

Part 5: Quality assurance and audit arrangements in relation to the Code of Practice

Introduction

- 5.1 Part 4 described how the QA Matrix can guide statistical producers in judging the amount of investigation and documentation that is necessary to adequately describe the assurance and audit arrangements of the administrative data. Part 5 relates the practices identified for the appropriate quality assurance of the data to the *Code of Practice for Official Statistics*. It also emphasises the importance of ensuring that the activities to assure the data are part of the producer's broader quality management practice and thinking.
- 5.2 The *Code* contains a variety of practices that reflect the need to determine and explain the nature and level of the quality of administrative data. Some are organisational aspects of the statistical producer body – for example, explaining its approach to quality management, and publishing quality guidelines. Others reflect the quality assurance arrangements adopted by statistical teams, and the importance of close working relationships with data suppliers. The practices are listed in Table 5.1 (at the end of the section).

Applying the Code

- 5.3 As illustrated in the practice model in Part 3, developing an understanding of audit arrangements for administrative data should be considered as part of a producer's overall approach to quality assurance. However, explaining the nature of these arrangements and their implications for the statistics does not necessarily require producers to release separate material from the supporting information currently published. Instead it would be most helpful to users for the information to be provided within existing quality material, with clear signposting between relevant documents.

(a) Quality Guidelines¹⁰

- 5.4 The *European Statistical System Quality Assurance Framework (ESS QAF)* highlights the need for published quality guidelines that set out how a statistical producer implements quality management. The guidelines should include a description of the statistical production processes and the methods used to monitor the quality at each stage of the process. Similarly the practice model in Part 3 of this report highlights the importance of providing insight into the data collection and operational circumstances in which administrative data are

¹⁰ Principle 4, Practice 4 of the *Code of Practice*

produced, as they may affect the quality of the underlying data and the statistics derived from them.

(b) Statement of Administrative Sources¹¹

- 5.5 The Statement of Administrative Sources (SoAS) requires producers to explain the audit arrangements for administrative data used for statistical purposes. Producers often provide a general statement reflecting the organisational approach to administrative data, with specific information provided for individual sets of statistics in their accompanying supporting material. As long as the signposting to the assurance and audit information is provided and is clear, this presentation of the SoAS is compliant with the *Code*.
- 5.6 Reviewing the assurance and audit arrangements for the administrative data and extending quality information will present a useful opportunity for producers to review the information provided in their SoAS. The SoAS can be used to explain the approach taken by groups of data collectors and suppliers (such as by NHS and Foundation trusts, local authorities and police forces) to assure themselves that the administrative data are both validated and their accuracy verified. These approaches may reflect the internal and external audit by the organisations themselves and their regulators. It may also describe (or signpost users to) the benchmarking comparisons by professional bodies, such as given by Local Government Association for local authorities on its Inform website¹².

(c) Quality Reports¹³

- 5.7 Statistical producers are also required to publish information about the quality and reliability of statistics to accompany the official statistics. The *ESS Handbook for Quality Reports* provides guidance to producers about the content of the guidelines. It recommends that these be based on the statistical output quality dimensions of the *ESS Quality Assurance Framework*: relevance, accuracy, comparability, coherence, timeliness and accessibility.
- 5.8 The ESS Handbook highlights that producers should ensure that the section on 'relevance' presents information about the organisational and operational circumstances surrounding the collection of the administrative data. These descriptions would be particularly helpful for users if they were based on a process map which illustrates the various elements of the data collection and supply process, and they should highlight the safeguards that are in place to minimise errors in data recording and processing. The section on 'accuracy' should provide information about the quality assurance and audit of the administrative data drawn from the investigations conducted by both the data

¹¹ Protocol 3, Practice 5 of the *Code of Practice*

¹² <http://www.local.gov.uk/about-lginform>

¹³ Principle 4, Practice 2 and Principle 8, Practice 1 of the *Code of Practice*

supplier(s) and the statistical producer. It would be good practice to provide specific quality indicators, such as rates of missing data and under-coverage. The process map could also be used to highlight the quality indicators.

Quality Management Actions

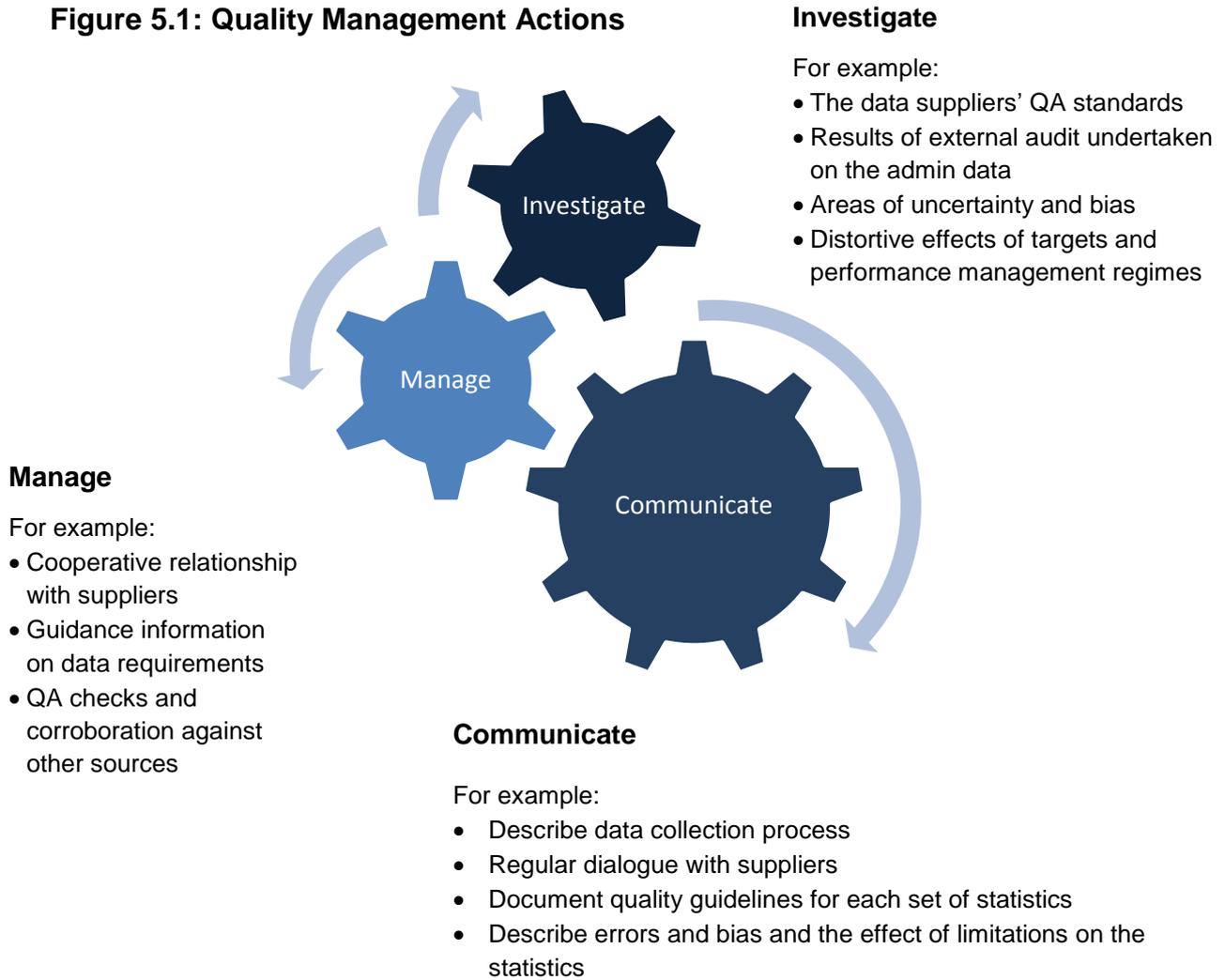
5.9 Statistical producers can use the maturity matrix (Part 4) to determine the level of detail required for specific sets of statistics, given their level of importance in informing decision making and the degree of concern about the accuracy of the underlying data. Having identified which maturity level is appropriate for each of the four practice areas, we recommend that producers carry out the following quality management actions:

- Investigate
- Manage
- Communicate

5.10 These represent three types of actions for assuring the quality of the administrative data and in documenting the findings. They draw on the practices highlighted in the four practice areas of the practice model. Producers should **investigate** – for example, the types of checks carried out by data collectors and data suppliers, as well as the operational circumstances in which the data are produced. They should also identify potential sources of bias in the production process. Producers should **manage** their relationships with the data suppliers – by establishing clear processes for data supply and for managing change. They should also maintain regular quality assurance checks of the data and use other data sources where possible to corroborate their findings. And producers should **communicate** clearly with their data suppliers and their users – to ensure a good understanding of the strengths and limitations of the administrative data.

5.11 As reflected by the cog diagram below (Figure 5.1), these are practices that are continuous and iterative, reflecting the ongoing use of the data and the dynamic nature of operational environments. Producers should not regard their review as a one-off event, but rather as a process that requires repeated evaluation, to understand the implications of changes and allow for the ongoing monitoring of the quality of the administrative data.

Figure 5.1: Quality Management Actions



Conclusion

5.12 This report highlights the importance of statistical producers gaining a fuller understanding of the administrative data that they use for deriving official statistics, of the circumstances in which the data are produced, and how they are tested and verified. We also emphasise that the inherent uncertainty in the data is communicated to the users of the statistics, to aid their use and interpretation of the statistics.

5.13 We recommend that statistical producers:

Recommendation 1:

Use the Quality Assurance Matrix, to determine the scale and scope of their investigations and documentation about the administrative data.

Recommendation 2:

Review their quality guideline statements, Statement of Administrative Sources, and quality reports for statistics based on administrative data, to ensure that users are informed about the circumstances in which administrative data are produced, of the steps taken to assure the data, and why they are satisfied that the data are sufficiently robust to be used for statistical purposes.

Recommendation 3:

In addressing recommendation 2, consider undertaking actions in line with the Quality Management Actions: investigate, manage and communicate, to identify and explain to users the nature of assurance and audit arrangements associated with the administrative data and the implications for the quality of the official statistics for the most likely uses of the data.

Table 5.1: Excerpts from the Code relevant to the assurance and audit of administrative data for each practice area

Principle or Protocol and specific practice number	Relevant parts of the practice	Areas of practice
Principle 4.1	Publish details of the methods adopted, including explanations of why particular choices were made	<i>1: Operational context & administrative data collection</i>
Principle 4.2	Ensure ... that users are informed about the quality of statistical outputs, including estimates of the main sources of bias and other errors	<i>1: Operational context & administrative data collection</i>
Principle 4.3	Adopt quality assurance procedures	<i>3: Suppliers' QA principles, standards and quality checks</i>
		<i>4: Producer's QA investigations and documentation</i>
Principle 4.4	Publish quality guidelines	<i>3: Suppliers' QA principles, standards and quality checks</i>
		<i>4: Producer's QA investigations and documentation</i>
Principle 4.5	Seek to achieve continuous improvement in statistical processes	<i>2: Communication with data suppliers</i>
		<i>3: Suppliers' QA principles, standards and quality checks</i>
		<i>4: Producer's QA investigations and documentation</i>
Principle 4.6	Promote comparability... by adopting common standards, concepts ... definitions, statistical units and classifications...	<i>2: Communication with data suppliers</i>
		<i>4: Producer's QA investigations and documentation</i>
Principle 4.7	Where time series are revised, or changes are made to methods or coverage, produce consistent historical data where possible	<i>2: Communication with data suppliers</i>
		<i>4: Producer's QA investigations and documentation</i>
Principle 6.3	Promote statistical purposes actively in the design of administrative systems in order to enhance the statistical potential of administrative records	<i>2: Communication with data suppliers</i>
Principle 6.4	Analyse the costs of proposed new data requirements (to data suppliers) against the potential benefits	<i>2: Communication with data suppliers</i>
Principle 6.5	Evaluate existing data sources and estimation techniques before undertaking new surveys	<i>2: Communication with data suppliers</i>
Principle 7.1	Ensure that statistical services have the	<i>2: Communication with data</i>

	staff, financial and computing resources to produce, manage and disseminate official statistics to the standards of this Code	<i>suppliers</i>
Principle 7.4	Monitor expenditure against work programmes and demonstrate effective stewardship of resources allocated to statistical work	<i>2: Communication with data suppliers</i>
Principle 7.5	Seek to balance quality (for example, accuracy and timeliness) against costs (including both costs to government and data suppliers), taking into account the expected uses of the statistics	<i>2: Communication with data suppliers</i>
		<i>3: Suppliers' QA principles, standards and quality checks</i>
		<i>4: Producer's QA investigations and documentation</i>
Principle 7.6	Ensure that appropriately skilled people are employed in the statistical production process.	<i>4: Producer's QA investigations and documentation</i>
Principle 7.7	Where administrative data are used for statistical purposes, follow the practices set out in Protocol 3	<i>4: Producer's QA investigations and documentation</i>
Principle 8.1	Provide information on the quality and reliability of statistics in relation to the range of potential uses, and on methods, procedures, and classifications	<i>1: Operational context & administrative data collection</i>
		<i>3: Suppliers' QA principles, standards and quality checks</i>
		<i>4: Producer's QA investigations and documentation</i>
Principle 8.2	Provide factual information about the policy or operational context of the official statistics	<i>4: Producer's QA investigations and documentation</i>
Protocol 1.4	Provide users with information about the quality of the statistics, including any statistical biases	<i>1: Operational context & administrative data collection</i>
		<i>3: Suppliers' QA principles, standards and quality checks</i>
		<i>4: Producer's QA investigations and documentation</i>
Protocol 3.2	Only base statistics on administrative data where the definitions and concepts are good approximations to those appropriate for statistical purposes	<i>2: Communication with data suppliers</i>
		<i>3: Suppliers' QA principles, standards and quality checks</i>
Protocol 3.3	Maximise opportunities for the use of administrative data, cross-analysis of sources and for the exchange and re-use of data, to avoid duplicating requests for information. Where possible, use common information technology and information management systems that facilitate the flow of information between producers of statistics	<i>2: Communication with data suppliers</i>
		<i>3: Suppliers' QA principles, standards and quality checks</i>
		<i>4: Producer's QA investigations and documentation</i>

Protocol 3.4	Ensure that no action is taken within the producer body, or public statement made, that might undermine confidence in the independence of the statistics when released	<i>2: Communication with data suppliers</i>
Protocol 3.5	<p>Prepare ...a Statement of administrative sources which identifies the following:</p> <p>a) The administrative systems currently used in the production of official statistics</p> <p>b) Procedures to be followed within the organisation to ensure that full account is taken of the implications for official statistics when changes to administrative systems are contemplated</p> <p>c) Information on other administrative sources that are not currently used in the production of official statistics but have potential to be so used</p> <p>d) Arrangements for providing statistical staff, whether inside the producer body or elsewhere, with access to administrative data for statistical purposes</p> <p>e) Arrangements for auditing the quality of administrative data used for statistical purposes</p> <p>f) Arrangements for ensuring the security of statistical processes that draw on administrative data</p>	<p><i>3: Suppliers' QA principles, standards and quality checks</i></p> <p><i>4: Producer's QA investigations and documentation</i></p>