

## Recorded Crime Audit Strategy

A major challenge facing the Bureau is improving the quality of the recorded crime data received from NSW Police.

One strategy for meeting this challenge is a recorded crime audit program to (1) identify possible changes in recording procedures affecting crime levels, (2) identify possible under-recording of crime and (3) assess the quality of data being recorded by Police.

### Strategy 1: Search for step changes and spikes in levels of crime

**Objective:** To identify possible changes in recording procedures rather than real changes in the levels of crime.

**Process:**

Statistical tests are applied to monthly incident counts for Total NSW, Statistical Division (SD), Statistical Sub-division (SSD), Local Government Area (LGA) and Police Local Area Command (LAC) for the top 17 offence types.

Irregularities are initially referred to programming staff to eliminate processing errors. Step changes and spikes are then considered within the context of the level of incidents counts, as series with small numbers of observations, such as robbery with a weapon, are inherently volatile. Significant movements at the state level are also considered within the context of annual data back to 1995.

**Statistical Tests:**

'Ratio of means' statistic – may indicate a discontinuity or 'step change' in the data. Series with a ratio of 12-month mean to 36-month mean of 1.5 or greater are checked.

'Chi<sup>2</sup>' statistic – is used to measure variability in the data. A series with a Chi<sup>2</sup> statistic of 10 or higher in any of the three months of new data (i.e. a 'spike') is checked. The Chi<sup>2</sup> 3-month statistic is used to indicate how much of the last three year's variation from the mean is concentrated in the latest three months of data. Significant values ( $p < 0.05$ ) are checked.

'Kendall's rank-order correlation test' – used to determine whether there has been an increasing or decreasing trend in the recorded number of criminal incidents over the most recent 24-month period. While this test identifies changes in the level of crime, it cannot be used to identify changes that may be due to changes in recording procedures rather than a real change in crime.

**Output:** Data steps and spikes of concern are referred in writing to the NSW Police Statistician and the Manager, Planning Unit, Performance Improvement & Planning for advice and, if appropriate, corrective action by the relevant Local Area Commands. Data irregularities of serious concern are referred directly to the NSW Police Commissioner.

**Frequency:** Quarterly (this analysis is an integral part of our quarterly recorded crime data processing)

## Strategy 2: Monitoring of 'Rejected' incidents

**Objective:** To identify possible under-reporting of criminal incidents

**Definitions:**

Rejected – The NSW Police Crime Recording Standard states that “An Incident should only be classified as 'REJECTED' if verifiable information is available which indicates that the crime / incident did not occur.” Rejected incidents are not included in the recorded crime statistics.

Trend test - 'Kendall's rank-order correlation test' is used to determine whether there has been an increasing or decreasing trend in the recorded number of criminal incidents over the most recent 24-month period.

**Process 1 – Analysis of effect of 'rejected' incidents on state-wide and regional trends**

Trend tests are applied to total incident counts (accepted plus rejected) and the results compared with the NSW and regional (SD and Metropolitan SSD) results for the recorded crime data (which excludes rejected incidents).

NSW trends are for all offence and regional trends for the 17 major offences.

Conflicting results are highlighted and LAC-level data investigated for the offences concerned, so as to isolate areas where the classification of incidents as 'Rejected' by individual LACs has affected any state-level or regional trend.

**Output** – Report to NSW Police advising of any state-wide or regional trends that have been affected by 'Rejected' incidents and the specific LACs which have caused this effect.

**Frequency:** Report six-monthly after release of March and September quarter statistics. (Due end August and February.)

**Process 2 – Interrogation of event narratives for 'Rejected' incidents**

Interrogation of event narratives for two samples of rejected incidents to identify (1) reasons why Police are rejecting incidents and (2) reasons for any LAC to have an upward trend in rejected incidents for any offence type

Random sample for major 17 offences excluding murder plus Breach bail and Breach apprehended violence order. Sample size = 250; stratified by rejection rate

Random sample of 50% of rejected incidents in previous 12 months for any LAC with a 24-month upward trend in any offence type

**Output** –Written report to NSW Police outlining the proportion of incidents incorrectly rejected and the reasons why incidents are 'rejected' by offence type and providing details of any LAC with a significant upward trend in rejected incidents.

**Frequency:** one-off analysis following release of March quarter 2010 statistics

### **Strategy 3: Analysis of 'Occurrence only' and 'DV – no offence' incidents**

**Objective:** To identify possible under-reporting of criminal incidents

**Definitions:**

DV – no offence – these are Domestic Violence-related incidents where no offence is considered to have taken place eg neighbours have called Police out to what is ascertained to be a verbal argument. These incidents are not counted in the Recorded Crime data.

Occurrence only – 'occurrence only' incidents are not classified as criminal incidents and so are not counted in the Recorded Crime data. The NSW Police Crime Recording Standard states:

“OCCURRENCE ONLY incidents should only be used where there is no other applicable COPS Incident Category and used where there is no police investigation / action required.”

**Process** - Interrogation of event narratives from a sample of 'occurrence only' and 'DV – no offence' incidents to identify the proportion for which a criminal incident should have been created

Random sample for 200 'Occurrence only' and 200 'DV – no offence' incidents

**Output** –Written report to NSW Police advising the proportion of sampled 'occurrence only' and 'DV – no offence' incidents which should have been created as a criminal incident type

**Frequency:** annually, following release of June quarter statistics (due end November)

## Strategy 4: Interrogation of event narratives

**Objective:** To compare incident details written in the event narratives with the incident classification codes in order to assess the quality of data being recorded by Police

**Definitions:**

Event narrative – a written description of the criminal event which may contain information about the offence including the offence type and location, the person of interest, the victim and the clear-up status of the incident. Access to the event narrative is granted by Police and is subject to stringent security requirements. The information in event narratives is not used in the recorded crime statistics.

Incident classification codes – codes or values recorded by Police in COPS and used in the compilation of recorded crime statistics eg premises type code 13 = Licensed Premises

**Process:**

The following details are extracted for a random sample of 100 non-traffic criminal incidents each quarter:

- Event number and incident number
- Incident date and incident time
- Location name and address details (eg number, street, suburb, postcode)
- Geo-codes (latitude and longitude)
- Premises type – up to three levels of detail eg OUTDOOR/PUBLIC PLACE LAND then ROAD/STREET
- Incident classification – up to two levels eg STEALING then STEAL FROM MOTOR VEHICLE
- Object involvement and type (eg knife)
- Associated factor flag (eg Domestic-Violence related, Alcohol-related)
- Relationship of victim to POI (eg spouse/partner, child)
- POI status (eg Court Attendance Notice, No formal action) and any charge details if proceeded against by Police
- Clear-up-status (i.e. Cleared, Under Investigation, No Further Investigation)

Using the event number to access the narrative on COPS, the audit officer reads the Narrative for each incident in the sample and marks each classification variable as Confirmed, Unconfirmed or Error.

A summary table is produced showing each variable by the proportion of entries that were Confirmed, Unconfirmed or an Error.

**Output:** Written report to NSW Police showing narrative analysis summary for variables along with analysis of common coding errors.

**Frequency:** Report by end May 2010 then as required