. The results were then extracted and analysed by the School Food Trust to determine a percentage of pupils having school lunch in that year.

41. For the 2008-09 figures primary school take up was calculated by dividing the average number of meals served per day (total number of meals served – paid and free – divided by the number of trading days) by the average number of pupils on roll at school during the period, expressed as a percentage. Calculation of take up in secondary schools is slightly more complicated. Take up is therefore calculated using till receipts divided by value of a free school meal.

42. Turnover from mid-morning breaks was included correctly by some local authorities but was excluded by others. The Schools Food Trusts intends that improvements to the questionnaire design for 2010-11 will address this issue.

43. Progress in relation to PSA 12 targets for 2009-10 is defined as an increase in take up of school lunches of 1.7 per cent or more in the primary sector and 1 per cent or more in the secondary sector compared with the 2008-09 baseline.

Findings

44. Originally, 2005 data was reported on as baseline for this indicator. However lack of consistency between local authorities in 2005-06 and 2006-07 resulted in a standardised process being implemented in 2007-08. The 2007-08 response rate using the standardised methodology was limited (to around 55 per cent of local authorities) and therefore it was decided that the 2008-09 data would be used as the new baseline and the target adjusted to reflect this.

45. Clear guidance is provided to local authorities for completing the standardised survey and 100 per cent checking is undertaken by the School Food Trust to ensure that data feeding into the final calculations agree to survey responses and are comparable with previous years. The School Food Trust has agreed protocols in place with data providers in the local authorities for each data point underpinning the indicator. In 2008-09 coverage of reporting was 93 per cent overall in the primary and special sector (99 per cent from local authority catered or contracted provision and 73 per cent from non-local authority catered provision) and 74 per cent overall in the secondary sector (96 per cent from local authority catered or contracted provision and 65 per cent from non-local authority catered provision).

46. The system is reasonably specified for the purpose of measuring the number of school meals purchased annually and therefore the number of pupils who have school lunches. The Department has made changes to improve coverage and comparability in calculating take up data for 2008-09 by standardising the calculation across all local authorities and including private sector caterers who were previously not involved. The Department has regular contact with the School Food Trust.

47. The Department has explained the implications of limitations that cannot be cost-effectively controlled in the statistical first release. Reference should, however, also be made in the Department's performance reports.

Indicator 3: Levels of childhood obesity.

48. The data systems underpinning this indicator are managed by the Department of Health. Unless stated, 'the Department' refers to the Department of Health.

Conclusion: GREEN (Disclosure)

49. The data system is appropriate for the purposes of measuring the childhood obesity target. However, the methodology for the survey which is used has certain limitations, such as the need for weighting for non-response and relatively small sample sizes. It is unlikely that such limitations can be mitigated or cost effectively controlled but they should be adequately disclosed. A baseline has been set using estimated data, but the Department has not reported progress against the target in the Autumn Performance Report published in December 2008.

50. The Department's 2009 Autumn Performance Report notes that subsequent to our 2008 validation review (reproduced below) the Department's NHS Information Centre (IC) identified an error in the programme used by the IC's contractor to allocate children to the BMI categories of obese and overweight which meant that some children were incorrectly included in the healthy weight category. The 2009 Autumn Performance Report states that these errors have now been corrected.

Characteristics of the data system

51. The data system for this target is the annual Health Survey for England (HSE), run by the NHS Information Centre. The survey is part of an overall programme of surveys designed to provide regular information on the nation's health. It is carried out under contract by the Joint Survey Unit of the National Centre for Social Research (NatCen) and the Department of Epidemiology and Public Health at University College, London.

Findings

52. The PSA target aims to reduce the rate of increase in obesity in children under 11 years old over the 2007 CSR period. This is in the context of a wider national target that aims to reduce the rate of overweight and obese children to 2000 levels by 2020. A forecast trajectory has been derived in order to assess progress against the 2020 ambition and for the Department to be on trajectory, the prevalence of child obesity in under-11s needs to be a maximum of 18.1 per cent by 2011.

53. The HSE was not specifically designed for the purpose of the target. Nevertheless the data collected is aligned and appropriate to the indicator. The survey focuses on a different demographic group each year but children have been included each year since 1995.

54. The survey fieldwork comprises an interview and nurse visit. Controls in place for capturing, transferring and maintaining the data are effective. The computer systems include queries of any unlikely height or weight measurements which are taken using appropriately calibrated equipment by experienced staff.

55. The number of children covered by the survey is set at 4,000 but in certain years booster samples are applied to increase this number. This affects the survey precision estimates from year to year. For 2007, the latest HSE figures available, the sample size was slightly over 7,500 children.

56. The sample is weighted to adjust for non response (in 2007 13 per cent of children in the survey did not have their weight measured) and the probabilities of selection since a maximum of two children are included in each household.

57. There is a risk that parents and carers most likely to withhold permission for children to be measured are those who expect their children to be classed as obese, leading to an under-recording of obesity. However, the Department has compared responses to related questions (e.g. on diet, physical activity) between those whose weight was measured and those whose weight was not measured and no statistically significant differences were observed.

58. An estimated 2008 baseline has been included in the Autumn Performance Report 2008. However the Department has yet to report progress against the target as the data is not yet available. The HSE is published on the NHS Information Centre's website with full details of the survey methodology and limitations. Success of the overall target will be measured in 2011, taking into account the time lag in publication of the survey results.

59. The technical note could be updated to include website links to the survey results and methodology in order to aid the reader in the interpretation of future results, and the Department should ensure that when progress against the target is reported such links are also included.

Indicator 4a: Child and adolescent mental health services (CAMHS)

60. The data systems underpinning this indicator are managed by the Department of Health. Unless stated, 'the Department' refers to the Department of Health.

Conclusion: GREEN (Fit for purpose)

61. Our 2008 validation report (reproduced below) noted that technical guidance to PCTs shows how the scores in the CAMHS online questionnaire should be applied, but recommended that this could be included in the externally published technical note guidance. Guidance is now available for one of the four proxy measures used for this indicator on the Department for Education's (formerly DCSF) website. Detailed guidance for the other three proxy measures is currently being developed. The Department for Children, Schools and Families had in its 2009 Autumn Performance Report provided baselines for both the primary care trust and local authority elements of the indicator.

62. The data system is well established and is capable of providing adequate information that is fit for the purpose of reporting against the indicator for the comprehensive CAMHS element.

Characteristics of the data system

63. The data system comprises three elements; two questionnaire based measures overseen by the Department for Children, Schools and Families which are still in development, and an assessment of comprehensive CAMHS provision overseen by the Department of Health.

64. For CAMHS, the primary data system is a mapping system designed and operated by the University of Durham (CAMHS mapping). Each CAMHS local authority provider completes an online questionnaire with details including team provision, function, setting, staffing and usage. The responses are mapped to provisions of levels of service. The indicator will show whether more local authorities attain the maximum score for service delivery.

65. For the purposes of reporting against the PSA, Primary Care Trusts provide returns to the Department of Health through the UNIFY2 system. We have separately reviewed controls over input to, and maintenance of, data in the UNIFY2 system and are satisfied that these are robust. The returns are based on CAMHS provision, using information drawn from the mapping tool, in order to provide a one to four score rating on the availability of four key strands of CAMHS:

    - emergency CAMHS;
    - services for those with learning disabilities;
    - services for 16-17 year olds; and
    - joint commissioning of early intervention support services.

Findings

66. The Durham data collection system was designed to capture the necessary data for measuring progress against the 2002 PSA target, plus a number of other aspects of mental health provision. Advice was taken from Department of Health statisticians, and the University of Durham Centre for Public Mental Health, as acknowledged experts in the field, were engaged to design the systems.

67. The mapping systems and associated controls are administered by individuals with the requisite technical and academic expertise to fulfil these functions.

68. The target looks at the attainment of a comprehensive CAMHS service by each PCT and local authority. An aggregated score of 16 across the four key strands is deemed to be a comprehensive service. Technical guidance to PCTs shows how the one to four scores should be applied. This could be extended to be included in the external technical note guidance.

69. There are limited validation checks to ensure that performance is not overstated, mainly by assessing the degree to which performance can be matched to coterminous local authority reporting against the same four strands of service.

70. The Department has reported baseline figures for PCTs in the Autumn Performance Report 2008.

Indicator 4b: Emotional health and well-being

71. The data systems underpinning this indicator are managed by the Department for Education (formerly the Department for Children. Schools and Families) - DfE. Unless stated, 'the Department' refers to the DfE.

Conclusion: AMBER (Systems)

72. We have concluded that the data system underlying this indicator is broadly appropriate, but there remain risks around standardisation of data collection. The Department has put improvements in place for subsequent surveys. Disclosures in the departmental annual report could be improved regarding the age range covered by the surveys.

Characteristics of the data system

73. This indicator is defined under the National Indicator Set (NI 50). The data for this indicator is collected by a pupil perception and experience survey called "Tellus". The first Tellus survey was delivered to a handful of local authorities in 2006 by Ofsted before being developed as a national survey by Ofsted with support from the Department. The subsequent waves of the Tellus survey (Tellus2 and Tellus3) were delivered by Ofsted in 2007 and 2008 respectively with assistance from participating local authorities. The survey reported in the 2009 Autumn Performance Report was Tellus3.

74. Tellus is a quantitative self-completion online survey designed to gather children and young people's views on their life, school and local area. The survey is aimed at children and young people in Years 6 (age 10-11), 8 (aged 12-13) and 10 (aged 14-15). It is delivered in schools and the sample includes mainstream primary and secondary schools, academies, special schools and pupil referral units.

75. Ofsted provided the Department with data from Tellus3 to so it could calculate the National Indicator performance measures which were published via a Statistical Release in January 2009.

76. In developing the national survey Ofsted and the Department sought specialist advice to develop the survey methodology and questionnaire content. This work concluded that a sample of children and young people in years 6, 8 and 10 would provide a representative view of children and young people. The questionnaire content was cognitively tested with children in years 6, 8 and 10. The specific years were chosen in order to give a large and broad enough response level so as to reduce the statistical margin of error (+/- 1.2 per cent) at the 95 per cent confidence level.

77. Ofsted was responsible for verifying that sufficient data had been collected and was also responsible for weighting responses in order to obtain the desired cross-section of responses by school type, gender and eligibility for free school meals. The data

was then provided to the Department to calculate the National Indicator performance measures.

78. Children's emotional health is defined in the PSA delivery agreement as the quality of their relationships with family and friends. To demonstrate good relationships, children must respond 'True' to the question on having one or more good friends, and respond 'True' to the question on being able to talk about worries with at least two or more of the following:

    - mum or dad;
    - friends; and
    - an adult other than mum or dad.

Findings

79. Two versions of the Tellus3 survey were developed, one for primary school children and the other for secondary school children. A standard question set was used for each questionnaire, with appropriate controls in place, such as clear instructions to respondents, standardised answers to respond to questions by respondents and restrictions on the level of assistance that can be given to respondents. This would help ensure that the data collected was robust, reliable and comparable.

80. Validation checks (for example on school year and age) were carried out on the data by Ofsted to check that all responses fell into acceptable ranges. The responses from the survey were also weighted to ensure that the data for a local authority was representative of the population of children within that area, in terms of gender and proportion of children eligible for free school meals, as a proxy measure for deprivation.

81. We noted that five local authorities chose not to participate in the Tellus3 survey and in total 148,998 children and young people from 3,113 schools in England took part in the survey. Nationally the response rate was sufficient for the departmental indicator to be calculated and the confidence level to be met.

82. Responsibility for the Tellus survey transferred from Ofsted to the Department in 2008 and the next wave of the survey, Tellus4, was delivered by the National Foundation for Educational Research (NFER) on the Department's behalf. A number of key changes were made to the design and delivery of the survey with the aim of improving the robustness of the data and confidence in its use. These changes included a dedicated website designed to support all aspects of the survey, a streamlining of the administrative and management processes and more detailed guidance to schools to help ensure consistent delivery.

83. The Tellus4 survey data differs from that of Tellus3 for a number of reasons. Firstly, responses were weighted by gender, year group and the Income Deprivation

Affecting Children Index scores which the Department considered to be a better measure for deprivation rather than the previous measure of free school meal eligibility. In addition to improve response rates for the Tellus4 survey, the timing was changed from the Summer term in 2008 to the Autumn term in 2009. As a result of this timing change and other improvements made, the Tellus4 survey achieved 253,755 individual responses in 3,699 schools with only one local authority choosing not to participate – an improvement of over 100,000 responses from Tellus3.

84. The Department re-weighted the Tellus3 data and recalculated the Tellus3 National Indicators to aid comparability. The National Indicator performance measures for 2009 (Tellus4) and information of the re-weighted Tellus3 data were published in a Statistical Release on 11 February 2010.

85. There remains a risk that collection methods can vary between schools and areas, for instance children being asked to do the survey in isolation in some schools or as a group in others. No specific assessment has been made by the Department of the risks to standardisation of collection. The age range covered by the Tellus3 survey was not disclosed in the 2009 Autumn Performance Report.

86. The Department has commissioned an independent evaluation of the Tellus4 survey. The evaluation was undertaken as a small scale, targeted piece of worked aimed at providing an insight into the delivery of the Tellus4 survey by schools and evaluating the improvements made to Tellus4. The Research report will be published by the Department later in the year.

Indicator 5: Parents' experience of services for disabled children and the 'core offer'.

87. The data systems underpinning this indicator are managed by the Department for Education (formerly the Department for Children. Schools and Families) - DfE. Unless stated, 'the Department' refers to the DfE.

Conclusion: AMBER (Disclosure)

88. We have concluded that the data system underlying this indicator is broadly appropriate, but includes limitations that cannot be cost-effectively controlled. While the Department has disclosed these limitations in the Statistical Release or published research reports they should also be explained in its performance reports.

Characteristics of the data system

89. This is a new indicator which forms part of the performance management arrangements aimed at improving the quality of services for disabled children. The indicator is defined under the National Indicator Set (NI54). Disabled children's services are also one of the Department of Health's 'vital sign' indicators under Tier 3 of the NHS Operating Framework 2010-11 (VSC33) ie the response to this national priority is to be determined locally and performance managed by Strategic Health Authorities. The national level indicator and local level indicators for 30 pilot authorities was produced in 2008-09. And in 2009-10 a second national score was produced, and local level scores calculated for the majority of local authorities and primary care trusts.

90. The data system underpinning the indicator is a national survey of parents and carers of disabled children within each local authority and Primary Care Trust which is conducted under contract by a market research company. The survey is carried out via a two-stage postal approach. Parents and carers of disabled children from the full spectrum of disabilities, difficulties and health conditions are identified via a screener sent to households of children sampled from the National Pupil Database (children with identified special educational needs are over-sampled). These identified parents are then sent a detailed questionnaire. From 2009-10 onwards, a panel element was introduced, so that the sample is a combination of previous respondents that have been sent a new questionnaire and new respondents identified through the screening process described above.

91. The survey captures views of three broad services (health, education and care and family support) against each of the five core offer standards (information, transparency, assessment, participation and feedback) set out in the Aiming High for Disabled Children report. Responses are used to identify an 'acceptable level' of experience of the relevant services in the past twelve months. Respondents who had not had experience of relevant services were excluded from the calculation of the sub-indicator. The survey is designed to distinguish significant changes; at

national level significant change in the overall national indicator is two or more points. The survey was subject to a feasibility study. In 2008-09 scores were created at national level (from responses received across all local authorities nationally) and 30 local authorities and 21 primary care trusts who had chosen the national indicator as part of their local area agreements or as a local target. From 2009-10 onwards the survey is being implemented across all local authorities and primary care trusts.

92. Data is collected and managed by the contractor and then submitted to DCSF in electronic form. The contractor undertakes most of the analysis, DCSF identifies outliers in both the overall indicator and underlying sub-indicators. The contractor has provided DCSF with a risk assessment and provides progress updates.

93. A Steering Group has been set up to oversee the survey and includes representatives from the DCSF, the market research company, stakeholders (including local authorities and primary care trusts) and research groups.

Findings

94. The Department aims to receive 200 returns from each area to ensure that overall scores are robust enough for assessment although this may be difficult when the cohort of relevant parents and carers is small. There is no complete record of disabled children to sample from. The two stage approach based on the national pupil database was identified as the best option available to identify relevant parents and carers.

95. Publication of the 2009-10 figures was delayed owing to data quality issues. The quality assurance process found that individual survey scores had been misallocated, children were allocated to the local authority of the school that they attended rather than the local authority in which they were resident. Similar issues also affected some of the published scores for the 30 pilot local authorities and 21 PCTs in the 2008-09 survey. National overall and sub-indicator scores for 2008-09 remain unchanged. However, some of the overall and sub-indicator scores for local authorities and PCTs were revised. This was disclosed in the Statistical Release.