







Australian Government Australian Digital Health Agency

## Attachment 1

# **EAST ARNHEM COMMUNITY PROFILE**

**Digital Health Communities of Excellence** Program

**East Arnhem Region** 

30 June 2020 / version 1.0

A partnership initiative between

**NT Health** 

AMSANT

**NT Primary Health** Network

Australian Digital Health Agency

## **Table of Contents**

1.	Glossary	2
2.	About the NT	3
3.	East Arnhem overview	4
4.	Socio-demographic profile	5
5.	Aboriginal culture and settlement history	17
6.	Education	17
7.	Economy and workforce	19
8.	Access and amenities	20
9.	Health indicators	22
10.	Health workforce	26

#### **Disclaimer**:

The document is intended to provide an overview of selected characteristics of the East Arnhem region as they are relevant to the Communities of Excellence Program.

Data and information have been drawn from publicly available sources, and referenced to the best possible extent. The reader should be aware of the following limitations:

- The Socio-demographic profile data is largely based on ABS estimates of the resident population, and therefore population figures should not be compared with subsequent sections.
- It is important to acknowledge that Census population counts are likely to be underestimates this is a known limitation with census data in remote and predominantly Aboriginal communities.
- It should be noted that in many Aboriginal communities, population figures can fluctuate dramatically, due to a number of factors including seasonal changes (wet and dry seasons), and ceremonial activity.

A Glossary is provided in Section 1 to assist in understanding the acronyms used in this document.

#### Acknowledgement:

We wish to acknowledge the Northern Territory Primary Health Network (NT PHN) and Rural Workforce Agency NT for the analysis and provision of selected demographic and health data for East Arnhem. Please refer to *East Arnhem Region Data Report prepared June 2020 by NT PHN.* 

#### Context:

This document has been prepared to inform the East Arnhem Communities of Excellence Program – a joint initiative between Department of Health, Aboriginal Medical Services Alliance Northern Territory (AMSANT), NT PHN and the Australian Digital Health Agency.

# 1. Glossary

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Service
AECD	Australian Early Development Census
AIHW	Australian Institute of Health and Welfare
AMS	Aboriginal Medical Services
ASR	Age Standardised Rate
ATSI	Aboriginal and/or Torres Strait Islander
CCF	Congestive Cardiac Failure
COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardiovascular Disease
ERP	Estimated Resident Population
HPV	Human Papillomavirus
HSD	Health Service District
ICD-10	International Classification of Diseases 10th Revision
IMR	Infant Mortality Rate
IRSD	Index of Relative Socioeconomic Disadvantage
LGA	Local Government Area
MMM	Modified Monash Model
NES	Non-English Speaking
NT	Northern Territory
NP	Not Published
PATS	Patient Assistance Travel Scheme
PHIDU	Public Health Information Development Unit
PHN	Primary Health Network
РРН	Potentially Preventable Hospitalisation
SA#	Statistical Area, Level 1, 2, 3, etc.
SEIFA	Socioeconomic Indexes for Areas
SES	Socioeconomic Status
TFR	Total Fertility Rate
URP	Usual Resident Population

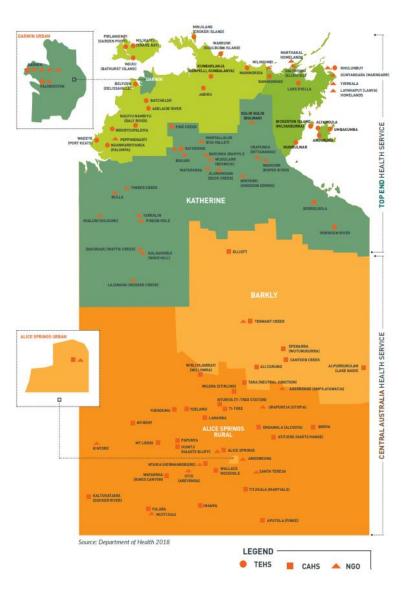
# 2. About the NT

The Northern Territory covers an area of almost 1.4 million km2, which represents 18 per cent of Australia's land mass, with a population of 245,869.

Aboriginal and Torres Strait Islander peoples make up approximately 30 per cent of the total population – over 70,000 people. The estimated gap in life expectancy between Aboriginal and non-Aboriginal people in the Territory is 14.4 years which is considerably higher than the national average.

People living in the NT have a disproportionately higher burden of disease across a range of conditions. Premature mortality rates are the highest in Australia, while underlying factors that are associated with these statistics include high alcohol consumption, smoking rates and poor nutrition, high levels of socioeconomic disadvantage and poor social determinants of health. The ability to address these factors is further complicated by the challenges of distance, and fragmentation of our health system.

The NT also faces increasing competition to attract and retain a skilled workforce across multiple disciplines, especially in diverse and remote locations. In addition to significant geographical and cultural barriers, it is a constant challenge to provide equity of access to health services to Territorians with nearly 50% of the NT population living in remote and very remote areas. This also make health services costly and challenging to resource.

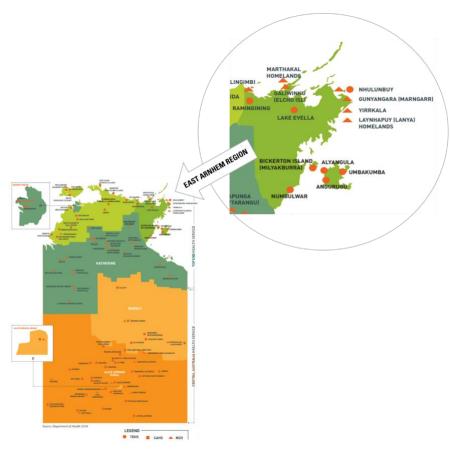


# 3. East Arnhem overview

East Arnhem region is situated in the far north-eastern corner of the NT and covers 33,310 square kilometres and has a population of nearly 14,000 people, approximately 6% of the total NT population.

The East Arnhem region is bounded by the Arafura Sea in the north, the Gulf of Carpentaria in the east, the Roper Gulf Regional Council area in the south, and the West Arnhem Regional Council area in the west. East Arnhem Land is named after the Dutch ship Arnhem which explored the coast in 1623. It is situated in the Federal Division of Lingiari and spans the Northern Territory Electoral Divisions of Arnhem and Mulka.

Aboriginal and Torres Strait Islander people make up 72.5% of the East Arnhem population, mainly populated by the Yolŋu (or Yolngu) people, the traditional owners of the region for over 40,000 years, who speak more than a dozen different languages under the Yolngu Matha group.



The main township of Nhulunbuy is located on the Gove Peninsula, with a population of approximately 3,240 people.

East Arnhem is serviced by one private general practice and three ACCHOs, Mitwatj Health Aboriginal Corporation, Laynhapuy Aboriginal Community Control Health Services, and Marthakal Homeland and Resource Centre Association. Gove District Hospital services the region with 30 beds, providing emergency services, surgical and medical care, paediatrics and obstetrics.

Remoteness is measured using the geographical classification system, the Modified Monash Model (MMM) using census population data, with seven remoteness categories ranging from Metropolitan (MM1) to Very Remote Community (MM7). The East Arnhem region falls within classification MM7 (very remote community).

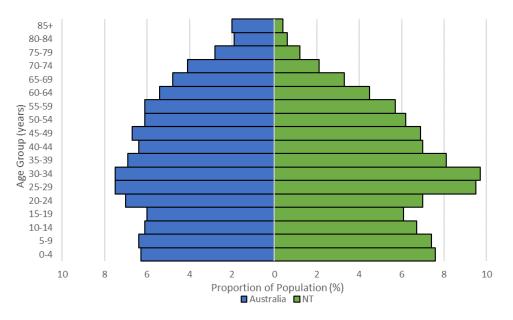
# 4. Socio-demographic profile

# 4.1. Population Age

The population structure of the NT shows a marked difference to the Australian average, with higher proportions of children and young adults, and lower proportions of people aged 60+ (Figure 1).

#### Figure 1: Population Structure of Australia and Northern Territory, 2018.

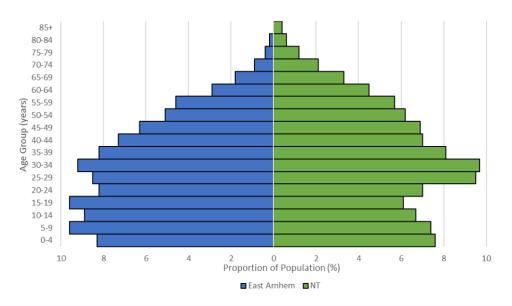
Source: Data compiled by PHIDU from ABS estimated resident population, 30 June 2018. Graph compiled by NT PHN.



The East Arnhem population follows a similar overall trend to the NT, but with an even higher proportion of children and young adults, and lower proportion of older adults (Figure 2).

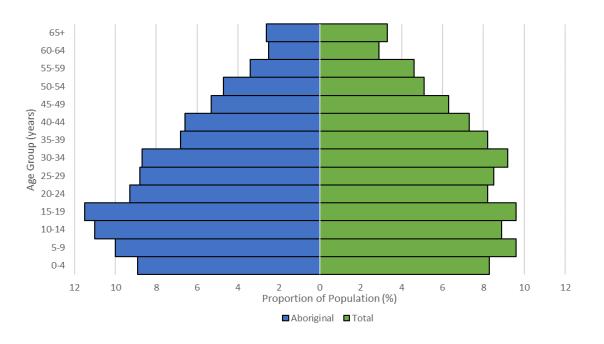
#### Figure 2: Population Structure of East Arnhem and Northern Territory, 2018.

Source: Data compiled by PHIDU from ABS estimated resident population, 30 June 2018. Graph compiled by NT PHN.



The East Arnhem population is made up of 73% Aboriginal and Torres Strait Islander peoples. The Aboriginal population in East Arnhem has a higher proportion of children and young people aged under 25 years compared to the total East Arnhem population (Figure 3).

Figure 3: Population Structure of the Aboriginal and/or Torres Strait Islander population and total population of East Arnhem, 2016 and 2018. Source: Data compiled by PHIDU from ABS estimated resident population, 30 June 2018; ABS Census of Population and Housing, August 2016. Graph compiled by NT PHN.



# 4.2. Population Change

Since 2011, the NT population has increased by over 6%, while the population in East Arnhem has experienced the greatest population decrease in the Territory (Table 1). This is due to the decommissioning of the mine in Gove Peninsula and the subsequent loss of the working population. As the population decreases, so does service viability and the range of local services and amenities available.

#### Table 1: Population change in the East Arnhem region, 2011 to 2019.

Source: ABS Regional Population Growth, Australia, 2018-19.

		Total Persons									
	2011	2016	2017	2018	2019	2011-2019					
East Arnhem (SA3)	16,101	14,557	14,518	14,505	14,525	-9.8%					
Daly - Tiwi - West Arnhem (SA3)	18,099	17,949	17,912	17,886	17,872	-1.3%					
Katherine (SA3)	20,400	20,674	20,748	20,820	20,869	2.3%					
Northern Territory	231,292	245,678	247,517	247,058	245,929	6.3%					
Australia	22,340,024	24,190,907	24,601,860	24,982,688	25,365,571	13.5%					

## **4.3. Population Dynamics**

The total fertility rate (TFR) in East Arnhem is lower than the rest of the Territory and Australia (Table 2). In real terms, there were 206 births in the region in 2018.

The loss of population to internal migration is consistent across many regions of the NT, as well as a small population gain from overseas migration. East Arnhem follows this migration pattern.

The median age of death of the population in East Arnhem is lower than the Territory average and much lower than the national average. The median age at death for Aboriginal people is below the NT average, yet slightly above the East Arnhem total population age.

Infant and youth mortality rates are high throughout the NT, particularly in East Arnhem, where rates are the highest in the Territory.

#### Table 2: Population Dynamics in the East Arnhem region.

Source: Compiled by PHIDU from multiple sources. \*Compiled by NT PHN from PHIDU Aboriginal and Torres Strait Islander Health Atlas. \*Figures are averages of several smaller Indigenous Areas within each SA3.

	Fertility		Net Migration		Median Age at Death		Infant Mortality	Youth Mortality
	2018	}	201	2018-19		2013-17		3-17
	No. Births	TFR	Internal	Overseas	All People	Aboriginal People*	IMR/1,000	ASR/100,000
East Arnhem (SA3)	206	1.8	-122	12	54	54.5	12.8	172.0
Daly - Tiwi - West Arnhem (SA3)	226	1.7	-160	15	56	53	9.3	157.6
Katherine (SA3)	361	2.1	-220	19	60	55.5	10.5	139.8
Northern Territory	4,046	1.97	-4,371	718	63.5	56	7.1	94.1
Australia	313,330	1.85	0	239,602	81	59	3.3	35.8

## 4.4. Demography and Disadvantage

Table 3 summarises key demographic and socioeconomic indicators for East Arnhem and surrounding areas. Over one-quarter of the East Arnhem population are aged 0 to 14 years, the highest proportion in the NT. Overall, the East Arnhem region has high levels of disadvantage. Of particular note are the high proportion of households requiring extra bedrooms ('overcrowded housing'), and households with no internet access or motor vehicle.

#### Table 3: Demographic overview of the East Arnhem region.

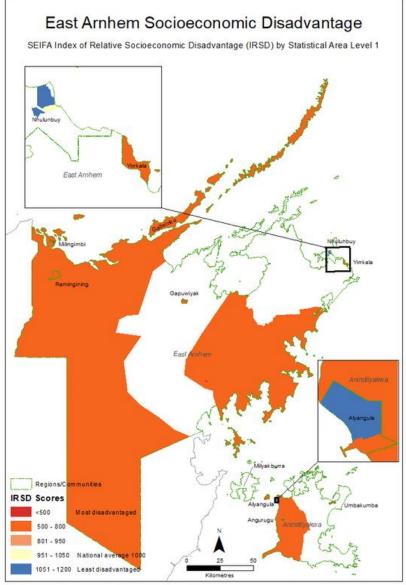
Source: Compiled by PHIDU from ABS estimated resident population, 30 June 2018, ABS Census of Population and Housing, August 2016. ^NES = non-English Speaking

	Age 0-14	Age 65+	Aboriginal Persons	Born Overseas (NES^)	Early School Leavers	Single Parent Families	Low Income Households	Overcrowded Housing	Unemploy ment	No Internet at Home	No Motor Vehicle	Disadvantage (SEIFA IRSD)
	2018	2018	2016	2016	2016	2016	2016	2016	June 2016	2016	2016	2016
	ERP %	ERP %	ERP %	URP %	ASR/100	%	%	%	%	%	%	Score
East Arnhem (SA3)	26.9	3.2	72.7	2.9	50.1	29.5	56.1	58.4	7.3	26.1	30.7	719
Daly - Tiwi - West Arnhem (SA3)	24.5	6.3	73.9	2.9	52.9	28.1	71.8	54.9	8.1	34.6	32.5	651
Katherine (SA3)	24.7	7.0	57.4	4.5	45.5	26.0	59.2	41.5	5.0	27.7	19.4	802
Northern Territory	21.6	7.6	30.3	13.4	34.4	22.1	43.2	21.9	4.2	16.9	10.7	939
Australia	18.8	15.7	3.3	17.9	30.4	20.4	40.5	7.1	5.9	14.1	7.5	1000

East Arnhem has high levels of disadvantage using this measure. Figure 4 illustrates the distribution at a much finer scale, where it can be seen that the main townships of Nhulunbuy and Alyangula are the least disadvantaged, while the surrounding rural area is highly disadvantaged.

#### Figure 4: Areas of socioeconomic disadvantage within East Arnhem.

Source: Compiled by NT PHN from ABS Census of Population and Housing: SEIFA, Australia, 2016.





## 4.5. Childhood

The Australian Early Development Census (AEDC) is conducted every 3 years, for each child in their first year of school. They are assessed by the teacher against five domains of competency. Children who are developmentally vulnerable can be at risk of poor social, emotional, and health outcomes in later life. The proportion of children who are vulnerable on two or more of the AEDC domains is often used as an indicator of children most at risk.

The 2018 AECD results for children within East Arnhem, combined with Daly – Tiwi – West Arnhem, have been reproduced here. Full reports for each local community, containing additional information including previous census results, can be accessed from the AEDC website: <u>https://www.aedc.gov.au/data/data-explorer</u>.

The combined Arnhem region has a high proportion of children who are developmentally vulnerable (Table 4). In every tested domain, there is a higher proportion of children who are developmentally vulnerable, and a high proportion of children vulnerable on one or more and two or more domains.

#### Table 4: Australian Early Development Census (AEDC) Results, 2018.

Source: Australian Early Development Census (AEDC), 2019.

Note: East Arnhem and Daly-Tiwi-West Arnhem data are combined.

			Childr	ren Developmen	tally Vulnerable (%)	1	
	Physical Health & Wellbeing	Social Competence	Emotional Maturity	Language & Cognitive Skills	Communication Skills & General Knowledge	Vulnerable on One or More Domains	Vulnerable on Two or More Domains
East Arnhem (SA3)	28.8	32.0	26.0	45.2	38.6	63.4	46.1
Katherine (SA3)	29.7	30.8	22.3	35.7	29.3	54.5	41.8
Northern Territory	15.9	18.5	15.5	21.5	16.2	37.2	23.1
Australia	9.7	9.9	8.4	6.5	8.5	22.0	11.1

This socio-demographic section of the East Arnhem Region Community Profile relates specifically to 2016 Census data for the East Arnhem Statistical Area Level 3 (SA3).

## 4.6. Marital Status

Of the East Arnhem population aged 15 years and over, 48.0% were married and 7.4% were either divorced or separated (compared to 10.9% in the NT and 11.7% across Australia).

#### 4.6.1. Registered marital status

	East Arnhem	%	Northern Territory	%	Australia	%
Married	4,464	48.0	78,333	43.7	9,148,218	48.1
Separated	292	3.1	6,046	3.4	608,059	3.2
Divorced	398	4.3	13,442	7.5	1,626,890	8.5
Widowed	454	4.9	5,622	3.1	985,204	5.2
Never married	3,689	39.7	75,917	42.3	6,668,910	35.0

Furthermore, 49.0% of people were in either a registered or de-facto marriage (compared to 57.3% in the NT and 58.1% across Australia), while 50.9% were not married (compared to 42.7% in the NT and 41.9% across Australia).

#### 4.6.2. Social marital status

	East Arnhem	%	Northern Territory	%	Australia	%
Registered marriage	3,296	40.3	58,583	41.4	8,001,141	47.7
De facto marriage	715	8.7	22,537	15.9	1,751,731	10.4
Not married	4,166	50.9	60,345	42.7	7,024,973	41.9

# **4.7. Education**

#### 4.7.1. Education Attendance

In East Arnhem, 38.7% of the population were attending an educational institution. Of these, 30.8% were in primary school (compared to 25.0% in the NT and 26.7% across Australia), 26.4% in secondary school (compared to 16.2% in the NT and 18.1% across Australia) and 3.0% in a technical or tertiary institution (compared to 13.6% in the NT and 22.0% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
Preschool	316	6.3	3,707	4.6	347,621	4.8
Primary - Government	1,373	27.2	15,160	18.6	1,314,787	18.2
Primary - Catholic	28	0.6	2,632	3.2	380,604	5.3
Primary - other non-Government	148	2.9	2,570	3.2	231,490	3.2
Secondary - Government	965	19.1	8,233	10.1	827,505	11.5
Secondary - Catholic	16	0.3	2,070	2.5	338,384	4.7
Secondary - other non-Government	139	2.8	2,911	3.6	280,618	3.9
Technical or further education institution	116	2.3	3,045	3.7	424,869	5.9
University or tertiary institution	159	3.2	8,054	9.9	1,160,626	16.1
Other	37	0.7	1,655	2.0	198,383	2.8
Not stated	1,747	34.6	31,342	38.5	1,707,023	23.7

## 4.7.2. Educational Attainment

**O**f the East Arnhem population aged 15 years and over, 12.5% reported having completed a Bachelor Degree level and above or Advanced Diploma and Diploma level as their highest level of educational attainment (compared to 24.3% in the NT and 30.9% across Australia). 17.1% reported having completed Year 9 as their highest level of educational attainment (compared to 8.6% in the NT and 8% across Australia), while 13.3% reported having completed Year 12 as their highest level of educational attainment.

	East Arnhem	%	Northern Territory	%	Australia	%
Bachelor Degree level and above	818	8.8	30,711	17.1	4,181,406	22.0
Advanced Diploma and Diploma level	347	3.7	12,854	7.2	1,687,893	8.9
Certificate level IV	201	2.2	6,391	3.6	551,767	2.9
Certificate level III	714	7.7	23,200	12.9	2,442,203	12.8
Year 12	1,233	13.3	22,743	12.7	2,994,097	15.7
Year 11	730	7.9	10,854	6.1	941,531	4.9
Year 10	1,181	12.7	17,509	9.8	2,054,331	10.8
Certificate level II	26	0.3	226	0.1	13,454	0.1
Certificate level I	23	0.2	128	0.1	2,176	0.0
Year 9 or below	1,591	17.1	15,473	8.6	1,529,897	8.0
No educational attainment	102	1.1	1,870	1.0	145,844	0.8
Not stated	2,147	23.1	33,298	18.6	1,974,794	10.4

# 4.8. Cultural and Language Diversity

### 4.8.1. Country of Birth

In terms of country of birth, 88.2% of the East Arnhem population were born in Australia (compared to 68.8% in the NT and 66.7% across Australia). The most common countries of birth outside Australia were New Zealand 1.7%, England 0.9%, Philippines 0.4%, South Africa 0.3% and Papua New Guinea 0.3%.

	East Arnhem	%	Northern Territory	%	Australia	%
Australia	11,437	88.2	157,531	68.8	15,614,835	66.7
New Zealand	220	1.7	4,636	2.0	518,466	2.2
England	119	0.9	5,583	2.4	907,570	3.9
Philippines	53	0.4	5,914	2.6	232,386	1.0
South Africa	45	0.3	899	0.4	162,449	0.7
Papua New Guinea	38	0.3	596	0.3	28,800	0.1

#### 4.8.2. Ancestry

The most common ancestries in East Arnhem were Australian Aboriginal 54.8%, Australian 13.0%, English 9.4%, Irish 3.1% and Scottish 2.8%. As a point of comparison, the proportion of Australian Aboriginal people is 12.8% in the NT and 0.5% in Australia. In the East Arnhem region excluding Nhulunbuy, the proportion of population of Australian Aboriginal ancestry is 85.0%.

	East Arnhem	%	Northern Territory	%	Australia	%
Australian Aboriginal	8,031	54.8	37,562	12.8	144,173	0.5
Australian	1,901	13.0	65,433	22.4	7,298,243	23.3
English	1,379	9.4	54,967	18.8	7,852,224	25.0
Irish	448	3.1	18,469	6.3	2,388,058	7.6
Scottish	416	2.8	14,971	5.1	2,023,470	6.4

### 4.8.3. Religious Affiliation

The most common responses for religion in East Arnhem were Uniting Church 40.4%, No Religion, so described 13.7%, Anglican 12.3%, Not Stated 11.8% and Catholic 10.8%. As a whole, Christianity was the largest religious group reported (78.6%).

	East Arnhem	%	Northern Territory	%	Australia	%
Uniting Church	5,249	40.4	12,976	5.7	870,183	3.7
No Religion, so described	1,778	13.7	67,176	29.4	6,933,708	29.6
Anglican	1,595	12.3	19,234	8.4	3,101,185	13.3
Not stated	1,530	11.8	36,642	16.0	2,238,735	9.6
Catholic	1,403	10.8	45,843	20.0	5,291,834	22.6

## 4.8.4. Language

In East Arnhem, 26.0% of the population spoke only English at home, compared to 58% in the NT and 72.7% across Australia. Other languages spoken at home included Djambarrpuyngu 32.2%, Anindilyakwa 10.4%, Dhuwaya 2.6%, Gupapuyngu 1.0% and Gumatj 0.9%.

	East Arnhem	%	Northern Territory	%	Australia	%
Djambarrpuyngu	4,166	32.2	4,275	1.9	4,282	0.0
Anindilyakwa	1,352	10.4	1,458	0.6	1,484	0.0
Dhuwaya	334	2.6	334	0.1	334	0.0
Gupapuyngu	134	1.0	145	0.1	146	0.0
Gumatj	112	0.9	116	0.1	116	0.0
English only spoken at home	3,370	26.0	132,634	58.0	17,020,417	72.7
Households where a non-English language is spoken	1,317	46.6	19,395	24.4	1,971,011	22.2

# 4.9. Employment

### 4.9.1. Employment Type

There were 4,110 people who reported being in the labour force in the week before Census night in East Arnhem. Of these people, 56.9% were employed full time (compared to 67.1% in the NT and 57.7% across Australia), 21.7% were employed part-time (compared to 19.5% in the NT and 30.4% across Australia) and 13.7% were unemployed (compared to 7.0% in the NT and 6.9% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
Worked full-time	2,338	56.9	74,100	67.1	6,623,065	57.7
Worked part-time	890	21.7	21,493	19.5	3,491,503	30.4
Away from work	320	7.8	7,112	6.4	569,276	5.0
Unemployed	562	13.7	7,685	7.0	787,452	6.9

## 4.9.2. Occupation

The most common occupations in East Arnhem included Professionals 25.0%, Community and Personal Service Workers 15.5%, Technicians and Trades Workers 12.7%, Clerical and Administrative Workers 11.1% and Managers 9.8%.

	East Arnhem	%	Northern Territory	%	Australia	%
Professionals	886	25.0	20,654	20.1	2,370,966	22.2
Community and Personal Service Workers	549	15.5	14,178	13.8	1,157,003	10.8
Technicians and Trades Workers	448	12.7	16,189	15.8	1,447,414	13.5
Clerical and Administrative Workers	393	11.1	14,102	13.7	1,449,681	13.6
Managers	348	9.8	12,515	12.2	1,390,047	13.0
Labourers	308	8.7	9,642	9.4	1,011,520	9.5
Machinery Operators and Drivers	287	8.1	5,880	5.7	670,106	6.3
Sales Workers	165	4.7	7,021	6.8	1,000,955	9.4

## 4.9.3. Industry of Employment

Of the employed people in East Arnhem, 7.1% worked in Bauxite Mining (compared to 0.2% in the NT and 0.0% across Australia) and 6.2% in Other Metal Ore Mining. Other industries of employment included Local Government Administration 5.2%, Supermarket and Grocery Stores 4.9% and Combined Primary and Secondary Education 4.9%.

	East Arnhem	%	Northern Territory	%	Australia	%
Bauxite Mining	246	7.1	251	0.2	3,347	0.0
Other Metal Ore Mining	215	6.2	568	0.6	3,161	0.0
Local Government Administration	180	5.2	1,910	1.9	142,724	1.3
Supermarket and Grocery Stores	171	4.9	2,309	2.2	254,275	2.4
Combined Primary and Secondary Education	171	4.9	1,516	1.5	122,286	1.1

### 4.9.4. Weekly Income

The median weekly personal income for people aged 15 years and over in East Arnhem was \$317, compared to \$871 in the NT and \$662 across Australia.

	East Arnhem	%	Northern Territory	%	Australia	%
Personal	317		871		662	
Family	1,137		2,105		1,734	
Household	1,944		1,983		1,438	

# **4.10. Household Characteristics**

### 4.10.1. Family Composition

Of the families in East Arnhem, 49.4% were couple families with children (compared to 46.2% in the NT and 44.7% across Australia). 21.8% were couple families without children (compared to 35.2% in the NT and 37.8% across Australia) and 25.9% were one parent families.

	East Arnhem	%	Northern Territory	%	Australia	%
Couple family without children	626	21.8	18,138	35.2	2,291,987	37.8
Couple family with children	1,417	49.4	23,815	46.2	2,716,224	44.7
One parent family	743	25.9	8,558	16.6	959,543	15.8
Other family	80	2.8	1,014	2.0	102,559	1.7

### 4.10.2. Employment Status of Couple Families with Children

In East Arnhem, of couple families with children, 20.5% had both partners employed full-time (compared to 33.0% in the NT and 21.6% across Australia), while 29.8% of couple families were both not working (compared to 14.5% in the NT and 20.1% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
Both employed, worked full-time	419	20.5	13,833	33.0	1,084,006	21.6
Both employed, worked part-time	64	3.1	1,215	2.9	203,596	4.1
One employed full-time, one part-time	240	11.7	6,638	15.8	1,086,460	21.7
One employed full-time, other not working	265	13.0	6,174	14.7	749,886	15.0
One employed part-time, other not working	138	6.8	1,677	4.0	302,037	6.0
Both not working	609	29.8	6,100	14.5	1,006,697	20.1
Other (includes away from work)	112	5.5	2,884	6.9	264,145	5.3
Labour force status not stated (by one or both parents in a couple family)	196	9.6	3,429	8.2	311,381	6.2

#### 4.10.3. Household Income

9.1% of households had a weekly household income of less than \$650 (compared to 12.6% in the NT and 20.0% across Australia) and 23.2% of households had a weekly income of more than \$3000 (compared to 25.8% in the NT and 16.4% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
Less than \$650 gross weekly income		9.1		12.6		20.0
More than \$3000 gross weekly income		23.2		25.8		16.4

### 4.10.4. **Dwellings Structure**

Of occupied private dwellings in East Arnhem, 81.9% were separate houses (compared to 66.3% in the NT and 72.9% across Australia), 11.1% were semi-detached, row or terrace houses, townhouses etc, and 4.9% were flats or apartments (compared to 17.5% in the NT and 13.1% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
Separate house	2,059	81.9	43,100	66.3	6,041,788	72.9
Semi-detached, row or terrace house, townhouse etc	280	11.1	7,844	12.1	1,055,016	12.7
Flat or apartment	124	4.9	11,374	17.5	1,087,434	13.1
Other dwelling	35	1.4	2,166	3.3	64,425	0.8

### 4.10.5. **Dwelling Size**

In East Arnhem, of occupied private dwellings, 4.4% had 1 bedroom, 22.8% had 2 bedrooms and 52.2% had 3 bedrooms. 15.4% of dwellings had 4 or more bedrooms, compared to 23.1% in the NT and 32.2% across Australia. The average number of bedrooms per occupied private dwelling was 2.9, similar to both the NT and Australia as a whole. Notably, the average household size was 4.1 people (compared to 2.9 in the NT and 2.6 across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
None (includes bedsitters)	15	0.6	874	1.3	39,769	0.5
1 bedroom	111	4.4	4,871	7.5	411,252	5.0
2 bedrooms	574	22.8	14,306	22.0	1,562,759	18.9
3 bedrooms	1,316	52.2	27,598	42.4	3,403,190	41.1
4 or more bedrooms	387	15.4	15,039	23.1	2,670,758	32.2

Number of bedrooms not stated	117	4.6	2,369	3.6	198,351	2.4
Average number of bedrooms per dwelling	2.9		2.9		3.1	
Average number of people per household	4.1		2.9		2.6	

## 4.10.6. **Dwelling Tenure**

Of occupied private dwellings in East Arnhem, 2.4% were owned outright (compared to 15.3% in the NT and 31.0% across Australia), 0.8% were owned with a mortgage (compared to 29.6% in the NT and 34.5% across Australia) and 90.0% were rented (compared to 50.3% in the NT and 30.9% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
Owned outright	60	2.4	9,957	15.3	2,565,695	31.0
Owned with a mortgage	19	0.8	19,247	29.6	2,855,222	34.5
Rented	2,265	90.0	32,737	50.3	2,561,302	30.9
Other tenure type	32	1.3	575	0.9	78,994	1.0
Tenure type not stated	142	5.6	2,545	3.9	224,869	2.7

### 4.10.7. Motor Vehicles

33.2% of occupied private dwellings had no motor vehicle garaged or parked at their address (compared to 10.7% in the NT and 7.5% across Australia), while 28.5% had two or more registered motor vehicles (compared to 52.6% in the NT and 54.3% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
None	771	30.7	6,948	10.7	623,829	7.5
1 motor vehicle	834	33.2	20,562	31.6	2,881,485	34.8
2 motor vehicles	532	21.2	22,357	34.4	2,999,184	36.2
3 or more vehicles	183	7.3	11,813	18.2	1,496,382	18.1
Number of motor vehicles not stated	191	7.6	3,389	5.2	285,197	3.4

### 4.10.8. Internet Connection

67.5% of households had at least one person access the internet from the dwelling (compared to 79.0% in the NT and 83.2% across Australia), while 26.0% of households did not access the internet from their dwelling (compared to 16.9% in the NT and 14.1% across Australia).

	East Arnhem	%	Northern Territory	%	Australia	%
Internet not accessed from dwelling	654	26.0	10,972	16.9	1,172,415	14.1
Internet accessed from dwelling	1,698	67.5	51,392	79.0	6,892,165	83.2
Not stated	163	6.5	2,698	4.1	221,494	2.7

# 5. Aboriginal culture and settlement history

The East Arnhem region is known for its rich and diverse culture. It is home to the Yolŋu, the Aboriginal traditional owners of East Arnhem. One of the largest Indigenous groups in Australia, the Yolŋu have lived in the region for at least 60,000 years, and today represent around 80% of the regional population. Prior to Australia's federation, Yolŋu traded with Macassan people from Sulawesi, Indonesia for thousands of years.

Yolngu groups are connected by a complex kinship system (gurrurtu). This system governs fundamental aspects of Yolngu life, including responsibilities for ceremony and marriage rules. Yolngu life is divided into two moieties: Dhuwa and Yirritja. Each of these is represented by people of a number of different groups, each of which have their own lands, languages, totems and philosophies.

Yolŋu have been leaders in Australia's Aboriginal land rights movement. In the 1960s, Yolŋu leaders in Yirrkala issued a petition, written on bark, to the Australian Parliament, provoked by a government decision to excise part of their land for mining. The 'bark petition', as it has become known, led to the passing of the *Aboriginal Land Rights (Northern Territory) Act 1976*, under which all land in East Arnhem has been recognised as Aboriginal land.

Yolŋu had limited contact with Europeans until the early 1900s, when several mission stations were established. European settlement led to the development of cattle grazing, fishing and timber milling. In 1931 Arnhem Land was declared an Aboriginal Reserve. During World War II, the Gove Peninsula was a RAAF base, with over 5,000 servicemen stationed in the area. In 1963 manganese mining began on Groote Eylandt, which resulted in the establishment of the special purpose township of Alyangula. In the late 1960s a bauxite mine and deep water port were established on Gove Peninsula, followed by an alumina refinery.

The special purpose township of Nhulunbuy was established in 1972 to service the needs of the nearby Nabalco (now Rio Tinto Alcan) bauxite mining operations. Rapid population growth took place in and around Nhulunbuy during the 1970s and early 1980s. The population of the Region increased from about 10,000 people in 1991 to over 13,000 people in 2006 as new dwellings were added to the area, and then was relatively stable to 2011. However the population was impacted by the closure of the alumina refinery in 2014.

# 6. Education

The East Arnhem Region is supported by a range of schools, vocational training and university supported research and training schemes.

There are 14 public schools in the region, the majority of which are Pre-school to Year 12 1:

In addition, there are two Christian schools and one independent school.

# 6.1. Public schools

- Alyangula Area School, serving 150 students in the mining community of Alyangula (pop. 1200) which is on Groote Eylandt. The island is 650km east of Darwin and 50km off the Arnhem Land coast in the Gulf of Carpentaria.
- Angurugu School, serving 100 students in the community of Angurugu (pop. 1150) on Groote Eylandt.
- Alyarrmandumanja Umbakumba School, serving 50 students in the community of Umbakumba (pop. 450) on Groote Eylandt.

<sup>&</sup>lt;sup>1</sup> My School, <u>https://www.myschool.edu.au/</u>

- Baniyala Garrangali School, serving 25 students in the Baniyala (Yilpara) community on the shores of Blue Mud Bay in north east Arnhem Land. Baniyala is 200km from Nhulunbuy on the Gove Peninsula.
- Gapuwiyak School, serving 180 students in the community of Gapuwiyak (pop. 1200), 220km west of Nhulunbuy.
- Milingimbi School, serving 315 students in the community of Milingimbi (pop. 1500) on Milingimbi Island, 440km east of Darwin.
- Milyakburra School, serving 20 students in the very remote community of Milyakburra (pop. 220) on Bickerton Island, approximately 640km southeast of Darwin and 40km off the Arnhem Land coast in the Gulf of Carpentaria.
- Nhulunbuy High School, serving 300 students in the mining township of Nhulunbuy (pop. 3300), 700km east of Darwin.
- Nhulunbuy Primary School, serving 400 students in the mining township of Nhulunbuy, 700km east of Darwin.
- Numbulwar School, serving 130 students in the community of Numbulwar (pop. 1300) in East Arnhem Land, 570km southeast of Darwin.
- Ramingining School, serving 250 students in the community of Ramingining (pop. 700-1000), 580km east of Darwin.
- Shepherdson College, serving 460 students in the community of Galiwin'ku (pop. 2200) on Elcho Island, 550km northeast of Darwin.
- Yirrkala School, serving 150 students in the community of Yirrkala (pop. 800-1200), 20km from Nhulunbuy and 700km east of Darwin.
- Yirrkala Homelands School, serving 85 students in the community of Yirrkala.

# **6.2. Christian schools**

- Gäwa Christian School, one of eight campuses of the NT Christian Schools Association, serving 65 students on the northernmost tip of Elcho Island.
- Nhulunbuy Christian College, a campus of NT Christian Schools, serving 150 students in the mining township of Nhulunbuy.

# 6.3. Independent schools

 Mäpuru Yirralka College, a registered school governed by Yirralka Education Ltd. enabling Mäpuru families, elders and custodians to govern their educational programs and schooling for their children. The school serves 60 students in the Wobulkarra country in east Arnhem Land and is embedded in the town of Mäpuru.

In addition to primary and secondary education, childcare facilities are provided at Arnhem Early Learning Centre, Nhulunbuy Community Childcare Centre and Nhulunbuy Preschool (part of Nhulunbuy Primary School).

Furthermore, there are Aboriginal Corporations that offer on-the-job, vocational training and certification. This is complemented by a range of self-initiated and government funded programs design to build skills of the

Yolŋu people to ensure that they can fully participate and contribute to the local labour market.2 In addition, Charles Darwin University (CDU) has provided some innovative vocational education and training for regional and remote Indigenous students, including work readiness VET programs at Gulkula in North East Arnhem Land and work-based training for aged care workers in East Arnhem Land. Notably, the home and community care (HACC) program is the largest VET program delivered by CDU for remote Indigenous students in the NT and is one of the most complicated in terms of the number and diversity of delivery locations, which include communities on Milimgimbi Island, Raminingining, Galiwin'ku on Echo Island, Gunyangara on the Gove Peninsula, Milyakburra, Angurugu and Umbukumba on Groote Island.3

Ongoing university research and teaching include the NT Medical Program which provides training to Flinders University and James Cook University students. This program has established teaching sites at hospitals in Alice Springs, Katherine and Nhulunbuy supported from Royal Darwin Hospital.

# 7. Economy and workforce

Today, the main industries in East Arnhem region are bauxite and manganese mining, on the Gove Peninsula and Groote Eylandt respectively, with fishing and tourism also being important industries.

For nearly 50 years Nhulunbuy and surrounding region has enjoyed a strong economy created by the establishment and continued operation of a bauxite mine, now operated by Rio Tinto. In 2019 the mine employed 309 workers<sup>.4</sup>

While refining operations are in curtailment, Gove bauxite is still shipped internationally as well as domestically to supply Queensland Alumina Limited and Yarwun refineries in Gladstone, Queensland. These refineries produce alumina as feedstock for our Australian aluminium smelting operations and for sale on the international market. Bauxite mining operations in the Gove Peninsula are expected to cease in 2030<sup>-5</sup>

Whilst mining is an important industry for the region, it is not a major employer of local Yolŋu and Anindilyakwa people. Instead, the predominant employer of local people is in land management, tourism and creative industries, niche primary industries (forestry and small scale agribusiness) and government (health, education, aged care, disability) and related services.6

It is important to note that East Arnhem accounts for over 30% of non-resident workers in the Northern Territory, compared to just 7% of the total NT workforce, showing that non-resident, including FIFO, workers are over-represented in the region.<sup>7</sup>

Nhulunbuy is the region's service hub, with services including education, health, and law and order being delivered through a cooperative arrangement between the Northern Territory and the Australian Government.

<sup>&</sup>lt;sup>2</sup> Developing East Amhem Land, East Amhem Space Capability Profile 2019, <u>https://www.developingeastarnhem.com.au/assets/uploads/2019/11/East-Arnhem-Space-Capability-Profile-Final.pdf</u>

<sup>&</sup>lt;sup>3</sup> https://www.cdu.edu.au/sites/default/files/cdu-vet/docs/cdu-vet-ready-for-work-full-report-low-res.pdf

<sup>&</sup>lt;sup>4</sup> Rio Tinto Gove Operations, <u>https://www.riotinto.com/en/operations/australia/gove</u>

<sup>&</sup>lt;sup>5</sup> Rio Tinto Gove Operations, <u>https://www.riotinto.com/en/operations/australia/gove</u>

<sup>&</sup>lt;sup>6</sup> East Arnhem Regional Economic Development Committee, Submission 84 re: The operation, regulation and funding of air route service delivery to rural, regional and remote communities, <u>https://www.aph.gov.au/DocumentStore.ashx?id=25a01cfd-1102-4ccb-8c50-fc77abb64bca&subId=563224</u>

<sup>&</sup>lt;sup>7</sup> Charles Darwin University Research Brief, <u>https://www.cdu.edu.au/sites/default/files/research-brief-2012-04.pdf</u>

# 8. Access and amenities

# 8.1. Getting there and away

Gove Airport is 15 kilometres from Nhulunbuy and daily flights<sup>8</sup> connect Nhulunbuy with Cairns and Darwin. Flights are available through Qantas and AirNorth. The Cairns-Gove flight is only 1 hour and 40min and Darwin-Gove flight is only 1 hour and 10 min. This said, Government agencies, NGOs and public/private healthcare providers operating out of Gove rely on charter air services to efficiently access outlying communities.

There are 11 communities and towns in the region, <sup>6</sup> of them island based and there are numerous permanently occupied Aboriginal homelands. All the communities and towns, and nearly all the homelands, are serviced by remote air strips, aerodromes and airports of various capacities and condition. These aerodromes are utilised by CareFlight, Police Airwing, Telstra (via charter helicopter), a number of air charter operators (commercial and not-for-profit) and commercial regular passenger transport (AirNorth, Mission Aviation Fellowship (MAF) and Fly Tiwi). <sup>9</sup>

The Gove Peninsula also provides the only deep-water port between Darwin and Cairns, which has regular cargo services.

The region can also be accessed by 4-wheel-drive along the Central Arnhem Road which connects to the Stuart Highway south of Katherine. Access from the south is via the Kakadu Highway.

# 8.2. Services and amenities

Nhulunbuy is a self-sufficient town with core services including a supermarket, several restaurants and other service providers. As a regional hub, various NT and Federal Government agencies have a presence in the town and are available to support local and regional initiatives.

Barge Express Transport provides a service to East Arnhem offering weekly transport for a large range of bulky supplies and goods including building materials, machinery and food supply.

Air services are essential for economic and social wellbeing and provide access to services such as critical emergency health care, emergency flood or cyclone evacuations and support, and to facilitate police and emergency services response.

Major features of the area include BanuBanu Wilderness Retreat, Groote Eylandt Lodge, Walkabout Lodge, Gove District Hospital, Captain Cook Shopping Centre, Endeavour Square Shopping Centre, Arafura Swamp, Gove Aquatic Centre, Gove Country Golf Club, Gove Boat Club, Anindilyakwa Arts and Cultural Centre, Buku-Larrnggay Mulka Centre, Bula'Bula Art Centre, Elcho Island Arts, Gapuwiyak Culture & Arts, BHP Billiton - Groote Eylandt Mine, Rio Tinto Alcan - Gove Mine, Milner Bay Port (Groote Eylandt), Port of Gove, numerous beaches, Hindle Oval, Mt Saunders, Gayngaru Wetlands Walk and Nhulunbuy Training Centre.

<sup>&</sup>lt;sup>8</sup> Daily flight schedule may be subject to change due to impact of COVID-19.

<sup>&</sup>lt;sup>9</sup> East Arnhem Regional Economic Development Committee, Submission 84 re: The operation, regulation and funding of air route service delivery to rural, regional and remote communities, <u>https://www.aph.gov.au/DocumentStore.ashx?id=25a01cfd-1102-4ccb-8c50-fc77abb64bca&subId=563224</u>

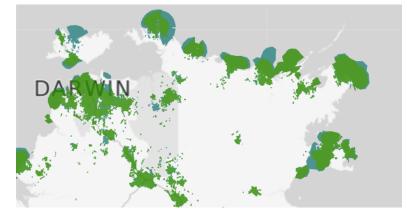
# **8.3. Accommodation**

There is a range of accommodation options available locally, including several motels with services and facilities. For larger workforce and crew accommodation, a range of options exist to provide camp style accommodation along with catering and support services. Longer term rental accommodation is also available with additional support provided to encourage those looking to start a new business to relocate to the region.

# **8.4. Communications**

The East Arnhem Region is serviced by the Arnhem Fibre Network providing broadband telecommunication services. Presently providing a typical speed of 45Mbps, planning is underway to improve this service and improve the reliability and diversity of the network.

As illustrated in the map below<sup>10</sup>, most inhabited areas of East Arnhem Land are covered by the Telstra 4G network, including Elcho Island, Milingimbi Island and Groote Eylandt. However, it is noted that on Milyakburra (Bickerton Island) an external antenna may be required due to a limited Telstra signal.



# **8.5. Alcohol consumption**

East Arnhem Land is a 'dry area'. Drinking in public places is prohibited with the exception of some popular recreational areas that are sign posted. The region has a strict liquor permit system whereby it is possible to drink in a licensed premise, for example a hotel, club or restaurant. However, it is necessary to obtain a liquor permit to buy takeaway alcohol and drink in a private home. All nine of the communities which sit under East Arnhem Regional Council are Restricted Areas that prohibit alcohol consumption.

# 8.6. Permits

It is necessary to apply to either the Northern Land Council or Anindilyakwa Land Council for a permit to:

- Enter Aboriginal Land for any purpose
- Travel by road through Aboriginal Land (does not apply to public roads)
- Enter or visit an Aboriginal Community (some exceptions apply).

<sup>&</sup>lt;sup>10</sup> Telstra, Our Coverage Maps, <u>https://www.telstra.com.au/coverage-networks/our-coverage</u>

# 9. Health indicators

# 9.1. **Potentially Preventable Hospitalisations (PPH)**

Potentially preventable hospitalisations (PPH) are admissions for which the hospitalisation could possibly have been prevented through the timely and appropriate provision of primary or community-based health care, and as such are considered indicators of the effectiveness of non-hospital care. Rates of PPH may reflect access to primary health care service and/or other contextual factors.

PPH for many chronic and acute conditions are much higher in the NT than the rest of Australia (Table 6). PPH rates are high in East Arnhem, particularly for Chronic Obstructive Pulmonary Disease (COPD) and acute cellulitis.

#### Table 6: Potentially Preventable Hospitalisations (PPH) for Chronic, Acute and Vaccine-Preventable Conditions.

Source: AIHW Potentially Preventable Hospitalisations in Australia, 2017-18. ^Chronic Obstructive Pulmonary Disease

	Congestive Cardiac	COPD^	Diabetes	Total Chronic	Cellulitis	Total Acute	Pneumonia/
	Failure		Complications	Conditions		Conditions	Influenza
				2017-18 ASR/100,000	//		
East Arnhem (SA3)	527	2,896	446	4,849	1,043	3,505	297
Daly - Tiwi - West Arnhem (SA3)	192	1,424	294	2,999	499	2,337	243
Katherine (SA3)	499	1,014	420	2,856	976	3,447	551
Northern Territory	336	706	284	2,260	685	2,711	355
Australia	206	267	187	1,233	258	1,286	207

# 9.2. Mortality

Coronary heart disease is the leading cause of death in Australia and the NT. In East Arnhem, the leading causes of death are:

- 1. Coronary heart disease
- 2. Chronic Obstructive Pulmonary Disease (COPD)
- 3. Diabetes
- 4. Lung cancer
- 5. Suicide.

These are similar to the overall NT leading causes of death. A high proportion of people in remote regions of the NT often have a cause of death of 'certain conditions originating in the perinatal period, congenital malformations, deformations and chromosomal abnormalities' (as defined by ICD-10 code), accounting for the eighth most common cause of death in the East Arnhem region.

## 9.3. Hospital Admissions

The rate of hospital admissions provides some insight into the diseases and conditions which contribute the most to poor health. In the East Arnhem region, hospital admissions are higher than the Territory average for many conditions. This is particularly high for circulatory system diseases, injury, poisoning and other external causes and respiratory system diseases. Same-day admissions for dialysis are high in the NT compared to Australia, and even higher in East Arnhem.

#### Table 7: Selected hospital admissions by principal diagnosis.

Source: Compiled by PHIDU using data from the AIHW and the ABS estimated resident population for 30 June 2016

	Hospital Admissions								Same-day
	Infectious & Parasitic Diseases	Diabetes	Circulatory System Diseases	Respiratory System Diseases	Digestive Diseases	Skin and Subcutaneous Tissue Diseases	Chronic Kidney Disease	Injury, Poisoning & Other External Causes	admissions for dialysis
					2016-17				
					ASR/100,0	00			
East Arnhem (SA3)	1,845	520	7,495	5,875	4,076	2,387	616	6,930	53,818
Daly-Tiwi-West Arnhem (SA3)	807	233	3,712	3,748	2,776	1,658	381	5,901	60,841
Katherine (SA3)	1,522	549	5,370	4,315	4,427	2,678	663	7,372	69,865
Northern Territory	1,521	319	4,063	3,732	4,318	1,984	404	6,330	44,677
Australia	769	195	2,382	2,061	4,380	752	202	3,235	5,553

# 9.4. Cancer

Compared to the rest of Australia, the NT has a low incidence of cancer, yet a higher rate of premature mortality from cancer. This reflects a pattern of late diagnosis, where treatment is unlikely to be lifesaving due to advanced cancer stage at diagnosis. In this context, cancer screening initiatives for early detection can play an important role in reducing mortality.

Hospital admissions and premature mortality are higher in East Arnhem than the Territory average (Table 8). Participation rates in national screening programs are much lower in East Arnhem than the NT average, with particularly low participation in bowel cancer screening.

The BreastScreen NT bus visits the Nhulunbuy township, and Alyangula and Galiwinku communities every two years. The Patient Assistance Travel Scheme (PATS) is available to people in the NT who require longdistance travel to see an approved medical specialist, which may be claimed by East Arnhem community members.

#### Table 8: Cancer Statistics.

Source: #AIHW Australian Cancer Database. ^Compiled by PHIDU from National Cancer Control Indicators. \*AIHW National Cancer Screening Programs Participation Data.

<sup>1</sup> On 1 December 2017, the renewed National Cervical Screening Program (NCSP) was introduced. Instead of women aged 20–69 having a Pap test every 2 years, women aged 25–74 now have a Cervical Screening Test (CST) every 5 years (the CST is an HPV test, followed by a cytology test if HPV is found). SA3 data not yet available for renewed NCSP.

				Screening*					
	Cancer Incidence#	Hospital Admissions^	Premature Mortality^	Bowel aged 50-74	Breast aged 50-74	Cervical aged 20-69			
	2009-13	2016/17	2013-17	2017-18	2017-18	2015-16	2018 <sup>1</sup>		
		ASR/100,000		%	%	%	%		
East Arnhem (SA3)	387	2,443	178	13.1	34.6	47.9	-		
Daly-Tiwi-West Arnhem (SA3)	444	1,579	202	22.4	29.5	44.4	-		
Katherine (SA3)	404	2,568	156	21.7	36.8	52.4	-		
Northern Territory	460	2,422	134	29.1	38.2	50.9	50.9		
Australia	497	2,826	101	42.4	54.8	55.4	54.1		

# 9.5. Mental Health and Suicide, Drug and Alcohol Use

Overnight mental health hospital admissions for drug and alcohol episodes and intentional self-harm are higher in the NT compared to Australia (Table 9). In East Arnhem, the rate of all mental health-related hospital admissions, drug and alcohol episodes and intention self-harm are higher again.

These figures represent a high rate of premature death due to suicide and self-inflicted injury in East Arnhem than the rest of the NT and Australia.

#### Table 9: Mental Health Hospitalisations and Suicide Rate.

Source: #AIHW Mental health services in Australia. ^AIHW Hospitalisations for mental health conditions and intentional self-harm. \*Compiled by PHIDU from ABS Causes of Death, Australia, 2017.

		Deaths (0-74 years)		
	All Mental Health#	Drug and Alcohol Episodes^	Intentional Self Harm^	Suicide and Self-Inflicted Injuries*
	ASR/10,000	ASR/100,000		ASR/100,000
	2017-18	2014-15		2013-17
East Arnhem (SA3)	144	228	289	28
Daly - Tiwi - West Arnhem (SA3)	113	166	213	25
Katherine (SA3)	103	165	164	24
Northern Territory	100	227	228	20
Australia	105	180	161	12

## 9.6. Immunisation

Immunisation targets vary depending on the vaccine and disease – 90% coverage is considered sufficient for most diseases to establish herd immunity (protection for entire population), but highly infectious diseases like measles require 95% coverage to interrupt disease transmission in the community.

Table 10 demonstrates the immunisation coverage rates for children and adolescent HPV immunisation.

Immunisation coverage rates in the NT are close to or slightly below the national average for all children and Aboriginal children aged 1, 2 and 5. In East Arnhem, immunisation coverage is high in children at 1, 2 and 5 years of age. Overall, immunisation coverage is high among Aboriginal children in the NT at age 1, 2 and 5 and approaches the national average.

Table 10: Immunisation Coverage, proportion of children fully immunised.

Source: Compiled by PHIDU from Australian Immunisation Register (AIR).

Note: Values of >100% are likely an artefact of high mobility inter- and intra-state within the NT.

	HPV 3-dose Coverage (%) 2017							
	1 Year Old	Aboriginal 1 Year Old	2 Years Old	Aboriginal 2 Years Old	5 Years Old	Aboriginal 5 Years Old	Females Aged 15	Males Aged 15
East Arnhem (SA3)	94.5		93.3		95.2		100.2	71.7
Daly-Tiwi-West Arnhem (SA3)	95.2	-	89.4	-	93.4	-	86.4	77.9
Katherine (SA3)	93.2	-	89.5	-	96.8	-	88.7	92.5
Northern Territory	94.0	92.8	91.0	90.2	93.6	95.8	95.6	88.0
Australia	94.3	92.6	91.6	89.9	94.8	96.9	80.5	76.1

# **10. Health Workforce**

The Health Workforce data published by the Australian Government Department of Health is derived from the national annual registration database for health professionals, by a survey completed at time of registration. This data is limited in the NT context as 'primary location of work in the past' week may not accurately capture the transient population and fly-in fly-out workforce. Therefore, the data presented represents a discrete 'point in time' situation.

Overall, the health workforce in East Arnhem is lower than the rest of the Territory; except for Aboriginal health practitioners, where the rate is higher (Table 11).

There are currently less than four registered practitioners across all allied health disciplines apart from Aboriginal Health Practitioners, Pharmacists and Physiotherapists.

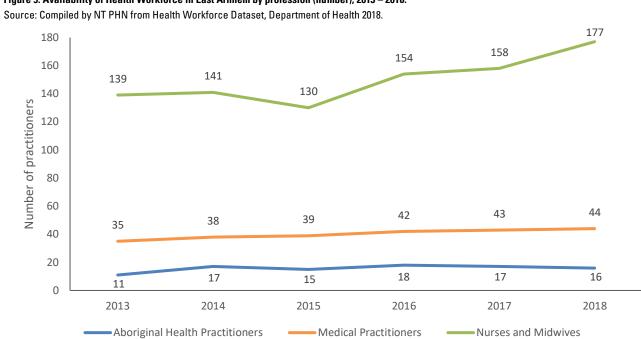
#### Table 11: Availability of Health Workforce, per 10,000 population, 2018.

Source: Health Workforce Data, Department of Health 2018.

	East Arnhem (SA3)	Northern Territory	Australia
Aboriginal Health Practitioners	11.0	5.8	0.8
<b>Medical Practitioners</b>	30.3	48.0	205.3
Nurses and Midwives	122.0	149.6	674.5
Oral Health Practitioners	NP	5.9	44.6
Occupational Therapists	NP	6.5	33.3
Optometrists	NP	1.3	10.6
Pharmacists	4.8	7.1	49.5
Physiotherapists	3.4	6.6	52.7
Podiatrists	NP	1.1	9.7
Psychologists	NP	6.3	53.0

NP - Not published due to low numbers

The East Arnhem region has a high rate of Aboriginal Health Practitioners, yet a lower rate of Medical Practitioners and Nurses and Midwives, when compared to the Territory average. In real terms, between 2013 and 2018, the numbers of Aboriginal Health Practitioners and Medical Practitioners experienced a small increase (Figure 5). The number of Nurses and Midwives experienced a moderate increase and remains relatively high, despite a dip in 2015.



#### Figure 5: Availability of Health Workforce in East Arnhem by profession (number), 2013 – 2018.