Research and analysis

Statement of administrative sources

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1. How Ofsted uses administrative data in official statistics

Ofsted publishes this statement of administrative sources to ensure that it is meeting its data governance and data quality obligations as set out in the Code of Practice for Statistics. This statement identifies:

- the administrative systems currently used to produce official statistics
- processes that ensure that we take full account of the implications for official statistics when considering changes to administrative systems
- information on other administrative sources that aren’t currently used when producing official statistics but have the potential to be
- arrangements for providing statistical staff – whether inside Ofsted or elsewhere – with access to administrative data for statistical purposes
- arrangements for auditing the quality of administrative data used for statistical purposes
- arrangements for ensuring the security of statistical processes that draw on administrative data

1.1 Ofsted’s official statistics

The official statistics Ofsted publishes are mainly based on the aggregation of the
number of inspections carried out and their outcomes and the details of education and care providers and institutions that are registered with Ofsted. Our data on inspection outcomes is drawn from our administrative systems.

2. Administrative sources used to produce statistics in Ofsted

2.1 Cygnum system

Cygnum is the name of the database we use as a source of official statistical releases.

The statistical releases that include data from Cygnum are:

- further education and skills inspections and outcomes
- non-association independent schools inspection outcomes
- initial teacher education inspections and outcomes
- state-funded schools inspections and outcomes
- children's social care data in England: providers and places; local authority and provider inspections and outcomes
- childcare providers and inspections

Changes to Cygnum

Discussions between policy, analytical and information systems (IS) teams may sometimes result in a need for change to Cygnum. The change process involves agreeing specifications, and developing and testing changes to the system, followed by a final sign-off.

Data changes are tested by the IS and policy teams, ensuring that those using the systems are involved in any important changes. Statistical staff are often involved in testing the impact of changes on reporting, which usually allows some advance notice of any discontinuities that may arise. These can be explained in the official statistics releases.

Staff access to Cygnum

Staff involved in producing official statistics have access to data via Ofsted’s SQL-based data warehouse and a range of internal management information reporting products. Staff use the data warehouse for statistical purposes by requesting access from the information asset owner. User permissions are reviewed regularly.
Quality assurance processes for Cygnum data
A number of automated exception reports are in place to alert staff to data that may be inaccurate. We then follow processes to ensure that this data is corrected at source. Statistical staff carry out additional manual quality assurance. This may include, for example, validation against previous releases, data held in Cygnum or data held by other government departments. The quality assurance is recorded against a checklist that statistical staff complete each time they compile official statistics.

Security of statistical processes that use Cygnum
Ofsted uses data on inspection outcomes for operational purposes. Therefore, a wide range of staff within Ofsted have access to the underlying data held in the system. Additionally, the inspection reports are published on the reports website, so members of the public also have access to this data.

Once extracted from Ofsted’s data warehouse, data is held in Excel format. Access to this data is restricted by the use of appropriate shared storage locations, with controlled access.

Access to the final version of a data set used in the production of a statistical release before publication is restricted to those involved in the quality assurance and production processes. The exception is the 24-hour access granted to those listed on the published pre-release access list. View our statement of compliance for prerelease access to official statistics.

Ofsted staff involved in the production of official statistics must complete training on information security and on identifying and managing the risk of disclosure of sensitive data.

2.2 SharePoint
We use SharePoint as a source of official statistics for serious incident notifications.

Changes to SharePoint
IS teams lead on changes to SharePoint. The change process does not involve the Social Care Data and Analysis team in remit team Data and Insight.

Data changes are tested by the IS and policy teams.

Access to SharePoint
Staff involved in producing official statistics have direct access to the relevant site. Staff use SharePoint for statistical purposes by requesting access from the information asset owner. User permissions are reviewed regularly.
Quality assurance for SharePoint data
Manual quality assurance is carried out by statistical staff to ensure that the information on serious incident notifications is accurate. The quality assurance is recorded in a checklist that statistical staff complete each time they compile official statistics.

Arrangements to ensure the security of the statistical processes that draw on SharePoint
Local authorities send serious incident notifications to Ofsted via a secure web portal. Once extracted from SharePoint, data is held in Excel format. Access to this data is controlled by the use of appropriate shared secure storage locations, with restricted access.

Access to the final version of a data set used in the production of a statistical release, before publication, is restricted to those involved in the quality assurance and production processes. The exception is the 24-hour access granted to those listed on the published pre-release access list.

2.3 Amazon Web Services
We collect fostering data through the fostering data collection portal. This data is stored using Amazon Web Services. The data held is a source of official statistics.

Processes for dealing with actual or planned changes to Amazon Web Services
Data and Insight and IS lead on changes to Amazon Web Services. The change process involves agreeing specifications, and developing and testing changes to the system, followed by a final sign-off. Data changes are tested by the IS and D&I teams.

Processes to give staff access to Amazon Web Services
Staff involved in producing official statistics have direct access to the relevant site. Staff use Amazon Web Services for statistical purposes by requesting access from the information asset owner. User permissions are reviewed regularly.

Processes to quality assure the data taken from Amazon Web Services
Quality assurance checks via automated validation are part of the fostering data collection online system. Agencies entering data onto the portal have to sign off the accuracy of their own data. Statistical staff assist the agencies with any issues or problems that continue after automated validation. Further quality assurance is done as part of the statistical production and is recorded in a checklist that statistical staff complete each time they compile official statistics.
Arrangements to ensure the security of the statistical processes that draw on Amazon Web Services

Local authorities provide fostering data to Ofsted via a secure web portal. Once extracted from Amazon Web Services, data is held in Excel format. Access to this data is controlled by the use of appropriate shared secure storage locations, with controlled access.

Access to the final version of a data set used in the production of a statistical release, before publication, is restricted to those involved in the quality assurance and production processes.

3. External data used in official statistics

Ofsted uses some external data for reporting. This data is either fed into the Cygnum system or is held in separate SQL or Excel databases.

The following are examples of sources of external data used by Ofsted:

- Department for Education (DfE) – details of state-funded and independent schools, and social care data that includes information on characteristics and placements of looked-after children and data from the National Pupil Database
- Education and Skills Funding Agency (ESFA) – details of providers that deliver education, training and apprenticeships to learners aged 14 to 16 and 16 to 19
- Office for National Statistics – geographical data

4. External data used in internal processes

Separately to the publication of official statistics, Ofsted also uses a range of administrative data including data supplied and/or published by other bodies including the DfE, the ESFA and local authorities.

Risk assessment

Risk assessments of providers and other aspects of inspection planning and scheduling are internal processes that Ofsted uses to act using intelligence-led methods. Further details of how Ofsted plans inspections is available through our methodology note for further education and skills (FES) providers and our methodology note for state-funded schools.
Production of pre-inspection briefings

For social care, schools and FES we use administrative data sources to provide inspectors with data before an inspection. For example, for schools and FES providers, we use performance data from the DfE to create inspection data summary reports (IDSRs). These are used to inform and guide inspectors before and during an inspection. The IDSRs are also made available to providers to facilitate discussions with inspectors. View guidance on using Ofsted’s IDSR, along with example reports.

5. Quality assurance of Ofsted data

Ofsted collects data as part of registration of providers that it regulates and as part of inspections.

Data collected as part of the registration process quality checked to ensure that Ofsted can meet its obligations to regulate education and care providers. Registration data is collected directly from service providers and is quality assured to ensure that Ofsted is able to identify, contact and in many cases inspect providers.

Data collected during Ofsted inspections is recorded promptly into Ofsted systems. Regular quality checks are undertaken on inspection data. Inspected providers are asked to comment on the factual accuracy of an inspection report before publication.

Inspection outcomes are entered onto our systems by the lead inspector. As inspection reports undergo a quality assurance process, any errors are likely to be identified at this stage. The content of inspection reports is QA’ed through a dedicated process, quite separate from production of statistics. However, our QA team also spot-checks a selection of entries to ensure the quality of data entry.

We focus on checking entries where the risk of error is highest. An example of this is where the inspection judgement changes during the quality assurance process. Despite the various quality assurance practices, there remains a small chance that some outcomes are entered incorrectly onto our systems.

6. Quality assurance of data from external sources

The data we receive from other government departments and external agencies is supported through service level agreements and data-sharing protocols. These agreements and protocols put in place the necessary mechanisms to ensure that
data is:

- stored, used and disposed of in a safe manner
- accessed only by those with a completed data access agreement
- not released ahead of official statistics, where applicable
- robust and accurate and has agreed processes for raising any issues and concerns

Where Ofsted received data from external agencies, the team leader completes a declaration stating how Ofsted will use the data and how we will comply with any requirements specified by the owner of the data. Before sharing data, service level agreements (SLAs) are in place between Ofsted and the relevant external agency. Each SLA contains the specific data sets, conditions for processing (including legal gateways), dates for destruction and an agreed list of permitted users. The agreed list of permitted users is maintained internally and shared with DfE. Individual declaration forms are now signed annually.

Where data is provided by the National Pupil Database (NPD), an application is made detailing Ofsted needs. This is then approved as appropriate by the DfE under a schedule of use. All Ofsted staff who need access to the NPD data set have to complete an individual declaration form and sign it to confirm that they agree to the terms of use. The DfE has specific dates for destruction for different NPD datasets. We keep a tracker internally to monitor this. The DfE also alerts Ofsted to when data needs to be destroyed. If Ofsted requires the data for longer than the initial agreed date, an extension of use has to be justified and submitted to the DfE. The relevant team leader within Ofsted is responsible for confirming data destruction or justifying any extension.

Ofsted also works with data suppliers to improve the quality of the data collected before we enter it into Ofsted systems. A series of validation checks are carried out at source to minimise errors. Ofsted carries out additional quality assurance checks on data received.

Communication with data suppliers ensures that Ofsted is informed of any issues as they arise. This allows Ofsted to manage the use of data where there are known issues.

Ofsted has comprehensive arrangements in place for ensuring the security of statistical processes that draw on administrative data.

Further information on data quality can be found in the quality reports released alongside Ofsted official statistics.

Jason Bradbury
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Ofsted
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