Review of Data Quality Arrangements

City of York Council

Audit 2007/08

April 2009
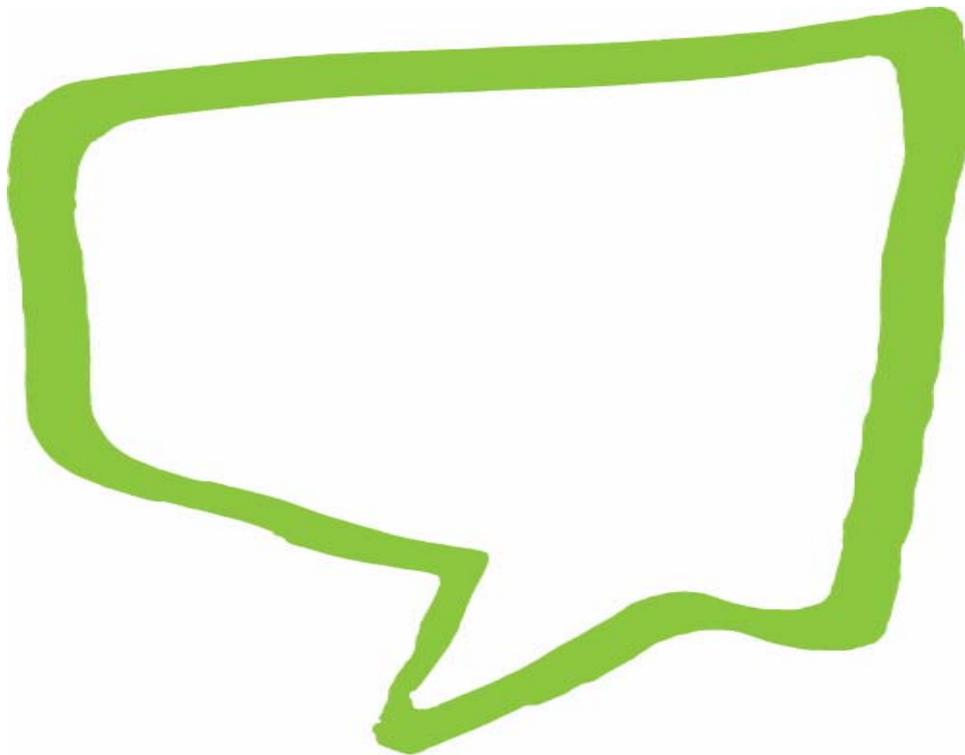
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Status of our reports

The Statement of Responsibilities of Auditors and Audited Bodies issued by the Audit Commission explains the respective responsibilities of auditors and of the audited body. Reports prepared by appointed auditors are addressed to non-executive directors/members or officers. They are prepared for the sole use of the audited body. Auditors accept no responsibility to:

- any director/member or officer in their individual capacity; or
- any third party.

Introduction

1 The purpose of this report is to summarise the findings from our work on data quality for 2007/08.

2 Auditors' work on data quality and performance information supports the Commission's reliance on performance indicators (PI) in its service assessments for comprehensive performance assessment (CPA).

3 Our work on data quality is complemented by the Audit Commission's paper, 'Improving information to support decision making: standards for better quality data'. This paper sets out standards, for adoption on a voluntary basis, to support improvement in data quality. The expected impact of the Audit Commission's work on data quality is that it will drive improvement in the quality of local government performance information, leading to greater confidence in the supporting data on which performance assessments are based.

Scope of our work

4 We have followed the Audit Commission's three-stage approach to the review of data quality as set out in Table 1.

Table 1   Data quality approach

Stage 1	**Management arrangements**
	A review using key lines of enquiry (KLOE) to determine whether proper corporate management arrangements for data quality are in place, and whether these are being applied in practice. The findings contribute to the auditor's conclusion under the Code of Audit Practice on the Council's arrangements to secure value for money (the VFM conclusion).
Stage 2	**Analytical review**
	An analytical review of 2007/08 BVPI and non-BVPI data and selection of a sample for testing based on risk assessment.
Stage 3	**Data quality spot checks**
	In-depth review of a sample of 2007/08 PIs most of which come from a list of specified BVPIs and non-BVPIs used in CPA, to determine whether arrangements to secure data quality are delivering accurate, timely and accessible information in practice. For 2007/08 PI spot checks, the Audit Commission specified that it is compulsory to review two housing benefits PIs at all single tier and district councils as a minimum.

5 As this is the third year of applying this approach to data quality, we tailored our work to focus on the key changes and actions taken to address previously identified weaknesses and recommendations.

6 In addition to the specified indicators at stage 3, we reviewed two performance indicators that are not on the list of specified indicators (BVPI 102 and BVPI 215). This is because we have previously identified problems with the Council's arrangements for ensuring the quality of the underlying data for these indicators.

Summary conclusions

Summary conclusions

Stage 1 – Management arrangements

7   The Council's overall management arrangements for ensuring data quality are demonstrating adequate performance.

8   The Council can show that it is now taking effective action to address key challenges identified in our previous data quality reports, particularly relating to the lack of corporate profile and commitment to data quality.

9   The inclusion of data quality as a key project within the Council's Single Improvement Plan together with the active engagement of a Chief Officer level champion and the development of the monthly corporate performance dashboard has provided:

- a renewed focus on the quality of underlying data; and

- fresh stimulus to focus on longstanding weaknesses in the Council's corporate arrangements and particularly the lack of consistency in practice between individual directorates.

10   There is a clear programme of action with identified responsibility and timescales to develop Council arrangements which extends into 2008/09 and incorporates the results of our previous reviews. Arrangements exist to formally review and report progress to senior officers and at an operational level, the PIT team provides a mechanism to monitor and review data quality.

11   Since the period under review a data quality policy has been formally agreed and Directorate Management Teams (DMTs) have been formally engaged as part of the implementation process.

Stage 2 – Analytical review

12   Our analytical review work at stage 2 identified three specified indicators - BVPI 183b, BVPI 199 and BVPI 212 which fell outside expected ranges. In each case the performance improvement or decline were reasonably substantiated by evidence. All other specified BV and non-BV PIs fell within expected ranges.

Stage 3 – Data quality spot checks

13   A summary of the results of our spot check reviews including a comparison with the equivalent outcomes from our previous data quality reviews is shown in Table 2. A summary of the key findings from the individual indicator reviews is shown in Table 4.

Table 2   Summary of data quality spot check testing

Indicator	2007/08	2006/07	2005/06
Fairly stated as presented for audit	4 (66.7%)	4 (66.7%)	6 (66.7%)
Fairly stated after audit	1 (16.7%)	1 (16.7%)	2 (22.2%)
Reserved (unfairly stated)	1 (16.7%)	1 (16.7%)	1 (11.1%)
Total tested	6 (100%)	6 (100%)	9 (100%)

14 We found the majority of indicators to be fairly stated and found satisfactory and/or improvements in the compilation arrangements of several previously reviewed indicators including BV102 and BV215a. This is consistent with the largely positive findings from the recent Internal Audit spot check review of performance indicators.

15 However there remain long-standing problems with a small number of indicators which need to be resolved if the Council is to make progress in the assessment of its overall data quality arrangements. In particular for the third year in a row we found BV215b to be unfairly stated and reserved this indicator.

16 A number of themes are evident from those indicators where problems were identified and which are consistent with our findings from previous years. In particular:

- an absence of effective protocols or other arrangements for obtaining accurate and relevant data from external partners and the lack of adequate checking procedures (BV215b);

- a lack of source documentation to substantiate indicator values (BV78a, B78b and BV183b, BV212);

- incorrect categorisation of benefit claims and incorrect use of start and end dates (BVPI 78a and 78b); and

- ongoing difficulties with compiling specific indicators (BV215b).

17 The Council now has a clear framework for improving its arrangements for managing data quality which incorporates the key issues raised in our previous reviews. As a result our 2007/08 does no replicate or provide any additional recommendations relating to the Council's corporate arrangements. Our action plan which has been agreed by the Council focuses on the issues arising from our review of the detailed indicators from our stage 3 work (see Appendix 1).

Detailed findings

Management arrangements (Stage 1)

18 Overall, the Council's corporate arrangements for data quality are demonstrating adequate performance.

Governance and leadership

19 The importance and corporate profile of data quality within the Council has been developing during 2007/08 and onwards. In particular:

- data quality has been included as one of the projects featuring within the Council's single improvement plan (SIP) which targets action on key themes arising from external scrutiny;

- the Council has appointed a Chief Officer Data Quality Champion without Directorate responsibility for the Performance Improvement Team (PIT) to help promote and embed practice; and

- the Chief Executive has attended the Performance Officer Group (POG) meeting to emphasise corporate commitment to improving data quality.

20 There is a corporate procedure in place covering the quality assurance of annual performance indicator collection, validation and publication processes and evidence over time of ongoing development and improvement. Since the 2007/08 year-end arrangements have been incorporated within an overarching corporate data quality policy framework.

21 There is a clear programme of action with identified responsibility and timescales to develop Council arrangements which extends into 2008/09 and incorporates the results of our previous reviews. Arrangements exist to formally review and report progress to senior officers and at an operational level, the PIT team provides a mechanism to monitor and review data quality. Although data quality has not formally or systematically been considered within the risk management framework to date there is evidence of an increasing risk in the context of the accuracy of key strategic indicators.

22 Ownership and accountability for data quality is still developing within the organisation. In particular:

- data quality responsibilities are identified at corporate and directorate level and incorporated within job descriptions and targets for some relevant staff though this is not consistent across the Council;

- specific data quality policies and objectives are not consistently reflected within individual directorates and the extent to which arrangements have developed within directorates to date is varied; and

- there are longstanding problems with the accuracy and compilation of particular indicators which suggests ownership of data at service level remains a problem.

Policies

23 The Council' three stage data quality model covers arrangements for the collection, calculation and validation of data and is supported by detailed guidance. Since our review these arrangements have been formalised with the development and adoption of the Council's corporate data quality policy.

24 The Performance Officer Group (POG) is a key mechanism for ensuring procedures are applied consistently across the Council and includes representation from all directorates. However, the lack of consistency in roles and responsibilities and seniority of individual POG officers remains a longstanding weakness but is to be addressed following the roll-out of the data quality policy during 2008/09.

25 Data quality guidance and procedures are well defined and well established. Relevant documentation is readily accessible to users through the shared network ('V') drive and additional support is provided by the PIT team which continues to be well regarded by the POG officers we interviewed. Our review of relevant documentation shows that compliance with procedures and completion of pro-forma documentation is generally good though some gaps remain particularly in the quality of analysis of major variances in PI values.

Systems and processes

26 There are a variety of systems in place for all stages of the data collection process though these are not integrated within the existing performance management framework and vary between directorates. The existing QPR performance management system has not operated effectively or as intended and directorates have developed separate reporting processes. The Council is taking effective action to address identified weaknesses and is currently conducting an extensive review of IT performance systems and practice. Detailed testing of individual PIs by internal audit and ourselves has identified general improvement although ongoing problems with particular indicators indicate that ownership and accountability for data at operational management level is not yet fully embedded.

Detailed findings

27 System checks and other controls are in place for several key information systems though arrangements have not to date been consistently embedded across all directorates. System control arrangements have been a key feature of the Council's recent data quality policy and a framework of regular quality checks on all relevant information systems is planned from 2008/09 onwards. Security arrangements are in place including data back-up and access controls to maintain the integrity of key information systems.

28 The Council has identified the need to improve its arrangements for managing and securing the quality of external data. In particular:

- several relevant external partners are now represented at the Council's POG;

- arrangements for sharing partner data is a key theme within the Council's recently published data quality policy; and

- whilst there have been ongoing weaknesses in obtaining accurate and reliable data from external sources our 2007/08 detailed PI testing has identified some improvement in relevant arrangements for particular problem indicators, for example BVPI 102 and to a lesser extent BVPI 215.

People and skills

29 Roles and responsibilities exist within directorates to secure data quality through the POG officer structure and an effective support framework is provided by the PIT team. Training needs have been identified at POG meetings and job descriptions generally include specific reference to data quality though inconsistencies in roles, responsibility and seniority of POG officers remain.

30 Effective mechanisms to ensure training needs are identified and addressed consistently across directorates have still to be developed. The Council intends to carry out a data quality skills assessment during 2008/09 and use this as a basis for implementing a formal training programme for relevant staff.

Data use and reporting

31 There is a well established framework for monitoring performance data and managing performance which involves both members and officers. The implementation of the monthly corporate dashboard to highlight delivery against key Council objectives from December 2007 has helped sharpen the focus on performance and quality of the underpinning data. There is evidence that DMTs make effective use of PIs and management information to monitor performance including trend and forecast data. As in the previous year, there has been a general improvement in comparative BVPI performance in 2007/08 and evidence of improvement in key service areas including community safety and waste management.

32 All BVPIs are supported by full audit trails where applicable and checks are carried out by PIT staff to test material variations in indicator values. Our review found validation arrangements are generally satisfactory but previously identified weaknesses still remain. In particular we found:

- weak or unspecific explanations for some significant variances in indicator values;

- definitions have generally been appropriately used with fewer problems identified by detailed testing though specific issues remain to be addressed for example, BVPI 215b; and

- there are some good examples of pro-forma being used to ensure data checks are carried out and senior commitment is obtained prior to submitting data externally for example in LCCS, but no evidence that this is formally or consistently considered across the Council.

33 Data validation processes still primarily focus on year-end out-turn indicators although the Council is expecting to formally integrate data quality within the existing performance management framework during 2008/09. In-year validation procedures currently vary between individual directorates with good examples evident in HASS and LCCS.

Analytical review (Stage 2)

34 An analytical review of the following BVPIs was carried out. The findings, subject to the validation of a sample of PIs in stage 3 spot checks, are shown below.

Table 3   Analytical review findings

2007/08 Performance indicator	Assessment	Comment
BVPI 183b Average time in temporary accommodation hostels	Real performance decline	Growth in capacity has resulted in more placements with increase in complexity of case-mix
BVPI 199a & b Cleanliness of public places	Real performance improvement	Full year impact of improved cleansing methods, including use of barrows, introduced during 2006/07
BVPI 212 Average re-let times	Real performance improvement	Reduction in the number of void properties together with improvement in the void management process, including implementation of pre-termination inspections

35 All other PIs reviewed were found to be complete and within plausible and permissible values.

Data quality spot checks (Stage 3)

36 A number of PIs were reviewed using a series of detailed spot checks and audit tests. Our findings are shown below.

Table 4 Spot check findings

Performance indicator	Assessment	Comment
Housing Benefits Speed of processing new claims BVPI 78a	Fairly stated	We identified a number of errors in the PI, but, although some of these were high value, this did not lead to a materially mis-stated performance. However from the number of errors we identified it is clear that there are some significant issues for the council to address for this PI (and BVPI 78b). The key issues identified were that claims were included in the PI even though they were not new claims, they were actually changes in circumstance, and the start/end dates were being incorrectly identified/processed by benefits staff. The key issue for the council to address appears to be a training issue, to ensure that all benefit processing staff know how to categorise claims and identify the start and end dates of the processing correctly.
Housing Benefits Speed of processing change in circumstances BVPI 78b	Fairly stated	The issues were much the same as reported above for BVPI 78a. We identified that the reported PI included claims that were not actually changes in circumstances, and that the start/end dates were incorrectly identified/processed.
Housing Average time in temporary accommodation: hostels BVPI 183b	Fairly stated	Some management arrangements for this PI, particularly around quality checking, are weak and this has lead to errors in the calculation of the PI. Weaknesses exist in systems to collect and record data. An excessive amount of manual manipulation is needed to extract information from a number of different reports and computer systems in order to gather data and produce the PI.

Performance indicator	Assessment	Comment
		Detailed spot checking of manual records against computer records and the data used to produce the PI found some errors which required extended sample testing. However, it has been possible to correct all the errors found and amend the PI so that it is fairly stated.
Housing Average time to re-let Council Housing BVPI 212	Fairly stated	Management arrangements for the data collection for this PI are good, with a system of checks in place between the section producing the PI and staff producing and supplying the data. Systems and processes used to collect data and produce the PI are satisfactory. Some manual manipulation is needed to ensure that the correct data is used in the calculation but generally there are good audit trails to show where amendments have been made. There is a weakness in the audit trail ensuring that data excluded due to major works complies with the major works definition and that the major works completed date used in the PI calculation corresponds with the completion date of the major works by the contractors. In particular the department responsible for producing the PI do not routinely keep: • comprehensive records of work carried out under the definition of 'major works'; or • records of contractors work sheets showing the completion date of 'major works' to ensure it is excluding these items correctly from the PI calculation. However, further testing confirmed that 'major works' had been excluded correctly from the PI.

Detailed findings

Performance indicator	Assessment	Comment
Community Safety Speed in fixing street lighting BVPI 215a	Fairly stated	The Service has improved its system and processes used to collect data and produce this PI following our previous recommendations. Information is now collected and recorded on a bespoke database which has reduced the amount of manual manipulation needed. The database links to the council's street lighting asset register to help ensure that only relevant data is used to calculate the PI. However, a clearer audit trail is still needed to support the start date of the indicator as most of the faults are reported by telephone calls and there are no specific records kept of the call once it has been entered onto the database. Spot checking has shown the incorrect inclusion of a small number of lamps though the resulting error was not material.
Community Safety Speed in fixing street lighting by Distribution Network Operator (DNO) BVPI 215b	Unfairly stated	The system used to collect the data is not adequate. It does not include clear audit trails to be able to confirm relevant dates and lighting units. For example, for those faults reported directly to the DNO, there is no clear audit trail to be able to check the DNO fault back to the Council's asset register of street lighting to ensure that the light unit is of a type to be included in the PI. There is also no reliable and consistent audit trail to be able to cross check and verify the start date of those faults passed on to the DNO by the Council. Where the audit trail has allowed cross checks to be made, testing has shown that all start dates are incorrect. It has not been possible to check that the data from the DNO fits the criteria that should be included in the PI calculation.

Performance indicator	Assessment	Comment
Transport and Planning Passenger Journeys on buses BVPI 102	Fairly stated	The system and processes used to collect data and produce the PI are much improved since our last inspection of this indicator. Testing has shown that controls and checks are sufficient to ensure that relevant data is collected and the PI produced correctly. Data is collected from bus operators who complete a council generated pro-forma with relevant information needed to produce the PI. The pro-forma includes generally good information for bus operators about what data should be included, however clarification for operators about cross boundary journeys data is currently missing from the form.

37 The recommendations arising from our detailed review of the individual performance indicators are included below.

Recommendations
R1 Ensure refresher training is provided for benefits assessment staff on data collection for the relevant performance indicators.
R2 Develop a clear, easy to read one page desk aid for assessors to keep on their desks which summarises the rules around data collection for the performance indicator. This should: • provide guidance on which date should be used as the start date; and • include a list of scenarios which constitute a new claim, a change of circumstances and data that is disregarded from the calculation of the performance indicator.
R3 The service should enhance its quality assurance regime to: • increase specific quality checking on PI start dates; • check that the assessment has been classified correctly for the PI as new, change of circumstances or disregarded; and • ensure that the results are used to identify ongoing training needs for staff involved in the collection of data for the benefits PIs.
R4 Improve management arrangements for producing BVPI 183b by implementing sample quality assurance checks of data collected and paper records against computer records to ensure that the data meets the requirements for inclusion in the PI calculation.

Detailed findings

Recommendations	
R5	Ensure that major works worksheets and completion sheets are routinely collected by the team calculating BVPI 212 for each void being excluded due to major works and that the data is not amended until both documents have been received
R6	Strengthen arrangements for verifying the start date used in BVPI 215a calculation by: • keeping records of the date of faults being reported (through all channels including telephone, in writing, via 3rd party partners etc); • introducing management checks to ensure that the date the fault has been reported corresponds with the 'reported date' on the fault recording database; and • keeping records of management checks made against the above.
R7	Establish a clear audit trail for all repairs with the DNO to verify relevant dates used in the PI calculation by ensuring that: • the DNO records the Council's fault reference number and asset reference number on their fault recording database and subsequently on the data supplied to the Council; and • the Council obtains a DNO order number and records it on their database against their record of the fault.
R8	Liaise with the DNO to ensure timely and accurate submission of data for BV215b by establishing a formal arrangement specifying a regular date for receiving data.
R9	Ensure guidance is provided to bus operators on cross boundary journeys on the monthly data collection sheets to assist in the accurate completion of BVPI 102.

Appendix 1 – Action Plan

Page no.	Recommendation	Priority 1 = Low 2 = Med 3 = High	Responsibility	Agreed	Comments	Date
14	R1 Ensure refresher training is provided for benefits assessment staff on data collection for the relevant performance indicators.	3	Andrew Walmsley	Yes	A new revamped version of SSX3 will be out in June. New training will be designed and delivered including data collection and the link to NIs.	June 2009
14	R2 Develop a clear, easy to read one page desk aid for assessors to keep on their desks which summarises the rules around data collection for the performance indicator. This should: • provide guidance on which date should be used as the start date; and • include a list of scenarios which constitute a new claim, a change of circumstances and data that is disregarded from the calculation of the performance indicator.	3	Andrew Walmsley	Yes	This will be included in the above.	June 2009

Appendix 1 – Action Plan

Page no.	Recommendation	Priority 1 = Low 2 = Med 3 = High	Responsibility	Agreed	Comments	Date
14	R3 The service should enhance its quality assurance regime to: • increase specific quality checking on PI start dates; • check that the assessment has been classified correctly for the PI as new, change of circumstances or disregarded; and • ensure that the results are used to identify ongoing training needs for staff involved in the collection of data for the benefits PIs.	3	Andrew Walmsley	Yes	Benefits team will review QA process and will improve the feedback loop to identify training needs.	April 2009
14	R4 Improve management arrangements for producing BVPI 183b by implementing sample quality assurance checks of data collected and paper records against computer records to ensure that the data meets the requirements for inclusion in the PI calculation.	1	Kath Bonfield	Yes	No longer relevant as we no longer calculate this indicator. The existing data is data quality checked through the normal procedures.	January 2009
14	R5 Ensure that major works worksheets and completion sheets are routinely collected by the team calculating BVPI 212 for each void being excluded due to major works and that the data is not amended until both documents have been received.	2	Kath Bonfield	Yes	A new system has been set up to obtain documentation which is then verified and held for auditor.	January 2009

Page no.	Recommendation	Priority 1 = Low 2 = Med 3 = High	Responsibility	Agreed	Comments	Date
15	R6 Strengthen arrangements for verifying the start date used in BVPI 215a calculation by: • keeping records of the date of faults being reported (through all channels including telephone, in writing, via 3rd party partners etc); • introducing management checks to ensure that the date the fault has been reported corresponds with the 'reported date' on the fault recording database; and • keeping records of management checks made against the above.	1	Ricky Watson	Yes	These were completed 2 weeks are Audit checks were completed	January 2009
15	R7 Establish a clear audit trail for all repairs with the DNO to verify relevant dates used in the PI calculation by ensuring that: • the DNO records the Council's fault reference number and asset reference number on their fault recording database and subsequently on the data supplied to the Council; and • the Council obtains a DNO order number and records it on their database against their record of the fault.	1	Ricky Watson	Yes	These were completed 2 weeks are Audit checks were completed	January 2009

Appendix 1 – Action Plan

Page no.	Recommendation	Priority 1 = Low 2 = Med 3 = High	Responsibility	Agreed	Comments	Date
15	R8 Liaise with the DNO to ensure timely and accurate submission of data for BV215b by establishing a formal arrangement specifying a regular date for receiving data.	1	Ricky Watson	Yes	These were completed 2 weeks are Audit checks were completed	January 2009
15	R9 Ensure guidance is provided to bus operators on cross boundary journeys on the monthly data collection sheets to assist in the accurate completion of BVPI 102.	1	Sarah Milton	Yes	Completed	January 2009

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