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Assurance Group



Annual report on Police data quality

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INTRODUCTION

High quality information is the lifeblood of any policing agency, being used to underpin day-to-day operations. Robust data is also key to making sense of how effective police are at doing their jobs. Indeed, having faith in the accuracy of data New Zealand Police collects and uses is fundamental to wider public trust and confidence in Police. In particular, people need to be able to rely on the official statistics which are derived from Police records, as they provide a key measure of community safety and can also influence how safe individuals feel.

Assurance around the quality and integrity of New Zealand Police's crime and incident data can be gained from many different sources. Detailed guidance is already published online to verify the basis on which Police offence and victimisation statistics are generated, and an independent review by Statistics New Zealand in 2014 confirmed "Police have in place suitable strategies, frameworks, plans and practices to monitor and assure the quality of [offence information] throughout the data lifecycle". In order to provide extra assurance, this report summarises an ongoing programme of work to further strengthen the quality of core Police data. As part of this snapshot, the report highlights key findings from Police's recently-completed *Data Quality Audit Plan 2015/16*.

BACKGROUND

Police has been on a data quality improvement journey for well over a decade. An important milestone was the move away from largely manual systems of earlier times, following implementation of the National Intelligence Application (NIA) computer system in 2005. The pace of progress stepped up with publication of a refreshed *National Recording Standard* (NRS) in 2008; which for the first time provided a comprehensive rulebook for how Police staff should code events. Other major data quality improvements followed as part of Policing Excellence, including the establishment of File Management Centres (FMCs) and the national rollout of the Crime Reporting Line (CRL).

Further impetus came from the launch of a formal data quality improvement plan in 2013. Several additional control and assurance mechanisms were brought together in a comprehensive Data Quality Improvement Programme that was driven forward in 2014 and 2015.

Since mid-2015, Police's ongoing data quality improvement work has been spearheaded by a specialist Data Quality and Integrity Team (DQIT) based in the Assurance Group at Police National Headquarters (PNHQ). The DQIT delivers on an annually-set *Data Quality Audit Plan*.

Highlights in 2015/16

Significant achievements from the last 12 months include:

Strengthened policy and training support

- Three updates were made to the NRS, including new chapters on fraud, cyber and drug offence recording
- The NRS was reformatted to make it more user-friendly and intuitive, and fully uploaded to www.police.govt.nz
- Internally for Police staff, an updated NRS Codebook was made available via the Intranet and mobile devices
- Awareness-raising and training sessions were offered to various key groups, including District Leadership Teams and 400+ FMC and other high-volume data entry staff.

Thematic reviews, one-off and cyclical data quality audits

- A review of use of the 1Z (other) incident code, which led to implementation of a monthly review of re-codes which flags up 'high risk' practice directly for Districts
- A review of variations in the rate of offence recording aligned to 1D-coded family violence occurrences in NIA
- A review of the accuracy of firearms recording in NIA
- An audit of the use of the 6C (child protection) code, highlighting ways to improve victimisation counts and increase the understanding of demand for services
- Audits of the K3 (no offence) code, showing early signs of promise - with the first District topping 80% overall accuracy, towards the ultimate target of ≥95% accuracy
- An audit of sexual offence re-codes, which has reduced inaccuracies by enabling individually-targeted follow up
- An audit of re-coded burglaries, which suggested there have been recent practice improvements in this area, and that a ≥95% re-coding accuracy target is achievable
- An audit of pre-charge warnings, which helped identify practical system/process improvement opportunities.

Focus areas in 2016/17

- As well as continuing to audit use of K3 and re-coding practices, the *Data Quality Audit Plan 2016/17* includes a focus on: recording warnings in NIA; use of the injury flag in NIA; offence and incident recording issues in the Communications and Resource Deployment system; and auditing use of 2C (civil disputes), 5F (family harm), 6C (child protection) and 6P (bullying) incident codes.

Overview

Recording and coding of incidents and offences by Police staff is subject to constant scrutiny. Checks are done at policing Area and District level by frontline supervisors, part of whose responsibilities include quality assuring the records entered by their staff. There are also specialist roles in Police, such as officers in charge of File Management Centres (FMCs), who have a watching brief over the quality of the data entered by District staff, and who will examine records to double-check their accuracy. Such audits happen on a daily basis across the country.

In addition to local assurance checks, there is also regular monitoring of key dimensions of data quality at a national level, as part of a focus on ensuring consistent application of Police's *National Recording Standard* (NRS) and mandated case management process. Specific audits of crime recording and coding decisions have also been undertaken as part of a comprehensive, national, *Data Quality Audit Plan*. This report highlights findings from the recently-completed 2015/16 *Data Quality Audit Plan*, covering the period from July 2015 to June 2016. The *Audit Plan* was delivered by a specialist Data Quality and Integrity Team (DQIT) at PNHQ. By way of context, the DQIT has three broad objectives:

- **Championing data quality** – embedding an ethical recording culture, which is underpinned by efficient and effective data quality systems and processes
- **Continuing to evolve the NRS** – as well as related policy and education resources, to deliver improvements in staff knowledge and data quality practices
- **Providing organisational assurance** – delivering an annual risk-based national audit plan focused on identifying improvement opportunities related to leadership and governance, systems and processes, and people and skills.

Before summarising outputs from Police's *Data Quality Audit Plan 2015/16*, it is worth touching briefly on the other two objectives of the specialist Data Quality and Integrity Team.

Championing data quality, and continuing to evolve the NRS

Led by the National Crime Registrar, the DQIT has three other staff, including two District Crime Registrars (DCRs). Currently, each DCR is paired with six policing Districts, working closely with District Leadership Teams and officers in charge of FMCs and other individuals who hold data quality portfolios. One DCR is embedded in Waikato District (covering the upper North Island Districts). The other DCR is based at PNHQ and partners with Lower North and South Island Districts. Together, the National Crime Registrar, DCRs and a Senior Adviser who specialises in data auditing provide visible leadership within Police on data quality issues, and act as champions for a culture of ethical recording.

As an example, great strides have been made in the area of raising staff awareness about the importance of high-quality data as a platform for effective policing. As well as ensuring there were targeted communications developed for District Leadership Teams and key groups of staff responsible for handling high volumes of data entry and record processing, the DQIT has developed a series of themed posters and information sheets for dissemination to all staff. The posters, in particular, have been very well-received, and are commonly seen around stations. They emphasise that robust data collection practices and a commitment to data quality are the underpinnings of good operational deployment decisions, and a key enabler of appropriate support to victims of crime. Images of the data quality posters are reproduced below:



Strengthened policy and training support for staff has also been made available by the DQIT during the last 12 months. Highlights include:

- Three updates were made to the NRS, including new chapters on fraud, cyber crime and drug offence recording
- The NRS was reformatted to make it more user-friendly and intuitive, and uploaded in full to Police's public website for wider visibility (<http://www.police.govt.nz/about-us/publication/national-recording-standard-september-2016>)
- Internally for Police staff, an updated NRS Codebook was made available on the Intranet and through mobile devices
- Awareness-raising and training sessions were also offered to various key groups, including District Leadership Teams and more than 400 FMC and other high-volume data entry staff; with a separate NRS conference being attended by approximately 50 staff from Districts, Police Communications Centres, and the dedicated Crime Recording Line (CRL).

Organisational assurance

As outlined earlier, the DQIT's third main objective is to deliver on a comprehensive, national, *Data Quality Audit Plan*.

The *Audit Plan* is designed around a quarterly cycle. Patterns of audit activity are repeated, across different quarters, and across year periods, enabling detailed analysis of the extent to which business practices have improved over time. The programmed audit work falls under one of five core strands of activity:

- **Strand 1: Accuracy of converting reports to records** – ensuring accurate conversion of offences which are resulted in Police's Communications and Resource Deployment (CARD) call centre system into occurrences in NIA. This area of activity requires a detailed understanding of channels through which incidents and crimes are reported to Police.
- **Strand 2: Accuracy of coding** – ensuring the offence code applied to a crime is accurate. This requires review of decision making where coding/re-coding occurs, in order to be satisfied the correct crime classification is reported (e.g., that a burglary is counted where this is most appropriate, and not a less serious offence, such as wilful damage).
- **Strand 3: Accuracy of use of 'no offence' result code (K3)** – ensuring the accuracy of actions to remove previously recorded offences from NIA. The NRS only permits removal of an offence from the Police recorded crime count in a narrowly-defined set of circumstances (e.g. where a crime has been created in error or is a duplicate record, or where there is credible evidence that the offence initially recorded did not happen [as, for instance, where people report their vehicles stolen from a car park, only to discover they have left it in a different location, and therefore the recorded offence has not actually occurred]).
- **Strand 4: Accuracy of resolutions** – ensuring the correct application of rules in the NRS governing when a particular resolution can be applied. This area of focus checks that resolution types such as a charge, summons or Pre-Charge Warning (PCW) are coded in accordance with established rules, and offenders do not receive resolutions to which they are not entitled, or without sufficient evidence to demonstrate their involvement in the offence.
- **Strand 5: Thematic reviews and/or analyses** – short notice or bespoke audits where an improvement opportunity or specific risk has been identified, which lends itself to completing a discrete piece of analytical or assurance activity.

Featuring items from across all five strands, the following section of this report highlights key outputs from the 2015/16 *Data Quality Audit Plan*, covering the period July 2015 to June 2016.

Accuracy of converting reported offences to recorded offences

- ***Use of the 1Z (other) incident code:*** National report targeting concerns that some matters which should be recorded as offences were wrongly filed using code 1Z. Some evidence of failed offence recording was found, and was immediately addressed with Districts. The DQIT has subsequently introduced a monthly review of re-codes (including the use of the 1Z code) which speedily flags up any 'high risk' practice directly to Districts for follow-up.
- ***Use of the 1D (domestic dispute) incident code:*** National report examining the reasons for variation in the rate of offence recording aligned to 1D occurrences in NIA. The report suggested consistent levels of intervention from supervisors and/or Family Violence (FV) Co-ordinators leads to increased accuracy of offence recording. The report generated useful insights into FV investigation practice, and was shared with Police's FV Change Programme team.

Accuracy of offence coding/re-coding (including the use of K3 in NIA)

- ***K3 audit:*** National report and 12 customised District reports (reported twice during 2015/16 – ie., 26 reports in total). The headline messages are positive: volumes and proportions of K3 continue to reduce, and there is evidence of statistically significant national improvements in overall K3 accuracy (up from 65% to 73%) and in K3 practice relating to sexual offences (an 11% accuracy improvement). There remains a distance to travel to consistently attain accuracy rates $\geq 95\%$, however the early signs are promising (notably, the first District has exceeded $>80\%$ overall accuracy).
- ***Burglary re-code audit:*** National report and 12 individual District reports. The reports suggest there have been practice improvements over recent times, and that achieving an aspirational $\geq 95\%$ re-coding accuracy target is achievable. Key implications from this audit work included: CRL staff get coding decisions right almost every time (around 99%), therefore Districts should be wary of investing too much time and resource into re-coding; and that restricting re-coding to specially trained officers (e.g. officers in charge of FMCs) achieves higher accuracy rates.
- ***Deep dive audit of burglary/theft from residential dwellings:*** National report which examined 600+ offence files to establish the accuracy of recording, as well as providing insight into the quality of related investigations. The detailed audit findings were shared with the National Intelligence Centre and contributed to subsequent consideration by Police's National Tasking and Coordination Group. A range of potential ways to improve investigations and enhance resolution outputs were identified as a result of the audit work.
- ***Sexual assaults - From reporting to recording:*** National report offering a detailed exploration of channels of contact and practice, which summarised the results of 11 component audits and drew on examination of some 1400 records. The assurance work provided a comprehensive evaluation of recording accuracy, and the strengths and weaknesses of supporting systems and processes.

Accuracy of closure/resolution coding

- ***Pre-Charge Warnings (PCWs):*** National report which identified variation in working practices and processes (both inter-Districts, as well as between Areas within Districts). The report outlined a series of practical improvement opportunities, based around an updated PCW policy. It also expressed support for a broader national framework of alternative resolutions, allowing Police to target offender behaviour more appropriately. The audit report's recommendations are in the process of being actively worked through by other Police National Headquarters groups.

Thematic reviews and/or analyses

- ***Accuracy of firearms recording in NIA:*** A bespoke report for the Assistant Commissioner: Response and Operations providing insight into the accuracy of recording firearms as property items in NIA.
- ***Use of the 6C (child protection report of concern) incident code:*** Bespoke audit carried out on behalf the Manager: Adult Sexual Assault and Child Protection to provide insight about the use of 6Cs in NIA. The activity resulted in a series of observations about inconsistency of code use, and highlighted how the current use of 6C negatively impacts in terms of accurate victimisation counts and understanding service demand levels.
- ***Re-codes and deletion reporting:*** Bespoke District reports made available on a monthly basis (ie., 12 per month). These reports have successfully reduced inaccurate re-codes, by identifying individuals who should not be re-coding.

Conclusion

In summary, 2015/16 has been a year in which significant further progress has been made on continuously improving Police's data quality. The specialist Data Quality and Integrity Team based at PNHQ has helped offer support and focus, and successfully delivered on a comprehensive *Data Quality Audit Plan 2015/16*.

New Zealand Police aspires to progressively lift the level of confidence in its core data, and a series of data quality initiatives will continue to be advanced in the years to come. To help give visibility to this work, reports such as this, which particularly highlights progress against the DQIT's *Data Quality Audit Plan*, will be produced on an annual basis (with next year's equivalent report expected to be available closer to the end of the financial/performance year in July). Amongst other things, data quality work programmed in 2016/17 will include an emphasis on:

- Appointment of a third DCR, aimed at increasing the level of support and guidance available for District-based staff
- Increasing the scope of regular internal auditing, and exploring the potential for external benchmarking
- Technology changes, aimed at making it easier for Police staff to record things accurately at first instance, and limiting the potential for incorrect coding.