

CHAPTER 2

HOUSING AND INFRASTRUCTURE

INTRODUCTION

Housing has been identified as a major factor affecting the health of Aboriginal and Torres Strait Islander people. Adequate housing provides protection from the elements, minimises the risk of disease and injury, and contributes to the physical, mental and social wellbeing of the occupants. Inadequate or poorly maintained housing and the absence of essential infrastructure, such as a supply of safe drinking water and effective sewerage systems, can pose serious health risks. Studies have shown that many Indigenous people live in housing which does not satisfy these basic requirements, and which is considered unacceptable by general Australian standards (Neutze 1998).

In this chapter, housing information is presented that describes the situation of Aboriginal and Torres Strait Islander people in relation to tenure, overcrowding, affordability, dwelling conditions and essential infrastructure. The information is drawn largely from two surveys conducted by the ABS in 1999: the Australian Housing Survey (AHS), which provides information on both Indigenous and non-Indigenous households, excluding those living in sparsely settled areas (see Glossary); and the Community Housing and Infrastructure Needs Survey (CHINS), which collected information from discrete Indigenous communities, located predominantly in remote areas.

Inset 2.1 provides a more detailed description of each of these surveys.

2.1 HOUSING SURVEYS OF RELEVANCE TO ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

Australian Housing Survey, 1999

The Australian Housing Survey 1999 (AHS) provides information about the characteristics, condition and quality of housing of the Australian population. It collected information from persons living in private dwellings, but not those living in sparsely settled areas, and so excluded much of the population living in remote areas. Data items collected by the AHS included demographic characteristics, tenure, household income, housing costs and dwelling conditions.

The AHS was developed in consultation with major stakeholders, in particular the Commonwealth Department of Family and Community Services (DFaCS), which provided a significant proportion of the funding for the survey, including that needed for the supplementation of the Indigenous sample. The supplementation allowed results for the Aboriginal and Torres Strait Islander population (excluding those living in remote areas) to be produced and compared with the total Australian population for the first time.

It should be noted that in the AHS an Indigenous household is defined as any household containing at least one person of Aboriginal and/or Torres Strait Islander origin aged 15 years or over. This definition differs from that used with Census data (see Glossary).

More detailed information on the AHS can be found in *Australian Housing Survey: Aboriginal and Torres Strait Islander Results* (ABS 2001c).

Community Housing and Infrastructure Needs Survey, 1999 (CHINS)

The ABS conducted the Community Housing and Infrastructure Needs Survey (CHINS) from August to October 1999. The survey was carried out on behalf of, and with funding from, the Aboriginal and Torres Strait Islander Commission (ATSIC). The CHINS was designed to collect data which would assist in the evaluation of policies and programs aimed at improving the housing conditions and infrastructure services of discrete Indigenous communities and other community-managed housing.

2.1 HOUSING SURVEYS OF RELEVANCE TO ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE *continued*

The CHINS collected data from all known Indigenous housing organisations and discrete Indigenous communities, including those located in urban and sparsely populated areas. Data included details of the current housing stock, management practices and financial arrangements of organisations that provided housing to Aboriginal and Torres Strait Islander people. Other information collected related to housing and infrastructure services such as water, power and sewerage systems, and the extent of community access to facilities such as education and health services.

Details of the results of the 1999 CHINS are available in *Housing and Infrastructure in Aboriginal and Torres Strait Islander Communities, Australia, 1999* (ABS 2000f).

Two important concepts used in CHINS were:

Reported usual population: The number of people, Indigenous and non-Indigenous, who usually reside in a community and whose main, or only, residence is that community. In this context 'residence' means the community in which a person resides, or intends to reside, for at least six months. Community populations were reported by key members of housing organisations and communities.

Discrete Indigenous community refers to a geographical location with a physical or legal boundary, that is inhabited, or intended to be inhabited, predominantly by Indigenous people, and which contains housing and infrastructure that are owned or managed on a community basis.

The 1999 CHINS was not the first survey carried out on Indigenous community housing and infrastructure. In 1992, ATSIAC commissioned the Housing and Community Infrastructure Needs Survey (HCINS), which collected housing and infrastructure information from Aboriginal and Torres Strait Islander people across Australia. However, the data collection methods employed varied between States and Territories, affecting attempts to aggregate the data at a national level. There were also differences between the methodologies and definitions used in the 1992 HCINS and the 1999 CHINS, which prevent comparisons between the results of the two surveys being made. An ABS technical note discussing these issues in more detail will be included in the 2001 edition of *Housing and Infrastructure in Aboriginal and Torres Strait Islander Communities, Australia, 2001* (ABS Cat. no. 4710.0).

The CHINS 2001 collected information which will allow housing conditions, community infrastructure and access to services, to be compared for 1999 and 2001.

CHARACTERISTICS OF INDIGENOUS HOUSEHOLDS

Homelessness Aboriginal and Torres Strait Islander people generally do not have the same levels of access to affordable, secure housing as other Australians. This can be the result of low income levels, discrimination on the part of landlords and rental agencies or a lack of suitable housing. Additionally, some Indigenous people leave their homes for long periods to fulfil cultural obligations and this may lead to the loss of a permanent dwelling (AIHW 1999a).

Differing definitions and concepts of homelessness, combined with problems in collecting data about homeless people, make it difficult to accurately estimate the number of homeless people in Australia. There are, however, five general situations, representing points on a continuum of circumstances, which provide a useful basis for defining homelessness:

- living on the street;
- living in crisis accommodation;

Homelessness *continued*

- living in temporary arrangements without security of tenure (e.g. staying with friends or relatives, living in squats, improvised dwellings or boarding houses);
- living in unsafe family circumstances; and
- living on very low incomes and facing extraordinary expenses or personal crisis (AIHW 1999a, pp. 297–298).

One measure of homelessness can be obtained from Census data which records people as living in 'improvised dwellings', a category which includes sheds, humpies, tents (other than in caravan parks) and park benches. It should be noted that census data are likely to underestimate the number of people without adequate housing because people staying with friends or relatives, or in shelters are not counted as 'homeless' (ABS & AIHW 1999).

On the night of the 1996 Census, 19,579 people reported that they were living in improvised dwellings. Just over 95% reported that they were at their usual address (see Glossary, 'usual residence'), and half reported that they were of Aboriginal or Torres Strait Islander origin (Chamberlain 1999).

There were over 5,800 households in improvised dwellings, just under a third (31%) of which were Indigenous households (see Glossary). Indigenous households in improvised dwellings were, on average, much larger than other households in similar circumstances, with 4.9 people per household, compared with 2.0 people per household for other households (ABS & AIHW 1999).

The 1999 CHINS identified a total of 2,284 'occupied temporary dwellings', including caravans, tin sheds without dividing walls, 'humpies', 'dongas' and other makeshift shelters, in discrete Indigenous communities. These temporary dwellings were occupied by 7,954 people, representing 7% of the total population of all discrete Indigenous communities. Almost all (92%) of those living in temporary dwellings were reported to be in need of permanent housing (ABS 2000f).

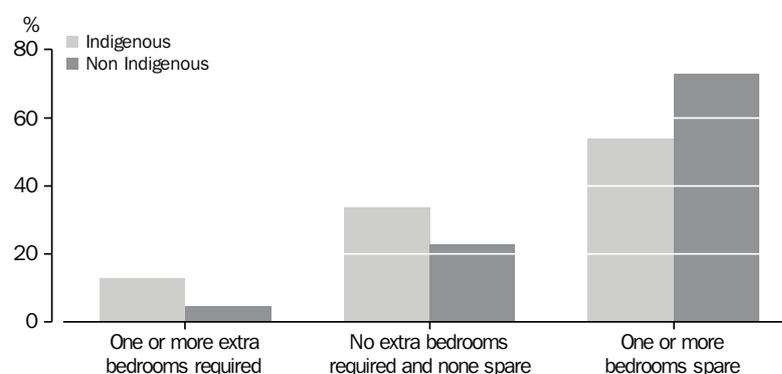
Overcrowding

Overcrowded living conditions increase the risk of the spread of infectious diseases such as meningococcal disease, rheumatic fever, tuberculosis and respiratory infections (Waters 2001). An analysis of 1996 Census data by Jones 1999, found that Aboriginal and Torres Strait Islander people experience overcrowded living conditions more commonly than other Australians (see Glossary). His analysis showed that at the time of the 1996 Census, 10% of Indigenous family and group households in major urban areas were overcrowded. Similarly, 15% in other urban areas were overcrowded, and 27% in rural areas. Comparable non-Indigenous proportions were 4% for major urban areas and 3% for both other urban and rural areas. The Jones study also estimated that the average number of additional bedrooms required per overcrowded Indigenous household was 1.9, compared with 1.2 for overcrowded non-Indigenous households. Average bedroom need per overcrowded Indigenous household for rural areas was double that for major urban areas (2.6 compared with 1.3) (Jones 1999).

Housing for Indigenous people, particularly that in rural and remote areas, often suffers from construction and design problems. These problems may result in the need for the occupants to reside temporarily with friends or relatives, which can cause overcrowding and increased stress on infrastructure and facilities (Commonwealth, State and Territory Housing Ministers' Working Group on Indigenous Housing 1999). Similarly, visitors to a household or community can cause temporary overcrowding. Results from the 1999 CHINS showed that 79% of discrete Indigenous communities, with reported usual resident populations of 50 or more, reported population increases in the previous 12 months due to visitors for periods of two weeks or more. A quarter of all communities reported increases of a size similar to, or greater than, their usual population. The most common reasons given for these increases were cultural or ceremonial obligations and visiting during holiday periods (ABS 2000f).

In the absence of a universally accepted standard for the measurement of overcrowding, methods vary from survey to survey (see Glossary). The 1999 AHS employed the Canadian National Occupancy Standard, which is based upon the number of bedrooms in a dwelling, the number of usual residents in the household, and factors such as the age, gender and the relationships of the occupants. The AHS reported 13% of Indigenous households in non-sparsely settled areas did not have enough bedrooms to meet their needs, compared with 4% of non-Indigenous households (see graph 2.2).

2.2 HOUSING UTILISATION



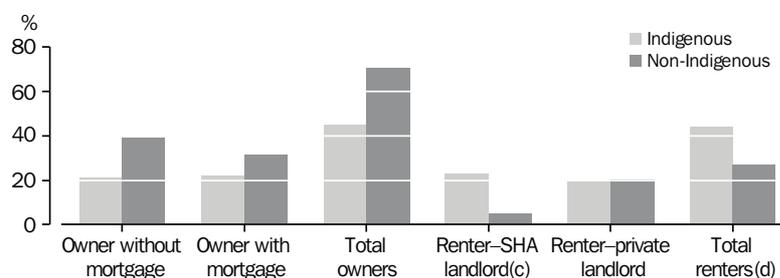
Source: ABS 2001c.

Housing tenure Home ownership is not always relevant to the needs of Aboriginal and Torres Strait Islander people, particularly those living in remote communities, where housing is often community owned. However, the 1999 AHS found that even in non-sparsely settled areas, Indigenous people are less likely than other Australians to own their own homes. The survey found that 58% of Indigenous households in non-sparsely settled areas were renting their home, while 39% were home owners. In comparison, 27% of non-Indigenous households rented and 70% were home owners. Indigenous households were more likely to rent from a State housing commission than a private landlord, whereas the opposite was true for non-Indigenous renter households.

Home ownership in Australia generally increases with age and, since the Indigenous population has a younger age structure than the non-Indigenous population, it is necessary to age-standardise the data before comparing housing tenure in the two populations.

Graph 2.3 presents age-standardised data, based on the age of the household reference person (see Glossary). It shows that non-Indigenous households in non-sparsely settled areas were over 1.5 times more likely to be home owners than Indigenous households (71% and 45%, respectively), and that non-Indigenous households were twice as likely as Indigenous households to be owners without a mortgage. Indigenous households were over 1.5 times more likely to rent their homes (44%, compared with 27% of non-Indigenous households).

2.3 HOUSEHOLDS BY TENURE TYPE(a)(b)



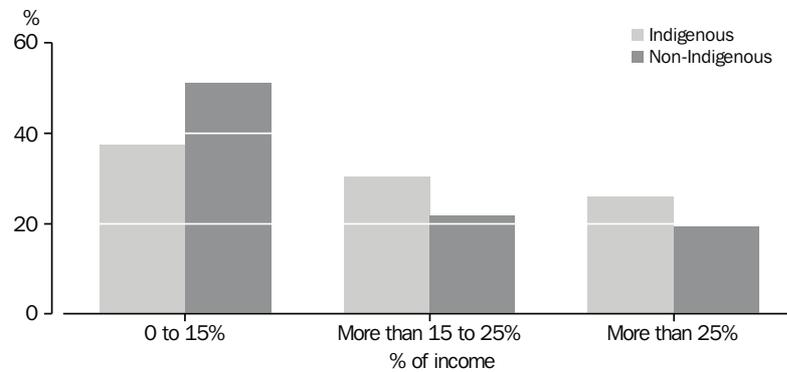
- (a) Indirectly age-standardised data.
- (b) Non-sparsely settled areas.
- (c) State or Territory housing authority.
- (d) Includes other renters.

Source: ABS 2001c.

The 1999 CHINS reported a total of 16,159 permanent dwellings in 1,291 discrete Indigenous communities, predominantly located in remote and very remote areas of Australia. Most (91%) of these dwellings were owned or managed by Indigenous community organisations. Of the remainder, 6% were rented from a State housing authority and 3% were privately owned or owned and managed by non-Indigenous organisations (ABS 2000f).

Housing costs Housing-related financial stress results when housing costs are high relative to household income. Clearly, when a high proportion of income is needed to secure housing, the ability to purchase other essential goods or services is reduced. The 1999 AHS collected information on housing costs, including rent, mortgage repayments, rates, land tax and body corporate fees, and found that the Indigenous households surveyed spent, on average, a higher proportion of their income on housing than non-Indigenous households. More than a quarter of Indigenous households spent more than a quarter of their income on housing, compared with just under one fifth of non-Indigenous households (graph 2.4). The survey also found that the average weekly housing cost for Indigenous households was \$139, compared with \$129 for non-Indigenous households, reflecting the higher proportion of non-Indigenous home owners without a mortgage.

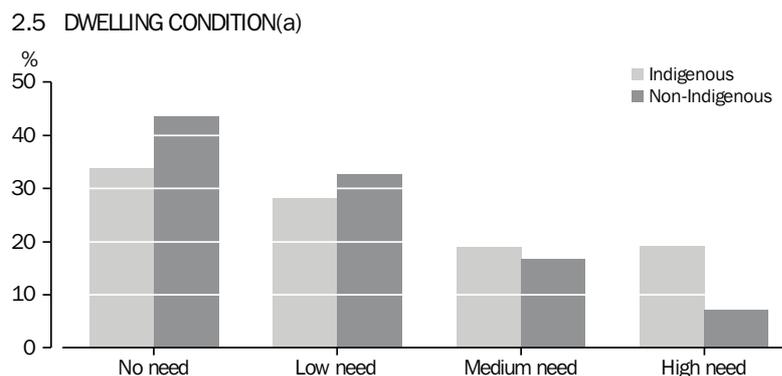
2.4 PROPORTION OF INCOME SPENT ON HOUSING COSTS



Source: ABS data available on request, Australian Housing Survey 1999.

Dwelling condition Findings from the 1999 CHINS indicate that the housing conditions of Indigenous people are generally poorer in rural and remote communities than in urban areas, with a third of the 14,667 community-owned or managed permanent dwellings in discrete Indigenous communities requiring major repairs (23%) or replacement (10%).

Results from the 1999 AHS, presented in graph 2.5, show that Indigenous households were almost three times more likely than non-Indigenous households to report their homes to be in high need of repair (19% versus 7%). A higher proportion of non-Indigenous households reported no need for repairs (44% versus 34%).



(a) Need for repairs.
Source: ABS 2001c.

INFRASTRUCTURE IN INDIGENOUS COMMUNITIES

Inadequate and poorly maintained infrastructure are major issues affecting Aboriginal and Torres Strait Islander communities, particularly those in remote and rural areas of Australia. It is recognised that improving basic environmental health conditions, such as access to clean water, safe food and adequate sanitation, are critical issues that need to be addressed if better health outcomes for Aboriginal and Torres Strait Islander people living in these communities are to be achieved (CDHAC 2000). The following section presents information on the infrastructure of discrete Indigenous communities in Australia, collected by the 1999 Community Housing and Infrastructure Needs Survey (CHINS) (see inset 2.1).

Population Of the 1,291 discrete Indigenous communities identified in the 1999 CHINS, more than half were in the Northern Territory (53%). Western Australia and Queensland accounted for 22% and 12%, respectively.

The combined reported usual population (see inset 2.1 for definition) of all discrete Indigenous communities was 109,994 persons. More than two-thirds of all people living in discrete Indigenous communities lived in communities with a population of 200 or more (table 2.6).

2.6 COMMUNITY SIZE, ALL COMMUNITIES(a)

	Communities with a population of			Total
	Less than 50	50–199	200 or more	
New South Wales	9	37	21	67
Victoria	—	2	—	2
Queensland	105	9	35	149
South Australia	79	18	9	106
Western Australia	200	65	20	285
Tasmania	—	1	—	1
Northern Territory	550	67	64	681
Australia	943	199	149	1 291
Persons (no.)	14 571	19 544	75 879	109 994
Community population (%)	13.2	17.8	69.0	100.0

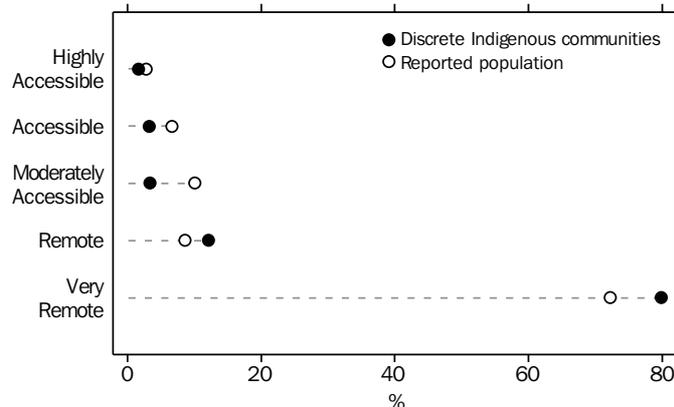
(a) There were no discrete Indigenous communities located in the Australian Capital Territory.

Source: ABS 2000f.

Population continued

Based on the Accessibility/Remoteness Index of Australia (ARIA—see Glossary), most (92%) discrete Indigenous communities were located in remote and very remote areas of Australia (graph 2.7). The reported usual population of these communities accounted for 81% of all people living in discrete Indigenous communities.

2.7 ALL COMMUNITIES AND REPORTED POPULATION BY ARIA(a)



(a) See glossary for definitions of ARIA categories of accessibility/remoteness.

Source: ABS data available on request, CHINS 1999.

Water supply

Water is a basic necessity, and ready access to safe drinking water is an essential requirement for the sustainability of any community. An adequate supply should meet domestic needs for drinking, food preparation, bathing and general hygiene. The consumption of unsafe water can lead to serious illness and long term health consequences. The most common and widespread health risks associated with drinking water result from the presence of micro-organisms, which can cause diseases such as gastroenteritis, diarrhoea, hepatitis and typhoid fever (NHMRC 1996).

Water supply *continued* A total of 184 discrete Indigenous communities, with a combined population of 19,814, had access to a town water supply that was maintained by a water authority or shire council (table 2.8). Most communities obtained their drinking water from sources for which they had responsibility for maintenance and continuity of supply. Bore water was the main supply of drinking water for 791 communities, with a combined population of 63,942. Rivers or reservoirs supplied drinking water to 98 communities (18,571 people) and about 1% of communities, with a combined population of 115 people, reported no organised water supply.

Of the 348 communities with populations of 50 or more, 35% reported that they had experienced water restrictions in the 12-month period prior to the CHINS survey. Equipment breakdown was reported as the main reason for restrictions, and was more commonly reported than climatic reasons such as dry season shortages and drought. Of the 121 communities affected by water restrictions, over a third (36%) reported water restrictions on five or more occasions in the previous 12-month period.

2.8 MAIN SOURCE OF DRINKING WATER, ALL COMMUNITIES

	Communities with a population of			Total	Reported population
	Less than 50	50–199	200 or more		
	no.	no.	no.		
Type of water supply					
Town supply	69	82	33	184	19 814
Bore water	611	96	84	791	63 942
Rain water tank	93	14	12	119	5 961
River or resevoir	73	7	18	98	18 571
Well or spring	62	—	2	64	1 363
Other organised supply	12	—	—	12	148
<i>All communities with an organised supply</i>	920	199	149	1 268	109 799
No organised supply	16	—	—	16	115
All communities(a)	943	199	149	1 291	109 994

(a) Includes 'not stated'.

Source: ABS 2000f.

Water treatment and regular water testing are essential to ensure that water is free from micro-organisms hazardous to human health. Information on water treatment and testing was collected from 233 communities with populations of 50 or more, which were not connected to a town water supply, representing a combined population of 76,964. Just over half these communities stated that their water was treated, with chlorination being the most common type of treatment reported. The water of 169 communities had been subjected to chemical, physical and microbiological testing in the past 12 months. Of these, 58

Water supply *continued* (total population 25,322) provided samples which failed testing at least once. A further 64 communities which were not connected to a town water supply, representing 11,135 people, had not had their water tested in the 12-month period prior to the survey (table 2.9).

2.9 WATER TESTING, COMMUNITIES NOT CONNECTED TO TOWN WATER SUPPLY(a)

	Communities with a population of		Total	Reported population
	50–199	200 or more		
Water tested				
Failed testing	14	44	58	25 322
Did not fail testing	47	53	100	36 918
All communities with water testing(b)	68	101	169	65 829
Water not tested	50	14	64	11 135
Total communities	118	115	233	76 964

(a) Communities with population of 50 or more.

(b) Includes 'not stated'

Source: ABS 2000f.

Sewerage and drainage Of the 1,291 discrete Indigenous communities surveyed by the 1999 CHINS, 1,192 reported having a sewerage system, although a high proportion of these reported sewerage problems. Of the 348 communities which reported a population of 50 or more, 204 (59%) reported overflows or leakages in the previous 12 months, with 34 of these reporting 20 or more overflows, indicating chronic sewerage problems. Dwellings were affected in 181 of the communities experiencing sewerage problems (ABS 2000f).

Sewage overflows or leakages were experienced by all communities, but were more prevalent in larger communities. Overflows or leaks affected 2,428, or 15%, of all community dwellings. The most commonly reported equipment and infrastructure problems were blocked drains (55%), equipment failure (39%) and insufficient capacity of the septic system (26%) (ABS 2000f).

The method of disposal of waste water from bathrooms, laundries and kitchens (grey water) was recorded for 206 communities with a population of 50 or more and which were not connected to a town sewerage system or community maintained full water-borne sewerage system. The grey water disposal method was considered to be undesirable by Australian public health authorities in 41 of these communities (ABS 2000f).

Communities with a population of 50 or more were asked whether areas within the community had been affected by ponding in the previous 12-month period. Ponding refers to areas where large pools of stagnant water collect and remain for more than a week. A major health risk associated with ponding is the increased risk of vector-borne diseases (i.e. diseases spread by insects, such as mosquitoes). Restriction of access and contamination by sewage are other important associated problems.

Sewerage and drainage <i>continued</i>	<p>Problems with ponding were reported by 141 discrete Indigenous communities, and 1,414 permanent dwellings were affected in 107 of these. Of all communities which experienced ponding, 56 with a total reported population of 13,550, had experienced problems on five or more occasions in the previous 12 months. The most commonly reported causes of ponding were rain (87%), overflow from blocked drains (27%) and sewage overflows and leakages (17%) (ABS 2000f).</p>
Electricity	<p>The 1999 CHINS collected information about electricity supply from all 1,291 discrete Indigenous communities. One in ten communities, with a combined population of 1,378, or 1% of the survey population reported that they were without an electricity supply, although the majority of these communities had a population of less than 20 (ABS 2000f).</p> <p>In communities with an electricity supply, domestic generators were the main source of power (26% of all communities), followed by community generators (23%) and State grids (22%). Nearly all (96%) communities which relied on domestic generators had populations of less than 50 people. Larger communities were more likely to have access to community generators or State grids (ABS 2000f).</p> <p>Information on power interruptions was collected for 348 discrete Indigenous communities with a population of 50 or more. Most communities (80%) reported interruptions at some time during the 12 months prior to the survey. Over a third (38%) of these communities reported 10 or more power interruptions in the same period. A total of 57 communities reported 20 or more power interruptions, affecting 18,490 people, or 19% of the total population of all discrete Indigenous communities. Equipment breakdown, storms and planned outage for maintenance were the main reasons cited for power interruptions (ABS 2000f).</p>
Rubbish collection	<p>Almost all (93%) of the 1,291 discrete communities reported some form of organised rubbish disposal. Fenced or unfenced tips located on community land were the most commonly reported form of rubbish disposal (62% of communities). A further 18% used rubbish tips located outside community land, and 10% of communities incinerated their rubbish (ABS 2000f).</p> <p>Of the 348 communities with a population of 50 or more which were asked about household rubbish collection, 322 reported that they had organised collections, and rubbish was collected at least once a week for the majority (98%) of these (ABS 2000f).</p>

Environmental health workers

An environmental health worker is usually an Indigenous person from within the community whose role is to inspect community infrastructure and report any environmental concerns to relevant government authorities (e.g. local government).

The 1999 CHINS asked the 348 communities with a population of 50 or more whether there was an environmental health worker working within the community. Of these communities, 250 reported that they did not have an environmental health worker either working or training within the community. In 22 communities, the environmental health worker was undergoing training and had not commenced duties. The most common activities undertaken by environmental health workers were in relation to dog control, rubbish disposal and sewerage systems.

SUMMARY

Compared with other Australians, Aboriginal and Torres Strait Islander people are disadvantaged in relation to housing. They are more likely to be in need of housing, are less likely to own their own homes, and spend a greater proportion of their income on housing, than the rest of the population. While community ownership of housing may partly explain the differences in tenure that exist between the Indigenous and the non-Indigenous populations, the relative socioeconomic disadvantage of Aboriginal and Torres Strait Islander people is also a contributing factor.

Many Aboriginal and Torres Strait Islander people, particularly those in remote areas, live in overcrowded and poorly maintained houses. This places the occupants at increased risk of disease and ill health. Poorly maintained water and sewerage systems are also potentially major causes of ill health for those living in discrete Indigenous communities.