National Offender
Management Service

NOMS Performance Hub Data Quality Policy	
This instruction applies to:-	**Reference:-**
NOMS Headquarters Prisons Providers of Probation Services	**AI 21/2014** **PSI 28/2014** **PI 25/2014**

Issue Date	Effective Date	Expiry Date
1 May 2014	1 May 2014	For review by 1 November 2014

Issued on the authority of	NOMS Agency Board
For action by (Who is this Instruction for)	All staff responsible for the development and publication of policy and instructions *(Double click in box, as appropriate)* ☒ NOMS HQ ☒ Public Sector Prisons ☒ Contracted Prisons* ☒ National Probation Service (NPS) Directorate ☒ Governors ☒ Heads of Groups ☒ NOMS Rehabilitation Contract Services Team ☒ Community Rehabilitation Companies (CRCs) ☒ Other Providers of Probation Services ***If this box is marked, then in this document the term Governor also applies to Directors of Contracted Prisons**
Instruction type	***Service Improvement***
For information	All staff in NOMS HQ, prisons establishments, National Probation Service and Community Rehabilitation Companies.
Provide a summary of the policy aim and the reason for its development / revision	The key aims of the policy are: • To provide a data quality framework for data collection through to reporting • To support the assessment and assurance of data quality • To support accountability for the quality of data This policy covers ALL data on the NOMS Performance Hub • Data submitted directly via the Hub • Extracts from strategic operational systems • Data provided by business areas/service delivery units The policy is to ensure all staff and all areas of the business are treating data quality appropriately and consistently.
Contact	Steve Ellerd-Elliott, Planning and Analysis Group Steve.Ellerd-Elliott@noms.gsi.gov.uk 0300 047 6286
Associated documents	Account Management Manual

Replaces the following documents which are hereby cancelled: None
Audit/monitoring: Deputy Directors of Custody and Controllers will monitor compliance with the mandatory actions set out in this Instruction. The Director of NPS in England, Director of NOMS in Wales and NOMS Director of Rehabilitation Services for CRCs will monitor compliance with the mandatory requirements in this instruction. NOMS contract management will hold providers to account for delivery of mandated instructions as required in the contract.
Introduces amendments to the following documents: None
Notes: *All Mandatory Actions throughout this instruction are in italics and must be strictly adhered to.*

CONTENTS

1. **Executive Summary**

Background

1.1 The NOMS Performance Hub has been in use since 2008 for the collection and reporting of Prisons and Probation Trusts data and management information. The NOMS Performance Hub contains data from a range of sources:

- Data submitted directly via the Hub
- Extracts from strategic operational systems
- Data provided by business areas/service delivery units

1.2 NOMS have long recognised the importance of information, and spend a great deal of time and money collecting and processing data. Poor quality data leads to wasted time and resources, hinders the ability to understand current and future business needs and can lead to poor decisions with a variety of knock-on effects such as operational delays, staff dissatisfaction and sub-optimal handling of offenders.

1.3 For the rest of the NOMS enterprise poor quality data has wider ranging consequences. *For example, NOMS must comply with the Data Protection Act and the Freedom of Information Act.* These Acts require that Government Departments ensure that any information published is accurate and up to date with a clear, demonstrable audit trail relating to the source of the data. When the quality of the data cannot be guaranteed, these demands cannot easily be met.

1.4 This policy sets out a framework to support the aim for quality data and reporting. It sets out the expectations of data quality, the roles and responsibilities those involved in each step, from collection to reporting, have for ensuring data quality, and the processes that are in place to support delivery of this aim.

Desired outcomes

1.5 The approaches described in this policy will help to:

- Ensure that the data collected is fit for purpose, relevant, timely and complete
- Data processing maintains high standards of data quality
- Provide greater transparency of the process and improved awareness of quality
- Raise the effectiveness of the business through increased understanding and confidence around the data
- Reduce the overall burden that comes from issues with data quality

Application

1.6 *A commitment to data quality must be the responsibility of all staff who should recognise that it is an integral part of their role.* There is a business need for staff at all levels to be trained in the uses of information, and to learn how appropriate use of information systems can help them in their jobs and why the data is important.

1.7 This policy sets out roles and responsibilities in Section 4.

Mandatory actions

1.8 *This policy is applicable to all staff directly employed and contracted by NOMS who*

deal with data and the accurate reporting which come from this data in relation to the NOMS Performance Hub. All mandatory instructions are shown in italics. The policy sets out a framework for data quality based on existing process and roles. These roles and responsibilities are set out in section 4.

Resource Impact

1.9   This policy defines a data quality framework with clear roles and responsibilities rather than introducing new processes or specific tasks so it does not directly introduce a new resource requirement. The size of any resource impact would depend on the extent to which those who have these roles are already undertaking the work in a way that delivers against these responsibilities. This will vary by data stream and across the prison estate and other service providers so the size of impact cannot be estimated without a disproportionate amount of work to understand the current delivery of these roles.

1.10   The policy does introduce a requirement for a quarterly data assurance statement and for sign off of data which is based on extracts from operational systems but this only formalises and documents a process which should be part of an existing role; the work to assure and validate data is not in itself a new requirement.

1.11   The policy is effective for the start of the 2014/15 performance reporting year with the expectation that systems and process to support this will be developed during the first six months and be fully in place by November 2014.

Andrew Emmett
Director of Finance & Analysis, NOMS

2   Principles of Data Quality

2.1   The overarching principles of the NOMS Performance Hub Data Quality are:

- Data Right First Time
- Responsibility for data accuracy rests with the Data Provider
- Data Providers aim to ensure data is correct at first submission
- Systems and processes will be developed and maintained to support the integrity of data within the current and evolving requirements of NOMS.
- All reasonable endeavours will be undertaken to ensure data is accessible and up to date. This includes development and maintenance of processes for collecting and validating data.

2.2   This aligns with the NOMS Management Information Strategy vision and principles:

Accurate and timely management information to support the commissioning, delivery and monitoring of cost-effective offender services

- One version of the truth
- Reduce the burden
- Intelligent analysis and reporting

3   Dimensions of Quality

3.1   There is no universal definition of quality; it is multifaceted and can therefore mean different things to different people, and vary in concept in relation to different procedures and products. Yet, to maintain trust in data and to provide products that are fit for purpose, quality should be at the centre of our procedures and methods.

3.2   Data quality is embedded both in the products themselves and in the processes used to produce them. These two aspects of quality are often referred to as (a) output quality, and (b) process quality.

3.3   The European Statistical System's (ESS's) Code of Practise sets out principles for process and output quality. For process quality: methodology, procedures, burden and effectiveness In relation to output quality, there are six dimensions of quality are generally used: relevance, accuracy, timeliness, accessibility and clarity, comparability and coherence.

3.4   For the purposes of the Hub Data Quality Policy these are defined as:

Process Quality

- **Methodology:** Procedures are in place to ensure that standard concepts, definitions and classifications are consistently applied. There is training of staff in tools and procedures.

- **Procedures;** Data collection, data entry, and coding are routinely monitored and revised as required. Revisions follow standard and transparent procedures. There is co-operation with owners of administrative data in assuring data quality.

- **Burden:** Demands are limited to what is necessary. Administrative data sources and electronic means of collection are used where possible.

- **Effectiveness:** The Hub is optimised for data collection, processing and dissemination. Efforts are made to improve the potential of administrative data and promote and implement standardised solutions that increase effectiveness and efficiency.

Output Quality

- **Relevance:** The degree to which the data meets user needs in both coverage and content.

- **Accuracy and Reliability:** Data should be fit for purpose and should reflect stable and consistent data collection processes across collection points.

- **Timeliness and Punctuality:** *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.*

- **Accessibility and Clarity:** Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and

sufficiency of the metadata and accompanying advice.

- **Coherence and Comparability:** Coherence is the degrees to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.

4   Responsibility for Data Quality

4.1   *A commitment to data quality must be the responsibility of all staff who should recognise that it is an integral part of their role.* There is a business need for staff at all levels to be trained in the uses of information, and to learn how appropriate use of information systems can help them in their jobs and why the data is important.

4.2   There are five key groups with Data Quality roles and responsibilities: Data Providers; Data Assurers; Data Stream Owners; Data Managers (NOMS PAG) and Data Auditors.   Annex E provides a list of key data quality stakeholders within these groups.

Data Providers must ensure the following:

- *Systems and processes are in place to support and provide assurance on compliance with the NOMS Performance Hub Data Quality Policy*
- *Staff are adequately trained to use the appropriate operational IT systems*
- *Staff keep up to date and comply with relevant Technical Notes[1]*
- *Each data strand should have a regular check with exception reports, highlighting inconsistent or inaccuracies, generated on a routine and regular basis*
- *A designated member of the senior management team has responsibility for oversight of data quality and takes action to investigate and correct any discrepancies*
- *Appropriate systems are in place for accurate and prompt submission of returns*
- *There is a culture of data quality which is embedded as part of the business as usual*

Data Assurers must:

- *Monitor provider compliance with the NOMS Performance Hub Data Quality Policy and provide a quarterly Data Quality Assurance Statement*
- *Undertake data assurance checks across a range of sources*
- *Keep up to date and ensure compliance with the Technical Notes*
- *Provide the knowledge of business related processes on the validation of data*
- *Engage with Data Managers in the case of data issues and request for change from Data Providers*
- *Feedback data issues to Data Managers to inform the Data Quality Risk Register*
- *Promote a culture of data quality so it is embedded as part of the business as usual*

Data Stream Owners must:

- *Be responsible for the Technical Notes for their relevant data metrics*
- *Have the knowledge of business related data processes from a range of sources both internal and external*
- *Ensure data and management information is relevant and supports*

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[1] Technical Notes provide details on the definitions of metrics and cover Performance, Management Information and Other Contract Measures.

development and implementation of strategic plans
- *Support a culture of data quality so it is embedded as part of the business as usual*

D*ata Managers (NOMS PAG)* *must:*

- *Provide a Data Management and Reporting team with the responsibility for providing a data management service through the NOMS Performance Hub*
- *Produce and maintain the NOMS Performance Hub Data Quality Policy*
- *Produce and maintain the NOMS Performance Hub Data Quality Risk Register*
- *Produce and maintain Technical Notes for all data metrics*
- *Develop and maintain data collection and reporting on the Hub*
- *Undertake periodical data quality reviews*
- *Provide support to data providers, assurers and stream owners*
- *Oversee developments to the NOMS Performance Hub and ensure they are delivered in a structured way*
- *Assist in ensuring that data is accurate, consistent and gathered efficiently by organising and chairing the Data Standards & Reporting Group (DSRG)*

Data Auditors *must:*

- *Assess provider compliance with the NOMS Performance Hub Data Quality Policy*

5   Data Quality Lifecycle

5.1   *Data quality must be viewed as an ongoing process.* Opportunities should be sought to embed good data quality practices. Where data is actively used to provide management information reports, for example, the quality will be driven up. Data quality needs to start before the actual data exists, in the form of rules, policies, constraints, and regular monitoring. Such lifecycle management requires data quality to be a key element of the culture and supported through appropriate systems.

5.2   The Data Quality lifecycle for data on the NOMS Performance Hub can be thought of in three stages:

- **Define**: Having a clear specification of what is required. This is managed through the Technical Notes which capture a description of requirement, the method of data extraction and processing, and the data quality controls.

- **Collect and Verify**: The gathering of data in line with the requirements set out in the Technical Notes. A key element of this stage is the monthly Hub Data Validation Process (see Section 6) and the Data Assurance (see Section 7).

- **Report**: Delivering the specification set out in the Technical Notes. There is a requirement at this stage for additional validation and assurance ahead of locking down the data. For the NOMS Performance Hub this is undertaken formally each quarter.

6   <u>**Hub Data Validation Process**</u>

6.1   The Data Validation Process helps to ensure:

- Data is accurate and timely
- There is clarity around how changes to data are handled
- All providers of data are treated fairly

6.2   *Data Providers must aim to ensure data is correct at first submission so that decisions are made using the best evidence. A monthly data validation sign off process will be placed on the Hub and signed off data will therefore be treated as having been quality assured.* Annexes A and B outline how this process works for Data Returns and Data Extracts.

6.3   Where PAG have concerns about data accuracy the Data Providers and the Data Assurers will be contacted detailing what the concern is and by when a response is required. When data is queried by PAG, providers should endeavour to respond within the timescales stipulated.

6.4   If a Data Provider identifies an issue and needs to amend their data then they will complete the Request for Change Form and email it to the relevant NOMS PAG functional mailbox. Annex C outlines this process.

7   **Data Assurance**

7.1   Data assurance is undertaken to ensure an effective system of internal control on data quality and that risk around data quality is managed appropriately.

7.2   The level of assurance should be proportionate to the risk of inaccuracy and the quality standard required.

7.3   *In order to ensure data quality within the Hub there must be ongoing monitoring of data quality by providers.* Each data strand should have a regular check with exception reports, highlighting inconsistent or inaccuracies, generated on a routine and regular basis.

7.4   *Data Assurers will have process in place to seek assurance that Data Providers are undertaking this monitoring and are acting in compliance with the NOMS Performance Hub Data Quality Policy.*

7.5   *On a quarterly basis all Data Assurers will provide a quarterly Data Quality Assurance Statement, which will give an overall assessment on the Data Provider; identifying any risks and updates to any data quality action plans which are in place. This statement will be used to inform any updates to the Hub Data Quality Risk Register.*

7.6   In order to ensure that **ALL** data that is held on the NOMS Performance Hub is subject to the same validation; and that there is consistency between internal management information and information which is published; **ALL** data will be locked down after quarterly assurance.

8   Data Quality Reviews

8.1   Informed by the Hub Data Quality Risk Register, Planning and Analysis Group (PAG) will undertake additional data quality checking and/or data reviews :

8.2   Each review will consider:

- the data and their sources
- the means of collection, classification and transfer
- the processes and analysis involved in producing outputs from the data

8.3   The review will be undertaken in partnership with stakeholders at all levels of the process: Data Providers, Data Assurers and Data Stream Owners.

8.4   By adopting this approach NOMS will maximise the quality of its data and deliver accurate, reliable and relevant information to its users, partners and stakeholders.

Annex A: Data Validation Process: Data Returns

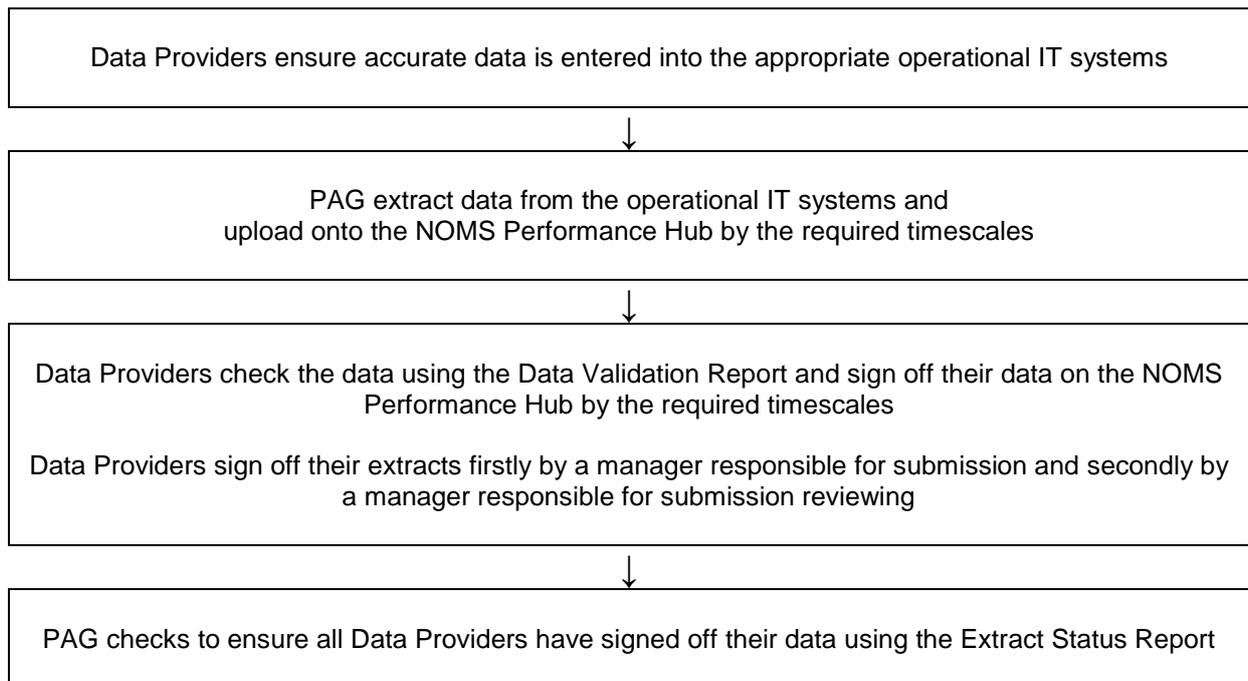| |
|---|
| Data Providers enter/submit data into the NOMS Performance Hub using the appropriate returns and by the required timescales |

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Data Providers sign off their returns firstly by a manager responsible for submission and secondly by a manager responsible for submission reviewing

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PAG checks to ensure all data returns have been signed off using the Returns Status Report

Annex B: Data Validation Process: Data Extracts

Data Providers ensure accurate data is entered into the appropriate operational IT systems

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PAG extract data from the operational IT systems and upload onto the NOMS Performance Hub by the required timescales

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Data Providers check the data using the Data Validation Report and sign off their data on the NOMS Performance Hub by the required timescales Data Providers sign off their extracts firstly by a manager responsible for submission and secondly by a manager responsible for submission reviewing

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PAG checks to ensure all Data Providers have signed off their data using the Extract Status Report

Annex C: Data Validation Process: Data Issues

If a Data Provider identifies an issue and needs to amend their data then they will complete the Request for Change Form and email it to the relevant NOMS PAG functional mailbox

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NOMS PAG and the Data Assurers will act as an exceptions panel and will either:

Unlock the Hub to allow the amendments (either new return or extract amended data)
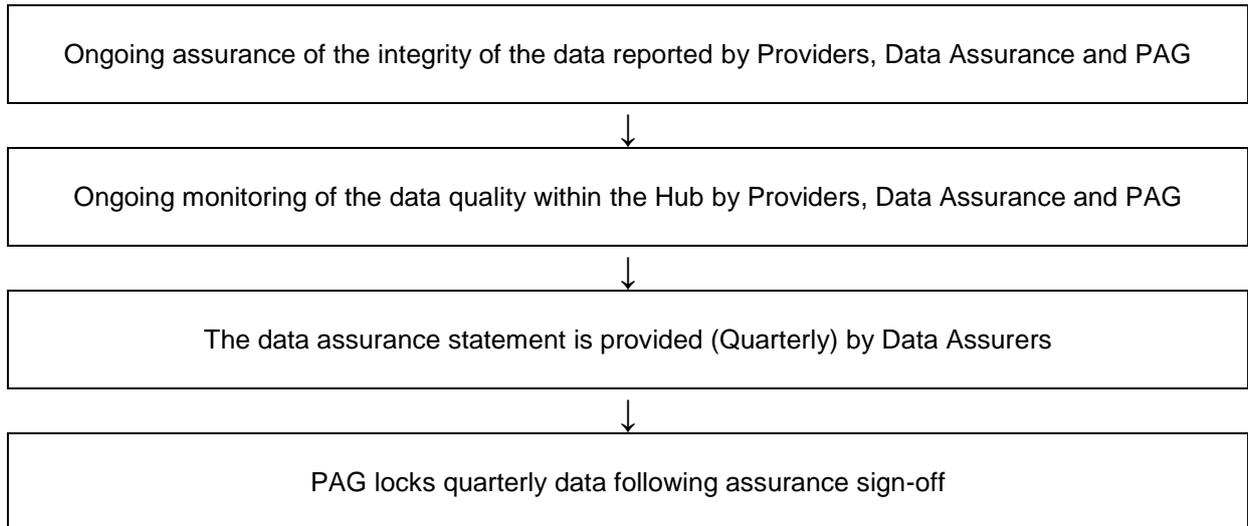
Or

Request further supporting evidence

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Amended data will require sign-off by Data Providers

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PAG will log all Requests for Changes

Annex D: Data Validation Process: Data Assurance

Ongoing assurance of the integrity of the data reported by Providers, Data Assurance and PAG

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Ongoing monitoring of the data quality within the Hub by Providers, Data Assurance and PAG

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The data assurance statement is provided (Quarterly) by Data Assurers

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PAG locks quarterly data following assurance sign-off

Annex E: Key Stakeholders for Data Quality

Data Providers

Public Sector Prisons (E.g. Hub Managers, Senior Managers)
Contracted Out Prisons
National Probation Services (NPS)
Community Rehabilitation Companies (CRCs)
Contracted Service Providers

Data Assurers

Deputy Directors of Custody for Public Sector Prisons (E.g. Regional Assurance Advisors)
Deputy Director of Custodial Contracts (E.g. Controllers for Contracted Out Prisons)
NPS Division Directors
NOMS Contract Managers
Contract Management Teams

Data Stream Owners

Commissioning & Commercial
National Operational Services
Public Sector Prisons
NOMS in Wales
Probation
Human Resources
Finance & Analysis
Change & ICT

NOMS PAG

Data Wardens
Performance Hub Managers

Data Auditors

Audit & Corporate Assurance Auditors