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Armed robbery in Australia:
2008 National Armed
Robbery Monitoring
Program annual report

Lance Smith
Kym Dossetor
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Foreword

Armed robbery is a serious crime that can have a negative impact on individual victims and employees of businesses that may be targeted. People who work in locations vulnerable to armed robbery can experience emotional repercussions if present during an armed robbery. The Australian Institute of Criminology (AIC) continues to focus on reducing armed robbery in Australia in order to reduce the severity of the effect this crime can have on people's lives.

The National Armed Robbery Monitoring Program (NARMP) was established in 2003 to fill an information gap on trends and patterns in armed robbery in Australia, with a particular focus on identifying changes over time in the use of specific weapons. The 2008 annual report is the sixth publication since the AIC began monitoring this offence. Building on previous analyses, this report provides an overview of the 6,427 victims of armed robbery and the situations, including locations, that made them vulnerable to victimisation.

In total, there were 5,686 armed robbery incidents in 2008. This represents a decline in the previous year's figures and is part of a continuing decline in the rate of armed robberies in Australia. While the

cause for this decline is yet to be fully explained, it remains a welcome finding. This decrease will continue to be monitored by NARMP to establish whether armed robbery incidents continue to decline in the coming years or if numbers begin to stabilise.

The 2008 data collection and annual report has been able to include additional information about armed robbery incidents. The inclusion of this additional data allows for a more detailed examination of armed robberies reported to police in Australian states and territories during 2008. Such information is valuable in assisting law enforcement to develop a more complete picture of armed robbery incidents, including being able to determine whether there are any differences in net financial gains for offenders based on the type of weapon they use, or the locations they target.

Many of the AIC's long-term monitoring programs, including the NARMP, are dependent upon the support and cooperation of state and territory police. The AIC greatly appreciates this cooperation and assistance, as we do the advice and assistance of our many stakeholders, including the retail, financial, service station and private security industries.

Adam Tomison
Director

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Acronyms

ABS	Australian Bureau of Statistics
AIC	Australian Institute of Criminology
ASOC	Australian Standard Offence Classification
CCTV	closed circuit television
NARMP	National Armed Robbery Monitoring Program
OH&S	occupational health and safety
RCV	Recorded crime: Victims, Australia

Unspecified retail location—shopping centres, jewellers, pawn shops, gambling locations (TABs) and other retail locations not further defined

Public setting—recreational; transport-related including car parks, stations and carriages/vehicles for trains, buses and taxis; open spaces; and the street and footpath

Transport-related location—bus stops and train stations, car parks associated with these terminals and conveyances eg buses, trains and taxis

Banking and financial location—automatic teller machines not attached to banking and financial premises

Licensed premises location—licensed clubs, pubs, taverns nightclubs and bottle shops

Residential location—private and commercial residences, includes yards and external structures

Recreational location—sporting facilities excluding premises flagged as retail or licensed

Other weapon category—bottle/glass, bat/bar/club, chemical, explosive, axe, sledgehammer, crowbar/metal pipe, stun gun, sword, tools, drug, vehicle, bow, spear, rock, blunt instruments and other weapons not further defined

For a more detailed Glossary see the *Technical Appendix* at the back of this report.

Executive summary

National Armed Robbery Monitoring Program overview

Data collection for the National Armed Robbery Monitoring Program (NARMP) began in 2003 following a commitment from police services in all Australian states and territories to provide information that would permit the detailed national-level exploration of armed robbery.

The program was established to:

- monitor trends in armed robbery, specifically trends in weapon use;
- identify changes in trends; and
- provide insight into the factors underpinning these trends.

In this, the sixth year of reporting, analysis is presented for data on all armed robberies reported to police between 1 January 2008 and 31 December 2008. Comparisons are also made with data from previous years, where possible.

Victims of armed robbery

Analyses of the 2008 victim-based NARMP dataset suggest that:

- while the number of victims of armed robbery has fluctuated from year to year, there has been an overall decrease of 28 percent since 2003, with a smaller decrease of approximately 10 percent in the number of victims compared with 2007 data (6,427 in 2008 compared with 7,133 in 2007 and 8,865 in 2003);
- knives were the most commonly used weapon (51%), with a four percent increase in the use of knives compared with the previous year's results. Armed robberies involving firearms decreased by three percent to account for only 13 percent of all weapons used in armed robbery;

- just under 40 percent of all armed robberies involving individual victims occurred in a retail setting (38%; specified and unspecified) while 48 percent occurred in an open setting (recreational space, transport-related, open spaces and street and footpath);
- the average age of an armed robbery victim was 30 years; 66 percent of male victims and 55 percent of female victims were under the age of 30 years;
- males were more than three times more likely to be victimised than females (33.5 per 100,000 for males; 9.9 per 100,000 for females);
- organisations or commercial premises accounted for 27 percent of victims recorded in NARMP. This figure has remained similar to previous years (27% in 2006 and 26% in 2007);
- the number of armed robberies involving organisational victims at residential locations (possibly indicating some type of home business) almost doubled in 2008 from the number recorded in 2007 (142 in 2008 compared with 76 in 2007); and
- one percent (76 victim records) indicated repeat victimisation during 2008, with most of these being organisations (62%).

Incidents of armed robbery

- During 2008, there were 5,686 incidents of armed robbery recorded in Australian states and territories.
- The majority of armed robbery incidents involved a single individual victim (63%) or a single organisation (27%).
- Approximately one-third of all robbery incidents occurred on the street (35%) and 16 percent on the premises of an unspecified retailer (this includes shopping centres, jewellers, pawn shops and gambling locations (TABs) among other retail locations not further defined).

- For the second year, there was a substantial decrease in the number of service station armed robberies (34% in 2007 and 32% in 2008).
- Two-thirds (67%) of armed robbery incidents occurred between the hours of 6 pm and 6 am.
- Forty-three percent of armed robbery incidents occurred between 6 pm and 12 am.
- Firearms were used in a higher percentage of robberies in banking and financial settings (45%) and licensed premises (39%) than in other locations.
- Knives were the most common weapon used in the majority of locations (eg corner stores, supermarkets and takeaways 62%; post offices and newsagents 58%; open spaces 58%).
- Not all jurisdictions were able to provide information on the type of property stolen. Available data indicated that the most common type of property stolen was cash (56%) followed by electrical goods, including mobile phones (16%).
- On average, armed robbery offenders netted \$1,662 per incident in 2008 which was a considerable increase compared with \$1,066 per incident in 2007 (where a weapon and location were identified). This result was influenced by the substantial decrease in the number of armed robberies where property value was recorded as nil (11% in 2008 compared with 28% in 2007).
- The median (the middle figure when ranging from lowest to highest) for the value of property stolen by armed robbery offenders in 2008 was \$270 and the mode (the figure occurring the most often) was \$300 (where something with value was stolen).
- The highest average gains for offenders were from incidents where a firearm was used (\$4,833). The lowest average was associated with 'syringe' robberies (\$830).
- Some of the highest average value gains for a weapon/location combination (with more than one incident) were for 'other' weapon robberies at pharmacies (\$28,038) and firearm robberies at licensed premises (\$18,777).

Armed robbery offenders

- Data were available for 3,425 armed robbery offenders involved in 2,157 incidents. The typical incident involved a lone offender (64% of incidents; the average was 1.6 offenders per incident while both the median and the mode were 1 offender per incident when an offender was identified).
- The more offenders that were involved in an armed robbery, the more likely it was that a firearm was used (incidents involving lone offenders involved firearms 11% of the time compared with 33% for five offenders).
- The average age of lone offenders was 26 years compared with 19 years of age for groups involving five offenders.
- The average age of offenders varied with location, with older offenders tending to target banking and financial locations (30 years) and pharmacies (30 years).

Patterns in armed robbery

Consistent with findings from previous years, the 2008 NARMP findings suggest that the features of Australian armed robberies have not changed markedly over the six years in which the NARMP has been collecting data. Generally, armed robberies fall into one of the following two categories:

- *low yield, unplanned and essentially opportunistic*—these are where targets are accessible to offenders who are generally inexperienced and likely to use 'easy to obtain' weapons such as knives (eg robberies in open spaces); or
- *high yield, suggesting some level of planning and organisation with a selected target*—high-yield offenders will often employ weapons that are more difficult to obtain (such as firearms) and are less likely to operate alone (eg banking and financial location robberies).

Data from previous analyses suggest that some residential armed robberies (home invasions) and a small subset of street robberies may fall into the latter category of high-yield robberies employing specialist weapons. However, the most recent NARMP data indicated that only high-yield armed robberies (ie more than \$10,000 stolen) at licensed premises locations (10 identified incidents) were more numerous than this type of armed robbery in residential or street locations. High-yield armed robbery was more likely to occur at street (n=9) and residential (n=8) locations than banking and financial (n=5) or other retail locations not further defined (n=4), but only two incidents of the possible 17 high yield armed robberies at residential and street locations involved the use of a specialist weapon (eg firearm). Traditional locations, such as banking and financial,

still had higher averages for the value of property stolen during an armed robbery than armed robberies occurring at residences or on the street (see Table 18). Therefore, despite the inconsistent weapon profiles and stolen property values, there is evidence of a growing number of high-yield cases occurring at residences and on the street.

Connected with this finding and continuing on from 2007 results, the majority of high-yield armed robbery victims in 2008 were, once again, individuals rather than organisations. This reinforces the suggestion from the previous report that crime prevention measures being employed by commercial targets of armed robbery may well be preventing or reducing commercial industry's armed robbery victimisation exposure.



Introduction

National Armed Robbery Monitoring Program collection

The NARMP is operated by the Australian Institute of Criminology (AIC) as a tool to identify and monitor trends in armed robbery across Australia. The AIC's analysis of the available armed robbery data provides a particular focus on trends in weapon use, as well as providing insight into the factors that may underpin these trends. It reports on national-level analyses that can complement other crime information sources. The NARMP was established in 2003 under the auspices of Australasian Police Ministers and senior police officers (for more detail about the establishment of the NARMP, see the AIC's NARMP website <http://www.aic.gov.au/research/projects/0003.html>). It is sustained by the ongoing support of police services in all Australian states and territories, as well as assistance from a range of other stakeholder groups including the retail, financial, service and private security sectors.

The NARMP collection is still a relatively new crime-trend monitoring program. It contains information concerning each victim of armed robbery reported to police in Australia since 2003. The NARMP was initially modelled on the *Recorded Crime: Victims, Australia* (RCV) collection (ABS

2009a, 2008a), although consultation with data providers and other key stakeholders has seen refinements to what is collected over time. For example, victim data from calendar year 2004 onwards have usually been accompanied by an incident 'identifier'. An identifier is a tool that allows victim records to be collapsed into incidents in which individual victims were involved. The ability to analyse data in this manner is important for the accurate description of the elements of each single incident of robbery. For instance, a single armed robbery involving one handgun might have six victims. If data are analysed in a victim-based format, a count of six handguns would result, but if the unit of analysis is the incident, only one handgun is counted.

The level of detail about armed robberies in collated information has also increased over time. The initial annual dataset mostly contained information pre-coded into higher level RCV categories. Files received from jurisdictions now contain information in its raw form, which allows more detailed categories to be constructed. The inclusion of more detailed categories means some analyses refer to categories containing only a few cases. However, small numbers can result in large fluctuations over time, affecting the reliability of yearly comparisons. The types of variables collated have also changed over time so that additional information, such as the

incident identifier described above, is now collected. Some variables are not recorded in NARMP, such as details on sentencing and an offender's prior convictions which can now be found in some jurisdictional reports such as Victoria's Sentencing Advisory Council report *Sentencing for Armed Robbery: A Statistical Profile* (Woodhouse 2010).

Due to the evolving nature of the NARMP, care should be taken in drawing strict or detailed comparisons between different recorded crime sources (such as RCV and the NARMP) or even between initial and later NARMP reports. Ongoing refinements to the nature of the material it contains mean that any comparisons drawn with earlier annual reports are based on observed trends and are not accompanied by statistical tests of significance. The relatively short time since the establishment of the NARMP also means that none of the annual comparisons have yet been subject to any time series analyses.

Report format

In this report, an examination is made of all armed robbery victims and the armed robberies they were involved in, which were reported to police in all Australian jurisdictions from 1 January to 31 December 2008. Details of methodology and type of information included in the NARMP can be found in the *Technical Appendix* to this report, as can a more detailed discussion of the limitations of the NARMP. The *Technical Appendix* also provides a glossary of terms and definitions found in this report.

The key findings from the 2008 NARMP collection are reported in three sections. The first section contains summaries of victim-based analyses. Using the same unit of analysis as in previous years has allowed broad comparisons to be drawn with

information contained in earlier NARMP annual reports, as well as in other recorded crime sources, such as RCV (ABS 2009a, 2008a).

In the second section, there is an examination of the characteristics of each armed robbery incident, using the incident as the unit of analysis. Findings can generally be compared with the previous NARMP analyses (all references to previous NARMP findings throughout this report relate to the relevant annual report; see Borzycki 2008, 2006). As with 2005, 2006 and 2007, data used in the 2008 report are more representative on a national level than earlier NARMP reports. This is because all jurisdictions were able to supply a unique incident identifier. In 2004, not all jurisdictions could supply the incident identifier, which meant that the incidents examined did not represent all incidents reported to police.

In the third section, incident-based analyses are also used to outline characteristics of armed robbery offenders. The report concludes with a case study that examines armed robberies at transport-related locations (eg train stations) in detail. This type of robbery is of interest due to the challenges it can pose for people who utilise public transport and for those who work in this type of location (eg taxi drivers).

Analysis of the NARMP data suggests that the characteristics of armed robberies have been generally consistent over the six years of the program although, as noted earlier, caution should be exercised when making comparisons with previous years. The introduction of crime prevention theory in the previous two reports (situational crime prevention and routine activity theory) better explain the dynamics of armed robbery. Methods for promoting better approaches to prevention are built into the *Discussion* and highlight the importance of monitoring armed robbery and evaluating approaches to prevention in order to inform the sector on successful strategies.



Key findings

Victims of armed robbery

The 2008 NARMP dataset contains records relating to 6,427 victims of armed robbery reported to police from 1 January to 31 December 2008. This represents an overall decrease of 2,438 victims (28%) from the first year of NARMP data collection in 2003. Compared with recent years, there was a decrease of 706 victims from the 2007 dataset (n=7,133; see Smith & Louis 2010). The number of annual victimisations recorded in the NARMP has fluctuated in the six years since it was established in 2003 (n=8,865 victims; see Borzycki, Sakurai & Mouzos 2004). An initial decline in victim numbers in 2004 (n=6,646) was followed by slight increases in each subsequent year until 2006, which was then followed by another decrease in both 2007 and 2008 (see Figure 1).

Approximately seven out of 10 victims (n=4,709; 73%) were categorised as individual persons, with the remainder being organisational victims. The percentage breakdown of victim type was similar to 2007 (74% individual persons).

Weapons used against armed robbery victims

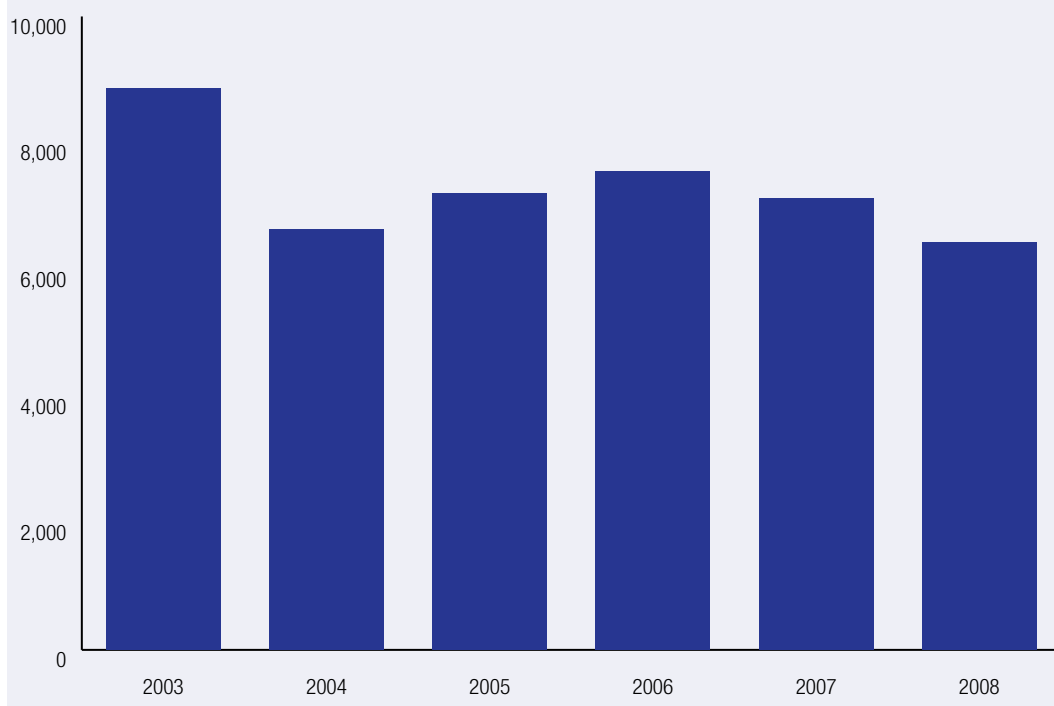
Three out of eight jurisdictions were able to supply information for victim cases where it was possible for

more than one weapon to be counted (known as 'multiple weapons' incidents). For these possible multiple weapon incidents however, the findings established that the average armed robbery still only involved a single weapon (1.09 weapons used in 2,295 victim cases where multiple weapons could be counted). The median number of weapons used was also one. Only seven percent were victims in incidents involving two weapons and less than one percent of victims were threatened with three weapons.

Other results indicated that:

- knives made up the majority of weapons used to commit armed robbery (51% of 6,629 weapons listed for victims; this is a 4% increase from 2007 figures; see Table 1);
- firearms were used to commit 13 percent of armed robberies, a three percent decrease from 2007 figures. Seven percent of all weapons specified were handguns and two percent shotguns;
- over one-quarter of weapons were in the category of 'other weapons' (26%), a decrease of five percent compared with 2007 results; and
- syringes accounted for fewer than one in 20 of the weapons involved (3%).

Figure 1 Individual victims of armed robbery, by year, 2003–08 (%)



Source: AIC NARMP 2008 [computer file]

Locations in which victims were robbed

Thirty-eight percent of all victims were robbed in some sort of retail setting (including specifically listed retail locations). Forty-eight percent of victims were robbed in an open, public setting with the majority of these robbed on the street or footpath (35% of all victims). These location figures have been consistent since the NARMP began in 2003. The percentage of individual persons relative to organisational victims subjected to robbery in each of the location categories was also similar to that observed in 2007.

Individuals comprised approximately nine out of 10 victims robbed in locations classified as recreational, transport-related, open spaces, street and footpath, and other community settings (see Figure 2). Organisations made up the majority of victims in all robberies occurring in primarily commercial settings. The exceptions were the categories of corner stores, which includes supermarkets and takeaways, and wholesalers.

Individual victims of armed robbery

The average age of an armed robbery victim, for whom valid age and gender information was recorded (n=4,638), was 30 years old, although male victims were slightly younger (29 years) than female victims (32 years). The majority of victims (63%) were aged less than 30 years (see Table 2); consistent with 2005–07 findings, 66 percent of males and 55 percent of females were aged less than 30 years.

Young men have consistently been shown to be subject to high rates of armed robbery victimisation. Men aged 18 to 19 years experienced the highest rate of victimisation of all age and gender groupings (133.6 per 100,000 population; see Table 2). The highest victimisation rate among women and girls was also found in the 18 to 19 year age group (37.9 per 100,000), although the overall rate of female victimisation was substantially less (see Table 2). The most victimised age groups among both male and females reflects the overall patterns for many crimes with the 15–24 year old cohort being the most

Table 1 Weapons used to threaten armed robbery victims, 2008^a

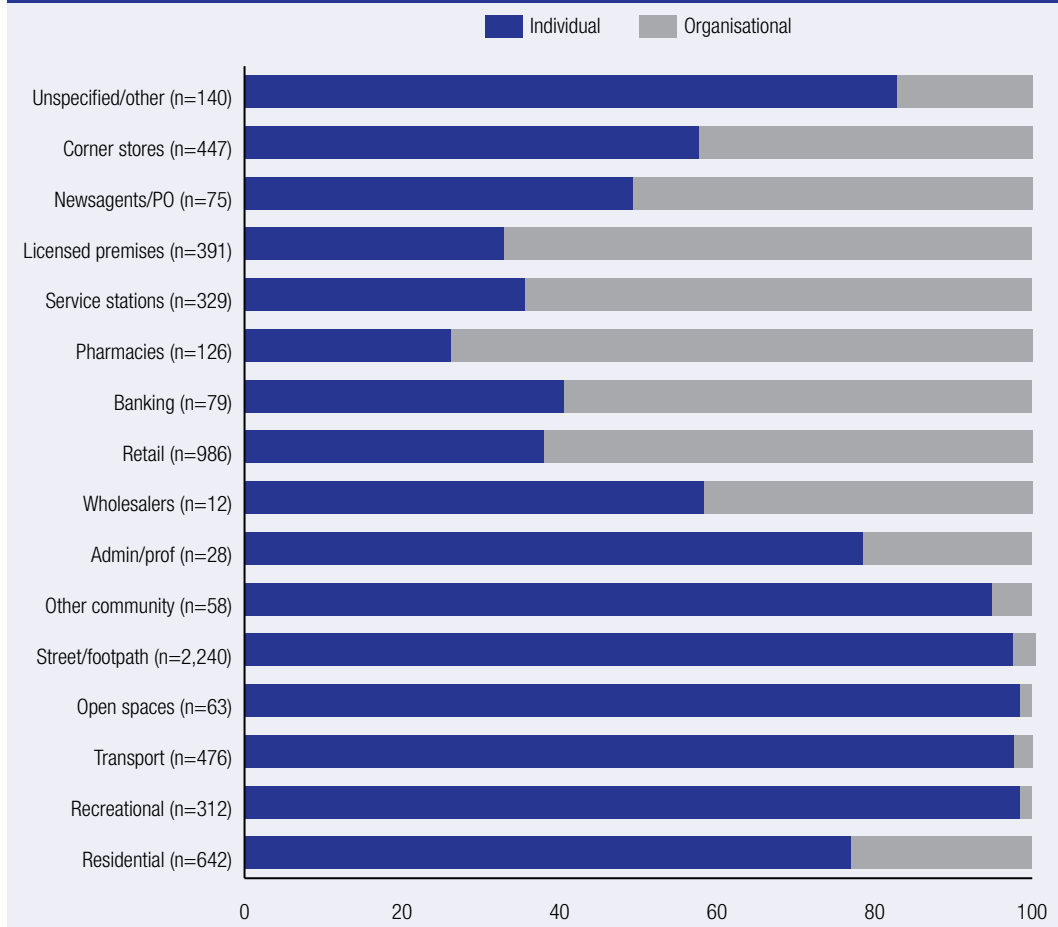
Weapon	n	Armed robberies (%)
Firearms		
Firearm (with no further detail)	42	1
Handgun	487	7
Shotgun	111	2
Rifle, airgun	41	1
Sawn off longarm	8	<1
Replica firearm	31	<1
Other firearm (not classified elsewhere)	113	2
Total firearms	833	13
Knives		
Knife (with no further detail)	3,274	49
Scissors	3	<1
Pocket knife	2	<1
Screwdriver	44	1
Other knife (not classified elsewhere)	77	1
Total knives	3,400	51
Syringes		
Syringe	177	3
Total syringes	177	3
Other weapons		
Other weapon (with no further detail)	468	7
Club, baton or stick	262	4
Rock, brick or stone	44	1
Tool (not classified elsewhere)	154	2
Blunt instrument (not classified elsewhere)	62	1
Bottle, broken glass	249	4
Chemical spray	21	<1
Drug	4	<1
Explosive, bomb	6	<1
Machete, axe	24	<1
Sledgehammer	22	<1
Crowbar, metal pipe	278	4
Bow, spear, speargun	2	<1
Vehicle	5	<1
Stun gun (Taser)	2	<1
Sword	2	<1
Other weapon (not elsewhere classified)	101	2
Total other weapons	1,706	26
Weapon used (with no further detail)	111	2
Unknown	402	6
Total (unknown and no further detail)	513	8
Total	6,629	

a: Multiple weapon types were listed for some victim records; therefore, total number refers to the total number of weapon types listed, not the total number of victim records

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Figure 2 Individual and organisational victims of armed robbery, by location type, 2008 (%)^a



a: Excludes individual and organisational victim records with missing location and/or organisational flag

Note: n=6,404

Source: AIC NARMP 2008 [computer file]

victimised (ABS 2010). Overall, males were three times more likely to be victimised than females (males=33.5 per 100,000 population, females=9.9). These figures are slightly lower than with the previous year's data, with rates of victimisation for males decreasing while the rates for females remained relatively stable (males=39.2 per 100,000 population, females=11.5).

Consistent with 2007 findings, the largest percentages of victims in most age and gender groups were robbed on the street or footpath (see Table 3). Over half of all males under 18 years of age (53%) and of 18 to 34 years of age (56%) were victimised in this location.

General patterns in victimisation locations are similar to those seen in previous years, with elderly males (60 years and over age group) more likely to be a victim of armed robbery in a residential setting than any other location. By contrast, elderly females were more likely to be victims in a retail setting than any other location. Fluctuations since 2003 in the proportion of victims subjected to armed robbery in most other locations, and in older age groups, are likely to result from the small number of victims in these subcategories.

The weapons used in armed robberies are based (where indicated) on the most serious weapon listed in a weapon combination, with the order of

Table 2 Victims, by sex and age group, 2008^{a, b}

Age group (yrs)	Male		Female		All		n
	Male victims (%)	Rate per 100,000 of this age group and sex	Female victims (%)	Rate per 100,000 of this age group and sex	All victims (%)	Rate per 100,000 of this age group	
<15	4	6.3	3	1.4	4	4.0	163
15–17	14	109.3	8	20.3	12	66.0	576
18–19	12	133.6	10	37.9	11	87.2	522
20–24	23	105.2	21	29.8	23	68.4	1,047
25–29	14	64.1	13	18.2	14	41.4	627
30–34	8	38.8	8	11.5	8	25.2	371
35–39	6	28.6	6	11.9	7	20.2	323
40–44	5	23.9	6	8.5	5	16.2	245
45–49	5	22.0	8	10.2	5	16.1	249
50–54	4	17.9	6	9.4	4	13.6	192
55–59	3	16.1	3	5.6	3	10.8	139
60–64	2	10.8	3	5.5	2	8.2	92
>65	2	5.4	2	1.4	2	3.2	92
All ages		33.5		9.9		21.6	

a: Excludes individual victim records with missing age and/or gender (n=63)

b: Rate of victimisation per 100,000 population (ABS 2009b), based on individual victims with valid age and gender. Excludes organisational victims and is therefore lower than the rate specified when also considering organisational victims (n=1,716)

Note: Percentages may not total 100 due to rounding. Males n=3,572; females n=1,066

Source: AIC NARMP 2008 [computer file]

decreasing seriousness being firearm, knife, syringe, then 'other' weapons. The most serious weapons used against male and female victims of different ages are summarised in Table 4. Knives were used against at least half of victims regardless of age or gender, although some age and gender differences can be found in patterns of weapon use. For example, it has been consistently found that a slightly higher percentage of females compared with males were subject to robbery with a syringe or firearm. This pattern continued in 2008, with females more likely to experience firearm robbery (12% for females compared with 10% for males) and robberies where a syringe was used (4% for females compared with 2% for males). As has been noted in earlier reports, the greater likelihood of females being victims of firearm robbery may be a reflection of employment, where women are more likely to work in locations where a higher risk of firearm robbery exists, such as a retail location. The 'other' weapon category

accounted for 31 percent of weapon usage in robberies against males compared with 25 percent for females.

Only a minority of jurisdictions were able to supply information regarding victim injury as a result of armed robbery, which equated to injury data for approximately one in seven victims (n=722). Due to the small number of cases examined, results should not be interpreted as representative of all armed robbery victims in Australia. Some findings in 2008 are similar to those of 2007 insofar as only a small proportion of supplied victim cases recorded serious injury (5%; see Table 5). Eleven percent of all victims had no report of injury. One-third of victims received a minor injury (33%). Of the major weapon types, other weapon robberies resulted in the highest percentage of reported minor injuries (52%). Fifty-one percent of all victims reported emotional trauma as the listed injury. There were no deaths recorded in this NARMP sample for 2008.

Table 3 Locations of victimisation, by sex and age group, 2008 (%)^a

Location	Males				Females				Total (n)
	<18	18–34	35–59	60+	<18	18–34	35–59	60+	
Residential	3	8	16	25	8	11	16	15	482
Recreational	14	6	4	6	8	5	3	4	301
Transport-related	13	10	7	7	13	13	8	6	459
Open spaces (excluding street and footpath)	4	1	<1	0	3	1	1	0	61
Street and footpath	53	56	36	23	44	45	20	19	2,154
Educational, health, religious, justice and other community	1	1	1	1	1	1	2	0	54
Administrative and professional	0	<1	<1	0	0	<1	2	2	22
Wholesalers, warehouses, manufacturing and agricultural	0	<1	<1	0	0	0	<1	0	7
Retail	5	5	13	12	9	9	16	26	370
Banking and financial	0	<1	1	0	1	1	2	2	31
Pharmacies and chemists	0	<1	1	2	1	2	1	2	31
Service stations	<1	3	3	5	0	2	2	6	117
Licensed premises	<1	2	4	3	1	5	4	4	129
Newsagents and post offices	<1	<1	2	2	0	<1	2	6	37
Corner stores, supermarkets and takeaways	3	4	7	10	7	6	14	9	255
Unspecified and other	3	2	3	3	5	1	4	0	113
Total (n)	621	2,004	802	130	115	554	344	53	4,623

a: Excludes individual victim records with age, gender, or location missing (n=78)

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 4 Weapons^a used in armed robberies by gender and victim age group, 2008 (%)^b

Age group (yrs)	Males					Females				
	Firearm	Knife	Syringe	Other weapon	Total (n)	Firearm	Knife	Syringe	Other weapon	Total (n)
<15	5	63	2	31	129	0	79	4	18	28
15–17	6	55	1	39	452	5	71	0	24	78
18–19	7	63	1	29	371	15	56	0	29	105
20–24	10	58	2	30	766	17	53	6	24	207
25–29	9	58	2	30	450	15	52	5	29	126
30–34	11	59	3	28	256	10	55	8	27	77
35–39	15	55	3	27	210	8	66	3	22	86
40–44	13	54	4	29	158	16	53	2	29	62
45–49	13	59	3	26	155	14	58	4	24	72
50–54	15	48	4	33	114	11	61	2	26	62
55–59	17	52	1	30	99	0	66	6	29	35
60–64	18	56	4	23	57	14	68	7	11	28
>65	15	50	3	32	62	6	82	0	12	17
Total (%)	10	57	2	31	100	12	59	4	25	100

a: Based on most serious weapon listed in a weapon combination, assuming order of decreasing seriousness of firearm, knife, syringe, 'other' weapon

b: Excludes individual victim records with weapon type unspecified, unknown, not applicable and those in which victim age or sex is not stated or gender is missing

Note: Percentages may not total 100 due to rounding. n=4,262

Source: AIC NARMP 2008 [computer file]

Table 5 Injury from weapon inflicted on individual victims, by weapon type^a, 2008 (%)^b

Injury	Weapon				All weapons
	Firearm	Knife	Syringe	Other weapon	
No injury	20	8	14	15	11
Minor injury	18	25	21	52	33
Serious injury ^c	2	6	0	5	5
Emotional trauma	61	60	64	28	51
Total (n)	56	432	14	220	722

a: Based on most serious weapon listed in a weapon combination, assuming order of seriousness of firearm, knife, syringe and 'other' weapon

b: Excludes individual victim records with missing injury information and/or unspecified weapon type, or weapon types of unknown, not applicable or not stated

c: Serious injury refers to that requiring immediate emergency medical treatment

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Organisational victims of armed robbery

Organisations comprised approximately one-quarter (27%) of all victims recorded in the NARMP for 2008, essentially the same proportion as for 2007 (26% of all victims). As was the case for individual victimisations, the majority of armed robberies of organisations involved a knife (54% organisations, 58% individuals), although a substantially higher percentage were subject to firearm robbery (23% organisations *cf* 11% for individuals). Only a small percentage of organisations were robbed with other weapons (18%), compared with 29 percent of individual victims.

Weapons used during armed robberies, and the types of locations where victimisation occurred in

2008 (see Table 6), were generally similar to those of 2007. However, there was a substantial increase in the number of residential armed robberies ($n=76$ in 2007) with increases seen in every weapon type for this location. Continuing on from 2007, service stations once again saw a marked decrease in the number of weapons used during robberies in 2008, with 100 fewer organisational victims reported. There were also decreases in every weapon type for service stations in 2008 compared with 2007 data.

Offenders

The NARMP contains information about both alleged (charged and awaiting trial) and convicted offenders linked to armed robberies reported in the reference period — with the capacity to capture information on

Table 6 Organisational victims of armed robbery, by weapon type^a and location, 2008 (%)^b

Location	Weapon				Total (n)
	Firearm	Knife	Syringe	Other weapon	
Residential	6	10	6	11	142
Recreational	0	<1	0	0	3
Transport-related	1	<1	0	1	11
Open spaces (excluding street and footpath)	0	<1	0	0	1
Street and footpath	3	3	3	3	52
Educational, health, religious, justice and other community	0	<1	0	0	3
Administrative and professional	1	<1	0	0	5
Wholesalers, warehouses, manufacturing and agricultural	0	<1	1	0	5
Retail	30	38	53	34	575
Banking and financial	7	1	0	2	41
Pharmacies and chemists	3	7	11	4	88
Service stations	10	13	7	14	193
Licensed premises	27	10	4	20	250
Newsagents and post offices	3	2	1	3	38
Corner stores, supermarkets and takeaways	8	13	10	5	163
Unspecified and other	2	1	3	2	23
Total (n)	374	856	70	293	1,593

a: Based on most serious weapon listed in derived weapon combination, assuming order of seriousness of firearm, knife, syringe and 'other' weapon

b: Excludes individual victim records with missing injury information and/or unspecified weapon type, or weapon types of unknown, not applicable or not stated

Note: Percentages may not total 100 because of rounding

Source: AIC NARMP 2008 [computer file]

up to five offenders per robbery in some jurisdictions. In cases where more than five offenders were involved, information about the sixth and subsequent offenders was not collated. The NARMP dataset does not contain demographic information about individuals suspected of robbery, or report offender descriptions where individuals had not been apprehended by the time data were extracted. Finally, there is redundancy in victim-based offender information because armed robberies involving multiple victims have duplicated offender data for each involved victim. Because of these dataset features, the following describes only a subset of *all* offenders involved in reported armed robberies in Australia in 2008 and some information is repeated in that subset.

In 2008, 61 percent of victim records did not contain associated offender data (for further details see *Technical Appendix*). Of the 2,473 victims with offender information supplied, demographic details were available for 3,975 offenders. Table 7 shows

that almost half of all organisational victims had at least one offender identified, compared with one-third (36%) of individuals who were robbed. On average, individuals were victimised by slightly larger groups of offenders (1.7 offenders) than organisations experienced (1.4 offenders). Previous NARMP reports show similar findings, but as noted in those reports, these apparent differences may be a function of limitations in available offender data.

Where data on the relationship between victim and offender was available, offenders were unknown to individual victims in approximately 91 percent of cases (see Table 8). This tends to suggest, as has every previous NARMP report, that robbery tends to be an anonymous crime. These results were identical to the previous year's results.

Approximately one-third of victim records (32%) were noted as not being finalised at the time of data extraction, regardless of the victim type (see Table 9); in a further one-third of cases, the matter was

Table 7 Number of offenders involved in armed robbery, by victim type, 2008 (%)

Offender count	Victim type		Total (n)
	Individuals	Organisations	
Nil/unsolved ^a	64	54	3,935
One	21	32	1,551
Two	9	9	566
Three	3	3	188
Four	2	1	112
Five or more ^b	1	1	68
Total (n)	4,709	1,711	6,420

a: Includes individual and organisational victim records that were unsolved or had an outcome of no offender proceeded against and those in which offender information could not be supplied or was missing

b: Data set contains a maximum of 5 offenders, therefore victimisations involving more than 5 offenders are included in the count of 5

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 8 Relationship between individual victim and offender^a, 2008

Relationship	n	Victim-offender relationships(%)
Offender(s) known to victim	164	9
Offender(s) unknown to victim	1,632	91
Total	1,796	100

a: Multiple relationships were listed for some victim records in which multiple offenders were identified. Therefore, n refers to the total number of relationships listed, not the number of individual victim records. Excludes victim records with relationship codes of 'missing', 'not applicable', or 'variable not supplied' and records flagged as organisational victims

Source: AIC NARMP 2008 [computer file]

finalised with an offender being proceeded against (33%). This figure was much higher for organisational victims (41%). The summary statistics should be considered with the caveat that the investigative status variable is problematic for a range of reasons. These findings (which can refer to outcome at data extraction or at 180 days) should not be compared with earlier NARMP annual reports (see *Technical Appendix*), nor with RCV information, which only reports on case status 30 days following a crime report being received.

Repeat victimisation

A small number of victims (identified via victim reference numbers) appeared in the 2008 dataset on multiple occasions. Although not a completely valid indicator of repeat victimisation (see the discussion of data limitations in the *Technical*

Appendix), there were 76 victim records where details strongly suggest repeat victimisation during 2008. Twelve of these victims (individuals and organisations) were subject to armed robbery on at least three occasions, while it appeared that two victims were targeted on at least four occasions. There was an average of 92 days between the dates on which the first and second armed robberies occurred for repeat victims, although 340 days elapsed for one victim. Knives were the most serious weapon used against 47 percent of repeat victims, with firearms present in 30 percent of cases. For 55 percent of repeat victims, the same type of weapon was used in the first and second reported robberies. The majority of repeat victims were organisations (n=47; 62%): 13 were licensed premises and 12 were service stations.

Table 9 Status of investigation^a of armed robbery, by victim type, 2008 (%)^b

Status	Individuals	Organisations
Investigation not finalised	32	32
Investigation finalised, no offender proceeded against	34	26
Investigation finalised, offender proceeded against	33	41
Other outcome	1	1
Total (n)	4,650	1,707

a: Refers to outcome at data extraction or, for jurisdictions unable to supply outcome at data extraction, at 180 days; therefore, time elapsed between incident and outcome is not equivalent for all victim records

b: Excludes individual and organisational victim records with status of investigation missing or not supplied

Note: Excludes cases not supplied or missing (n=70). n=6,357. Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 10 Victims involved in armed robbery incidents, by victim type, 2008

Victim type	n	Incidents(%) ^a
One individual	3,555	63
One organisation	1,542	27
Multiple individuals	406	7
Multiple organisations	8	<1
One organisation and one individual	126	2
One organisation and multiple individuals	23	<1
One individual and multiple organisations	1	<1
Total	5,661	

a: Excludes incident records with missing victim type

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 11 Locations of armed robberies, by victim type, 2008 (%)^a

Location	Victim type ^b						Total (n)
	Single individual	Single organisation	> 1 individual	> 1 organisation	1 organisation & 1 individual	1 organisation & > 1 individual	
Residential	11	9	10	25	6	4	577
Recreational	6	<1	9	0	0	4	265
Transport-related	11	1	8	0	2	0	433
Open spaces (excluding street and footpath)	1	<1	1	0	0	0	53
Street and footpath	48	3	49	0	7	0	1,965
Educational, health, religious, justice and other community	1	< 1	1	0	0	4	43
Administrative and professional	<1	<1	<1	0	1	0	24
Wholesalers, warehouses, manufacturing and agricultural	<1	<1	<1	0	0	0	11
Retail	8	36	5	25	33	26	900
Banking and financial	1	3	<1	0	1	4	75
Pharmacies and chemists	1	6	1	0	3	0	119
Service stations	2	12	1	13	11	9	300
Licensed premises	2	15	4	25	13	13	329
Newsagents and post offices	1	2	1	13	4	0	64
Corner stores, supermarkets and takeaways	4	10	7	0	17	26	374
Unspecified and other	2	1	1	0	0	9	118

a: Excludes incident records with victim type or location missing

b: Excludes 1 case at the location of service stations where victim type was 1 individual and multiple organisations

Note: Percentages may not total 100 due to rounding. n=5,650

Source: AIC NARMP 2008 [computer file]

Armed robbery incidents

A total of 5,686 unique armed robbery incidents were identified and created from the victim file. The 2008 data yielded fewer numbers of armed robbery incidents than recorded in 2007, however, many of the findings still remained relatively stable. For example, Table 10 shows that 63 percent of armed robberies involved a single individual victim and 27 percent a single organisation (2007 figures were 63% and 27% respectively).

Locations where armed robberies occurred

Because the vast majority of armed robbery incidents involved only single victims (90%), the findings reported here are consistent with those observed in other victim-based analyses. Thirty-five percent of all armed robberies took place in the street and 16 percent occurred at the premises of unspecified retailers. Similar percentages were found in the 2007 annual report (33% and 16% respectively). Robberies involving individuals were more likely to take place in open public spaces,

whereas most organisational victimisations (whether robbed in conjunction with individual victims or not) occurred in commercial settings (see Table 11). Unspecified retail locations were the most common site of incidents involving both an organisation and individual victims (33%).

Temporal aspects of armed robbery

In 2008, two-thirds (67%) of armed robberies took place in the hours between 6 pm and 6 am, with four out of 10 armed robberies (43%) occurring between 6 pm and midnight. Findings are generally consistent with NARMP data from previous years,

for example, 65 percent of 2005 and 2006 NARMP incidents and 67 percent of 2007 incidents occurred between 6 pm and 6 am.

In Table 12, a summary is presented of incident time and location and shows that some settings were disproportionately subject to armed robberies at certain times. Over all locations, only 28 percent of armed robberies occurred during business hours (9 am to 6 pm). Locations that keep standard business hours experienced the majority of armed robberies during those hours (eg 71% banking and financial settings, 67% pharmacies and chemists, 67% administrative and professional offices). By contrast, 86 percent of service station and 73 percent of licensed premises robberies took place between 6 pm and 6 am. Newsagencies and

Table 12 Time of day robberies occurred, by location, 2008 (%)^a

Location	Time category								
	Midnight to 2.59 am	3.00 am to 5.59 am	6.00 am to 8.59 am	9.00 am to 11.59 am	Noon to 2.59 pm	3.00 pm to 5.59 pm	6.00 pm to 8.59 pm	9.00 pm to 11.59 pm	
Residential	14	13	4	6	7	10	21	24	
Recreational	17	6	2	5	11	15	17	26	
Transport-related	15	5	6	6	10	16	18	25	
Open spaces (excluding street and footpath)	13	4	0	8	11	21	17	26	
Street and footpath	23	10	4	5	6	8	16	28	
Educational, health, religious, justice and other community	14	10	6	6	12	8	22	24	
Administrative and professional	4	0	8	8	29	29	17	4	
Wholesalers, warehouses, manufacturing and agricultural	9	9	18	9	27	27	0	0	
Retail	7	4	3	10	15	18	26	16	
Banking and financial	4	1	8	25	19	27	8	8	
Pharmacies and chemists	1	0	3	18	16	33	24	5	
Service stations	28	16	4	3	2	6	16	27	
Licensed premises	16	5	2	9	9	8	20	32	
Newsagents and post offices	5	22	16	3	22	25	8	0	
Corner stores, supermarkets and takeaways	11	7	7	7	9	9	27	22	
Unspecified and other	14	8	4	11	7	16	21	20	
Total (n)	927	473	247	394	507	695	1,087	1,340	

a: Excludes incident records with location missing

Note: Percentages may not total 100 due to rounding

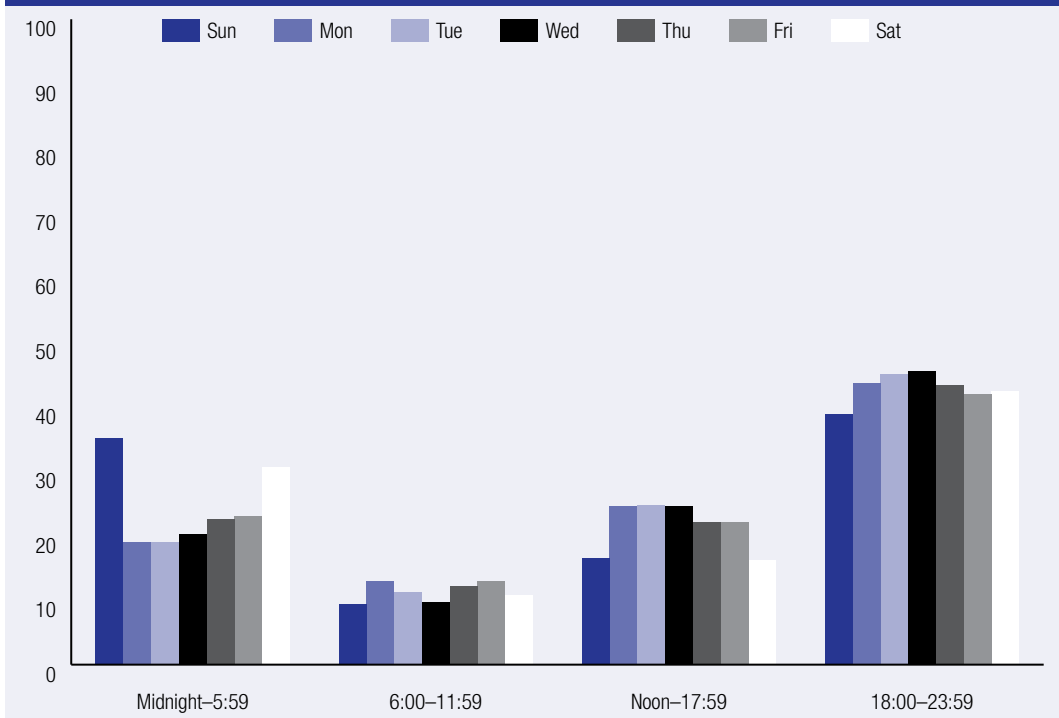
Source: AIC NARMP 2008 [computer file]; n=5,670

Table 13 Time armed robberies occurred, by day of the week, 2008 (%)

Time category	Day of the week						
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
12.00 am to 2.59 am	23	12	12	14	14	16	21
3.00 am to 5.59 am	13	7	7	6	9	7	9
6.00 am to 8.59 am	4	4	4	4	5	4	5
9.00 am to 11.59 am	6	9	7	6	8	9	6
12.00 pm to 2.59 pm	7	11	10	12	11	8	6
3.00 pm to 5.59 pm	10	14	15	13	11	14	10
6.00 pm to 8.59 pm	18	21	20	20	20	18	18
9.00 pm to 11.59 pm	21	23	25	25	23	24	24
Total (n)	924	812	741	711	772	784	937

Note: Percentages may not total 100 due to rounding. n=5,681

Source: AIC NARMP 2008 [computer file]

Figure 3 Time armed robberies occurred, by day of the week, 2008 (%)^a

a: Excludes individual and organisational victim records with missing location and/or organisational flag

Note: n=5,681

Source: AIC NARMP 2008 [computer file]

post offices were targeted more frequently than any other location in the early morning hours (3 am to 9 am), with 38 percent of armed robberies at these locations occurring during these hours. These patterns are similar to those seen in previous years.

There was little difference between armed robberies reported on the weekend (Friday 14%, Saturday 16% and Sunday 16%) than other days of the week (Monday 14%, Tuesday 13%, Wednesday 13% and Thursday 14%). However, date and time data in combination shows that armed robberies were more frequent on certain days and times during the week (see Table 13 and Figure 3). For example, one-third of all robberies occurred between the hours of 6 pm and 6 am on Fridays, Saturdays and Sundays. Mention needs to be made regarding the interpretation of these figures; while 1 am on Sunday is technically recorded as Sunday, some people may still consider this to be a Saturday night robbery.

Weapons used in armed robbery

Given the high proportion of single-victim incidents, patterns of weapon use that emerged from the incident-based analysis (see Table 14) closely mirror those found using victim-based data. A majority of incidents involved a knife (52%); only three percent of incidents involved a syringe, while 13 percent involved a firearm and 24 percent involved other weapons. In 2008, as seen in previous years, most firearm robberies involved threats with a single firearm (12% of all incidents; 12% in 2007 and 2006; 10% in 2005; 13% in 2004). In most knife robberies, a single knife was used (51% of incidents in 2008; 45% in 2007; 51% in 2006; 53% in 2005; 52% in 2004). The most commonly reported combination of weapons used in a single incident was that of knife and 'other' weapon (in 60 incidents). However, the NARMP does not always collate information on all of the weapons used in an armed robbery; therefore, this finding is not necessarily descriptive of all armed robberies.

Table 15 shows the most serious weapon used in armed robberies in different locations. As was the case in previous years, firearms were used in a high percentage of robberies in banking and financial settings (45% in 2008; 49% in 2007; 47% in 2006; 41% in 2005; 44% in 2004) and in licensed premises (39% in 2008; 44% in 2007; 38% in 2006; 35% in

2005; 44% in 2004), relative to other locations. The percentage of pharmacy robberies involving syringes has fluctuated over the years, reaching as high as 13 percent in 2005 and as low as zero incidents in 2006. In 2007, the use of syringes in pharmacy robberies was again high (7%) and in 2008, this figure continued to increase (8%). Knives were the most common weapons used in the majority of locations (eg corner stores, supermarkets and takeaways 62%; post offices and newsagents 58%; open spaces 58%).

Property taken in armed robbery incidents

Some jurisdictions were able to supply information on up to five types of property stolen in an incident (n=2,424). As there are issues around the reliability and representativeness of property data, the results should be interpreted with caution. Most incidents (n=1,149; 47%) involved the theft of only a single item, although on average, two items of property were stolen in incidents with property information supplied.

The most commonly reported stolen property item was cash (in 1,356 incidents), reported in approximately six out of every 10 incidents where property information was available. The item listed as being stolen least frequently was weapons (n=14 incidents). Electrical equipment, including mobile phones, was listed 398 times (16%). There were 457 armed robberies (19%) in the current dataset in which both electrical equipment and cash were stolen. Fifty-two percent of these occurred on the street or footpath, while 14 percent occurred in residential locations.

Some jurisdictions were able to supply up to five types of stolen property that could be listed for each incident record. However, given the many possible different property combinations that could arise from this, information has been collapsed into a set of hierarchical property *combinations* (see Table 16). The categories are hierarchical, insofar as the first category, *cash*, refers to all possible property combinations in which cash was listed. The second, *negotiable documents* (which includes credit cards and ATM cards), refers to all possible combinations including this property type, but excluding cash. The

Table 14 Weapon combinations^a used in armed robberies, by victim type, 2008 (%)

Weapon combinations	Victim type ^b						Total	
	Single individual	Single organisation	> 1 individual	> 1 organisation	1 organisation & 1 individual	1 organisation & > 1 individual	Number	%
Firearms								
Single firearm	8	21	11	38	17	26	671	12
Multiple firearms	0	0	0	0	0	0	1	<1
Firearm, knife	1	1	0	0	0	0	32	1
Firearm, other weapon	1	1	0	0	0	0	26	<1
Firearm, knife & other weapon	0	<1	<1	0	0	0	1	0
Total firearm combinations (n)	317	340	44	3	21	6	731	13
Knives								
Single knife	52	49	50	63	56	26	2,886	51
Multiple knives	1	0	0	0	0	0	20	<1
Knife, syringe	<1	0	<1	0	0	0	2	<1
Knife, other weapon	1	1	3	0	0	0	60	1
Knife, other weapon, unspecified weapon	<1	0	0	0	0	0	3	<1
Total knife combinations (n)	1,904	769	217	5	70	6	2,971	52
Syringes								
Single syringe	3	4	1	0	2	4	164	3
Total syringe combinations (n)	90	66	4	0	3	1	164	3
Other weapons								
Single other weapon	27	17	26	0	19	39	1,353	24
Multiple other weapons	<1	<1	0	0	0	0	14	<1
Total other weapon combinations (n)	969	258	106	0	24	9	1,366	24
Missing/not further defined								
Single weapon nfd	<1	0	0	0	0	0	2	<1
No specific weapon types/missing	8	7	9	0	6	4	426	8
Total no further details/unspecified/missing (n)	275	109	35	0	8	1	428	8
Total (n)	3,555	1,542	406	8	126	23	5,660	100

a: Weapon combinations derived from up to 3 listed weapon types. Excludes incident records with victim type missing

b: Excludes 1 case where a single 'other' weapon was used and the victim type was 1 individual and multiple organisations

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 15 Most serious weapon^a used, by location, 2008 (%)^b

Location	Weapon					Total (n)
	Firearm	Knife	Syringe	Other weapon	Non-specific or missing	
Residential	13	48	1	30	8	580
Recreational	6	50	3	34	7	265
Transport-related	8	57	3	24	8	434
Open spaces (excluding street and footpath)	2	58	0	34	6	53
Street and footpath	7	55	2	28	7	1,970
Educational, health, religious, justice and other community	4	57	0	27	12	51
Administrative and professional	25	67	0	4	4	24
Wholesalers, warehouses, manufacturing and agricultural	9	55	9	9	18	11
Retail	16	53	5	18	7	901
Banking and financial	45	27	1	16	11	75
Pharmacies and chemists	13	60	8	13	6	119
Service stations	16	52	4	18	10	302
Licensed premises	39	31	1	23	6	329
Newsagents and post offices	20	58	2	17	3	64
Corner stores, supermarkets and takeaways	13	62	3	10	12	374
Unspecified and other	14	42	4	35	5	123
All locations	13	52	3	24	8	5,675

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness of firearm, knife, syringe, 'other' weapon

b: Excludes incident records with missing location

Note: Percentages may not total 100 due to rounding. n=5,675

Source: AIC NARMP 2008 [computer file]

third, refers to all combinations with *identity documents* but excluding cash and negotiable documents, and so on.

In Table 16, it can be seen that cash was stolen in 43 percent of robberies where only one type of property was taken. If more than one type of property was taken, it was likely that one of those property items would be cash (eg cash was taken in 85% of incidents with five property types stolen).

The locations in which robberies occurred impacted on the percentage of incidents where cash was stolen. For example, less than half of the armed robberies that occurred in recreational locations (43%), open spaces (37%), residential locations (47%) and the street (49%) involved the theft of

cash. Slightly more than half of armed robberies that occurred in transport locations (52%) had cash stolen. By contrast, cash was stolen in over 75 percent of high-cash transaction businesses such as service stations, licensed premises, financial settings and corner stores (see Table 17). The 2004, 2005, 2006 and 2007 annual reports noted similar findings; previous reports have noted that the theft of alcohol and other drugs during robberies was highest when pharmacies were targeted. These findings were replicated in 2008 (20%).

For a subset of incidents (n=1,473), information was included on the value of stolen items. This variable should be treated as no more than indicative of the nature of the financial loss associated with armed

robbery. In Australian jurisdictions, property value is not usually a mandatory reporting field and if it is recorded at all, it is often only an estimate. Typically, it is not validated at a later date.

Based on the available data, regardless of the weapon used and whether a location was indicated, armed robbery offenders netted an average of \$1,656, although total values were skewed towards the lower end of the range.

- The median value was \$275.
- Eleven percent of incidents had a total recorded value of nil.
- Thirty-two percent of incidents had a recorded total value of less than \$100.
- Sixty-four percent of incidents had a recorded total value of less than \$500.

The highest average gains for offenders (where a location was identified) were from incidents where the most serious weapon used was a firearm

(\$4,833; see Table 18). Similar to most previous reports, the lowest average in 2008 was associated with syringe robberies (\$830). Robberies with knives, however, netted only slightly better gains with an average of \$983, while robberies committed with 'other' weapons netted a higher average of \$1,451. Other findings included that:

- the highest average value gains (calculated from weapon–location categories containing more than 5 incident records) were 'other' weapon robberies from pharmacies (\$28,038; see Table 18). However, this figure was skewed by one incident where it was reported that \$195,200 was taken [not displayed in Table 18]; and
- in 2008, there were a number of large-gain armed robberies that skewed average results at different locations, including administrative locations (\$47,580), licensed premises (\$125,599) and banking and financial locations (\$37,549 and \$45,000).

Table 16 Items taken in armed robbery incidents, 2008^a (%)^b

Property type	Count of items stolen ^c					All armed robberies
	1	2	3	4	5	
Cash	43	60	66	83	85	56
Negotiable documents	1	5	11	9	9	5
Identity documents	2	4	5	2	2	3
Luggage	2	14	10	4	4	6
Electrical equipment	28	9	6	2	0	16
Jewellery	2	1	<1	0	0	1
Alcohol and other drugs	4	2	2	0	0	3
Weapons	0	2	0	0	0	1
Personal items not classified elsewhere	12	3	<1	0	0	7
Conveyances and accessories	2	1	0	0	0	1
Other property not classified elsewhere	4	0	0	0	0	2
Total (n) ^d	1,149	562	392	266	55	2,424

a: Derived from first listed victim of incident, because property information is usually not linked to individual victims but to the incident itself. Electrical equipment includes mobile phones and accessories

b: Percentages may not total 100 due to rounding

c: Property count describes the number of different types of property listed in an incident record, excluding duplicated property types

d: Total number includes incident records annotated as *No property stolen* but excludes incident records with property information missing or not supplied

Source: AIC NARMP 2008 [computer file]

Table 17 Highest-ranking property taken^a during armed robbery by location, 2008 (%)

Location	Property type											Total (n)
	Cash	Negotiable documents	Identity documents	Luggage	Electrical equipment	Jewellery	Alcohol and other drugs	Weapons	Personal items	Conveyances	Other	
Residential	47	4	2	6	16	2	2	1	15	3	2	262
Recreational	43	4	3	8	23	1	1	2	11	2	3	140
Transport-related	52	6	2	10	19	1	3	< 1	5	< 1	1	221
Open spaces (excluding street and footpath)	37	7	7	10	17	0	0	0	13	10	0	30
Street and footpath	49	7	4	9	23	< 1	1	1	5	1	2	979
Educational, health, religious, justice and other community	47	0	11	0	26	0	5	0	11	0	0	19
Administrative and professional	50	25	0	0	0	25	0	0	0	0	0	4
Wholesalers, warehouses, manufacturing and agricultural	25	25	0	0	25	0	0	0	25	0	0	4
Retail	69	2	1	1	8	1	4	0	10	1	4	282
Banking and financial	93	7	0	0	0	0	0	0	0	0	0	15
Pharmacies and chemists	67	2	0	0	0	0	20	0	10	0	0	49
Service stations	81	2	0	0	5	0	6	1	2	2	2	124
Licensed premises	78	1	0	3	3	1	11	0	3	0	1	117
Newsagents and post offices	69	0	4	0	12	0	8	0	0	4	4	26
Corner stores, supermarkets and takeaways	82	4	1	1	3	0	7	0	0	0	2	101
Unspecified and other	42	2	6	10	24	6	4	0	6	0	0	50
Total (n) ^b	1,356	114	67	149	397	24	72	14	158	28	44	2,423

a: Derived from first listed victim of incident because in the majority of victim records, property information is linked not to individual victims, but to the incident itself. Property types are hierarchical; the first category captures all property combinations, the second captures all combinations except cash and so on. Electrical equipment includes mobile phones and accessories

b: Total number excludes incident records annotated as *No property stolen* and incident records with property and/or location missing or not supplied

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 18 Average total value of property stolen during armed robbery, by weapon type and location type, 2008^{a, b} (\$)

Location	Weapon used				All weapon types
	Firearm	Knife	Syringe	Other weapon	
Residential	1,193	2,449	–	1,505	1,865
(number of incidents)	(25)	(75)	(0)	(75)	(175)
Recreational	813	767	191	657	696
(number of incidents)	(7)	(36)	(4)	(35)	(82)
Transport-related	4,921	966	1,352	1,283	1,351
(number of incidents)	(10)	(85)	(7)	(44)	(146)
Open spaces (excluding street and footpath)	–	327	–	515	430
(number of incidents)	(0)	(5)	(0)	(6)	(11)
Street and footpath	3,569	719	1,282	894	1,027
(number of incidents)	(42)	(272)	(12)	(195)	(521)
Educational, health, religious, justice and other community	0	216	–	307	233
(number of incidents)	(1)	(8)	(0)	(5)	(14)
Administrative and professional	47,580	1,750	–	–	24,665
(number of incidents)	(1)	(1)	(0)	(0)	(2)
Wholesalers, warehouses, manufacturing and agricultural	–	3,437	–	–	3,437
(number of incidents)	(0)	(3)	(0)	(0)	(3)
Retail	2,231	735	253	941	1,103
(number of incidents)	(55)	(128)	(7)	(55)	(245)
Banking and financial	10,132	1,112	–	202	6,884
(number of incidents)	(13)	(5)	(0)	(2)	(20)
Pharmacies and chemists	897	739	736	28,038	5,933
(number of incidents)	(7)	(20)	(3)	(7)	(37)
Service stations	968	538	379	867	665
(number of incidents)	(9)	(50)	(3)	(22)	(84)
Licensed premises	18,777	2,120	500	1,948	7,059
(number of incidents)	(22)	(25)	(1)	(25)	(73)
Newsagents and post offices	1,824	2,144	–	670	1,739
(number of incidents)	(6)	(4)	(0)	(2)	(12)
Corner stores, supermarkets and takeaways	–	1,091	300	898	1,044
(number of incidents)	(0)	(22)	(1)	(2)	(25)
Unspecified and other	166	281	–	1,320	803
(number of incidents)	(4)	(7)	(0)	(12)	(23)
All locations	4,833	983	830	1,451	1,662
(Total number of incidents)	(202)	(746)	(38)	(487)	(1,473)

a: Based on most serious weapon listed in a weapon combination, assuming order of decreasing seriousness of firearm, knife, syringe, 'other' weapon. Excludes incidents from which total property value or location was missing or not supplied or weapon was missing or unspecified

b: Key findings have been emphasised in bold

Source: AIC NARMP 2008 [computer file]

Armed robbery offenders

Offender data were available for 2,157 incidents, although as noted in the *Technical Appendix*, NARMP offender data are only broadly representative of all armed robbery offenders. Due to the possibility of multiple offenders being associated with a single incident, some or all variables had been supplied for a total of 3,425 offenders. The average incident for which offender information was available involved 1.6 offenders.

In the preceding examination of the offenders linked to each victim, an offender was counted once for every victim involved in that armed robbery. Therefore, if two victims were robbed, the offender was counted twice. In the following section, armed robbery offenders are assessed by incident, not number of victims. An incident-based analysis can provide a more accurate description of this crime because features of the offenders are counted only once per incident, regardless of the number of victims involved. In the current dataset, 246 incidents which contained valid offender information (11% of all incidents) also involved multiple victims.

In Table 19, a summary is presented of the type of victims involved in incidents, cross-tabulated with the number of offenders associated with that incident. Almost two-thirds of incidents where offender information was available (7 cases did not have victim type information available) involved only a single offender (64%), although this varied with

victim types. For instance, lone offenders were involved in 52 percent of incidents where multiple people were victims and 71 percent of incidents where a single organisation was the victim.

Lone offenders might target certain types of organisations rather than individuals because the individuals representing that organisation may be less likely to resist for a range of reasons (eg retail staff may be advised to comply with offenders and/or they may be alone at the location in question). An examination of the 504 locations where lone offenders robbed single organisations shows that 39 percent were unspecified retailers and 11 percent were service stations. Further, even though these robberies predominantly occurred in retail locations, which could be assumed to operate during conventional business hours, 59 percent of armed robberies of lone organisations occurred after 6 pm but before 9 am; times when fewer staff and customers would be expected in most retail settings.

As with data from previous years, 2008 data suggest multiple individual victims are more likely than other victim categories to be targeted by multiple offenders. Forty-eight percent of incidents with multiple individual victims involved more than one offender. This may be because the more offenders involved in a robbery, the greater control of the situation they are afforded. Multiple offender participation in a robbery may increase the element of intimidation and decrease the likelihood of victim resistance. Research from the United Kingdom into

Table 19 Proportion of armed robberies involving specified numbers of offenders^a by victim type, 2008 (%)

Victim type ^b	Number of offenders					Total (n)
	1	2	3	4	5	
One individual	61	23	9	4	3	1,192
One organisation	71	19	6	2	2	712
Multiple individuals	52	26	7	10	5	183
Multiple organisations	86	0	14	0	0	7
One organisation and one individual	67	20	9	2	2	46
One organisation and multiple individuals	56	44	0	0	0	9
All	64	22	8	4	3	2,149

a: Based on offender information from first listed victim in incident. Excludes incident records in which offender information was not supplied

b: Excludes 1 case where offender count was '1' and the victim type was 1 individual and multiple organisations

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

the methods and motivations of street robbers indicates that increased numbers also act as type of insurance policy where some offenders chose to operate in groups because the costs (having to split financial takings) are offset by the benefit of guaranteed back-up should victims resist (Deakin et al. 2007).

Armed robbers acting alone may believe they are less able to effectively intimidate victims, particularly multiple victims. Therefore, they may also be expected to arm themselves with highly threatening weapons, such as firearms, in order to increase their ability to intimidate. In earlier NARMP analyses, the use of knives was more common than the use of

Table 20 Most serious weapon^a used in armed robberies, by number of offenders, 2008^b (%)

Weapon	Number of offenders					All incidents
	1	2	3	4	5	
Firearm	11	15	19	21	33	14
Knife	52	49	49	50	31	51
Syringe	5	1	1	0	0	4
Other weapon	22	24	26	23	30	23
Non specific or missing	9	10	5	6	6	9
Total (n)	1,379	476	168	80	54	2,157

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness of firearm, knife, syringe, 'other' weapon

b: Based on offender information for first listed victim in incident. Excludes incident records in which offender information was not included

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 21 Armed robbery offenders^a in each age group by sex, 2008 (%)

Age group (yrs)	Sex		Both sexes
	Male	Female	
<15	6	10	7
15–17	26	26	26
18–19	16	8	15
20–24	19	13	18
25–29	14	22	15
30–34	9	11	9
35–39	5	5	5
40–44	4	3	4
45–49	1	2	1
50–54	<1	<1	<1
55–59	<1	0	<1
60–64	<1	0	<1
>65	<1	0	<1
Total (n)	3,033	380	3,413

a: Based on up to 5 listed offenders, for first listed victim in incident. Excludes offenders with age and/or gender missing or not supplied. Excludes incident records for which offender information was not included

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 22 Most serious weapon^a used in incidents, by sex and age group, 2008^b (%)

Sex and age (yrs)	Weapon				Offenders(n)
	Firearm	Knife	Syringe	Other weapon	
All male offender groups					
<18	6	57	1	37	372
18–34	16	59	4	21	922
35–49	19	52	9	20	190
>50	24	71	0	6	17
Multiple age categories	16	52	1	31	176
All males	14	57	3	25	1,677
All female offender groups					
<18	6	46	6	43	35
18–34	11	49	19	21	70
35–49	0	55	36	9	11
>50	0	0	0	0	0
Multiple age categories	11	67	11	11	9
All females	9	50	16	26	125
Male & female (mixed) offender groups					
<18	6	75	0	19	16
18–34	20	60	5	15	55
35–49	0	50	0	50	4
>50	0	0	0	0	0
Multiple age categories	35	34	0	31	68
All mixed gender offenders	25	49	2	24	143

a: Based on most serious weapon listed in derived weapon combination, assuming order of seriousness of firearm, knife, syringe and 'other' weapon. Excludes incident records missing or unspecified weapons

b: Based on up to 5 listed offenders, for first listed victim in incident. Records with information concerning only 1 offender are included in the relevant gender/age category. Excludes offenders with age and/or gender missing or not supplied. Excludes incident records for which offender information was not included

Note: n=1,945. Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

firearms regardless of offender numbers (Smith & Louis 2009); however, findings from 2008 NARMP data show that when five offenders were involved, firearms (33%) were slightly more common than knives (31%). This may represent incidents perpetrated by a small subset of more professional robbery gangs, although location data do not strongly support this—61 percent of five person gangs using firearms targeted victims on the street or footpath. It is also important to note that only a small number of cases had multiple weapon data provided because some jurisdictions who had previously supplied multiple weapon data were

unable to provide this information in 2008. These patterns must therefore be treated with some caution as case numbers are much smaller than in previous reports.

Offender demographics

Armed robbery research consistently shows that most offenders are young males (eg see Willis 2006). Data summarised in Table 21 shows that in 2008, approximately nine out of every 10 offenders was male (89%) and 94 percent of all offenders were under 40 years of age. More than half (56%) of all

offenders were males aged 18 to 39 years. As with victims, this is the general pattern for offender age across most recorded offences, with 15–24 year old males being mostly culpable (ABS 2009c).

Co-offenders in armed robberies tend to be of similar ages. Of the 763 incidents involving multiple offenders, 63 percent comprised co-offenders who belonged to the same broad age–gender grouping. Given that most armed robbers are young men, it is not surprising that co-offenders involved in the largest number of incidents (n=208; 27%) were also males aged 18 to 34 years.

The types of weapons used by male and female offenders and co-offenders across age groups are summarised in Table 22. Results suggested there was little variation in patterns of weapon use as a

function of the various age and gender groupings. The results from earlier NARMP annual reports have suggested a slight gender differentiation, although the categories in question contained only a very small number of cases, thus these patterns remain tenuous. Males were more likely than females to use firearms (14% *cf* 9%), while females were five times more likely than males to use syringes as a weapon (16% *cf* 3%). Male and female (mixed) offender groups under the age of 18 years (75%) used knives more frequently than all other groups.

The average age of offenders was 23 years, the same as that observed in 2006 and 2007. Average age did vary according to location of offence and numbers of offenders involved in the robbery; however, patterns of variation were similar to those

Table 23 Average offender age^a by location type and number of offenders involved, 2008

Location	Offenders (n)						All (n)
	1	2	3	4	5	All	
Residential	27	26	27	20	20	25	313
Recreational	19	18	17	17	16	18	83
Transport-related	23	19	18	17	17	20	171
Open spaces (excluding street and footpath)	21	25	23	19	22	21	17
Street and footpath	23	20	18	18	18	20	531
Educational, health, religious, justice and other community	24	17	–	18	22	22	21
Administrative and professional	37	32	14	–	–	32	11
Wholesalers, warehouses, manufacturing and agricultural	24	–	–	30	–	26	7
Retail	27	24	21	21	18	25	404
Banking and financial	34	30	23	25	–	30	43
Pharmacies and chemists	31	30	26	–	–	30	81
Service stations	25	22	24	19	23	24	124
Licensed premises	27	29	25	21	26	27	132
Newsagents and post offices	31	25	–	21	–	27	22
Corner stores, supermarkets and takeaways	25	25	23	22	18	24	143
Unspecified and other	25	26	18	15	15	22	43
All locations	26	23	21	19	19	23	2,146

a: Average derived from information from first listed victim in incident, concerning up to 5 listed offenders. Excludes offenders with age missing. Excludes incident records in which offender information was not included or not supplied and/or location is missing

–=no records in subcategory

Source: AIC NARMP 2008 [computer file]

observed in 2007. For example, lone offenders tended to be older on average than those who offended as part of a group. The average age of lone offenders was 26 years compared with 19 years for groups of five (these figures were 25 and 18 years in 2007). The average age of offenders varied with location, however, similar to previous years, older offenders tended to target banking and financial locations (30 years) and pharmacies (30 years). Younger offenders, however, tended to target more public space locations such as street and footpaths (20 years) or transport-related locations (20 years).

Case study: Armed robbery at transport-related locations

In the past, other armed robbery location targets have been monitored more closely as a result of the amount of money they turn over (eg banking and financial locations and licensed premises); the type of property unique to their industry (eg pharmacies often have alcohol and drugs stolen); the frequency of being targeted for armed robbery (eg service stations); or the invasion of a safe environment (eg residential armed robberies).

The 2008 NARMP dataset contains information on transport-related locations including bus stops and train stations, as well as car parks associated with these terminals and robberies occurring on the actual conveyances—that is, buses, trains and taxis. This type of robbery is of interest due to the challenges it can pose for people who use public transport and for those who work in this type of location (eg taxi drivers). There were a total of 434 armed robbery incidents at transport-related locations in 2008 (132 more than at service stations), which constituted eight percent of the total number of armed robbery incidents.

The most common type of transport location for armed robbery was the car park of a transport terminal (such as a train station car park; 41%). However, train stations were often recorded as an armed robbery location themselves, accounting for one in four transport location armed robberies (27%). Actual transport conveyances accounted for less than 20 percent of transport location armed robberies, with four percent occurring in taxis,

seven percent occurring on trains and one percent on buses (another 4% occurred on 'other' conveyances not further defined).

There were some inconsistencies between weapons used in the different transport locations. Armed robberies in car parks were less likely to involve a knife compared with those at train stations (56% and 68% respectively). Yet, car park armed robberies were more likely to involve firearms than any other transport location and accounted for close to two-thirds of all transport-related armed robberies involving a firearm (65%).

With the exception of taxis, which were likely to be targeted during the early morning hours (75% between midnight and 6 am), the majority of armed robberies in most transport locations were experienced during the hours of 3 pm to midnight (eg 57% of bus stop robberies; 64% of those in train stations). This, in part, reflects patterns of commuter use—minimal bus and train services operate between midnight and 6 am, with taxis the only form of public transport available after midnight in some areas. In addition, these transport locations may not be as fully staffed, monitored, or utilised in the evening, making them more 'attractive' to potential offenders. Over half of all car park robberies (56%) occurred during this same period (3 pm to midnight), presumably because these are the times when drivers are most likely to return to their vehicles and may be vulnerable to attack—particularly after dark.

Lone offenders accounted for the majority of incidents (65%). Where multiple offenders were involved, incidents with two offenders accounted for 20 percent of transport location armed robberies, while incidents with three offenders accounted for nine percent. Armed robbery incidents at train stations involved two offenders in approximately one-quarter of cases (23%). Both male and female offenders were more likely to be involved in armed robberies at train stations (39% for males, 42% for females) or car parks (30% for males, 26% for females).

Half (50%) of all offenders involved in armed robberies at transport locations were under the age of 18 years. Some locations, such as bus stops and train stations, recorded approximately two-thirds (67% and 64% respectively) of identified offenders as being under the age of 18 years old. Although

case numbers were small, taxis were one of the forms of transport most likely to involve an older armed robber, with 18 percent of offenders being 35 years and older.

In general, transport location offenders were typically young males, employing easy to obtain weapons such as knives, suggesting they may be likely to be

amateur offenders. Offenders were no more likely to operate in groups when compared with armed robbers in locations unrelated to transport. Few transport-related armed robberies occurred on actual conveyances, with the majority taking place at the terminals or in car parks.

Table 24 Armed robbery incidents at transport locations, 2008

Location	n	%
Car parks	178	41
Bus stops	35	8
Train station	117	27
Other terminals	31	7
Train	30	7
Bus	5	1
Taxi	16	4
Other conveyance	19	4
Other transport	3	1
Total	434	100

Source: AIC NARMP 2008 [computer file]

Table 25 Transport location by weapon type^a, 2008 (%)

Location	Firearm	Knife	Syringe	Other weapon	Total (n)
Car parks	14	56	3	28	163
Bus stops	3	74	0	24	34
Train station	5	68	5	23	106
Other terminals	3	60	0	37	30
Train	8	65	4	23	26
Bus	20	60	0	20	5
Taxi	7	64	14	14	14
Other conveyance	5	58	11	26	19
Other transport	0	0	0	100	3
Total	9	62	4	26	400

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness of firearm, knife, syringe, 'other' weapon

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 26 Time robberies occurred, by transport location, 2008 (%)

Location	Time category							
	Midnight to 2.59 am	3.00 am to 5.59 am	6.00 am to 8.59 am	9.00 am to 11.59 am	Noon to 2.59 pm	3.00 pm to 5.59 pm	6.00 pm to 8.59 pm	9.00 pm to 11.59 pm
Car parks	17	4	5	6	12	14	19	22
Bus stops	9	9	17	3	6	9	14	34
Train station	15	3	4	7	7	20	19	26
Other terminals	13	3	0	10	16	19	16	23
Train	13	0	7	7	7	27	7	33
Bus	0	0	0	0	0	20	80	0
Taxi	44	31	0	6	0	6	0	13
Other conveyance	11	5	11	5	16	5	21	26
Other transport	0	0	0	0	0	0	0	100
Total	15	5	6	6	10	16	18	25

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 27 Transport location armed robberies, by number of offenders^a, 2008 (%)

Location	Offenders (n)					
	1	2	3	4	5	n
Car parks	75	18	7	0	0	61
Bus stops	54	15	23	8	0	13
Train station	52	23	11	11	4	56
Other terminals	80	10	0	10	0	10
Train	58	33	8	0	0	12
Bus	0	0	100	0	0	1
Taxi	100	0	0	0	0	6
Other conveyance	64	27	9	0	0	11
Other transport	50	50	0	0	0	2
All transport	65	20	9	5	1	172

a: Based on offender information from first listed victim in incident. Excludes incident records in which offender information was not supplied

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 28 Armed robbery incidents at transport locations, by gender of offenders^a, 2008 (%)

Location	Male	Female	Total
Car parks	30	26	30
Bus stops	8	13	9
Train station	39	42	39
Other terminals	6	0	5
Train	8	0	7
Bus	1	0	1
Taxi	2	5	2
Other conveyance	5	13	6
Other transport	1	0	1
Total (n)	233	38	271

a: Based on up to 5 listed offenders, for first listed victim in incident. Excludes offenders with age and/or gender missing or not supplied. Excludes incident records for which offender information was not included

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Table 29 Armed robbery incidents at transport locations, by age of offender^a, 2008 (%)

Location	Offenders by age group				n
	>18	18–24	25–34	35+	
Car parks	38	38	14	10	79
Bus stops	67	29	4	0	24
Train station	64	22	7	7	107
Other terminals	36	50	14	0	14
Train	28	56	17	0	18
Bus	100	0	0	0	3
Taxi	36	27	18	18	11
Other conveyance	25	33	33	8	12
Other transport	50	50	0	0	2
All transport	50	32	11	7	270

a: Based on up to 5 listed offenders, for first listed victim in incident. Excludes offenders with age and/or gender missing or not supplied. Excludes incident records for which offender information was not included

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2008 [computer file]

Conclusion

Despite changes over time in the level of detail available for NARMP data and a further decrease in the number of armed robberies for 2008, the features of armed robbery in the latest NARMP findings are generally consistent with those observed in previous years. This suggests that the major features of Australian armed robberies have not changed markedly over the six years in which the NARMP has been collecting data and reporting on analyses.

While the features of armed robbery as a whole have not changed from year to year, there were some findings from the 2008 report that are worth highlighting:

- There has been a 28 percent decrease in the overall number of armed robbery victims since NARMP first started collecting data in 2003. However, after an initial large decrease in 2004, figures have remained at similar levels, fluctuating yearly. There was a 10 percent decrease in the number of armed robbery victims in 2008 compared with the 2007 results (6,427 in 2008 compared with 7,133 in 2007).
- After a substantial decrease (34%) in the number of armed robbery incidents at service stations in 2007, there was a further considerable decrease in number the armed robberies at this location in 2008 (32%).
- The number of organisational victims at residential locations (indicating some type of home business) in 2008 almost doubled from 76 in 2007 to 142 in 2008.
- The number of armed robberies where property value was recorded as *nil* decreased substantially in 2008 (11% in 2008 compared with 28% in 2007), while the average dollar value of the property stolen increased (\$1,662 in 2008 and \$1,066 in 2007).

Why might these armed robbery characteristics have changed so dramatically in this short space of time? First, there was a 10 percent decrease in the number of armed robbery victims on top of a six percent decrease in 2007. This continuing decline can be considered indicative of most crime types in Australia in recent years (AIC 2010). Armed robbery is one of the few crime types where under-reporting is not problematic (such as with sexual assault

offences); therefore, the question of increased under-reporting can probably be discounted. In addition, the decrease in 2008 was evident across all locations (except for the administrative/professional location where numbers are small each year), ruling out reductions in any one particular location as having a substantial impact. Detailed qualitative research with current and former armed robbery offenders would be ideal to determine whether armed robbery offenders are choosing to cease armed robbery attempts and if so, to identify reasons behind any possible displacement.

Second, the continuing decrease in service station armed robbery may reflect the decrease in overall armed robbery figures; however, it may also result from crime prevention strategies implemented by the industry and/or from police initiatives and operations. For example, have service stations in the usual hotspot locations been able to change practices and force decreases in armed robbery? Is one particular company responsible for the decrease? Is the decrease a result of new crime prevention strategies or police operations? If so, have police and industry initiatives been evaluated to determine if they could be effective in all types of service stations in all locations, or in other types of business settings? It is important that the details of this decrease are investigated more fully (a task that is outside the scope of NARMP) and that any crime prevention knowledge gained through monitoring and evaluation is disseminated and added to the general 'toolkit' of responses to armed robbery.

If the decrease over the 2007 and 2008 period is a result of a strategy implemented by the industry, it is recommended that the strategy be evaluated effectively, if it has not been done already. The NARMP will continue to monitor this particular trend and any displacement that might be occurring as a result. It should be noted, however, that there was no obvious displacement identified in the current data, with no signs of weapon displacement, location displacement, temporal displacement or even target displacement. The number of armed robberies at similar locations (eg convenience stores) has actually remained similar, if not decreased slightly, during the same time period. The only other form of displacement—crime type displacement—cannot be measured by the NARMP. For further

details on displacement, see the 2006 NARMP report (Smith & Louis 2009).

The third finding was that there was an increase in organisational victims at residential locations identified in the 2008 NARMP report. While this suggests that more home businesses are being targeted for armed robbery, the cause of this increase is difficult to determine. This trend may pose a whole new area of crime prevention challenges for business owners, police and criminologists. As these commercial locations are also residences, conventional strategies (eg time delay safes and line of sight to entry and exit points) may not be relevant. To further compound this problem, the NARMP data does not examine relationship status between an organisation and an offender. This is unfortunate as when individuals are targeted at residential locations, there can sometimes be a prior relationship between the offender and victim (this is in contrast to the majority of armed robberies). Another factor that blurs the cause of this increase in armed robbery is that most of the organisational victims were targeted at night, yet most commercial locations traditionally targeted at night are businesses not likely to operate out of a residence (eg service stations and convenience stores). This area of armed robbery will be monitored by NARMP to determine if this trend continues. Consideration will also be given to the types of crime prevention strategies that might be suitable for home businesses vulnerable to armed robbery.

The fourth finding highlighted in this report relates to the value of property stolen during armed robbery incidents. The number of armed robberies that were unsuccessful in 2008 (ie where no property of any value was stolen) decreased from 28% in 2007 to 11% in 2008. Therefore, in 2008, nine out of every 10 armed robbers—at least those where property value information was available—were successful in obtaining some property of value (however, this does not mean they were not arrested at some later stage). Not only were armed robbers more likely to obtain property of some value, they were also more likely to obtain property of greater value than what was recorded in 2007. In 2008, the average value of property stolen in an armed robbery was \$1,662 compared with \$1,066 in 2007. This suggests that while there were fewer armed robberies in 2008, the overall levels of ‘success’ were higher. Crime

prevention strategies designed to minimise the attractiveness of a target to armed robbers (eg effective cash handling procedures so only minimal amounts are kept in the till) may have to be re-evaluated in some instances, as it appears offenders are becoming more effective at obtaining valuable property. This and other key findings from the 2008 NARMP report ideally require further research to determine their causes. However, the NARMP will continue to monitor patterns in these aspects of armed robbery to identify changes over time.

Finally, transport-related armed robberies were targeted for more detailed analysis in this report. In general, transport location offenders were typically identified as young males, using easy to obtain weapons such as knives, suggesting they may be likely to be amateur offenders. Few transport-related armed robberies occurred on actual conveyances, with the majority taking place at the terminals or in car parks.

Given that these offences appear to be typically committed by amateur offenders, evidence-based crime prevention strategies may be effective at reducing armed robbery in transport-related settings. Crime reduction measures such as closed circuit television (CCTV), improved lighting, distress alarms at terminals etc have already been adopted in Australian public transport settings. However, the effectiveness of such measures has been questioned, with recent systematic reviews of crime prevention measures implemented in overseas jurisdictions producing mixed results. For instance, evaluations of CCTV placed in public transport settings have shown positive, negligible and undesirable effects on crime. CCTV placement in car parks has shown a more consistent positive crime reduction benefit, although issues associated with the design of the reviewed evaluations makes it difficult to explain observed effects. The review notes that the factors behind successful CCTV schemes include their integration with other situational crime prevention measures, focusing crime prevention packages only on particular crime types (such as vehicle theft in car parks, and high public support for CCTV schemes; see Welsh & Farrington 2007a). More definitive statements can be made about improved lighting in a variety of settings. Welsh and Farrington (2007b: 8) concluded that ‘especially if

well targeted to a high-crime area, improved street lighting can be a feasible, inexpensive, and effective method of reducing crime', although again, the mechanism behind the observed effects could not be isolated because of issues with evaluation design.

Armed robbery interventions can also be linked to interventions to address broader concerns of violence in and around public transport settings, which have been a matter of recent public interest in Australia (eg 'Public transport top priority for Victoria Police' *Herald Sun* 11 January 2011; 'CCTV cameras 'not enough' to stop train station crime' *Brisbane Times* 17 August 2010). This has given rise to a range of responses, such as the planned deployment of police protective services officers to patrol railway stations in Victoria (Baillieu 2010).

Safety on public transport is also of concern internationally. For instance, city authorities in London recently launched a strategy to improve the safety—as well as the level of public confidence in the safety—of travelling in the city. This strategy includes large-scale measures such as high-visibility policing at strategic transport hubs and dedicated police resources to focus on organised criminal gangs who profit from theft on public transport. Other measures include CCTV, lighting, appropriate signage and visible and engaged staff at transport locations (Mayor of London 2010). Importantly, the strategy includes quantifiable objectives against which performance will be monitored, which should provide some indication of success of the strategy and lessons that may be learned by other jurisdictions confronting similar problems.



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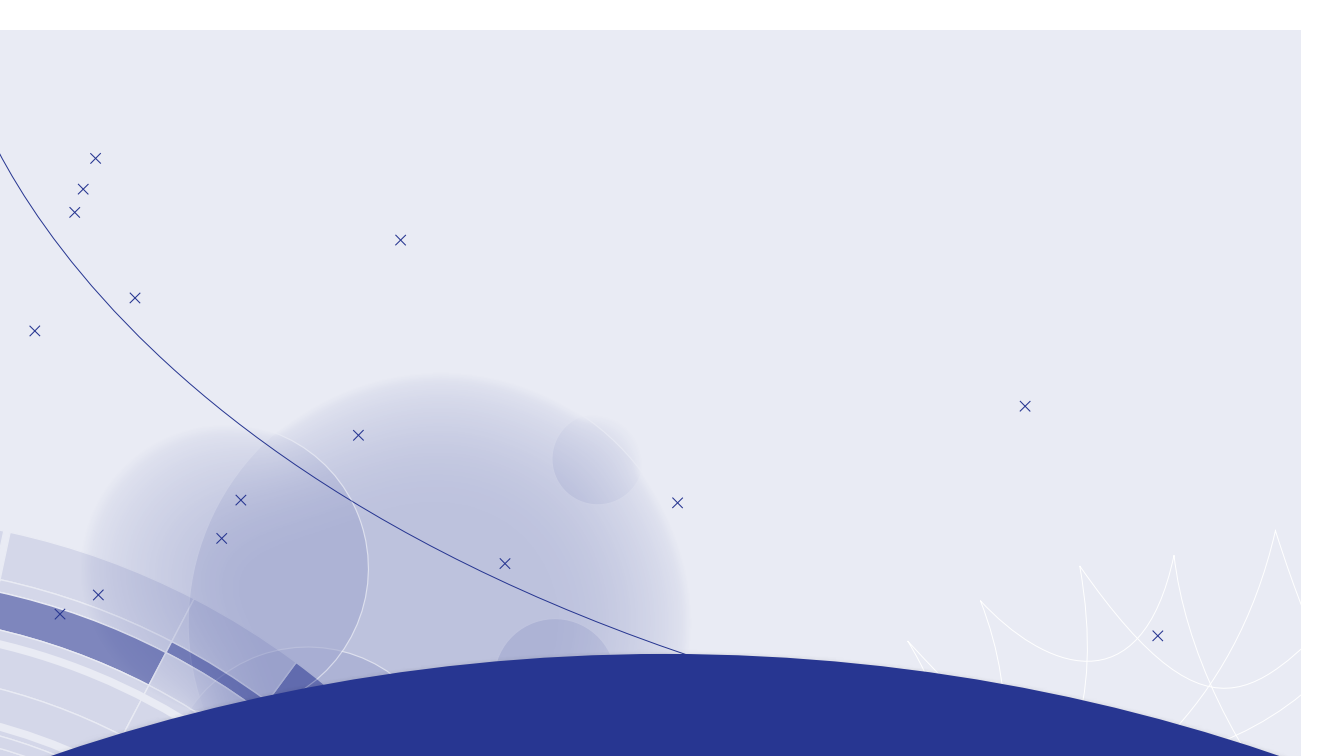
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Appendix

Appendix 1:

Technical appendix

National Armed Robbery Monitoring Program glossary

Armed robbery—the Australian Bureau of Statistics (ABS) delineates between armed robbery (involving a weapon) and unarmed robbery (no weapon used). Only armed robbery is of relevance to the NARMP (see also *robbery* below).

Actual offences that can be classified as armed robbery differ between Australian jurisdictions because of differing criminal codes. The coding scheme employed by the ABS, the *Australian Standard Offence Classification* (ASOC: ABS 2008b), allows varying offences to be grouped into categories. Those categories of relevance to the NARMP are aggravated robbery, non-aggravated robbery and robbery not further defined.

Weapon use is central to establishing which offences are included in the NARMP. For the purposes of the NARMP, a weapon is broadly defined in accordance with the ABS definition (see *weapon* below).

Incident—the ABS defines a criminal incident as:

one or more offences (and their related victims and offenders) which are grouped into the same unique occurrence if they are committed by the same person or group of persons and if:

- they are part of actions committed simultaneously or in sequence over a short period of time at the same place
- they are part of interrelated actions; that is, where one action leads to the other or where one is the consequence of the other(s)

- they involve the same action(s) repeated over a long period of time against the same victim(s) and come to the attention of the police at one point in time. (ABS 2005: 40)

The same broad definition of an incident is used for compilation of the NARMP but with the following exclusions:

- incidents where different victims (sometimes threatened with different weapons or in different locations) are robbed by the same offender(s) within a short period of time; or
- repeat victimisations of the same individual(s) or organisation(s) by the same offender(s), with long periods intervening between the armed robberies.

Location—‘The initial site where an offence occurred, determined on the basis of its use or function’ (ABS 2007: 51). For the purposes of the NARMP, broad location categories include:

- residential—private and commercial residences, includes yards and external structures;
- recreational—includes sporting facilities but excludes premises explicitly flagged as retail or licensed;
- transport related—includes terminals, conveyances in transit and car parks;
- open spaces—excludes street and footpath;
- street and footpath;
- educational, health, religious, justice and other community locations;
- administrative and professional;
- wholesalers, warehouses, manufacturing and agricultural; and

- retail—includes shopping centres, jewellers, pawn shops, gambling locations (TABs) among other retail locations not further defined and excludes all retail premises included in the following categories;
 - banking and financial—includes automatic teller machines not attached to banking and financial premises;
 - pharmacies and chemists;
 - service stations;
 - licensed premises—includes licensed clubs, pubs, taverns nightclubs and bottle shops;
 - newsagents and post offices;
 - corner stores, supermarkets and takeaways; and
 - unspecified and other.

Offender—the terms *offender(s)* and *armed robber(s)* are used interchangeably to refer to alleged perpetrators of armed robbery offences, even if those individuals have not been convicted of those offences.

Robbery—consistent with the ABS definition, robbery involves:

the unlawful taking of property, with intent to permanently deprive the owner of the property, from the immediate possession of a person, or an organisation, or control, custody or care of a person, accompanied by the use, and/or threatened use of immediate force or violence (ABS 2007: 52).

Victim—also consistent with the ABS, a robbery victim:

may be either an individual person or an organisation. Where the robbery involves an organisation or business, the element of property ownership is the key to determining the number and type of robbery victims. If the robbery only involves property belonging to an organisation, then one *victim* (ie the organisation) is counted regardless of the number of employees from which the property is taken. However, if robbery of an organisation also involves personal property in an employee's custody, then both the organisation and employee(s) are counted as victims (ABS 2007: 53).

A person traumatised by, or witness to, a robbery where property is not targeted, although a victim in the broader, common sense use of the term, is not a victim for the purposes of the NARMP. In addition, the term victim is used throughout this report to refer to the person(s) or organisation(s) victimised in an alleged armed robbery, regardless of whether related offences were later proven.

Generally, victim records are included in the NARMP if actual offences were subsumed by any of those ASOC categories listed for *armed robbery* (see above) and some form of weapon use was also recorded, although there are some exceptions. Victim records are excluded if offences:

- are classified as aggravated robbery but weapon information shows no weapon use or not applicable (the use of a weapon in the commission of a robbery is considered one, although not the only aggravating circumstance, hence all offences involving weapons could technically be considered aggravated); or
- are classified as robbery not further defined or non-aggravated robbery, recorded with no weapon use, or where weapon information has not been supplied or is annotated as missing. A minority of victim records classified as non-aggravated robbery or robbery not further defined also recorded use of a weapon and these are retained.

Finally, also consistent with the ABS:

Where a victim is subjected to multiple offences of the same type within a distinct criminal incident, eg in the case of robbery this may be due to attacks by several offenders, the victim is counted only once (ABS 2006: 33).

Weapon—as per the ABS definition, a weapon is:

any object used to cause injury or fear of injury. It also includes imitation weapons and implied weapons (eg where a weapon is not seen by the victim but the offender claims to possess one). Parts of the body such as fists or feet are not included (ABS 2007: 53).

The broad categories of weapon considered in the NARMP generally tally with ABS categories, namely:

- firearm, including imitation firearms;
- knife;

- syringe; and
- other weapon, which subsumes the recently introduced ABS categories (see ABS 2007) of:
 - bottle/glass;
 - bat/bar/club; and
 - chemical.

There are minor differences between broad NARMP and ABS weapon categories. For example, the NARMP categorises a screwdriver as a knife (the ABS classify it as 'other weapon').

National Armed Robbery Monitoring Program data collection method

Police services in all Australian jurisdictions extract (from police administrative information systems) unit record data relating to victims of armed robberies reported during the reference period. Electronic data files from each of the jurisdictions are forwarded to the AIC, where they are reformatted and recoded as necessary to achieve, as far as is possible, a uniform national victim dataset. The final victim dataset is contained and analysed within STATA, a statistical software package.

Jurisdictions cannot extract identical variables in all instances, nor can they always extract equivalent

levels of detail or equivalent values for those variables that are produced in common. Raw data undergo considerable recoding and reformatting, and the creation of new variables from supplied raw data where necessary, before being submitted to analyses. Table 30 details the core variables, the number of valid records for each and where relevant, the categories within each variable employed in the victim analyses conducted for this report.

The incident-based data file is created from victim records; victim records are combined into a single incident record using the shared incident identifier supplied by jurisdictions. Incident information such as location, weapon use and incident time and date did not agree among all the victims associated with an incident in a small minority of cases. When victim information differed on only a single variable, the relevant variable in victim records was amended to show consistent information (eg incident time amended to show the earliest incident time).

A small number of victim records could be grouped into single incidents by police incident identifiers but were disaggregated into separate incidents for the purposes of the NARMP. This occurred when:

- different victims were robbed by the same offender(s) and so grouped as a single incident, but detailed examination showed that they were threatened with different weapons or in different locations, or at different times; or

Table 30 Number of valid cases using particular variables and values of variables, 2008 NARMP victim dataset

Variable description	Valid records (n)	Values
Offence code	6,401	Aggravated robbery Non-aggravated robbery Robbery not further defined
Organisational identifier flag	6,420	Individual victim Organisational victim
Victim age at incident	4,648	
Victim date of birth	4,139	
Victim gender	4,703	
Relationship of first listed offender to victim	1,468	Known to victim Unknown to victim

Table 30 (continued)

Variable description	Valid records (n)	Values
		No offender identified
Relationship of second listed offender to victim	71	Known to victim Unknown to victim No offender identified
Relationship of third listed offender to victim	23	Known to victim Unknown to victim No offender identified
Relationship of fourth listed offender to victim	13	Known to victim Unknown to victim No offender identified
Relationship of fifth listed offender to victim	13	Known to victim Unknown to victim No offender identified
Injury to victim	808	No injury noted Injury not further defined Minor injury Major injury Death Emotional trauma
Unique incident reference number	6,427	
Date incident reported	5,775	
Date incident occurred/started	6,427	
Month incident occurred	6,427	
Year incident occurred	6,427	
Day of week on which incident occurred	6,426	
Time of day when incident occurred/started	6,422	
Date incident ended	2,973	
Time incident ended	4,346	
Location where armed robbery occurred	6,427	Residential settings Recreational settings (excluding licensed premises) Transport-related settings Open spaces (excluding street and footpath) Street and footpath Educational, health, religious, justice and other community settings Administrative and professional settings Wholesalers, warehouses, manufacturing and agricultural settings

Table 30 (continued)

Variable description	Valid records (n)	Values
		Retail (including not further defined and not elsewhere classified) Banking and financial Pharmacies and chemists Service stations Licensed premises Newsagents and post offices Corner stores, supermarkets and takeaways Unspecified and other locations not classified elsewhere
Licensed premises flag	6,379	Licensed premises Premises not licensed
First listed weapon used in incident	6,149	Firearm Knife Syringe Other weapon
Second listed weapon used in incident	593	Firearm Knife Syringe Other weapon
Third listed weapon used in incident	105	Firearm Knife Syringe Other weapon
Date of incident clearance	3,156	
Investigation outcome/clearance status at data extraction/at 180 days	6,364	Not finalised Finalised, no offender proceeded against Finalised, offender proceeded against Other outcome
Property taken incident, first type listed	2,721	No property stolen Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs

Table 30 (continued)

Variable description	Valid records (n)	Values
		<ul style="list-style-type: none"> Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Property taken incident, second type listed	1,537	<ul style="list-style-type: none"> Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Property taken incident, third type listed	1,063	<ul style="list-style-type: none"> Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Property taken incident, fourth type listed	815	<ul style="list-style-type: none"> Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories

Table 30 (continued)

Variable description	Valid records (n)	Values
		Other property not classified elsewhere
Property taken incident, fifth type listed	614	Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Value of property taken in incident, first property type listed	1,156	
Value of property taken in incident, second property type listed	700	
Value of property taken in incident, third property type listed	565	
Value of property taken in incident, fourth property type listed	503	
Value of property taken in incident, fifth property type listed	415	
Total value of property stolen incident	1,665	
Unique reference number for first listed offender	2,284	
Unique reference number for second listed offender	862	
Unique reference number for third listed offender	335	
Unique reference number for fourth listed offender	159	
Unique reference number for fifth listed offender	67	
Age of first listed offender at time of incident	2,478	
Age of second listed offender at time of incident	934	
Age of third listed offender at time of incident	370	
Age of fourth listed offender at time of incident	179	
Age of fifth listed offender at time of incident	68	
Date of birth, first listed offender	2,455	
Date of birth, second listed offender	927	
Date of birth, third listed offender	367	
Date of birth, fourth listed offender	179	
Date of birth, fifth listed offender	68	

Table 30 (continued)

Variable description	Valid records (n)	Values
Gender, first listed offender	2,486	
Gender, second listed offender	935	
Gender, third listed offender	369	
Gender, fourth listed offender	180	
Gender, fifth listed offender	68	

- the same individual(s) or organisation(s) were repeatedly victimised (sometimes by the same offenders) and so grouped together, but detail showed there were long periods intervening between the armed robberies.

After processing, there were 5,686 incident records in the incident-based file examined for this report.

Data limitations

Jurisdictional consistency

What constitutes a single reported crime victim is not uniform across jurisdictions. With respect to the ABS RCV, it has been noted that:

Some jurisdictions almost always record a reported criminal incident on their crime recording system, whereas other jurisdictions apply a threshold test prior to a record being made (eg whether the victim wishes to proceed against the offender or the seriousness of the incident).

These thresholds vary across jurisdictions and are not currently guided by national standards (ABS 2006: 31).

Given that NARMP data are extracted by police services using similar protocols to those employed for the RCV, issues raised concerning the RCV (ABS 2009a) are directly relevant to the compilation of the NARMP.

The overarching ASOC scheme (ABS 2008b) allows the grouping of disparate offences across Australian jurisdictions. Nonetheless, offences are not defined identically in all states and territories. Other variables are also inconsistently defined (eg raw values relating to relationships between victims and offenders) and so although they can be collapsed into higher-level

categories such as those as employed in the RCV, these categories do not necessarily convey all the information available.

Given all factors, jurisdictional comparisons are not made in this report but jurisdictional information is available to relevant police staff within jurisdictions via a secure internet website.

Representativeness of victim and offender records in the National Armed Robbery Monitoring Program

Not all crime events that take place are reported to, or detected by, police. This means the NARMP cannot describe armed robberies and armed robbery victims that do not come to police attention. Not all armed robberies will result in the apprehension of offenders and logically, police data can only include information regarding offenders who have been apprehended and will exclude those who have, for whatever reason, avoided detection.

Systematic factors may influence a victim's decision not to report crime; recorded crime as reported to police generally underestimates the level of victimisation compared with that reported in victim surveys (although this is thought to be less pronounced with armed robbery relative to other types of offences). Systematic factors may also influence whether offenders avoid apprehension, or if apprehended, are not proceeded against. These systematic factors are important in the understanding of armed robbery, but are well beyond the scope of the NARMP.

Victim counts for 2008 do not precisely tally with those provided in RCV for 2008 (ABS 2009a). For the purposes of the NARMP and RCV, robbery victims are those persons or organisations whose

property was the target of an attack. By definition, organisations can only be involved in a robbery through property ownership. A person traumatised by, or witness to, a robbery whose property is not targeted, although a victim in the broader, common sense use of the term, is not a victim for recorded crime purposes. In previous reports, it appears that some individual persons who were witness to and/or traumatised (but not actually the owners of targeted property) in the robberies of organisations may have been incorporated in the dataset. To overcome this, all individual victims reported as additionally involved in an incident in which an organisation was robbed of property and who were flagged as having only traumatic (as opposed to a financial) involvement in the incident were excluded from the 2006, 2007 and 2008 datasets for the purposes of this report. A number of these exclusions may be valid victims who did have property removed but as no means were available to distinguish this, the conservative rule described above was applied.

Some jurisdictions were able to supply information about whether included victims were subject to completed or to attempted armed robberies. As these data were not available for all records, this variable was not examined for this report. Some aspects of robbery, victim or offender may differentiate completed from attempted robberies, but these are not explored in this report.

The investigative status (or outcome) variable initially contained information very similar to that reported in the RCV (ie outcome at 30, 90 or 180 days). In order to achieve greater precision, some jurisdictions are able now to supply information about investigative outcomes at the time of data extraction, plus the dates those outcomes were achieved. These cannot be supplied by all states and territories, however, which means the precise time taken to achieve the various possible outcomes has not been calculated. Consequently, the outcomes reported were not necessarily achieved within the same timeframe for each record (ie the time between incident report and outcome achieved varies between records). In a related fashion, the number of jurisdictions able to supply this information and the form it is provided in (ABS coding versus raw, local codes) has changed since the establishment of the NARMP. Summary findings making use of this variable should therefore be interpreted with caution and treated as only the most general indicator of outcome.

Data extraction protocols employed in some jurisdictions can result in the duplication of victim records (ie victim records are supplied multiple times with few or even no differences between those records). All detected duplicate records were removed from the victim dataset but in some instances, it was not possible to definitively confirm all apparent duplications (for instance, when the victim was an organisation robbed in a retail setting). As a result, it is possible that the dataset contains some duplicate victim records.

Finally, this report provides some information on repeat victimisation during the reference period. However, it is likely that this is an underestimate of actual repeat victimisations reported to police in Australia. The non-name victim identifiers provided to the AIC by some jurisdictions are not unique and universal to all states and territories. That is, they identify a victim in a particular incident but if that same individual or organisation is victim to another incident, a new identifier will be allocated. If a victim is subject to second or subsequent armed robbery in a different jurisdiction to that in which the first occurred, they cannot be identified as a repeat victim. Because of the above, the analyses presented should therefore be considered at best, as only broadly indicative of all attempted and completed armed robberies, all armed robbery offenders and all armed robbery victims.

Weapons, property, offenders, relationships and victim injury described in the National Armed Robbery Monitoring Program

Where possible and relevant, jurisdictions supply information concerning up to three weapons used against victims, up to five involved offenders, up to five relationships between victim and offenders, and up to five stolen property types and values. These do add to knowledge of armed robbery by providing greater detail about the crime but should not be seen as definitive regarding every reported instance of armed robbery. Some jurisdictions cannot supply information concerning more than one of each of these elements and records which may involve more than the maximum number of each of these elements are not flagged as such in the national dataset. This means that the true total reported number of weapons employed, offenders involved, or types of property stolen cannot be established.

Variables relating to the type and dollar value of stolen items could not be supplied by all jurisdictions. These variables are not mandatory fields for police officers to complete when recording offence reports. Further, their accuracy is not necessarily later validated by police. Data do not, therefore, accurately describe the types and value of all property taken in all examined incidents. This caveat is especially important when considering certain subcategories of robbery, for which only single or a very small number of records were examined.

The injury received by the victim during an armed robbery was a variable that could not be supplied by all jurisdictions. Therefore, not all victim injuries are captured with the available data. This is particularly important for the small number of deaths that occur as a result of armed robbery. In 2008, NARMP data recorded no deaths but this finding is not comprehensive and must be treated with caution.

Changes to the National Armed Robbery Monitoring Program over time

As noted in the introduction to this report, as the NARMP has evolved, the nature of NARMP

information has also changed, making fine-grained comparisons with earlier NARMP reports inappropriate. Some changes have arisen directly from stakeholder feedback and others are the result of changes in the ways states and territories compile information. Changes include:

- the inclusion of more detailed information in raw data forwarded to the AIC (eg weapon type or location);
- the inclusion of additional variables to those initially specified (eg a flag variable indicating whether or not a location was a licensed premise);
- the supply of information that previously could not be supplied, by more or all jurisdictions (eg unique offence identifier); and
- changes in the way some variables are derived. For example, analyses of weapon type in combination with other variables in 2003 and 2004 annual reports were usually based on the first listed weapon. Analyses from the 2005 and subsequent reports employ the most serious weapon listed for that victim (or the first listed victim in an incident).

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