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Armed robbery in Australia: 2007 National Armed Robbery Monitoring Program annual report

Lance Smith
Erin Louis

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Foreword

Armed robbery is a serious crime that can have a negative impact on individual victims and employees of targeted businesses. People who work in locations vulnerable to armed robbery can experience emotional repercussions if present at work during an armed robbery. The Australian Institute of Criminology (AIC) continues to undertake research to assist in reducing armed robbery in Australia and 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 of armed robbery in Australia, with a particular focus on identifying changes over time in the use of specific weapons. The 2007 annual report is the fifth publication since the (AIC) began monitoring this offence. Building on previous analyses, this 2007 report provides an overview of the 7,133 victims of armed robbery and the situations, including locations, which made them vulnerable to victimisation.

The 2007 data collection and annual report has included additional information about armed robbery incidents. In total, there were 6,086 armed robbery incidents in 2007. The inclusion of this additional data allows for a more detailed examination of armed robberies reported to police in Australian state and territories during 2007. Such information

is valuable in assisting law enforcement as it provides a more complete picture of incidents of armed robbery. This includes being able to determine whether there are any differences in net gains for offenders based on the type of weapon they use, the locations they target, or whether the offence is committed by one or more offenders.

Equally important is being able to assess whether crime prevention initiatives are having their desired impact. Separate AIC publications have been produced in recent times for this purpose, focusing on specific locations vulnerable to armed robbery such as service stations. To build further on this crime prevention focus, a section on crime prevention for armed robbery is included in the report.

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 NARMP is now accumulating enough data that some basic trends can be explored for recent years and analysis is able to provide further insight into some very different armed robbery scenarios, including high-yield armed robberies. A case study is presented in this year's annual report examining some of the most serious incidents of armed robbery, including those carried out by 'professional' offenders.

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
RAT	Routine Activity Theory
RCV	Recorded crime: Victims, Australia

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 fifth year of reporting, analysis is presented for data on all armed robberies reported to police between 1 January 2007 and 31 December 2007.

Victims of armed robbery

Analyses of the 2007 victim-based NARMP dataset suggest:

- that while the number of victims of armed robbery has fluctuated from year to year, there has been a decrease of approximately six percent in the number of victims compared with 2006 data;
- the average armed robbery involved only one weapon;
- knives were the most common weapon used (47%), with a smaller proportion of armed robberies involving firearms (16%);

- just over 40 percent of all armed robberies involving individuals occurred in a retail setting (42%; specified and unspecified) while 46 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 of age. Sixty-four percent of male victims and 51 percent of female victims were under the age of 30 years;
- males were much more likely to be victimised than females (39.2 per 100,000 for males; 11.5 per 100,000 for females);
- organisations or commercial premises accounted for 26 percent of victims recorded in NARMP. This figure is similar to 2006 data (27%); and
- forty-one victim records indicated repeat victimisation during 2007, with 71 percent of these being individuals (n=29).

Incidents of armed robbery

- During 2007, there were 6,086 incidents of armed robbery recorded in Australian states and territories.
- The majority of armed robbery incidents involved a single individual victim (63%).
- One-third of all robbery incidents occurred on the street 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).
- Unspecified retailers were the most common site of incidents involving both an organisation and an individual victim (32%).

- Two-thirds (67%) of armed robbery incidents occurred between the hours of 6 pm and 6 am. Forty-two percent of armed robbery incidents occurred between 6 pm and 12 am.
- Armed robbery incidents in 2007 were slightly more likely to occur on weekends but there was generally little difference between the days of the week on which armed robbery incidents occurred.
- Firearms were used in a higher percentage of robberies in banking and financial settings than in other locations (49%).
- Knives were the most common weapon used in the majority of locations (eg post offices and newsagents 62%; open spaces 59%; corner stores, supermarkets and takeaways 56%).
- 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 (58%), followed by electrical goods, including mobile phones (15%).
- On average, armed robbery offenders netted \$1,066 per incident (when a weapon was identified; median=\$150 and mode=\$50 when something with value was stolen), although total values were skewed towards the lower end of the range. For example, 28 percent of armed robbery incidents provided the offender with no return, while 72 percent had a recorded total value of less than \$500. This skew of results would be much greater if not for those few high-yield armed robberies (n=42) and the effect they have on the total average.
- The highest average gains for offenders were from incidents where a firearm was used (\$1,726). The lowest average was associated with 'syringe' robberies (\$483).
- The highest value gain for a weapon/location combination was for knife robberies at banking and financial locations (\$18,091). The average takings from banking and financial locations involving a firearm (\$11,237) was considerably less but still high compared with all other weapon/location combinations.

Armed robbery offenders

- Data were available for 3,108 armed robbery offenders involved in 2,009 incidents, accounting for approximately one-third of all incidents. The typical incident usually involved a lone offender (the average was 1.5 offenders per incident while the median and mode were both 1 offender when an offender was identified).
- 2007 data suggests multiple individual victims were more likely to be targeted by multiple offenders.
- Co-offenders were generally of similar ages.
- The average age of lone offenders was 25 years old compared with 18 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 (28 years) and pharmacies (33 years).

Patterns in armed robbery

Despite some minor changes in the level of detail and in the way some information is analysed, the 2007 NARMP findings suggest that the features of Australian armed robberies have not changed markedly over the five 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. Targets are accessible to the offenders who are generally inexperienced and likely to use 'easy to obtain' weapons such as knives (eg robberies in open spaces); or
- high-yield, involving some level of planning and organisation with a carefully selected target that is likely not to be in the offender's local area. High-yield offenders will often employ weapons that are more difficult to obtain, such as firearms, and are more likely not to be operating alone (eg banking and financial location robberies).

Data from both current and previous analyses also 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.

Relative to other armed robberies, the 2007 case study of a high-yield armed robbery shows that such incidents tend to be committed:

- using a firearm as the weapon. Figures suggest that firearms were more than twice as likely to be used in a high-yield armed robbery when compared with all other robberies (see case study); and
- at locations such as banking and financial institutions, on a street and footpath, possibly transport-related and in residential settings. Fourteen percent of all high-yield armed robberies occurred at banking and financial locations and 26 percent at residential locations. Twelve percent occurred at transport and related locations and 21 percent in street and footpath locations. The latter three locations are of interest as they are predominantly locations where individuals, not businesses, are usually targeted (see Figure 1).

It would appear that offenders who commit high-yield armed robberies at banking and financial locations are most likely organised and experienced. Other high-yield offenders in residential, street and footpath, and transport-related locations may also be experienced and professional armed robbers and may also know the victim. The possibility that a relationship between victims and offender, rather than the offender's professionalism, could enable a large-scale robbery to be successful is suggested with one high-yield armed robbery involving \$125,000 taken from an individual in a street and footpath location. In this case, the offender was an 'acquaintance' of the victim. Interestingly, the victims of most high-yield robberies were individuals which suggests that the crime-prevention measures employed by commercial targets of armed robbery (banks, service stations, pharmacies, convenience stores etc) may well be causing target displacement, while at the same time 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 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.

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 information contained in the NARMP was initially modelled on the *Recorded Crime: Victims, Australia* (RCV) collection (ABS 2008b, 2007), 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 not recorded in NARMP, such as

details on sentencing and an offender's prior convictions, can now be found in some jurisdictional reports such as Victoria's Sentencing Advisory Council report (2010) *Sentencing for Armed Robbery: A Statistical Profile*.

Due to the evolving nature of NARMP, care should be taken in drawing strict or detailed comparisons between different recorded crime sources (such as RCV and 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 NARMP also means that none of the annual comparisons have yet been subject to any time series analyses.

Report format

This report examines 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 2007. Details of methodology and type of information included in NARMP can be found in the *Technical Appendix* to this report, as can a more detailed discussion of the limitations of NARMP. The *Technical Appendix* also details a glossary of terms and definitions found in this report.

The key findings from the 2007 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 2008b, 2007).

The second section examines characteristics of each armed robbery incident, using the incident as the unit of analysis. Findings can generally be compared with the 2004, 2005 and 2006 NARMP analyses (all references to previous NARMP findings throughout this report relate to the relevant annual report; see Borzycki 2008, 2006). As with 2005 and 2006, data used in the 2007 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.

The third section also uses incident-based analyses to outline characteristics of armed robbery offenders. The report concludes with a case study which examines high-yield armed robberies in detail. This type of robbery is of interest due to the higher likelihood of firearms being used and because of the large sums of money stolen.

NARMP data suggest that the characteristics of armed robberies have been generally consistent over the five years of the program, although as noted earlier, caution should be exercised when making comparisons with previous years. The report starts with a timely discussion of some methods for better understanding the dynamics of armed robbery and methods for promoting better approaches to prevention.

Crime prevention strategies and armed robbery

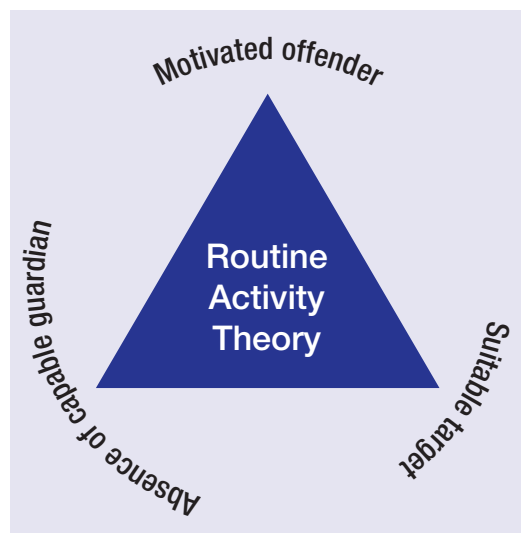
There are multifaceted reasons for why armed robbery occurs. In the 2006 annual report, a new section was added to look at how researchers and academics attempt to understand incidents of armed robbery. The report examined the role and efficacy of situational crime prevention, describing the success of crime-prevention strategies in reducing the incidence of armed robbery. Another key element of causation is the decision-making processes of offenders (Gill 2000). Accordingly, this section of the report uses Routine Activity Theory (RAT)—a concept widely used in criminology—to describe some aspects of how a decision may be made to commit an armed robbery.

Routine Activity Theory

Previous NARMP annual reports (eg see Borzycki, Sakurai & Mouzos 2004) have considered some findings within a routine activity framework (Cohen & Felson 1979). As with previous reports, RAT can be applied to the 2007 NARMP results. To avoid unnecessary repetition, specific statements about the way current NARMP findings can be located within this framework have not been included. In previous years, these were made with reference to individual analyses (see Borzycki, Sakurai & Mouzos 2004).

RAT is an environmental criminology theory first proposed by Cohen and Felson (1979) that focuses on an analysis of opportunity for criminal involvement. RAT suggests that for crime to occur, three things must coincide in time and space:

- a suitable crime target must be available;
- there needs to be a lack or absence of a suitable guardian to prevent the crime from happening, and
- a likely and motivated offender must be present.



Generally, in any given environment, there are many suitable crime targets available. A target can be classified into three main forms: a person, an object or a place. Felson and Clarke (1998) subsequently devised four main elements that influence a target's risk of criminal attack, to which they applied the acronym 'VIVA'. This stands for:

- **Value**—the value of an item to the offender. Offenders will only be interested in targets that they value (in armed robbery this is generally money).
- **Inertia**—the weight of the item. This is why small electronic goods such as mobile phones are more commonly stolen in armed robberies (second only to cash).
- **Visibility**—the exposure of items to the offender. When somebody handles money in public, or when commercial businesses handle money in front of customers, this increases the risk of victimisation.
- **Access**—the ease in which an offender can get at a target. If a business does not operate a time delay safe for example, this makes the money on the premises much more accessible to the offender.

Clarke (1999) developed a further analysis that assists in the identification of appropriate targets. This analysis takes the acronym of 'CRAVED' and extends on the VIVA concept to include elements relating to motivation. CRAVED suggests that a target's intrinsic value to a criminal can be assessed in terms of it being:

- **Concealable**—items that cannot be concealed on the person are more difficult for the thief to remove and less likely to be stolen, as are items that are easy to identify.
- **Removable**—similar to 'Inertia' from the VIVA acronym. 'Removable' pertains to how easy it is for the offender to remove the item. If it is relatively small and easily carried away it is more likely to be stolen.
- **Available**—this ranges from the availability of attractive new products (eg laptops and mobile phones) to people not securing their expensive belongings, such as jewellery, in the home.

- **Valuable**—the value of an item to the offender. This will differ depending on the offender (eg young offenders will target items that appeal more to young people).
- **Enjoyable**—this component is linked to 'Valuable' as offenders will take what is valuable to them and one part of this value is whether they find the item enjoyable.
- **Disposable**—if the target item is not enjoyable to the offender then it should be disposable. It should be easy to sell and there should be a demand for the item in the illegal fencing market.

Regardless of how suitable a target is, an offence will not occur unless a capable guardian is absent and a likely offender is present (Clarke 1999). A capable guardian infers a 'human element' so would usually be considered a person and their mere presence would likely deter potential offenders from committing a crime (Felson & Clarke 1998). However, the increasing availability of technology such as closed circuit television (CCTV) is extending the definition of guardian to include situations where a human guardian may not need to be physically present. Some examples of capable guardians include:

- police patrols;
- security guards;
- Neighbourhood Watch schemes;
- door-staff;
- vigilant staff and co-workers;
- friends;
- neighbours; and
- CCTV systems.

Some guardians are formal and deliberate such as security guards; some are informal and inadvertent, such as neighbours (Home Office 2010). It is also possible for a guardian to be present, but ineffective. For example, a CCTV camera is not a capable guardian if it is set up incorrectly or positioned in an inappropriate place (Clarke 1999). Staff might be present in a shop, but may not have sufficient training or awareness to be an effective deterrent. This is one of the key reasons crime prevention strategies insist on regular staff training, together

with target-hardening measures such as time delay safes. These tools assist staff to be effective guardians.

The final element is the presence of a likely offender. RAT looks at crime from an offender's perspective and at what influences their decision-making processes, that is, their *assessment* of the balance between perceived risks and rewards of committing armed robbery. A crime will only be committed if a likely offender thinks that a target is suitable and a capable guardian is absent (Cohen & Felson 1979). As such, it is their assessment of a situation that determines whether a crime will occur.

When examining armed robbery, RAT has the most success when applied to deter amateur armed robbers as they generally fail to invest a great deal of thought into planning their offences. If any component of the crime seems too difficult, it is likely that the amateur offender will alter their plans. As such, RAT highlights the importance of target hardening and situational crime prevention techniques in deterring the occurrence of armed robbery.

The majority of commercial armed robberies fit the characteristics described by RAT (a suitable

target—money); a lack of a capable guardian (most employees are told to comply with armed offenders); and a motivated offender. There are, however, some less common commercial armed robberies where the presence of a capable guardian does not outweigh the perceived rewards for an offender (cash in transit armed robbery). The most appropriate manner in which RAT can be applied to commercial armed robbery is to focus on limiting the value, visibility and accessibility of the target through the methods mentioned earlier, such as time delay safes and competent cash handling procedures for staff. This limits the amount of money kept on the premises and therefore makes commercial premises less suitable targets.

RAT can also be applied to armed robberies involving individuals. Similar to commercial armed robberies, by taking away the suitable target, the offence can be disrupted. As most street armed robberies occur at night and are opportunistic, potential victims can make themselves a less suitable target by altering their behaviour. They can take alternative transport, walk in greater numbers and be vigilant about their surroundings while out late at night.

Key findings

Victims of armed robbery

The 2007 NARMP dataset contains records relating to 7,133 victims of armed robbery reported to police from 1 January to 31 December 2007. This represents a decrease of 427 victims from the 2006 dataset (n=7,560; see Smith & Louis 2009). The number of annual victimisations recorded in the NARMP has fluctuated in the five 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 2007, which again saw a decrease.

The number of armed robbery victims recorded in 2007 translates to a rate of victimisation of 33.9 persons per 100,000 (a slight decrease from 36.5 in 2006), compared with the armed robbery victimisation rate of 36.4 victims per 100,000 (n=7,657) reported in RCV (revised) for 2007 (ABS 2009).

Approximately seven out of 10 victims (n=5,281; 74%) were categorised as individual persons, with the remainder being organisational victims. The percentage breakdown of victim type was similar to 2006 (73% individual persons).

Weapons used against armed robbery victims

Four out of eight jurisdictions were able to supply information about incidents where more than one weapon had been used against a victim (known as 'multiple weapons' incidents). Of the 6,151 victim records in which multiple weapon types could be examined, the findings established that the average armed robbery only involved a single weapon (n=1.31). The median number of weapons used was also one which is not surprising given that eight in 10 victims were involved in incidents where only single weapons were listed. Fourteen percent were victims in incidents involving two weapons and two percent of victims were threatened with three weapons. These results were slightly higher than those reported in 2006.

- Knives made up the majority of weapons used to commit armed robbery (47% of 7,939 weapons listed for victims; see Table 1).
- Firearms were used to commit 16 percent of armed robberies, with 10 percent of all weapons specified as handguns. Less than one percent of the weapons used were replica firearms.
- Over one-quarter of weapons were in the category of other weapons (31%), with syringes accounting for fewer than one in 20 of the weapons involved (3%).

Table 1 Weapons used to threaten armed robbery victims^a

Weapon	Number	Armed robberies (%)
Firearms		
Firearm (with no further detail)	70	1
Handgun	760	10
Shotgun	132	2
Rifle, airgun	74	1
Sawn-off longarm	17	<1
Replica firearm	35	<1
Other firearm (not classified elsewhere)	199	3
Total firearms	1,287	16
Knives		
Knife (with no further detail)	3,338	43
Dagger	10	<1
Scissors	28	<1
Pocket knife	30	<1
Screwdriver	103	1
Other knife (not classified elsewhere)	198	2
Total knives	3,707	47
Syringes		
Syringe	227	3
Total syringes	227	3
Other weapons		
Other weapon (with no further detail)	500	6
Club, baton or stick	320	4
Rock, brick or stone	62	1
Tool (not classified elsewhere)	238	3
Blunt instrument (not classified elsewhere)	116	1
Bottle, broken glass	277	3
Chemical spray	11	<1
Explosive, bomb	8	<1
Machete, axe	95	1
Sledgehammer	33	<1
Crowbar, metal pipe	399	5
Bow, spear, speargun	6	<1
Vehicle	3	<1
Stun gun (Taser)	14	<1
Sword	16	<1
Other weapon (not elsewhere classified)	330	4
Total other weapons	2,428	31
Weapon used (with no further detail)	52	1
Unknown	238	3
Total (unknown & no further detail)	290	4
Total	7,939	100

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 2007 [computer file]

- The percentage breakdown is similar to that seen in the preceding year, although data suggest that firearms made up a slightly lower percentage of weapons in 2006 (15%) and knife usage was six percent higher (53%).

Locations in which victims were robbed

Just over 40 percent of victims were robbed in some sort of retail setting (42%; unspecified eg shopping centres, jewellers, pawn shops, gambling locations (TABs) and other retail locations not further defined; and specifically-listed retail locations). Forty-six percent of victims were robbed in an open, public setting (which includes recreational; transport-related including car parks, stations and carriages/vehicles for trains, buses and taxis; open spaces; and the street and footpath), with the majority of these robbed on the street or footpath (33% of all victims). These figures have been consistent since the NARMP began in 2003. The percentage of individual persons relative to organisational victims subject to

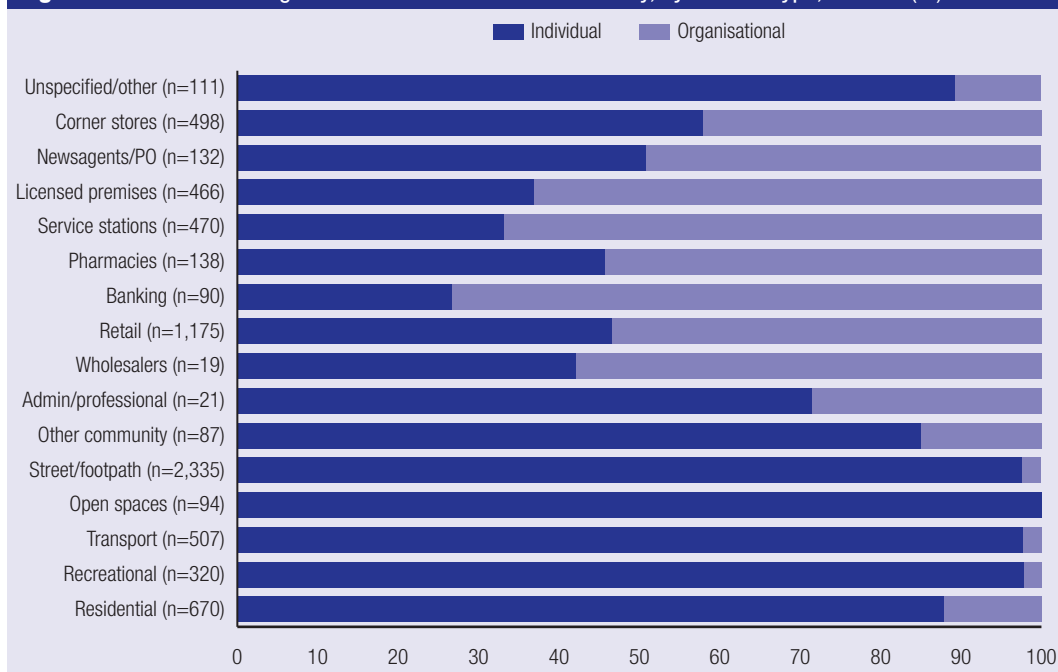
robbery in each of the location categories was also similar to that observed in the previous year.

Figure 1 highlights that approximately nine out of 10 victims in locations classified as residential, recreational, transport-related, open spaces, street and footpath, and other community settings were individuals. Organisations made up the majority of victims in all primarily commercial settings. The exceptions were the categories of corner stores (including supermarkets and takeaways), newsagencies/post offices and pharmacies.

Individual victims of armed robbery

The average age of an armed robbery victim, for whom valid age and gender information was recorded (n=5,228), was 30 years old, although male victims were slightly younger (29 years) than female victims (33 years). As shown in Table 2, the majority of victims (61%) were aged less than 30 years. Consistent with both 2005 and 2006 findings, 64 percent of males and 51 percent of females were aged less than 30 years.

Figure 1 Individual and organisational victims of armed robbery, by location type, in 2007 (%)^a



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

Note: n=7,133

Source: AIC NARMP 2007 [computer file]

Young men have consistently been shown to be subject to high rates of armed robbery victimisation. Table 2 shows that men aged 18 to 19 years experienced the highest rate of victimisation of all age and gender groupings (160.8 per 100,000 population). The highest victimisation rate among women and girls was also found in the 18 to 19 year age group (37.1 per 100,000) but the actual rate was substantially less for females. Overall, males were three times more likely to be victimised than females (males=39.2 per 100,000 population, females=11.5). These figures are generally consistent with the previous year's data, with rates of victimisation for both males and females in 2006 remaining relatively stable (males=40.8 per 100,000 population, females=11.8).

Consistent with last year's findings, the largest percentage of victims in most age and gender groups were robbed on the street or footpath

(Table 3), with half of all males under 18 years of age, and of 18 to 34 years of age, being victimised in this location. Males and females from the under 18 years category were also two to three times more likely than most older age groups to be victimised in a recreational or transport location.

General patterns in victimisation locations are similar to those seen in previous years, although there was a nine percent increase in overall retail victimisation and a seven percent increase in female victimisation in the 60 years and over age group. Service stations saw a 35 percent overall reduction in victimisation. There was a seven percent reduction in residential victimisation in the female under 18 years category compared with 2006 (14%). Fluctuations since 2003 in the percentage of victims subject to armed robbery in most other locations, and in older age groups, are likely to be the result of the small number of victims in these subcategories.

Table 2 Victims, by sex and age group, in 2007^{a, b}

Age group (years)	Male		Female		All		
	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	Number
<15	4	7.6	3	1.6	4	4.7	191
15-17	13	118.6	6	17.9	11	69.7	593
18-19	12	160.8	9	37.1	11	100.5	566
20-24	21	114.7	21	34.1	21	75.1	1,104
25-29	14	82.0	13	23.1	14	52.8	742
30-34	9	46.4	10	16.7	9	31.5	470
35-39	6	34.2	7	11.5	7	22.8	348
40-44	6	29.8	7	10.7	6	20.2	310
45-49	5	27.0	8	12.7	6	19.8	296
50-54	4	21.2	6	11.1	4	16.1	220
55-59	3	18.2	4	6.9	3	12.6	160
60-64	2	15.3	2	5.9	2	10.6	105
>65 years	2	6.9	3	2.7	2	4.6	123
All ages		39.2		11.5		25.3	

a: Excludes individual victim records with missing age and/or gender (n=57)

b: Rate of victimisation per 100,000 population (ABS 2008c), 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=1,848)

Note: Percentages may not total 100 due to rounding. Males n=4,032; females n=1,196

Source: AIC NARMP 2007 [computer file]

Table 3 Locations of victimisation, by sex and age group, 2007 (%)^a

Location	Males				Females				Total (n)
	<18	18–34	35–59	60+	<18	18–34	35–59	60+	
Residential	4	9	16	23	7	11	17	22	584
Recreational	14	6	4	2	12	4	2	3	310
Transport related	16	9	7	10	17	8	5	6	493
Open spaces (excluding street and footpath)	6	1	1	2	5	1	1	6	94
Street and footpath	49	53	34	23	36	41	17	24	2,249
Educational, health, religious, justice and other community	3	1	1	3	1	1	2	3	72
Administrative and professional	0	<1	<1	0	0	<1	1	0	15
Wholesalers, warehouses, manufacturing and agricultural	0	<1	<1	1	0	0	<1	0	7
Retail	4	7	14	20	10	14	22	24	541
Banking and financial	0	<1	1	1	0	1	2	0	24
Pharmacies and chemists	0	<1	1	3	2	3	4	3	62
Service stations	<1	4	3	4	0	3	3	0	155
Licensed premises	<1	3	6	1	0	4	5	0	171
Newsagents and post offices	<1	<1	3	1	1	2	3	3	67
Corner stores, supermarkets and takeaways	2	4	8	7	5	6	16	6	285
Unspecified and other	3	2	1	0	5	2	1	1	96
Total (n)	678	2,247	947	159	106	634	386	68	5,225

a: Excludes individual victim records with age, gender, or location missing (n=29)

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

The weapons used in armed robberies are based (where indicated) on the most serious weapon listed in a weapon combination, with the order of decreasing seriousness being firearm, knife, syringe, other weapon. The most serious weapons used against male and female armed robbery 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 in patterns of weapon use were found. 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.

The 'other' weapon category accounted for 32 percent of weapon usage in robberies against males where a weapon was used. This increase comes

from an increase in victimisation rates against males aged 40 years and over. In previous years, firearms were most likely to be used against this age category of males. Females aged 60 to 64 years were most likely to be a victim of firearm armed robbery (44%) and this deviates from trends in the past few years. Women in the 40 to 44 year old category were victims of robberies where knives were used more often than any other age category (65%), closely followed by the 15 to 17 year old age category (64%). This is a 12 percent increase on 2006 (52%). 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.

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 10 victims (n=745). Due to the small number of cases examined, results should not be interpreted as representative of all armed robbery victims. Some findings in 2007 are similar to those of 2006 insofar as only a small proportion of supplied victim cases recorded serious injury (4%; see Table 5). Fourteen percent of all victims had no report of injury. Slightly less than one-third of victims received

a minor injury (32%). Of the major weapon types, other weapon (including 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) robberies resulted in the highest percentage of reported minor injuries (45%). Fifty-one percent of all victims reported emotional trauma as the listed injury. There were no deaths recorded in the NARMP for 2007.

Table 4 Weapons^a used in armed robberies by gender and victim age group, 2007 (%)^b

Age group	Males					Females				Total (n)
	Firearm	Knife	Syringe	Other weapon	Total (n)	Firearm	Knife	Syringe	Other weapon	
<15 years	7	63	1	29	150	23	53	3	20	30
15–17	5	52	1	42	481	11	64	0	24	70
18–19	9	54	3	35	434	16	53	8	23	99
20–24	11	54	3	32	807	14	52	3	32	234
25–29	13	53	3	30	534	14	61	6	19	147
30–34	16	50	3	31	318	20	47	9	24	113
35–39	15	53	3	29	240	20	56	1	23	80
40–44	21	46	4	29	212	18	65	4	13	78
45–49	18	53	3	26	188	12	58	12	18	91
50–54	24	56	2	19	135	26	52	6	16	69
55–59	19	46	4	31	110	24	55	3	18	38
60–64	26	51	0	23	73	44	41	0	15	27
>65	14	54	1	30	69	15	54	10	21	39
Total (%)	13	53	3	32	100	17	55	5	22	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=4,866

Source: AIC NARMP 2007 [computer file]

Table 5 Injury from weapon inflicted on individual victims, by weapon type^a, 2007 (%)^b

Injury	Weapon				
	Firearm	Knife	Syringe	Other weapon	All weapons
No injury	16	10	18	19	14
Minor injury	20	26	36	45	32
Serious injury ^c	2	3	0	5	4
Emotional trauma	62	61	45	31	51
Total (n)	86	397	11	251	745

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 2007 [computer file]

Organisational victims of armed robbery

Organisations comprised 26 percent of all victims recorded in NARMP. This figure was similar to 2006 data (27%). Similar to individual victimisations, the majority of armed robberies of organisations involved a knife (50% organisations, 53% individuals), although a substantially higher percentage were subject to firearm robbery (29% organisations versus 14% for individuals). Only a small percentage of organisations were robbed with other weapons (18%), compared with 30 percent of individual victims.

Weapons used during armed robberies, and the types of locations where victimisation occurred in 2007 (see Table 6), were generally similar to those

of 2006. The exception to this trend was unspecified retailers who experienced a small increase from 2006 figures (28% firearms and 37% knives for 2007; 26% firearms and 34% knives in 2006). Licensed premises had a five percent increase in victimisation where a firearm was used (28%) and comprised approximately 16 percent of organisational robbery victims. Service stations saw a marked decrease in the number of weapons used during robberies. Firearms decreased from 20 percent in 2006 to 15 percent in 2007 and knife use decreased from 26 percent in 2006 to 18 percent in 2007. In 2005, 44 percent of organisational robberies involving a syringe occurred in an unspecified retail setting. This figure rose to 60 percent in 2006 but dropped slightly in 2007 to 58 percent.

Table 6 Organisational victims of armed robbery in 2007, by weapon type^a and location (%)^b

Location	Weapon				Total (n)
	Firearm	Knife	Syringe	Other weapon	
Residential	1	5	5	7	76
Recreational	<1	<1	0	1	6
Transport related	<1	1	0	1	11
Open spaces (excluding street and footpath)	0	0	0	0	0
Street and footpath	3	3	0	4	51
Educational, health, religious, justice and other community	<1	1	0	1	13
Administrative and professional	1	<1	0	0	5
Wholesalers, warehouses, manufacturing and agricultural	1	1	0	1	10
Retail	28	37	58	33	599
Banking and financial	7	2	0	3	61
Pharmacies and chemists	4	5	5	3	72
Service stations	15	18	13	17	293
Licensed premises	28	10	0	17	280
Newsagents and post offices	3	4	5	3	63
Corner stores, supermarkets and takeaways	7	14	11	11	198
Unspecified and other	<1	1	2	0	9
Total (n)	506	874	55	312	1,747

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 due to rounding

Source: AIC NARMP 2007 [computer file]

Offenders involved in the armed robbery of individual and organisational victims

NARMP contains information about both alleged and convicted offenders linked to armed robberies reported in the reference period. It does not contain demographic information about individuals suspected of robbery, or reported offender descriptions where individuals had not been apprehended by the time data were extracted. There is the capacity to capture information for up to five offenders involved in an armed robbery, although not all jurisdictions could supply this. Further, if more than five offenders were involved, information about the sixth and subsequent offenders has not been collated. 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 2007 and some information is repeated in that subset.

In 2007, 67 percent of victim records did not contain associated offender data. Of the 2,360 victims with offender information supplied, demographic details were available for 3,724 offenders. Table 7 shows that more than one in three organisational victims had at least one linked offender, compared with less than one in three individuals being robbed. On average, individuals were victimised by larger offender groups (1.7 offenders) than organisations (1.4 offenders). Previous NARMP reports show similar findings, but as noted in those reports, these apparent differences may be a function of offender data limitations.

Table 7 Number of offenders involved in armed robbery, by victim type, 2007 (%)

Offender count	Victim type		Total (n)
	Individuals	Organisations	
Nil/unsolved ^a	69	62	4,773
One	19	27	1,485
Two	8	8	548
Three	3	2	202
Four	1	1	88
Five or more ^b	1	<1	37
Total (n)	5,281	1,852	7,133

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 2007 [computer file]

Table 8 Relationships between individual victim and offender, 2007

Relationship	Number	Victim-offender relationships(%)
Offender(s) known to victim	167	9
Offender(s) unknown to victim	1,660	91
Total ^a	1,827	100

a: Multiple relationships were listed for some victim records in which multiple offenders were identified. Therefore, *Number* 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

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Table 9 Status of investigation^a of armed robbery, by victim type, 2007 (%)^b

Status	Individuals	Organisations
Investigation not finalised	29	23
Investigation finalised, no offender proceeded against	40	40
Investigation finalised, offender proceeded against	30	38
Other outcome	<1	<1
Total (n)	5,214	1,847

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=72). n=7,061. Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Where data on relationship between victim and offender was available, offenders were unknown to individual victims in approximately 91 percent of cases (see Table 8). This supports the theory that robbery tends to be an anonymous crime.

Slightly more than one-quarter of victim records (27%) were noted as not being finalised at the time of data extraction, regardless of the victim type. Table 9 shows that for two out of every five individual victims with valid data, the matter was finalised without an offender being proceeded against (40%). This was the same for organisational victims (40%). 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 status at 30 days following report.

Repeat victimisation

A small number of victims (identified with victim reference numbers) appeared in the 2007 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 41 victim records where details strongly suggest repeat victimisation during 2007. Only four of these victims (individuals and

organisations) were subject to armed robbery on at least three occasions, where it appeared that one organisation was victimised on at least four occasions. There was an average of 76 days between the dates on which the first and second armed robberies occurred for repeat victims, although 257 days elapsed for one victim. For 49 percent of repeat victims, the same weapon type was used in the first and second reported robberies.

The majority of repeat victims were not organisations (n=12; 29%). For organisations who were repeat victims, three were corner stores, supermarkets and takeaways and two were licensed premises. These were also the only locations with more than one repeat victim. Of the seven cases with valid weapon data, knives were involved in five robberies and firearms in two robberies.

Armed robbery incidents

A total of 6,086 unique armed robbery incidents were identified and created from the victim file. The 2007 data yielded similar results to 2006 despite a decrease in the number of incidents reported. As a result, many of the findings 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 (2006 figures were 62% and 28% respectively).

Table 10 Victims involved in armed robbery incidents, by victim type, 2007

Victim type	Number	Incidents(%) ^a
One individual	3,829	63
One organisation	1,625	27
Multiple individuals	427	7
Multiple organisations	8	<1
One organisation and one individual	151	2
One organisation and multiple individuals	46	1
Total	6,086	100

a: Excludes incident records with missing victim type

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Table 11 Locations of armed robberies, by victim type, 2007 (%)^a

Location	Victim type						Total (n)
	Single individual	Single organisation	>1 individual	>1 organisation	1 organisation & 1 individual	1 organisation & >1 individual	
Residential	12	4	13	0	4	2	576
Recreational	6	<1	8	0	1	0	264
Transport related	10	<1	10	0	3	0	433
Open spaces (excluding street and footpath)	2	0	3	0	0	0	69
Street and footpath	47	3	41	13	7	0	2,033
Educational, health, religious, justice and other community	1	1	2	0	0	0	77
Administrative and professional	<1	<1	0	0	1	0	17
Wholesalers, warehouses, manufacturing and agricultural	<1	1	0	0	0	0	19
Retail	9	33	8	50	32	46	986
Banking and financial	1	4	<1	13	2	2	84
Pharmacies and chemists	1	4	2	0	5	2	115
Service stations	3	18	1	0	12	4	442
Licensed premises	2	17	5	13	10	15	377
Newsagents and post offices	1	3	1	0	10	13	94
Corner stores, supermarkets and takeaways	5	11	5	13	13	13	415
Unspecified and other	2	1	2	0	1	2	85

a: Excludes incident records with victim type or location missing

Note: Percentages may not total 100 due to rounding. n=6,086

Source: AIC NARMP 2007 [computer file]

Locations where armed robberies occurred

Because the vast majority of armed robbery incidents involved only single victims (90%), findings are consistent with those observed in victim-based analyses. Thirty-three 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 2006 annual report (32% 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 (32%).

Temporal aspects of armed robbery

In 2007, two-thirds (67%) of armed robberies took place in the hours between 6 pm and 6 am, with four out of 10 armed robberies (42%) occurring between 6 pm and midnight. Findings are generally

Table 12 Time of day robberies occurred, by location, 2007 (%)^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	18	12	7	6	5	10	20	23
Recreational	15	6	3	5	8	16	22	26
Transport-related	15	8	6	5	9	12	18	27
Open spaces (excluding street and footpath)	16	1	9	9	13	20	10	22
Street and footpath	23	9	4	4	6	9	17	28
Educational, health, religious, justice and other community	10	4	4	8	10	21	23	19
Administrative and professional	6	6	0	6	18	59	6	0
Wholesalers, warehouses, manufacturing and agricultural	5	5	11	16	16	21	16	11
Retail	7	5	5	11	14	19	22	19
Banking and financial	0	1	12	32	24	25	2	4
Pharmacies and chemists	1	0	1	18	21	34	22	3
Service stations	26	17	3	3	3	4	15	27
Licensed premises	23	7	4	7	4	8	18	30
Newsagents and post offices	0	13	35	11	17	22	2	0
Corner stores, supermarkets and takeaways	9	9	7	7	12	15	24	17
Unspecified and other	25	6	0	11	7	16	24	12
Total (n)	1,022	518	301	422	517	766	1,123	1,417

a: Excludes incident records with location missing

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]; n=6,086

consistent with NARMP data from previous years, for example, 60 percent of 2004 NARMP incidents and 65 percent of 2005 and 2006 incidents occurred between 6 pm and 6 am.

Table 12 summarises 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 5 pm). However, locations which keep standard business hours experienced the majority of armed robberies

during those hours (eg 81% banking and financial settings, 73% pharmacies and chemists, 82% administrative and professional offices). In contrast, 86 percent of service station and 77 percent of licensed premises robberies took place between 6 pm and 6 am. Newsagencies and post offices were targeted more frequently than any other location in the early morning hours (3 am to 9 am), with 48 percent of armed robberies at these locations occurring during these hours. These patterns are similar to those seen in previous years.

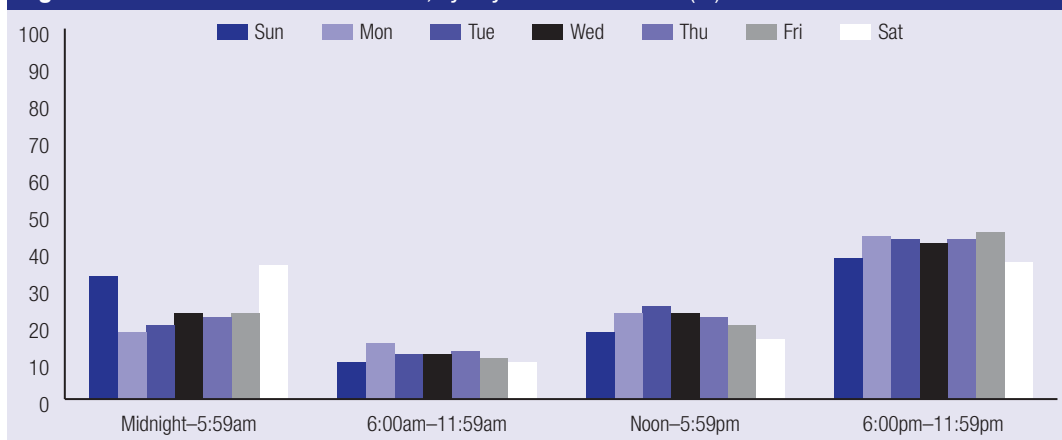
Table 13 Time armed robberies occurred, by day of the week, 2007 (%)

Time category	Day of the week						
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Midnight to 2.59 am	22	12	13	17	14	15	23
3.00 am to 5.59 am	11	6	7	6	8	9	12
6.00 am to 8.59 am	5	7	3	6	4	5	4
9.00 am to 11.59 am	5	8	9	6	9	6	7
Noon to 2.59 pm	7	11	8	10	9	8	6
3.00 pm to 5.59 pm	11	13	17	13	13	12	10
6.00 pm to 8.59 pm	17	19	20	18	21	17	17
9.00 pm to 11.59 pm	21	25	23	24	22	28	21
Total (n)	977	879	755	775	945	945	921

Note: Percentages may not total 100 due to rounding. n=6,086

Source: AIC NARMP 2007 [computer file]

Figure 2 Time armed robberies occurred, by day of the week 2007 (%)^a



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

Note: n=6,086

Source: AIC NARMP 2007 [computer file]

There was little difference between armed robberies reported on the weekend (Friday 16%, Saturday 15% and Sunday 16%) than other days of the week (Monday 14%, Tuesday 12%, 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 2). 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, as although 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 (49%). Only three percent of incidents involved a syringe, while 16 percent involved a firearm and 25 percent involved other weapons. In 2007, as seen in previous years, most firearm robberies involved threats with a single firearm (12% of all incidents; 12% in 2006; 10% in 2005; 13% in 2004). In most knife robberies, a single knife was used (45% of incidents 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 multiple 'other' weapons (in 189 incidents). This is a variation from previous years where in 2006, the most common combination was that of a firearm and a knife (55 incidents) and in 2005 the most common combination (occurring in 89 incidents) was a knife and an 'other' weapon. In 2007, the general use of a combination of weapons was also much higher than in 2006. However, NARMP does not always collate information on all of the weapons used in an armed robbery, therefore weapon combination findings are 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 (49% in 2007; 47% in 2006; 41% in 2005;

44% in 2004) and in licensed premises (44% in 2007; 38% in 2006; 35% in 2005; 44% in 2004), relative to other locations. Previous years saw a high percentage of pharmacy robberies involving syringes (13% in 2005). Despite no incidents of armed robbery at pharmacies involving the use of a syringe in 2006, in 2007, the use of this weapon at this location was again high (7%). Knives were the most common weapon used in the majority of locations (eg post offices and newsagents 62%; open spaces 59%; corner stores, supermarkets and takeaways 56%).

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=2,659). As there are issues around the reliability and representativeness of property data, the results should be interpreted with caution. Most (n=1,237; 47%) incidents involved the theft of only a single item, although on average, two different types of property were stolen in incidents with property information supplied.

The most commonly reported stolen property item was cash (in 1,533 incidents), appearing as stolen in approximately six out of every 10 incidents where property information was available. The item listed as being stolen least frequently was weaponry (n=17 incidents). Electrical equipment, including mobile phones, was listed 402 times. There were 491 armed robberies in the current dataset in which both electrical equipment and cash were stolen. Fifty-seven percent of these occurred on the street or footpath, while 10 percent occurred in residential locations.

Given the many possible different stolen property combinations that could arise from an armed robbery, information has been collapsed into hierarchical categories. The first category captures all incidents in which cash was stolen, regardless of what other property may have been taken. The second captures armed robberies in which negotiable documents, such as an ATM or credit cards, but not cash (and potentially other items), were taken. The third category includes incidents where identity documents, either with or without other property, were stolen but not cash or negotiable documents etc.

Table 14 Weapon combinations^a used in armed robberies, by victim type, 2007 (%)

Weapon combinations	Victim type						Total	
	Single individual	Single organisation	> 1 individual	> 1 organisation	1 organisation & 1 individual	1 organisation & > 1 individual	Number	%
Firearms								
Single firearm	9	21	10	25	19	22	757	12
Multiple firearms	1	2	1	0	1	2	64	1
Firearm, knife	1	2	1	0	3	2	72	1
Firearm, syringe	<1	<1	0	0	0	0	2	<1
Firearm, other weapon	1	2	1	0	2	0	83	1
Firearm, unspecified weapon	0	<1	<1	0	0	0	3	<1
Firearm, knife & syringe	0	<1	0	0	0	0	1	<1
Firearm, knife & other weapon	0	<1	<1	0	0	2	5	<1
Firearm, knife & weapon not further defined	<1	<1	0	0	0	0	2	<1
Firearm, syringe & other weapon	0	<1	0	0	0	0	4	<1
Total firearm combinations (n)	433	449	59	2	37	13	993	16
Knives								
Single knife	47	43	43	38	38	37	2,737	45
Multiple knives	1	1	2	0	2	7	73	1
Knife, syringe	<1	0	<1	0	1	0	7	<1
Knife, other weapon	2	3	2	0	4	17	139	2
Knife, unspecified weapon	1	1	1	0	1	2	38	1
Knife, other weapon, unspecified weapon	<1	0	0	0	0	0	1	<1
Total knife combinations (n)	1,925	761	206	3	71	29	2,995	49
Syringes								
Single syringe	3	3	2	0	1	2	174	3
Multiple syringes	0	<1	0	0	0	0	1	<1
Syringe, other weapon	<1	<1	0	0	0	0	8	<1
Syringe, unspecified weapon	<1	<1	0	0	0	0	4	<1
Total syringe combinations (n)	125	51	8	0	2	1	187	3
Other weapons								
Single other weapon	25	13	26	25	21	4	1,304	21
Multiple other weapons	3	4	4	0	3	2	189	3
Other weapon, unspecified weapon	0	0	0	13	1	0	2	<1
Total other weapon combinations (n)	1,055	266	132	3	36	3	1,495	25
Missing								
No specific weapon types/missing	8	6	5	0	3	0	414	7
Total unspecified/missing (n)	289	98	22	0	5	0	414	7
Total (n)	3,829	1,625	427	8	151	46	6,086	100

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

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Table 15 Most serious weapon^a used, by location, 2007 (%)^b

Location	Weapon					Total (n)
	Firearm	Knife	Syringe	Other weapon	Non-specific or missing	
Residential	17	42	2	31	8	576
Recreational	6	49	1	37	6	264
Transport-related	10	56	2	25	8	433
Open spaces (excluding street and footpath)	7	59	1	26	6	69
Street and footpath	9	51	3	30	7	2,033
Educational, health, religious, justice and other community	13	52	5	22	8	77
Administrative and professional	35	47	0	6	12	17
Wholesalers, warehouses, manufacturing and agricultural	26	37	0	26	11	19
Retail	21	51	5	18	5	986
Banking and financial	49	26	0	14	11	84
Pharmacies and chemists	21	57	7	10	6	115
Service stations	24	47	3	19	7	442
Licensed premises	44	31	1	18	6	377
Newsagents and post offices	19	62	4	12	3	94
Corner stores, supermarkets and takeaways	17	56	4	16	7	415
Unspecified and other	8	49	6	24	13	85
All locations	16	49	3	25	7	6,086

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=6,086

Source: AIC NARMP 2007 [computer file]

In Table 16, it can be seen that cash was the item stolen in 46 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 84% of incidents with 5 property types stolen). The locations in which robberies occurred impacted on the percentage of incidents where cash was stolen. For example, slightly less than half of the armed robberies which occurred in residences (47%), recreational locations (43%), transport-related settings (48%), involved the theft of cash. Slightly more than half of the armed robberies which occurred in the street (53%) had cash stolen. This is compared with over 75 percent in service stations,

newsagents, banking and financial settings, and corner stores (see Table 17). The 2004, 2005 and 2006 annual reports noted similar findings and remarked that the latter locations tend to be sites for high cash turnover. Therefore, it is not surprising that cash was the item stolen most frequently. 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 2007 (29%).

For a subset of incidents (n=1,518), 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

Table 16 Items taken in armed robbery incidents in 2007^a (%)^b

Property type	Count of items stolen ^c					All armed robberies
	1	2	3	4	5	
Cash	46	63	64	79	84	58
Negotiable documents	1	6	13	10	11	5
Identity documents	2	6	6	5	3	4
Luggage	2	8	8	4	1	5
Electrical equipment	26	8	6	2	1	15
Jewellery	1	2	<1	0	0	1
Alcohol and other drugs	5	2	1	<1	0	3
Weapons	1	1	<1	0	0	1
Personal items not classified elsewhere	2	3	1	0	0	2
Conveyances and accessories	2	1	0	0	0	1
Other property not classified elsewhere	13	0	0	0	0	6
Total (n) ^d	1,237	624	420	302	76	2,659

a: Derived from first listed victim of incident, because property information is usually not linked to individual victims but to the incident itself. Property-type categories are hierarchical—the first category captures all property combinations in which cash was listed, the second captures all combinations including negotiable documents but excluding cash and so on. 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 2007 [computer file]

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, armed robbery offenders netted an average of \$1,066 per incident, although total values were skewed towards the lower end of the range:

- The median value was \$156.
- Twenty-eight percent of incidents had a total recorded value of nil.
- Seventy-two percent of incidents had a recorded total value of less than \$500.

The highest average gain for offenders was from incidents where the most serious weapon used was a firearm (\$1,726; Table 18). Similar to most previous reports, the lowest average gain was associated with syringe robberies in 2007 (\$483). Robberies with knives netted almost double this with an average of \$860 and robberies committed with other

weapons netted a higher average of \$1,048. Other findings included that:

- The highest average value gains (calculated from weapon-location categories containing more than 1 incident record) were knife robberies from banking and financial locations (\$18,091). Although this is in contrast to previous reports, this robbery location and weapon type only had seven incidents recorded, with two incidents involving gains of \$36,000 and \$72,000 which skewed the average figure. The value of robberies involving a firearm at a banking and financial location was several thousand dollars less on average (\$11,237).
- Regardless of weapon used, the highest average gains (again in categories with more than 1 record) were clearly from financial settings (\$14,664), with the next highest average from newsagents and post offices being much less (\$1,724; see Table 18).

Table 17 Highest-ranking property taken^a during armed robbery by location, 2007 (%)

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	4	21	2	4	1	3	1	11	263
Recreational	43	6	6	5	23	0	0	0	6	4	7	138
Transport related	48	6	5	9	25	1	1	1	<1	<1	3	205
Open spaces (excluding street and footpath)	39	8	8	11	29	0	0	0	3	0	3	38
Street and footpath	53	8	4	6	18	1	1	<1	2	2	5	1,041
Educational, health, religious, justice and other community	72	4	4	0	20	0	0	0	0	0	0	25
Administrative and professional	100	0	0	0	0	0	0	0	0	0	0	4
Wholesalers, warehouses, manufacturing and agricultural	33	0	0	0	33	0	0	0	17	0	17	6
Retail	64	4	3	3	6	1	4	2	2	0	11	370
Banking and financial	84	11	5	0	0	0	0	0	0	0	0	19
Pharmacies and chemists	59	3	0	0	0	0	29	0	0	0	9	58
Service stations	79	3	2	1	4	1	5	1	1	1	3	187
Licensed premises	68	5	5	3	7	0	5	2	0	0	5	110
Newsagents and post offices	89	2	2	0	2	0	0	0	2	0	2	47
Corner stores, supermarkets and takeaways	81	0	2	0	6	0	9	0	0	0	2	124
Unspecified and other	38	4	4	8	38	0	0	0	4	0	4	24
Total (n) ^b	1,533	145	99	122	402	26	75	17	45	29	166	2,659

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 2007 [computer file]

Table 18 Average total value of property stolen during armed robbery by weapon type and location type, 2007^{a, b} (\$)

Location	Weapon used				All weapon types
	Firearm	Knife	Syringe	Other weapon	
Residential	2,877	931	13	1,842	1,691
(number of incidents)	(34)	(62)	(2)	(67)	(165)
Recreational	160	535	–	275	377
(number of incidents)	(5)	(28)	(0)	(33)	(66)
Transport-related	2,528	1,000	430	1,228	1,255
(number of incidents)	(19)	(83)	(2)	(50)	(154)
Open spaces (excluding street and footpath)	20	518	–	175	376
(number of incidents)	(1)	(11)	(0)	(6)	(18)
Street and footpath	2,452	554	769	1,149	950
(number of incidents)	(42)	(264)	(16)	(224)	(546)
Educational, health, religious, justice and other community	462	108	1,120	4	222
(number of incidents)	(6)	(11)	(1)	(5)	(23)
Administrative and professional	350	0	–	–	175
(number of incidents)	(1)	(1)	(0)	(0)	(2)
Wholesalers, warehouses, manufacturing and agricultural	–	0	–	–	0
(number of incidents)	(0)	(1)	(0)	(0)	(1)
Retail	1,057	624	124	511	684
(number of incidents)	(67)	(135)	(8)	(72)	(282)
Banking and financial	11,237	18,091	–	–	14,664
(number of incidents)	(7)	(7)	(0)	(0)	(14)
Pharmacies and chemists	394	779	152	200	583
(number of incidents)	(13)	(23)	(3)	(2)	(41)
Service stations	420	1,260	329	1,324	948
(number of incidents)	(35)	(39)	(2)	(20)	(96)
Licensed premises	1,332	186	–	104	764
(number of incidents)	(26)	(13)	(0)	(11)	(50)
Newsagents and post offices	–	435	–	4,301	1,724
(number of incidents)	(0)	(4)	(0)	(2)	(6)
Corner stores, supermarkets and takeaways	458	796	–	611	700
(number of incidents)	(5)	(19)	(0)	(7)	(31)
Unspecified and other	6	560	–	182	308
(number of incidents)	(5)	(10)	(0)	(8)	(23)
All locations	1,726	860	483	1,048	1,066
(Total number of incidents)	(266)	(711)	(34)	(507)	(1,518)

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 2007 [computer file]

Armed robbery offenders

Offender data were available for 2,009 incidents, although as noted in the *Technical Appendix*, NARMP offender data are only very 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 3,108 offenders. The average incident for which offender information was available involved 1.5 offenders.

Table 19 summarises the type of victims involved in incidents, cross-tabulated with the number of offenders associated with that incident. Just under two-thirds of incidents where offender information was available involved only a single offender (64%), although this varied with victim types. For instance, 52 percent of incidents with multiple individual victims involved lone offenders, compared with 71 percent of incidents involving lone organisational victims.

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, or they may be alone at the location in question). An examination of the 500 locations where lone offenders robbed lone organisations shows that 33 percent were unspecified retailers and 21 percent were service stations. Further, even though these robberies predominantly occurred in retail locations,

which could be assumed to operate during conventional business hours, 57 percent of armed robberies of lone organisations occurred after 6 pm but before 9 am; times when minimal staff and customers would be expected in most retail settings.

As with data from previous years, 2007 data suggest multiple individual victims are more likely 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 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, especially multiple victims. As such, they may also be expected to arm themselves with highly threatening weapons, such as firearms. However, earlier NARMP analyses suggest the opposite to be true with the use of knives more common than the use of firearms, regardless of offender numbers (Smith & Louis 2009). In 2007, results were similar to the previous year's analysis with the exception that firearm use

Table 19 Proportion of armed robberies involving specified numbers of offenders^a by victim type, 2007 (%)

Victim type	Number of offenders					Total (n)
	1	2	3	4	5	
One individual	62	25	7	4	2	1,128
One organisation	71	21	6	2	<1	655
Multiple individuals	52	25	14	6	2	176
Multiple organisations	100	0	0	0	0	2
One organisation and one individual	61	22	17	0	0	36
One organisation and multiple individuals	75	17	8	0	0	12
All	64	24	7	4	1	2,009

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 2007 [computer file]

was not more common with robberies where greater numbers of offenders were involved. Incidents involving one (20%) and four (22%) offenders were most likely to involve a firearm whereas incidents with five offenders were least likely to involve this weapon (7%). As such, there was no discernable pattern in 2007 for the relationship between offender numbers and firearms, although as offender

numbers increased, so did the use of 'other' weapons.

Offender demographics

Research on armed robbery consistently shows that most offenders are young males (eg see Willis 2006). Data summarised in Table 21 shows that in 2007,

Table 20 Most serious weapon^a used in armed robberies, by number of offenders, 2007^b (%)

Weapon	Number of offenders					All incidents
	1	2	3	4	5	
Firearm	20	15	17	22	7	18
Knife	46	48	39	36	37	45
Syringe	4	2	3	0	0	3
Other weapon	21	25	32	38	48	24
Non-specific or missing	9	10	9	4	7	9
Total (n)	1,285	475	150	72	27	2,009

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 2007 [computer file]

Table 21 Armed robbery offenders^a in each age group by sex, 2007 (%)

Age group	Sex		Both sexes
	Male	Female	
<15 years	7	11	7
15–17	27	19	26
18–19	13	13	13
20–24	21	18	21
25–29	14	16	14
30–34	8	12	8
35–39	6	8	6
40–44	2	2	2
45–49	1	1	1
50–54	<1	<1	<1
55–59	<1	0	<1
60–64	<1	0	<1
>65 years	<1	0	<1
Total (n)	2,785	301	3,086

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 2007 [computer file]

approximately nine out of every 10 offenders was male and 96 percent were under 40 years of age. More than half (56%) of all offenders were males aged 18 to 39 years.

Co-offenders in armed robberies tend to be of similar ages. Of the 724 incidents involving multiple offenders, 66 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=209; 29%) were 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 contain only a very small number of cases and as with previous report findings, these patterns remain tenuous. Males were much more likely to use firearms than females, with males under the age of 18 years the only male group less likely to use firearms than females of the same age.

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

Sex and age (years)	Weapon				Offenders(n)
	Firearm	Knife	Syringe	Other weapon	
All male offender groups					
<18	6	58	1	35	368
18–34	26	48	3	23	864
35–49	31	49	4	16	162
>50	20	33	13	33	15
Multiple age categories	28	41	2	29	174
All males	22	49	3	26	1,583
All female offender groups					
<18	10	62	0	28	29
18–34	12	46	20	22	59
35–49	0	54	0	46	13
>50	0	0	0	0	0
Multiple age categories	0	43	14	43	7
All females	9	51	12	28	108
Male & female (mixed) offender groups					
<18	11	32	0	58	19
18–34	10	60	5	25	60
35–49	14	71	0	14	7
>50	0	0	0	0	0
Multiple age categories	10	67	3	21	39
All mixed gender offenders	10	58	3	28	125

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=1,816. Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Male and female (mixed) offender groups in the 35–49 years category used knives more frequently than all other groups (71%). Females, regardless of age, were four times more likely to use syringes in robberies than males or mixed gender groups.

The average age of offenders was 23 years, which is the same as that observed in 2006. Average age did vary according to location of offence and number of offenders involved in the robbery, however, patterns of variation were similar to those observed in 2006. 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 25 years, versus 18 years for groups of five (26 years and 18 years respectively in 2006). One notable contrast to results from last year's annual report was the sudden decline in the age of offenders targeting licensed premises (28 years in 2006 compared with 24 years in 2007).

Conclusion

Despite changes over time in the level of detail available regarding armed robbery offences and a decrease in the number of armed robberies for 2007, the trends 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 five years in which 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 key results from the 2007 report that are worth highlighting:

- There were slight increases in the use of firearms in armed robbery in 2007 compared with 2006.
- There was a substantial decrease (34%) in the number of armed robbery incidents at service stations in 2007.

Table 23 Average offender age^a by location type and number of offenders involved, 2007 (years)

Location	Number of offenders					All	
	1	2	3	4	5	All	(n)
Residential	28	25	24	28	22	27	244
Recreational	19	21	17	17	17	18	63
Transport-related	22	21	19	19	17	20	148
Open spaces (excluding street and footpath)	21	18	17	12	–	18	20
Street and footpath	23	19	19	18	17	20	507
Educational, health, religious, justice and other community	20	25	–	–	–	22	18
Administrative and professional	31	–	–	22	–	26	7
Wholesalers, warehouses, manufacturing and agricultural	22	16	–	27	41	29	7
Retail	26	26	22	20	17	25	374
Banking and financial	32	21	22	21	–	28	30
Pharmacies and chemists	33	33	–	–	–	33	54
Service stations	25	22	21	14	17	23	200
Licensed premises	27	24	20	21	19	24	136
Newsagents and post offices	24	30	–	16	–	26	25
Corner stores, supermarkets and takeaways	27	23	19	17	–	24	150
Unspecified and other	25	26	16	–	–	23	26
All locations	25	23	20	19	18	23	2,009

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 2007 [computer file]

- There were fewer cases of repeat victims for 2007 than previous reports.
- Investigations were more likely to successfully proceed against an offender when an organisation was the victim. This is probably due to the various crime-detection resources organisations have in place, such as CCTV.

In the context of RAT, it is possible that organisations are improving the quality of some of their capable guardians, resulting in a higher rate of prosecutions against offenders. Capable guardian improvement may have been achieved through improvements in areas such as CCTV implementation or through improved police patrols with a focus on this type of crime. Clarke (1999) asserts that if the quality of a guardian improves so that the guardian is considered capable, regardless of how suitable a target is, an offence will not occur. The service station industry may be a specific example of where capable guardians have been improved, resulting in a considerable decrease in victimisation. Service stations may have achieved this through improved CCTV standards or through the more widespread use of methods such as transfer trays (see Smith & Louis 2009).

Although the changes in armed robbery trends for 2007 do not appear substantial, if they have occurred as a result of improved guardians, they can still cause displacement to specific commercial targets (see Smith & Louis 2009). Displacement can occur when an offender changes their preferred target for future armed robberies as a result of being deterred by improved guardians at their usual target. With the large reduction in the number of service station armed robberies, there is likely to be some displacement effect, most notably increases in armed robberies at similar commercial targets such as convenience stores (previous research has indicated that convenience stores and service stations are comparable in relation to armed robbery victimisation eg late opening hours with a similar profile of offenders; see Smith, Louis & Preston 2009). Alternatively, offenders may opt not to target a location similar to a service station, but rather 'upgrade' by using a firearm instead of a knife and targeting somewhere more lucrative (eg licensed premises). Both possible displacement effects can cause policy and practical implications for the public and private spheres.

Although displacement is never guaranteed, the convenience store industry is the commercial sector at greatest risk of experiencing an increase in armed robberies as a result of displacement from the service station industry. This has policy implications for occupational health and safety (OH&S) policies in the convenience store industry. This industry may need to revisit their policies concerning armed robbery and OH&S in order to prepare for a possible increase in the number of incidents they experience. It is important for staff to be familiar with procedures in the event of an armed robbery in order to minimise possible harm.

Another policy implication caused by shifting armed robbery trends affects both the public and private spheres. As mentioned previously, displacement does not always represent a change of targets. Instead, displacement might occur in the form of the offender upgrading their weapons. Offenders may then target service stations again (with a weapon upgrade), but are also likely to select targets that are also an upgrade in terms of difficulty and reward (offenders might see service stations as now having the same risk/deterrent factor as the upgraded target that holds greater rewards). Ultimately, this displacement may affect policy in private industry, specifically, industries such as licensed premises, which might become the new upgraded target for these offenders. While they are unlikely to be targeted as much as the convenience store industry, they may still experience an increased risk requiring them to ensure their OH&S policies are updated.

With regards to weapons used in armed robbery, it can be seen that if there is an increase in licensed premises armed robberies, there will also be a rise in amateur to intermediate offender types brandishing handguns instead of knives. With the slight increase in the use of firearms from 2006 to 2007, the levels of firearms used in armed robberies needs to be closely monitored by the relevant authorities so that any policy response can be timely. An increase in firearm use will likely be linked to an increase in stolen firearms. Stolen firearms are often taken from owners who have not properly secured their firearms (Bricknell 2010) or have been stolen from commercial armed robbery targets such as the cash in transit industry. Therefore, government policy concerning storage of firearms may again need to be revisited

to ensure currency (see Bricknell 2010), as will government policy regarding the cash in transit industry and their roles in storing and carrying firearms. Overall, shifting results in one or two key areas are likely to cause some displacement and both private industry and government policy should attempt to anticipate and respond to this displacement accordingly.

Another area worthy of investigation would be a review of the *type* of offenders involved in armed robbery in Australia. A typology of armed robbery in Australia suggests there are at least three types of incidents involving three types of offenders, spanning a continuum from opportunistic to intermediate to professional. These can be differentiated by the degree of offender planning, including incident features like location, weapon and victim type (see Borzycki, Sakurai & Mouzos 2004). For example:

- Opportunistic armed robberies involve amateur offenders, with short-sighted intentions and very little understanding of what to expect from the experience or the amount of money they are likely to receive (Mathews 2002).
- Intermediate armed robberies involve offenders who are more organised and experienced than amateurs, but not as dedicated to armed robbery as professionals (Mathews 2002). They tend to be in a transitional phase where they are likely to engage in a reasonable amount of planning and are prepared to use their weapons if necessary.
- Professional armed robberies involve offenders with a higher level of motivation, who conduct rigorous planning and are more likely to persistently commit armed robberies as a means of making a living (Katz 1988).

Current findings are consistent with the suggestion of this armed robbery typology. However, as noted in the *Introduction*, armed robberies of residential premises may represent a qualitatively different type of incident, characterised by the presence of some sort of pre-existing victim-offender relationship.

While the opportunistic/professional typology used to consider Australian armed robberies does not involve any consideration as to why offenders choose to commit armed robbery, it assumes that certain factors within the offender may motivate them to engage in varying degrees of planning and preparation before offending. A detailed discussion of offender motivation is beyond the scope of this report and not discernible from the data currently compiled in the NARMP, yet the issue of offender motivation is directly relevant to any research into armed robbery.

The armed robbery results that were reported in this annual report indicated few marked differences between the 2006 and 2007 NARMP figures, however, the changes that have occurred may indicate shifting trends in some forms of armed robbery in Australia. Such changes may be viewed as displacement effects, where offenders might be forced to alter their armed robbery behaviour (eg choice of target) due to prevention/deterrent strategies employed by the target industry and/or police. Displacement effects can have serious consequences for private industry (eg service stations, convenience stores and other business types described in this report), particularly when it causes an increase in the number of armed robberies experienced. Armed robbery in Australia has a severe impact on its victims, whether they are organisations or people, and the AIC continues to closely monitor this offence in order to assist in recommending suitable crime prevention strategies.

Case study: High-yield armed robbery

In 2007, there were a total of 42 armed robbery incidents from a total of 1,638 incidents where value was recorded, in which the value of the property stolen was greater than \$10,000. These incidents are known as high-yield robberies. As not all jurisdictions were able to provide property value information, jurisdictional comparisons are not reported. The following analysis provides a broad overview of some of the characteristics of high-yield armed robberies.

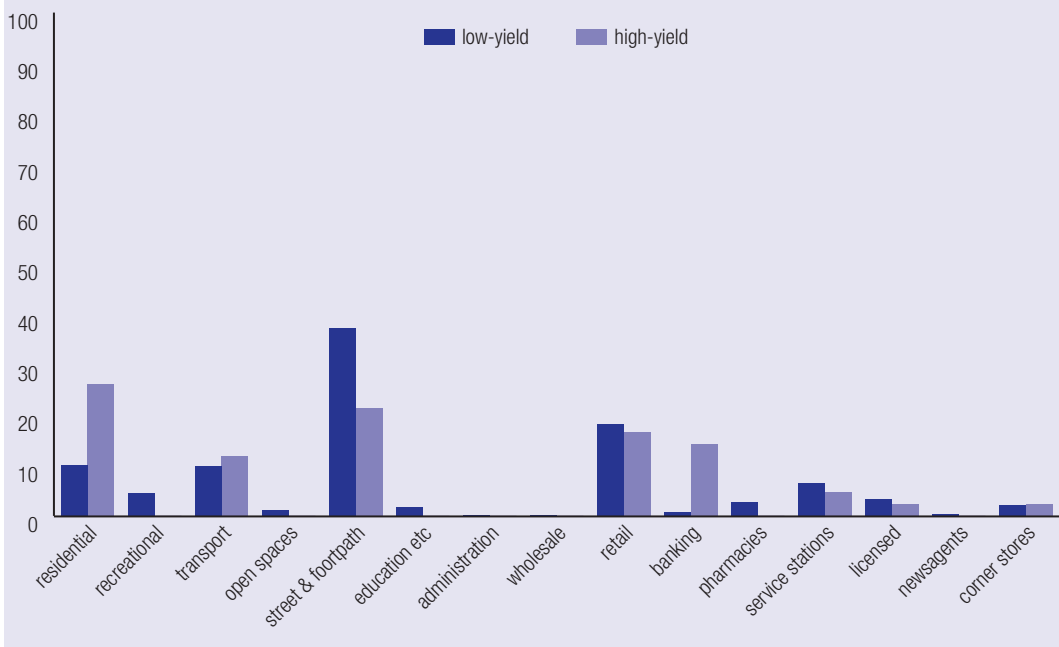
Comparisons between small and large robberies were made, but none were tested for statistical significance as a result of the relatively low number of high-yield armed robbery incidents. Nonetheless, aspects of high-yield armed robberies *appear* to differ from the more common low-yield armed robbery. First the location of the robberies (see Figure 3) is different, with banking and financial locations (14%) being victims of high-yield armed robberies more frequently than what they do for all other robberies. Somewhat surprisingly though, the same could also be said for residential locations (26%) and transport (12%). Although not as prominent proportionately as for low-yield armed robberies, street and footpath locations still involved several cases of high-yield armed robbery (21%).

The times that high-yield armed robberies occurred compared to low-yield armed robberies provided some differing trends (see Figure 6). Low-yield armed robberies show a definite drop in incidence during the early and late morning hours of the day, with sharp rises as the day gets later and night falls. High-yield armed robberies are slightly more erratic, with a rise from 3 am to 6 am, but then drop in the morning hours until around midday when levels increase and remain constant until midnight. Interestingly, high-yield armed robberies are proportionally more likely to occur during the early morning and business hours (3 am–6 pm).

Other findings include:

- Firearms were more than twice as likely to be used in a high-yield armed robbery (41%) as opposed to a low-yield incident (17%; see Figure 4).
- There were 22 property types listed in the stolen property fields for high-yield robberies. Cash was obviously the main type of property stolen (55% of all listed property), followed by electrical equipment (32%) and jewellery (9%; see Table 24).

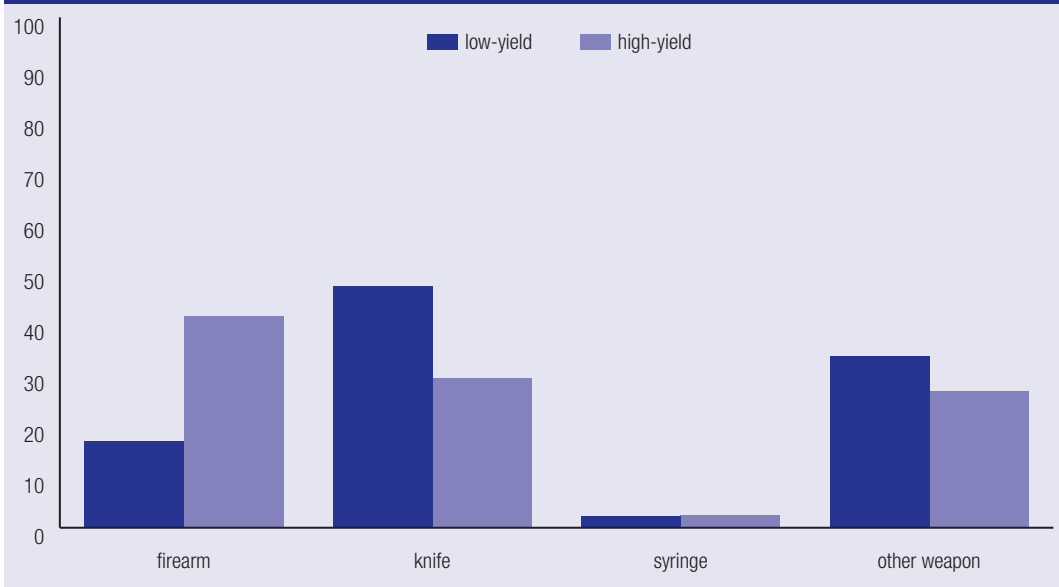
Figure 3 Low- and high-yield armed robbery incidents by location, 2007 (%)



Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Figure 4 Low- and high-yield armed robberies by most serious weapons^a used, 2007 (%)

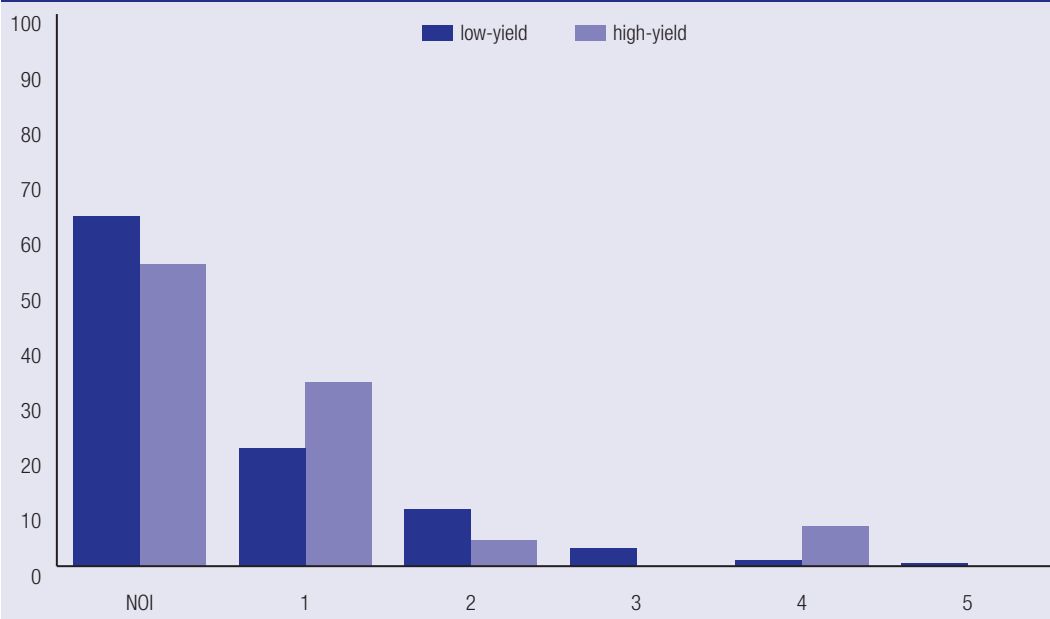


a: Based on most serious weapon listed in derived weapon combination, assuming order of seriousness of firearm, knife, syringe and other weapon. Excludes incident records where property information was not supplied.

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Figure 5 Low- and high-yield armed robberies by number of offenders^a involved in incident, 2007 (%)

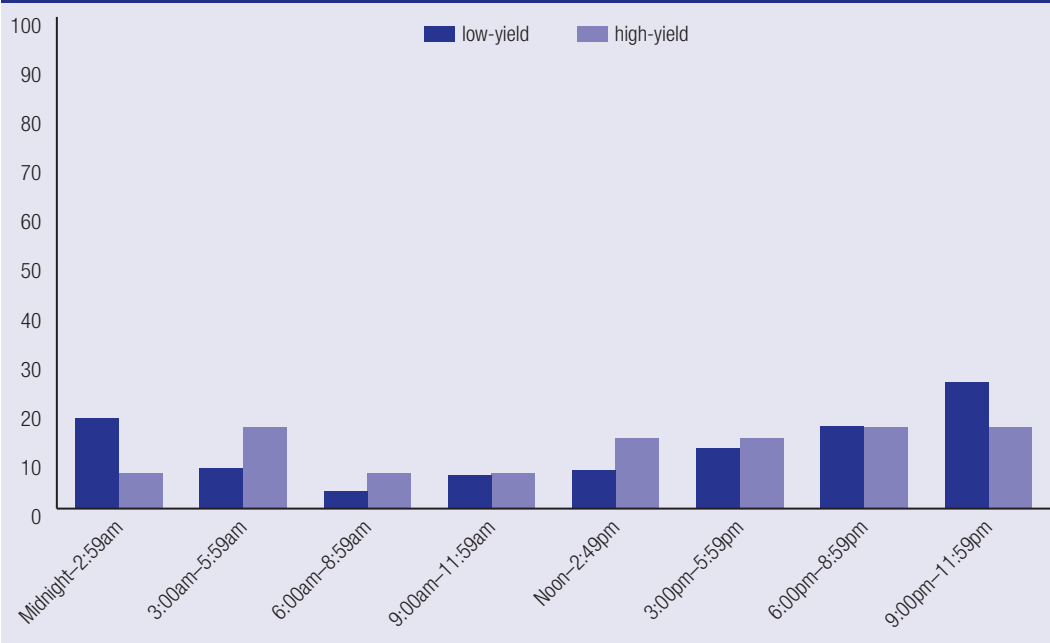


a: Based on offender information from first-listed victim in incident. Excludes incident records about which offender or location information was not included.

Note: Percentages may not total 100 due to rounding. NOI represents cases where 'no offender was identified'

Source: AIC NARMP 2007 [computer file]

Figure 6 Low- and high-yield armed robberies, by time incident occurred, 2007 (%)



Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

Table 24 Most serious type of property taken^a in low- and high-yield armed robberies, 2007 (%)

Stolen in incident	Low-yield	High-yield
Cash	57	55
Negotiable documents	4	0
Identification documents	1	0
Bags	6	0
Electrical	13	32
Jewellery	1	9
Alcohol and other drugs	4	5
Weapons	<1	0
Personal items	2	0
Cars/accessories	1	0
Other items	12	0
Total (n)	1,038	22

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

Note: Percentages may not total 100 due to rounding. n=1,060

Source: AIC NARMP 2007 [computer file]

Table 25 shows that the 42 high-yield armed robberies clearly skew the overall average dollar amounts gained through armed robbery. Without those 42 high-yield armed robberies, the average dollar amount for property taken is only \$480. With those 42 high-yield armed robberies included, the average dollar amount more than doubles to over \$1,000.

Table 25 Average dollar amount stolen in low- and high-yield armed robberies^a, 2007

	Average dollar amount	Maximum	Number
Low-yield	\$480.84	\$9,971	1,596
High-yield	\$22,174.62	\$125,000	42
All armed robberies	\$1,037.92	\$125,000	1,638

a: Based on offender information from incident's first-listed victim. Excludes incident records about which offender or location information was not included

Note: Percentages may not total 100 due to rounding

Source: AIC NARMP 2007 [computer file]

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All URLs correct at 22 March 2010

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Appendix

Appendix 1:

Technical appendix

National Armed Robbery Monitoring Program glossary

Armed robbery: the ABS delineates between armed robbery (involving a weapon) and unarmed robbery (no weapon used). Only armed robbery is of relevance to the NARMP. Also see *robbery* below.

Actual offences which 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 2008a), 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 (see *weapon* below).

Incident: the Australian Bureau of Statistics (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 whose 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 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 26 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
- 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 6,086 incident records in the incident-based file examined for this report.

Table 26 Number of valid cases using particular variables, and values of variables, in the 2007 NARMP victim data set

Variable description	Valid records	Values
Offence code	7,133	Aggravated robbery Non-aggravated robbery Robbery not further defined
Organisational identifier flag	7,133	Individual victim Organisational victim
Victim age at incident	5,252	
Victim date of birth	4,675	
Victim gender	5,255	
Relationship of first listed offender to victim	1,600	Known to victim Unknown to victim No offender identified

Table 26 (continued)

Variable description	Valid records	Values
Relationship of second listed offender to victim	133	Known to victim Unknown to victim No offender identified
Relationship of third listed offender to victim	56	Known to victim Unknown to victim No offender identified
Relationship of fourth listed offender to victim	30	Known to victim Unknown to victim No offender identified
Relationship of fifth listed offender to victim	8	Known to victim Unknown to victim No offender identified
Injury to victim	786	No injury noted Injury not further defined Minor injury Major injury Death Emotional trauma
Unique incident reference number	7,133	
Date incident reported	3,890	
Date incident occurred/started	7,133	
Month incident occurred	7,133	
Year incident occurred	7,133	
Day of week on which incident occurred	7,133	
Time of day when incident occurred/started	7,133	
Date incident ended	4,996	
Time incident ended	4,996	
Location where armed robbery occurred	7,133	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 Retail (including not further defined and not elsewhere classified) Banking and financial Pharmacies and chemists

Table 26 (continued)

Variable description	Valid records	Values
		Service stations Licensed premises Newsagents and post offices Corner stores, supermarkets and takeaways Unspecified and other locations not classified elsewhere
Licensed premises flag	7,075	Licensed premises Premises not licensed
First listed weapon used in incident	6,876	Firearm Knife Syringe Other weapon
Second listed weapon used in incident	959	Firearm Knife Syringe Other weapon
Third listed weapon used in incident	104	Firearm Knife Syringe Other weapon
Date of incident clearance	3,123	
Investigation outcome/clearance status at data extraction/at 180 days	7,061	Not finalised Finalised, no offender proceeded against Finalised, offender proceeded against Other outcome
Property taken incident, first type listed	3,178	No property stolen 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, second type listed	1,854	Cash Negotiable documents Identity documents

Table 26 (continued)

Variable description	Valid records	Values
		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	1,270	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	973	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, fifth type listed	715	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

Table 26 (continued)

Variable description	Valid records	Values
Value of property taken in incident, first property type listed	1,206	
Value of property taken in incident, second property type listed	688	
Value of property taken in incident, third property type listed	538	
Value of property taken in incident, fourth property type listed	475	
Value of property taken in incident, fifth property type listed	374	
Total value of property stolen incident	1,733	
Unique reference number for first listed offender	2,360	
Unique reference number for second listed offender	875	
Unique reference number for third listed offender	326	
Unique reference number for fourth listed offender	124	
Unique reference number for fifth listed offender	38	
Age of first listed offender at time of incident	2,360	
Age of second listed offender at time of incident	876	
Age of third listed offender at time of incident	327	
Age of fourth listed offender at time of incident	125	
Age of fifth listed offender at time of incident	38	
Date of birth, first listed offender	2,140	
Date of birth, second listed offender	805	
Date of birth, third listed offender	301	
Date of birth, fourth listed offender	117	
Date of birth, fifth listed offender	37	
Gender, first listed offender	2,359	
Gender, second listed offender	875	
Gender, third listed offender	327	
Gender, fourth listed offender	125	
Gender, fifth listed offender	37	

National Armed Robbery Monitoring Program 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 (ABS 2008b), issues raised concerning the RCV (ABS 2008b) are directly relevant to the compilation of the NARMP.

The overarching ASOC scheme (ABS 2008a) 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 2007 do not precisely tally with those provided in RCV for 2007 (ABS 2008b). 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 and 2007 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 and relationships 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 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.

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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