

Motoring Offence Statistics Quality Assurance of Administrative Data

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Administrative data are playing an increasing role in the production of Official Statistics.

In 2015, the UK Statistics Authority published a Regulatory Standard for the Quality Assurance of Administrative Data which outlines what producers of Official Statistics should do to assure themselves of the quality of these data.

PSNI Statistics Branch has applied the Administrative Data Quality Assurance Toolkit to assess the quality of the data utilised in the production of PSNI statistics.

This report outlines the findings of this assessment for PSNI motoring offences statistics.



Northern Ireland
Statistics and Research Agency

Keeping People Safe



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Motoring Offence Statistics - Background information

Data Supplier:	Police Service of Northern Ireland (PSNI)
Supplier info:	<p>The primary aim of the PSNI is to keep people safe through policing with the community and the organisation is accountable to the Northern Ireland Policing Board.</p> <p>The majority of the operational information within the PSNI is input to the organisation's central management information system by officers and staff across a range of levels and areas. A team of statisticians seconded to the PSNI Statistics Branch from the Northern Ireland Statistics and Research Agency (NISRA) extract, validate, collate and analyse the information before providing it as Official Statistics to the organisation and its users.</p>
Data type (counts or unit records)	Unit records
Data Content:	The PSNI Statistics Branch extracts all required information in relation to motoring offences in Northern Ireland from a number of PSNI systems, mainly the StarDome system and the central management information system. This includes information on number of fixed penalty notices issued, speed awareness courses completed, discretionary disposals issued and the number of offences which have been referred for prosecution.
Supply Schedule:	Ongoing. PSNI statisticians are based within the PSNI and have access to the systems and information on an ongoing basis. Information is extracted as required for validations, publications and information requests.
Use of Data:	PSNI Statistics Branch publishes monthly and annual bulletins in relation to motoring offences in Northern Ireland and responds to numerous information requests from a range of sources. The information is extensively used within the organisation for monitoring purposes and widely used externally by government departments, as well as the media, academia and the public.

Risk / Profile Matrix

A risk / profile matrix was carried out on the motoring offences statistics to determine the level of assurance required, based on the level of risk of quality concerns against the public interest profile. The PSNI motoring offence statistics were assessed as requiring **A2: Enhanced Assurance** level (statistical producer has evaluated the administrative data QA arrangements and published a fuller description of the assurance) as shown in Table 1. The rationale for this assessment is summarised below.

Level of risk of quality concerns

The level of risk of quality concerns associated with PSNI motoring offence statistics was assessed as low because Statistics Branch, which produces the outputs, is located within the PSNI which supplies the data. In addition, the data is collated and quality assured in-house by a dedicated team of experienced staff with high levels of understanding in relation to the purpose and context of the statistics.

Public interest profile

Public interest in the motoring offence statistics was deemed to be high, as demonstrated by strategic use of the data within the organisation and substantial media coverage received.

Table 1 Risk / Profile matrix for PSNI Motoring Offence Statistics

Level of risk of quality concerns	Public interest profile		
	Lower	Medium	Higher
Low	Statistics of low quality concern and lower public interest [A1]	Statistics of low quality concern and medium public interest [A1/A2]	Statistics of low quality concern and higher public interest [A1/A2]
Medium	Statistics of medium quality concern and lower public interest [A1/A2]	Statistics of medium quality concern and medium public interest [A2]	Statistics of medium quality concern and higher public interest [A2/A3]
High	Statistics of high quality concern and lower public interest [A1/A2/A3]	Statistics of high quality concern and medium public interest [A3]	Statistics of high quality concern and higher public interest [A3]

QA Matrix

The four areas of practice related to the quality assurance of administrative data are as follows:

- Operational context and admin data collection
- Communication with data supply partners
- QA principles, standards and checks by data suppliers
- Producers' QA investigations and documentation.

The following tables provide evidence of how PSNI Statistics Branch ensures the required level of assurance for motoring offence statistics as assessed in the risk / profile matrix above (A2 – Enhanced Assurance), across each of the four areas of practice.

1. Operational context and admin data collection

Practice Area 1. Operational context & administrative data collection: Assessed by PSNI to require level of assurance A2	
<i>Consider the following types of activities:</i>	PSNI Evidence
<ul style="list-style-type: none"> • Producer has provided users with a fuller description of the operational context and administrative data collection arrangements, e.g.: <ul style="list-style-type: none"> - a process map detailing the data collection processes, - explanations for classifications, 	<p>The PSNI Official Statistics documentation is published on the PSNI website and Section 4 addresses administrative sources, outlining the key data sources and access arrangements. Operational context and administrative data collection arrangements specific to the motoring offence statistics are detailed in the Motoring Offence Statistics User Guide on the PSNI website. The document outlines the purpose and uses of the statistics, detailed descriptions of the data, recording practices and reporting arrangements.</p> <p>The Motoring Offence Statistics User Guide includes a process map which identifies the broad process areas with the associated risk, mitigation and validation points.</p> <p>Detailed descriptions of the data collected and coverage of the data are outlined in the Motoring Offence Statistics User Guide as well as in the monthly Motoring offences bulletin.</p>
<ul style="list-style-type: none"> • Identified and summarised potential sources of bias and error in the administrative system, 	<p>The strengths and weaknesses of the data and the process are recognised in the Motoring Offence Statistics User Guide and as well as in the monthly Motoring offences bulletin.</p>
<ul style="list-style-type: none"> • Identified and described safeguards taken to minimise risks to data quality, 	<p>The Motoring Offence Statistics User Guide Section 3 (Pages 6-10) and accompanying process map outline the safeguards taken to minimise risk to data quality including consistent and experienced staff, validation with other sources including Police Officers, automated and generated validations, data cleaning using SPSS and transparent revisions.</p>
<ul style="list-style-type: none"> • Provided a detailed description of the implications for accuracy and quality of data, including the impact of any changes in the context or collection arrangements 	<p>The PSNI Official Statistics documentation administrative data section outlines the procedures for handling changes and possible discontinuities in the data, while risks to the outputs including resources, changes to collection etc. are included in the Branch risk register. The Motoring Offence Statistics User Guide includes information on the collection, validation, reporting and associated risk mitigation.</p>

2. Communication with data supply

Practice Area 2. Communication with data supply partners : Assessed by PSNI to require level of assurance A2	
<i>Consider the following types of activities:</i>	PSNI Evidence
<ul style="list-style-type: none"> • Producer has agreed and documented: <ul style="list-style-type: none"> - data requirements for statistical purposes, - legal basis for data supply, - data transfer process, - arrangements for data protection, - sign-off arrangements by data suppliers 	<p>Motoring offences data is sourced in-house, directly from the PSNI systems by NISRA statisticians working to the Code of Practice for Official Statistics and therefore no third party data supply, legal basis to provide or data transfer security arrangements are required.</p> <p>NISRA statisticians are seconded to PSNI and have access to PSNI IT systems. Statisticians are involved in the recording and reporting processes (subject to vetting and training). The extraction of the information from the PSNI IT systems is outlined in the Motoring Offence Statistics User Guide. This provides evidence that the statistics are a by-product of the police operational systems and are subject validation by NISRA statisticians who work directly for PSNI (Section 3, pages 6-9). This allows the statisticians to have input into the system design and information management and this arrangement allows for a close collaboration between statisticians, PSNI IT systems and PSNI colleagues.</p> <p>The PSNI Statistics Branch PSNI Official Statistics documentation outlines the arrangements for maintaining the confidentiality of statistical data (Section 3).</p>
<ul style="list-style-type: none"> • Established an effective mode of communication with contacts (eg. with data collector and supplier bodies, IT systems, operational/policy officials) to discuss the ongoing statistical needs in the data collection system and quality of supplied data 	<p>As above, NISRA statisticians are seconded to PSNI, have access to the PSNI IT systems and are involved in the recording and reporting processes (subject to vetting and training).</p> <p>Information on the sources of the data are provided in Section 4 of the PSNI Official Statistics documentation on the Official Statistics section of the PSNI website.</p>
<ul style="list-style-type: none"> • Sought the views/experiences of statistics users and resolved any quality issues reported 	<p>The key users and uses of PSNI motoring offence statistics are described in the Motoring Offence Statistics User Guide (Section 2.1, pages 4-5). The user guide also summarises the latest feedback in relation to motoring offence statistics (Section 2.2, page 5).</p> <p>Results of the bi-annual Statistics Branch User Satisfaction Survey are published on the PSNI statistics webpage.</p> <p>PSNI Statistics Branch customer service commitment and user engagement policy is outlined in detail in Section 6 of the PSNI Official Statistics documentation.</p>

3. Quality Assurance principles, standards and checks applied by data suppliers

Practice Area 3. Quality Assurance principles, standards and checks applied by data suppliers : Assessed by PSNI to require level of assurance A2	
<i>Consider the following types of activities:</i>	PSNI Evidence
<ul style="list-style-type: none"> • Producer has provided a fuller description of the main QA principles, quality indicators and checks used by the data suppliers 	<p>Motoring offence data is sourced in-house, directly from the PSNI systems by NISRA statisticians working to the Code of Practice for Official Statistics and therefore no third party data supply, legal basis to provide or data transfer security arrangements are required.</p> <p>A detailed overview of the processes and quality assurance applied within Statistics Branch is provided in the Motoring Offence Statistics User Guide (Section 3, pages 6-10).</p> <p>Detailed internal procedures documents and syntax provides step by step guidance on how data is extracted, quality assured and published. The process is ensured by completion of a checklist of the key tasks each month.</p>
<ul style="list-style-type: none"> • Described the role of relevant information management or governance groups in data quality management 	<p>Statistics Branch works closely with PSNI operational colleagues including Roads Policing Unit and Fixed Penalty Processing Centre (FPPC) staff to ensure the data meets user requirements, is fit for purpose and accurate. Users and uses are detailed in the Motoring Offence Statistics User Guide (Section 2), while the PSNI Official Statistics documentation contains the branch customer service and user engagement strategy.</p>
<ul style="list-style-type: none"> • Described the role of audit of the admin data within the collection and operational settings 	<p>Every motoring offence is recorded and quality assured before inclusion in official statistics. Quality assurance checks and audit processes are outlined in the Motoring Offence Statistics User Guide (Section 3).</p>
<ul style="list-style-type: none"> • Described the implications for the statistics for the quality issues identified by data supply bodies and regulators 	<p>Motoring offence data is derived from PSNI administrative systems directly and there are no data supply arrangements in place. We have our own quality assurance checks and procedures, which are outlined in detail in the Motoring Offence Statistics User Guide (Section 3).</p> <p>Statistics Branch works closely with PSNI operational colleagues including Roads Policing Unit and FPPC staff to ensure the data meets user requirements, is fit for purpose and accurate.</p> <p>Statistics Branch is open and transparent in terms of revisions as per Section 5 of the PSNI Official Statistics documentation.</p>

4. Producer's QA investigations & documentation

Practice Area 4. Producer's QA investigations & documentation : Assessed by PSNI to require level of assurance A2	
Consider the following types of activities:	PSNI evidence
<ul style="list-style-type: none"> • Producer has provided a fuller description of its own QA checks on the admin data 	<p>Section 3 of the Motoring Offence Statistics User Guide explains in detail the data collection, extraction, quality assurance and dissemination processes. This includes a list of the specific validations which are carried out on a monthly basis as well as a checklist of the key publication stages to ensure completion.</p> <p>Detailed internal procedures documents and syntax provides step by step guidance on how data is extracted, quality assured and published.</p>
<ul style="list-style-type: none"> • Detailed the general approach and findings for specific quality indicators 	<p>Section 3 of the Motoring Offence Statistics User Guide explains in detail the data collection, extraction, quality assurance and dissemination processes. This includes a list of the specific validations which are carried out on a monthly basis as well as a checklist of the key publication stages to ensure completion.</p> <p>Monthly figures are provisional to obtain a balance between timeliness and accuracy. Revisions are reported for users in each monthly publication, providing a percentage indication of the scale of the revision. This enables users to gauge the coverage of the provisional figures and more accurately factor for potential change.</p>
<ul style="list-style-type: none"> • Identified the strengths and limitations of the admin data 	<p>Strengths and limitations of the admin data are identified in the Motoring Offence Statistics User Guide Section 4 (page 11).</p>
<ul style="list-style-type: none"> • Explained the likely degree of risk to the quality of the admin data 	<p>The Motoring Offence Statistics User Guide Section 3 (Pages 6-10) and accompanying process map outline the safeguards taken to minimise risk to data quality including consistent and experienced staff, validation with other sources including Police Officers, automated and generated validations, data cleaning using SPSS and transparent revisions.</p> <p>Statistics Branch feed into both the Operational Support Department (OSD) risk register within PSNI and the NISRA risk register (at detailed output level). Both identify the limited resources and subsequent lack of contingency, both within the Branch and wider (for example the PSNI ICT team), as key elements of risk in relation to the quality of data.</p>