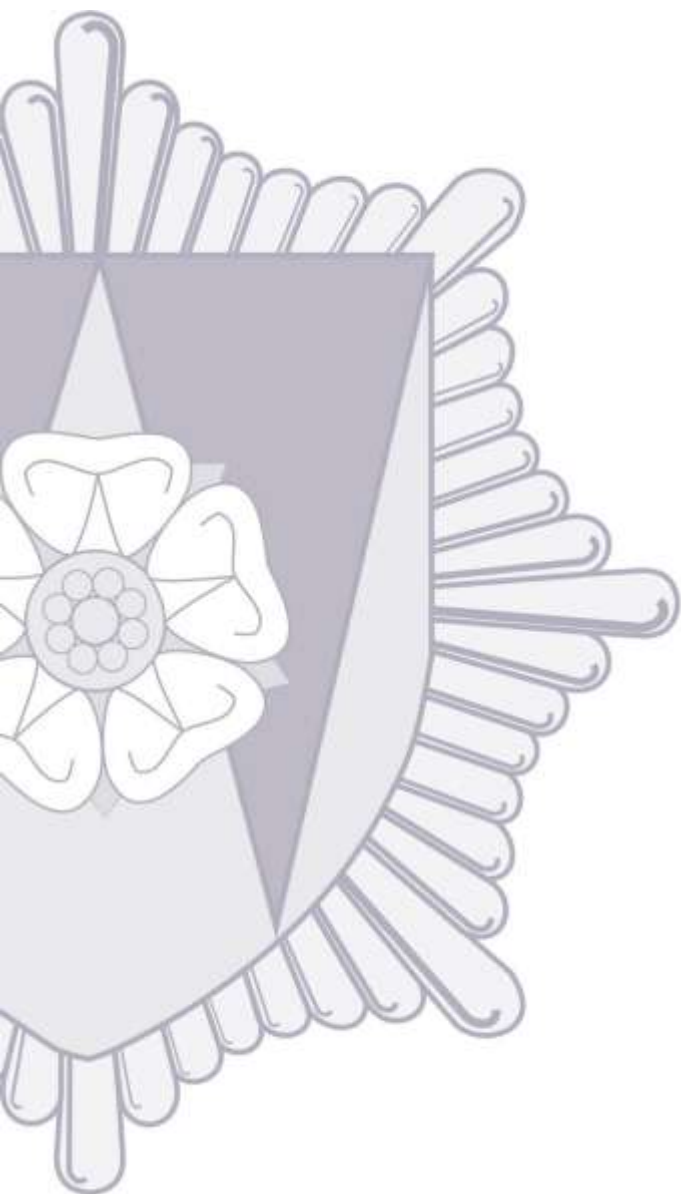


West Yorkshire Fire & Rescue Service

Data Quality Policy



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PREVENTING PROTECTING RESPONDING

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1 Introduction

All effective organisations measure their performance so that they know how well they are performing and to identify opportunities for improvement. Consistent, high-quality, timely and comprehensive information is a vital component to support good decision-making and improved service outcomes. It is essential that the performance information used to inform, manage and plan activities is accurate, reliable and comparable, both currently and over time.

External bodies are increasingly using performance information to assess our performance, as either an addition or an alternative to inspection, and this trend is causing these external bodies to place a growing emphasis on data quality.

Data quality involves identifying processes, applying standards and providing guidelines to enable and sustain improvement. In order to achieve and maintain a high level of data quality, West Yorkshire Fire and Rescue Service (WYFRS) has approved a Data Quality Policy. The policy aims to:

- Make WYFRS a leading authority on the collection, recording and reporting of accurate, reliable and consistent performance data to inform the decision-making process
- Provide employees with a framework to ensure sufficient action is being taken to meet the data quality objectives set
- Meet external audit standards and requirements

This policy outlines the steps necessary to maintain high quality standards throughout the processes that result in the production of performance information: from the establishment of performance indicators (PIs) and their definitions, via the input of individual data to a system, to the validation of these figures (in some cases, but not all, by an external auditor).

The policy will be kept under review and will be amended as necessary to reflect any changes in national standards or requirements, as well as redefining monitoring arrangements where these are applicable.

2 Why is data quality important?

As a public body, we must manage resources to meet the needs of the communities we serve and the performance information we use to account for our activities – to our users, partners and external auditors – must be accurate, reliable and timely.

Producing such data should not be an end in itself, but an integral part of effective performance management. Organisations which place an emphasis on data quality are likely to be actively and effectively managing data in all aspects of their business.

3 What makes good quality data?

There are six key characteristics to describe the quality of data, as detailed in the following table. These characteristics can assist us in assessing the quality of our data and in taking action to address any potential areas of weakness.

Accuracy	<p>Data should be sufficiently accurate for its intended purposes, representing clearly and in sufficient detail the interaction provided at the point of activity. Data should be captured once only, although it may have multiple uses. Accuracy is most likely to be secured if data is captured as close to the point of activity as possible. Reported information that is based on accurate data provides a fair picture of performance and should enable informed decision making at all levels.</p> <p>The need for accuracy must be balanced with the importance of the uses for the data, and the costs and effort of collection. For example, it may be appropriate to accept some degree of inaccuracy where timeliness is important. Where compromises have to be made on accuracy, the resulting limitations of the data should be clear to its users.</p>
Validity	<p>Data should be recorded and used in compliance with relevant requirements, including the correct application of any rules or definitions. This will ensure consistency between periods and with similar organisations. Where proxy data is used to compensate for an absence of actual data, organisations must consider how well this data is able to satisfy the intended purpose.</p>
Reliability	<p>Data should reflect stable and consistent data collection processes across collection points and over time, whether using manual or computer-based systems, or a combination. Managers and stakeholders should be confident that progress toward performance targets reflects real changes rather than variations in data collection approaches or methods.</p>
Timeliness	<p>Data should be captured as quickly as possible after the event or activity and must be available for the intended use within a reasonable time period. Data must be available quickly and frequently enough to support information needs and to influence the appropriate level of service or management decisions.</p>
Relevance	<p>Data captured should be relevant to the purposes for which it is used. This entails periodic review of requirements to reflect changing needs. It may be necessary to capture data at the point of activity which is relevant only for other purposes, rather than for the current intervention. Quality assurance and feedback processes are needed to ensure the quality of such data.</p>
Completeness	<p>Data requirements should be clearly specified based on the information needs of the organisation and data collection processes matched to these requirements. Monitoring missing, incomplete, or invalid records can provide an indication of data quality and can also point to problems in the recording of certain data items.</p>

*Source: Audit Commission –
Improving information to support decision making: standards for better quality data*

4 How can we improve data quality?

If we are to achieve consistently high standards of data quality in our performance information, leadership from the top of the organisation is essential, underscored by a comprehensive management and accountability framework supporting this objective.

This framework should cover:

- Staff knowledge of data to be provided
- The procedures in place for data recording and reporting
- The responsibilities of staff to achieve the data quality standards
- The systems and processes in place to ensure data quality
- The arrangements and controls in place for monitoring and review of data
- The guidelines for presenting information to a variety of audiences

These areas are detailed in the following sections.

5 Data definitions

Everyone involved will be aware which PIs are produced from the data they input and how they are defined (see Responsibilities).

Comprehensive Performance Assessment (CPA) indicators and Best Value Performance Indicators (BVPs) have nationally set definitions. It is important that every detail of the definition is understood and applied. This ensures that data is recorded consistently, allowing for comparison over time and national benchmarking. Although no longer nationally collated, many Authorities still utilise CPA indicators and best value performance indicators (BVPs).

Where we are setting local performance indicators, we need to ensure that we have established a clear definition and that there are systems or processes available to collect and report the data in an agreed format. For example, we need to be clear about whether target and outturn figures refer to a snapshot or cumulative position.

Every PI must have a Nominated Officer (see Section 7.1) who is responsible for collecting and reporting the information. This ensures that there is consistency in the application of definitions and the use of systems for providing the data.

Every PI must also have a Validating Officer (see Section 7.1) who must keep the Nominated Officer advised of any changes in definition that may occur from time to time.

6 Documented procedures

In order to minimise errors and achieve good quality data, appropriate procedures and guidance must exist so that staff can be trained and supported in their work.

Details of these procedures and processes will be available to all trained staff.

6.1 Timescales

Best use can be made of performance information if it is produced and communicated on a timetable that allows for management action.

The timely recording of data is essential to the efficient and effective production of performance information for decision-making and improved service outcomes. Data needs to be present at the time that processes require it, for both service delivery and reporting purposes. All performance information should be collected frequently i.e. monthly collection as opposed to quarterly collection.

This may require departments to re-examine their internal processes to provide information on a shorter timetable without compromising data quality.

Staff need to be aware of relevant deadlines and all the key dates must be observed.

6.2 Audit trail

All PIs need to be supported by a clear audit trail. Examples of documents to support figures include detailed tables, evidence of calculations, etc.

It is best practice to set up audit files for all performance information at the beginning of each year. The check sheet should be kept on file and act as a guide as to what information should be included to support each PI. A clear and complete audit trail must exist for all PIs.

All annual outturns for PIs must follow the full sign off procedure i.e. the End of Year Self-Assessment Form and the Annual Outturns Summary.

6.3 Improvement and development

Where it is considered necessary, data quality reports will be fed back to operational managers with advice regarding corrective action to be taken such as improving processes and systems, or advice relating to staff training and development.

6.4 Duplication and replication

As stated above, in the characteristics required for good quality data, data should be captured once only, even though it might have multiple uses. To maintain accuracy and reliability, it is essential that the data is held in a single version or from a single source.

Where locally built sub-sets of data are utilised for individual projects or departments (e.g. by taking a copy of a data set from the correct database and then manipulating it to provide statistical information), it is more likely that inaccuracies and inconsistencies will occur, for example as a result of using out of date or unaudited data.

Similarly, where data is recorded twice, it is possible that future references to the data might access the wrong version or source and result in further inaccuracies.

Such usage and manipulation of data has become all too common and can often result in poor quality data. All data must therefore be obtained from the correct source. Duplication and replication of data in locally built data sets are forbidden.

7 Responsibilities

Overall strategic responsibility for data quality rests with the Director of Corporate Resources, but all relevant staff should know how their day-to-day job contributes to the calculation of performance information and how lapses can lead to either errors or delays in reporting, both of which limit the ability to manage performance effectively.

This means that everyone should have an understanding of any PIs affected by the data they contribute. A basic grasp might be, for example, knowledge of what the numerator and denominator is, and whether there are any important guidelines (for example, the exclusion of certain cases). This will normally be easier to communicate if staff understand the purpose of the indicator, or the policy it is meant to monitor.

7.1 Defined responsibilities

For all performance indicators there must be a Nominated Officer (with the responsibility for collecting and inputting or recording the information) and a Validating Officer (responsible for the validation of the information).

The role of these officers is crucial for the accurate collection and reporting of performance information.

The Nominated Officer will:

- Ensure that the correct definitions have been applied when calculating the figures for all PIs, and that any subsequent updates to these definitions have also been complied with. Where definitions are not clear, they must seek advice from the Validating Officer.
- Maintain awareness of relevant deadlines and the key dates to be observed.
- Maintain an audit file.
- Ensure that all outturns and future targets are correctly entered.
- Ensure that relevant comments are added to any report or proforma, which explain and relate to the performance outturn position, and describe plans for addressing any major variation from target or previous outturn.
- Ensure that targets are set for all PIs and recorded fully on the relevant systems.

The Validating Officer will:

- Ensure that accurate performance data is reported – this will include a thorough check of data produced by the Nominated Officer and possibly a request for inclusion of further pieces of evidence to support the figures produced for audit files.
- Where definitions are not clear to the Nominated Officer, the Validating Officer will seek advice from the relevant defining body – usually via CLG.
- Communicate any updates / revised guidance and ensure full compliance.
- Review the additional comments provided, such as any commentary or analysis.
- Coordinate the collection of all future years' targets and the methodology by which they are derived, taking into account any government or national targets or guidance.
- Offer general training and support to Nominated Officers in their departments.
- Proactively inform the Nominated Officers of the results of their efforts in ensuring data quality, providing them with feedback, both positive and negative.

7.2 Responsibilities of all staff

7.2.1 Recognition and awareness

Everyone must recognise the need for good data quality and how they can contribute.

Data quality is the responsibility of every member of staff entering, extracting or analysing data from any of the Authority's information systems. Every relevant person should therefore be aware of his or her responsibilities with regard to data quality. The commitment to data quality will be communicated clearly throughout the Authority to reinforce this message.

Responsibility for data quality will be reflected in job descriptions and the appraisal process. Departments are encouraged to ensure that suitable appraisal targets and paragraphs are included in job descriptions, appropriate to the level of involvement staff have in the information process.

The importance of achieving good data quality will be addressed with all relevant staff as part of the induction process at the commencement of their employment.

Responsibility for the operational management of data quality will lie with the managers of all departments affected by this policy.

7.2.2 Data input responsibilities

There must be adequate controls over the input of data. It is vital that information input into a system is accurate, to ensure that information extracted from it can be relied upon.

The aim should be 100% accuracy 100% of the time.

It is important that staff have clear guidelines and procedures for using systems and are adequately trained to ensure that information is being entered consistently and correctly. There must be controls over input, ensuring especially that information is input on an ongoing basis, rather than being stored up for input 'en bloc' at the end of a period. This should reduce the error rate and the need for complex verification procedures.

All data collection and input processes will have an audit trail that operates continuously. Any training and development issues identified in the course of auditing will be addressed promptly.

Where an issue relating to data quality cannot easily be resolved through training and development at the point of input, it will be reported by the Nominated Officer to the Validating Officer and ultimately, if still not resolved, to the Director of Corporate Resources, who holds strategic responsibility for data quality.

8 Systems and processes

Systems and processes must be fit for purpose and staff must have the expertise to get the best out of them.

Performance information will be extracted regularly and therefore the systems and processes must allow for efficient extraction and swift communication.

Each system or process must have a Nominated Officer responsible for data quality issues.

This Nominated Officer is required to ensure that:

- Users are adequately trained, where appropriate by having a formal training programme which is periodically evaluated and adapted to respond to changing needs.
- Written procedures (e.g. user guide) exist for the purpose of extracting performance information.
- Adequate support is available to users.
- The system can produce appropriate audit trails.
- System upgrades can be made where necessary (including to accommodate amendments to definitions).
- The system meets the performance information needs of the Authority and its managers.
- Feedback from users is acted upon.
- Actions recommended by system reviews (e.g. by the external auditors) are implemented.
- There is security of access / amendment.

- Periodic data integrity tests are undertaken.
- A business continuity plan for the system exists to protect vital records and data.

There should also be a named substitute officer who can deputise in the Nominated Officer's absence by (at least) maintaining the day-to-day functionality of the system. Given the increasingly demanding timescale for performance reporting, the Authority cannot afford to have systems lying dormant during unplanned absences.

It is, therefore, also essential that written procedures are designed so that another officer can carry out the procedures essential to providing performance information if the officer who normally performs these duties is absent.

9 Monitoring and review

The Authority's data quality arrangements will be regularly reviewed by Corporate Services.

This Data Quality Policy will be reviewed on an annual basis and updated as necessary.

The Authority wishes to embed a data quality learning culture so that improvements can be made where necessary and mistakes avoided.

As stated in Section 7.2.2, the aim should be 100% accuracy 100% of the time.

To achieve this, data requirements must be designed along the principle of 'getting it right first time' in order to avoid waste in the form of time and money spent on checking data, interfacing between different information systems, matching and consolidating data from multiple databases, etc.

Nevertheless, in complex processes, even where there are strong controls over input, errors can occur. Therefore, a verification procedure should exist close to any point of data input. The frequency of verification checks will need to be appropriate to the frequency of data reporting.

Responsibility for data verification will lie within individual departments, but Corporate Services can offer advice and guidance regarding verification procedures.

Particular attention needs to be paid to data provided by external sources (see Section 11 below).

It is important that performance information is subject to scrutiny before being passed up the line for management action. This can be undertaken at several stages in the process. The most basic instance will be a verification check on the initial output.

There will also be close internal scrutiny of external audit submissions by reviewers (see Section 12 below).

10 Presentation

Reporting accurate information regularly leads to good decision-making and improved performance.

Wherever possible, reports should follow the corporate traffic light principles, and should include diagrammatic summaries and brief commentaries.

For a large number of PIs, that performance will only be recognised publicly if it can be substantiated by external bodies.

Annual PIs must therefore be presented in such a way as to give an easily understood and accurate picture of our performance to external auditors and the public.

Performance information is pro-actively improved regularly as a result of requests from, or changes approved by, the Performance Improvement Working Group, which includes members of senior management and the Performance Improvement Member Champion.

11 Validation of data from partners

When entering into contracts with service providers it is essential that, wherever there is a requirement to provide timely and accurate performance information, we are clear with the provider about their responsibilities for data quality and how we will be checking the information they provide.

- It is the Authority's responsibility to ensure the data used is robust – this includes any data we receive from partners and third parties.
- The Nominated Officer must be satisfied that any external data is accurate, but must check it in the same way that they would internal data.
- The format, presentation and frequency of collection of data must comply with all Authority requirements.
- All key dates for the submission of data must be adhered to – it is each department's responsibility to communicate and enforce this message to any partners.
- All Nominated Officers who receive data from partners or third parties must ensure that these organisations have the same shared understanding of data definitions.
- A clear audit trail to evidence validation checks is essential and must be kept on file.
- Wherever possible, a specific objective relating to data quality should be written into all partner contracts or service level agreements.

12 External audits

When information is presented for external audit, at least two officers must review working papers to confirm that the definition has been followed, the calculations are correct and the indicator is supported by a full audit trail.

This full audit trail needs to include the following:

- calculation
- system notes
- explanation of any variance from the previous year
- documentation supporting any estimates, sampling, or any apportionments made
- supporting information (e.g. spreadsheet, database, screen dumps) or at least a full description of where the supporting information is kept.

During external audits, there should be at least one other officer who is able to provide advice and information on the PI in the absence of the Nominated Officer. This is an important control to ensure that audit work proceeds smoothly.

13 Action plan

13.1 Staff knowledge and responsibilities

Action Number	Action	Responsibility	Timescale
13.1.1	<p>Every PI to have a Nominated Officer</p> <ul style="list-style-type: none"> - To be responsible for collecting and reporting the information. - To ensure consistency in the application of definitions. CPA indicators and BVPIs: every detail of the definition must be understood and applied. Local performance indicators: there must be a clear definition. - To maintain awareness of deadlines / key dates. - To maintain an audit file. - To ensure consistency in the use of systems for providing the data. - To ensure that out-turns and future targets are correctly entered. - To ensure that relevant comments are added. 	Head of Department	Ongoing
13.1.2	<p>Every PI to have a Validating Officer</p> <ul style="list-style-type: none"> - To keep the Nominated Officer advised of any changes in definition. - Where definitions are unclear, to seek advice from the defining body. - To be responsible for validation (e.g. thorough check of data; possible requests for inclusion of further evidence). - To co-ordinate collection of all future targets and the methodology used. - To review the additional comments provided. - To offer general training and support to Nominated Officers in their departments. - To proactively inform the Nominated Officers of the results of their efforts in ensuring data quality, providing them with feedback, both positive and negative. 	Corporate Services	Ongoing
13.1.3	Data input staff to be aware which PIs are produced from the data they input, how they are defined and whether there are any important guidelines or exclusions.	Head of Department	Ongoing

Action Number	Action	Responsibility	Timescale
13.1.4	<p>Departments to reflect responsibility for data quality, where appropriate, by:</p> <ul style="list-style-type: none"> - the inclusion of suitable paragraphs and appraisal targets in job descriptions. - addressing as part of the induction process for new starters. - suitable emphasis in the appraisal process. 	Head of Department	Ongoing

13.2 Procedures – data recording and reporting

Action Number	Action	Responsibility	Timescale
13.2.1	<p>Appropriate procedures and guidance to be documented to train and support staff.</p> <p>Details of these procedures and processes to be available to all trained staff.</p>	Head of Department	Ongoing
13.2.2	Staff to be aware of relevant deadlines and all the key dates to be observed.	Head of Department	Ongoing
13.2.3	<p>All performance information to be collected frequently i.e. monthly collection as opposed to quarterly collection (this may require departments to re-examine their internal processes to provide information on a shorter timetable).</p> <p>Input timescales or controls to ensure that data information is input on an ongoing basis, rather than 'en bloc' at the end of a period.</p>	Head of Department	Ongoing
13.2.4	Audit files for all performance information to be set up at the beginning of each year (check sheet to be kept on file as a guide about what information should be included to support each PI).	Corporate Services	Annually
13.2.5	All annual outturns for PIs to follow the full sign off procedure (i.e. the End of Year Self-Assessment Form and the Annual Outturns Summary).	Corporate Services	Annually

13.3 Systems and processes

Action Number	Action	Responsibility	Timescale
13.3.1	<p>Each system or process to have a Nominated Officer to ensure that:</p> <ul style="list-style-type: none"> - Users are adequately trained, where appropriate by having a formal training programme, which is periodically evaluated and adapted to respond to changing needs. - Written procedures (e.g. user guide) exist for the purpose of extracting performance information. - Adequate support is available to users. - Feedback from users is acted upon and actions recommended by system reviews (e.g. by the external auditors) are implemented. - There is security of access / periodic data integrity tests are undertaken. - A business continuity plan for the system exists to protect vital data. 	Head of Department	Ongoing
13.3.2	There should also be a named substitute officer who can deputise in the Nominated Officer's absence by (at least) maintaining the day-to-day functionality of the system.	Head of Department	Ongoing

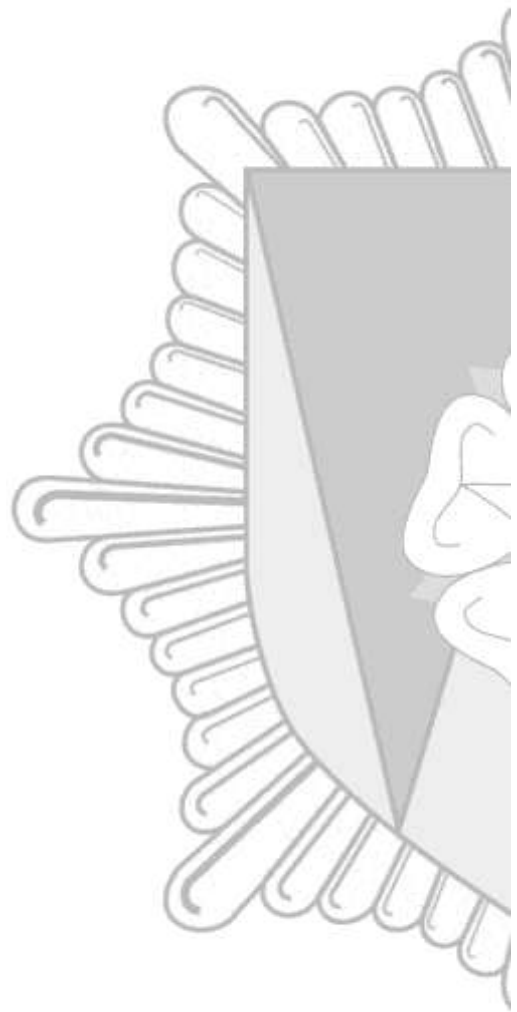
13.4 Monitoring and review of data

Action Number	Action	Responsibility	Timescale
13.4.1	Corporate Services to regularly review the Authority's data quality arrangements, including this Data Quality Policy on an annual basis.	Corporate Services	Annually
13.4.2	Verification procedures to exist close to any point of data input. The frequency of verification checks to be appropriate to the frequency of data reporting.	Head of Department	Ongoing
13.4.3	All performance information to be subject to further validation before being passed up the line for management action.	Corporate Services	Ongoing

13.5 External audits

Action Number	Action	Responsibility	Timescale
13.5.1	When information is presented for external audit, at least two officers to review working papers to confirm that the definition has been followed, the calculations are correct and the indicator is supported by a full audit trail.	Corporate Services	Ongoing
13.5.2	During external audits, at least one other officer to be able to provide advice and information on the PI in the absence of the Nominated Officer, to ensure that audit work proceeds smoothly.	Head of Department	Ongoing

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