GOVERNMENT OF WESTERN AUSTRALIA

PEEL Development Commission

PEEL REGION HEALTHCARE & SOCIAL ASSISTANCE SNAPSHOT

EXECUTIVE SUMMARY REPORT

PROGRESSIVE | PROSPEROUS | DYNAMIC

Contents

PEEL Development Commission

Introduction

The Peel Region Heathcare & Social Assistance Snapshot (hereafter referred to as 'the Snapshot') provides a broad examination of the **demographic, socio-economic, health and welfare** indicators for the Peel region.

The Snapshot has identified core factors that are necessary for the Shires of Boddington, Murray, Serpentine Jarrahdale, Waroona and the City of Mandurah to consider in terms of threshold planning, service delivery reform, and planning for growth.

The following core factors represent an overview of findings of the Snapshot, acting to bridge the data and knowledge of WA Health and its Population Health team, the ABS Statistics, the state demographers forecast population growth (Department of Planning, Lands and Heritage) and the Department of Social Services payment data. The objective of the Snapshot will be to assist in the identification of priorities for interventions, planning and service delivery which can assist in improving the socio-economic, health and wellbeing outcomes of the Peel Region.

Demographic change

The Peel region is a region experiencing significant overall population growth. In terms of the rate of growth across the Local Government Areas (LGA), the Peel essentially comprises three speed tiers. The Shire of Boddington and Shire of Waroona are relatively stable in terms of population growth. The Shire of Murray has experienced mediocre population growth, which is anticipated to strengthen into the next decade. The City of Mandurah and Shire of Serpentine Jarrahdale both have significant growth pressures (Serpentine Jarrahdale to undergo rapid change as it transitions from peri-urban to urban), they are both anticipated to nearly double their existing populations to 2031.

Population change

Peel region

The Peel region has experienced significant population change between 2006 to 2016, increasing from 85,525 to 130,374 persons[1] (Figure 1). This represents an increase of 44,849 persons in the Peel.

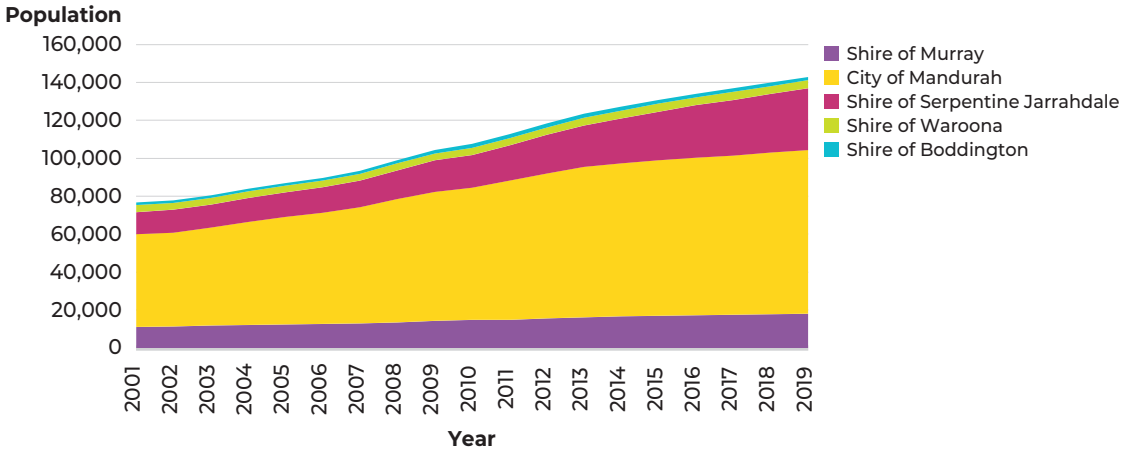


FIGURE 1 Peel region estimated resident population 2001–19

Source: Australian Bureau of Statistics. 2020. ABS.Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

1 Australian Bureau of Statistics. 2016. ABS Tablebuilder Extract Of Local Government Population — Census Years (2006, 2011, 2016) Population By AGEP5. Australian Bureau of Statistics, Government of Australia.

Demographic change (continued)

Shire of Boddington

Population increased between 2006 to 2016, increasing from 1,384 to 1,870 persons[2] (Figure 2). This represents an increase of 486 persons. The Shire of Boddington was home to an estimated resident population of 1,765 in 2020.

Mandurah

Population increased between 2006 to 2016, increasing from 55,821 to 80,816 persons[2] (Figure 3). This represents an increase of 24,995 persons. The City of Mandurah was home to an estimated resident population of 88,080 in 2020.

Shire of Murray

Population increased between 2006 to 2016, increasing from 11,960 to 16,695 persons[2] (Figure 4). This represents an increase of 4,735 persons. The Shire of Murray was home to an estimated resident population of 18,207 in 2020.

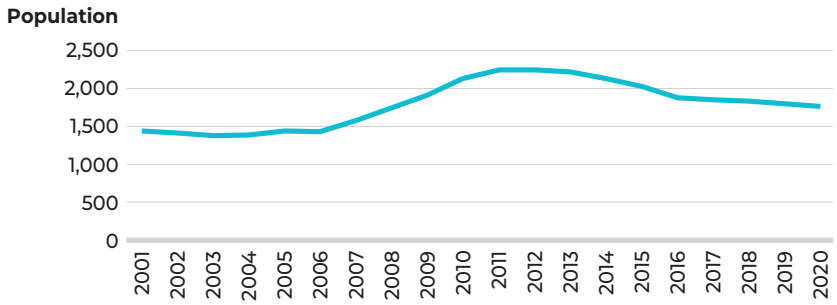


FIGURE 2 Shire of Boddington estimated resident population 2001–19

Source: Australian Bureau of Statistics. 2020. ABS.Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

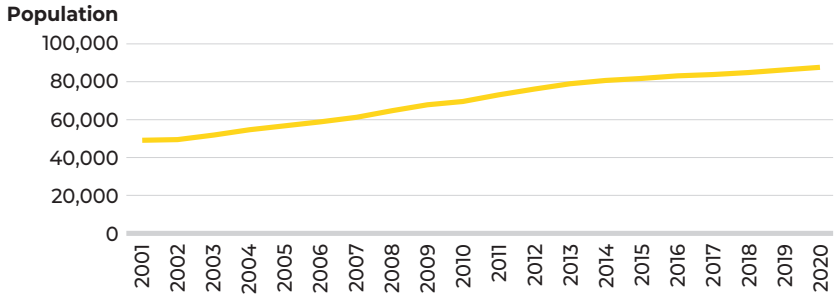


FIGURE 3 City of Mandurah estimated resident population 2001–19

Source: Australian Bureau of Statistics. 2020. ABS.Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

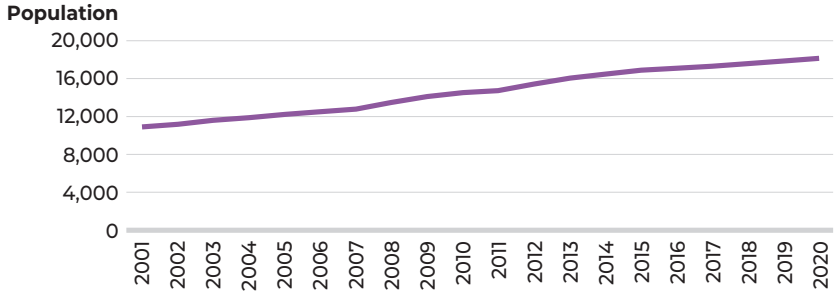


FIGURE 4 Shire of Murray estimated resident population 2001–19

Source: Australian Bureau of Statistics. 2020. ABS.Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

2 Australian Bureau of Statistics. 2020. ABS. Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

Shire of Serpentine Jarrahdale

Population increased between 2006 to 2016, increasing from 12,894 to 26,840 persons[3] (Figure 5). This represents an increase of 13,946 persons. The Shire of Serpentine Jarrahdale was home to an estimated resident population of 33,920 in 2020.

Shire of Waroona

Population increased between 2006 to 2016, increasing from 3,466 to 4,153 persons[3] (Figure 6). This represents an increase of 687 persons. The Shire of Waroona was home to an estimated resident population of 4,267 in 2020.

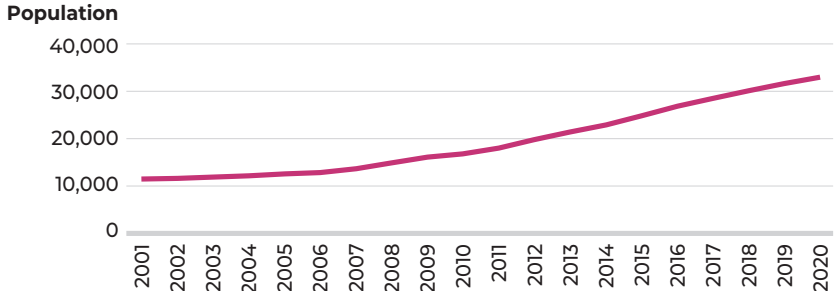


FIGURE 5 **Shire of Serpentine Jarrahdale estimated resident population 2001–19**

Source: Australian Bureau of Statistics. 2020. ABS.Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

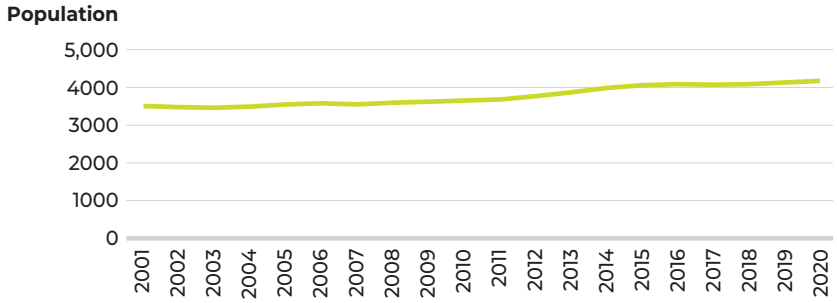


FIGURE 6 **Shire of Waroona estimated resident population 2001–19**

Source: Australian Bureau of Statistics. 2020. ABS.Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

3 Australian Bureau of Statistics. 2020. ABS. Stat Estimated Resident Population 2001–19 (Accessed September 2020). Australian Bureau of Statistics, Government of Australia.

Demographic change (continued)

Population projections

Peel region

It is anticipated per Department of Planning, Lands and Heritage (DPLH) Band C population projections for the Peel region, that the Peel will grow to an estimated 212,540 persons by 2031 (Figure 7). This represents an increase of 82,166 persons in the Peel.

Shire of Boddington

DPLH Band C projections to 2031 estimate that the Shire of Boddington will be home to 2,010 persons (Figure 8).

City of Mandurah

DPLH Band C projections to 2031 estimate that the City of Mandurah will be home to 121,300 persons (Figure 9).

POPULATION PROJECTIONS

PEEL REGION
212,540

SHIRE OF BODDINGTON
2,010

CITY OF MANDURAH
121,300

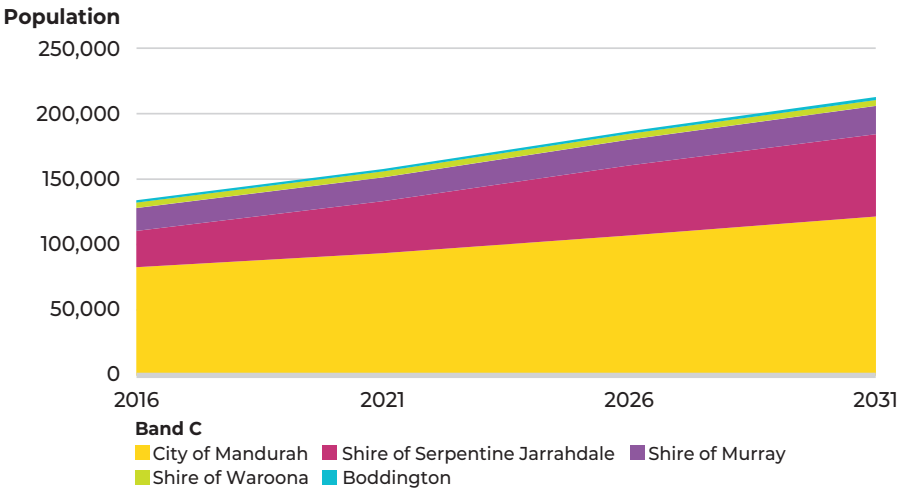


FIGURE 7 Peel region WA Tomorrow population projection — Band C

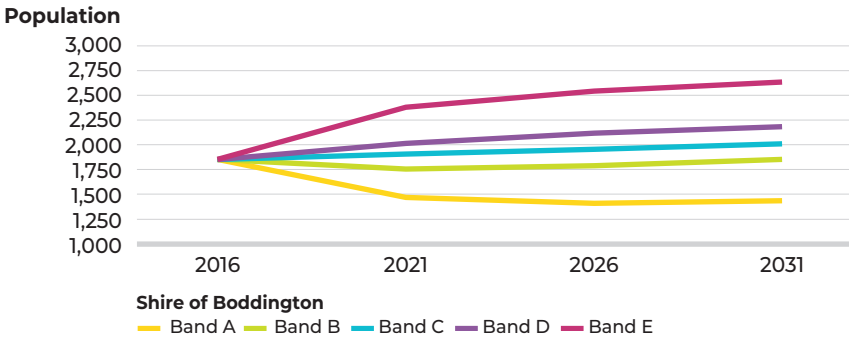


FIGURE 8 Shire of Boddington WA Tomorrow population projections

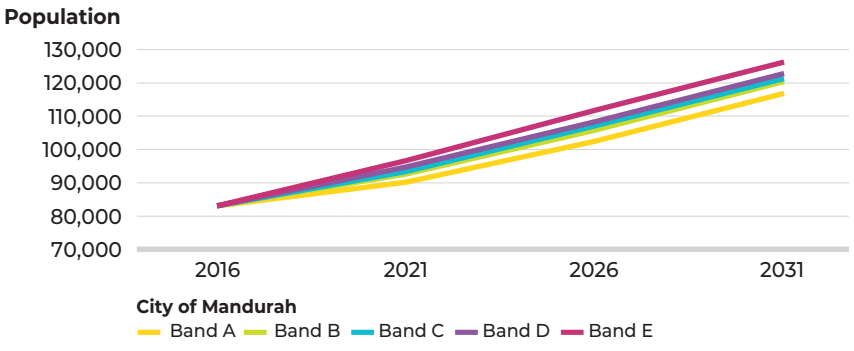


FIGURE 9 City of Mandurah WA Tomorrow population projections

POPULATION PROJECTIONS

SHIRE OF MURRAY

21,610

SHIRE OF SERPENTINE-JARRAHDALE

62,920

SHIRE OF WAROONA

4,700

Shire of Murray

DPLH Band C projections to 2031 estimate that the Shire of Murray will be home to 21,610 persons (Figure 10).

Shire of Serpentine Jarrahdale

DPLH Band C projections to 2031 estimate that the Shire of Serpentine Jarrahdale will be home to 62,920 persons (Figure 11).

Shire of Waroona

DPLH Band C projections to 2031 estimate that the Shire of Waroona will be home to 4,700 persons (Figure 12).

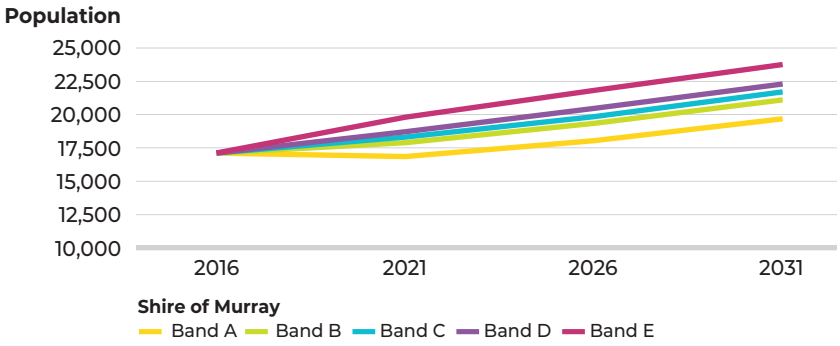


FIGURE 10 Shire of Murray WA Tomorrow population projections

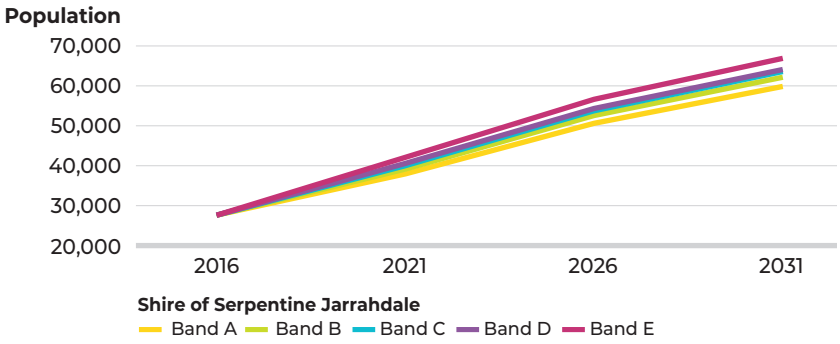


FIGURE 11 Shire of Serpentine Jarrahdale WA Tomorrow population projections

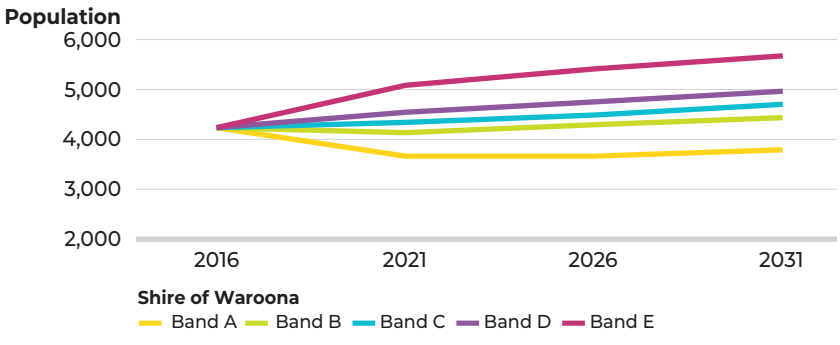


FIGURE 12 Shire of Waroona WA Tomorrow population projections

Demographic change (continued)

Population distribution

Peel region

Figure 13 highlights the estimated age/sex population distribution by age cohort in the Peel region by 2031. From 2006, there has been a consistent increase in the population, and the continued trend is projected of an increasing early age population and retiree age cohort. As we move towards 2031, a large proportion of youth becomes evident in the Peel and will have broad implications for infrastructure demand and service delivery.

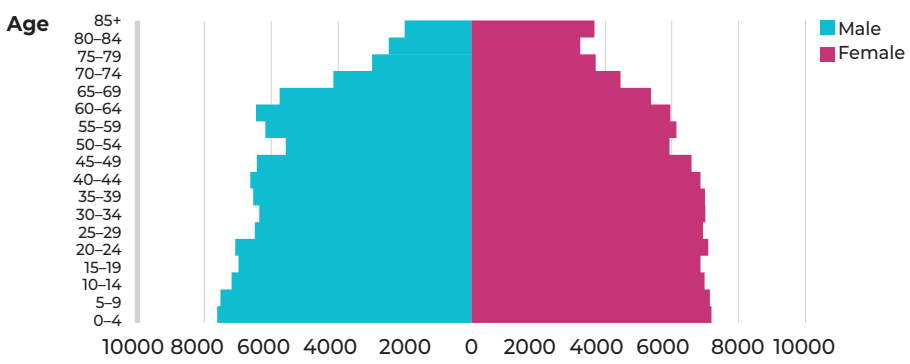


FIGURE 13 Peel region — DPLH 2031 population projection (Band C)

Shire of Boddington

Figure 14 demonstrates the Shire of Boddington estimated age/sex population distribution by age cohort in the Shire of Boddington by 2031. In 2016, significant representative population cohorts are those of an ageing workforce and growth of the retiree population (30–64 years). The youth cohort (0–19 years) presents evidence of a small proportion of young-middle age families and an evident pattern of outward emigration for those aged 15–29.

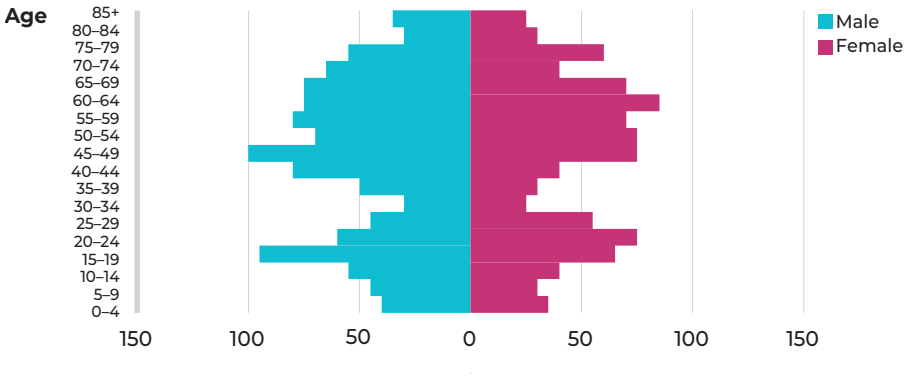


FIGURE 14 Shire of Boddington — DPLH 2031 population projection (Band C)

City of Mandurah

Figure 15 demonstrates the City of Mandurah estimated age/sex population distribution by age cohort in the City of Mandurah by 2031. In 2016, significant representative population cohorts in the Peel are those of an ageing workforce and growth of the retiree population (35–70 years). There is an increase in the prevalence of the youth/young adult cohort compared to the retiree age cohorts estimated in the City of Mandurah by 2031.

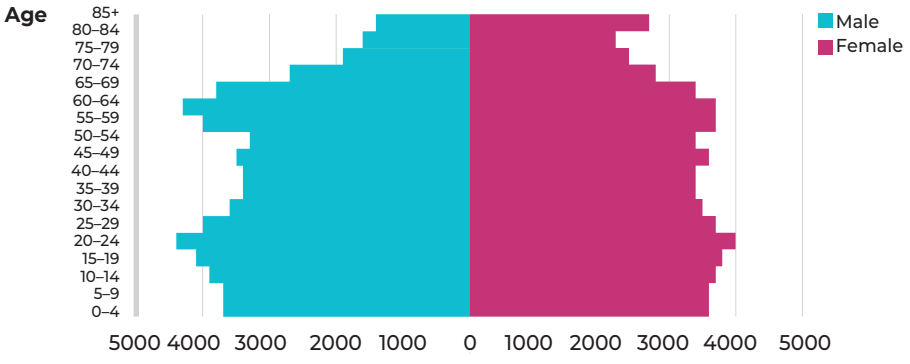


FIGURE 15 City of Mandurah — DPLH 2031 population projection (Band C)

Shire of Murray

Figure 16 demonstrates the Shire of Murray estimated age/sex population distribution by age cohort in the Shire of Murray by 2031. In 2016, significant representative population cohorts are those of an ageing workforce and growth of the retiree population (40–69 years). The increase in the prevalence of the youth/young adult cohort compared to the retiree age cohorts is estimated in the Shire of Murray by 2031.

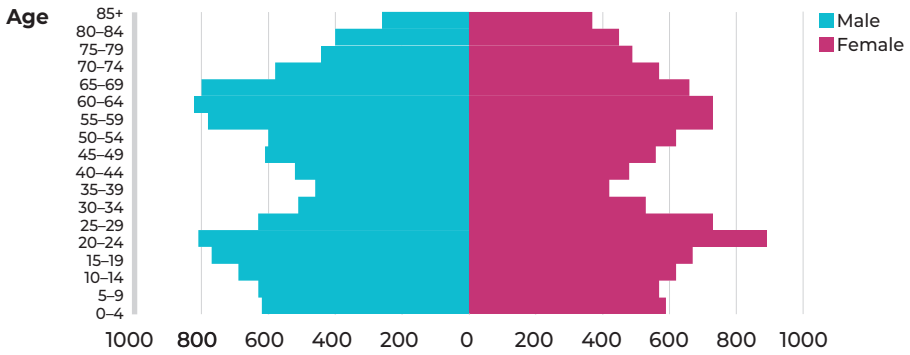


FIGURE 16 Shire of Murray — DPLH 2031 population projection (Band C)

Shire of Serpentine Jarrahdale

Figure 17 demonstrates the Shire of Serpentine Jarrahdale estimated age/sex population distribution by age cohort in the Shire of Serpentine Jarrahdale by 2031. In 2016, it is relevant to note that the most significant representative population cohort is the early age working population (15–34), and families given the size of the child cohort. Estimated increase in the child cohort and young-middle aged persons by 2031 is significant.

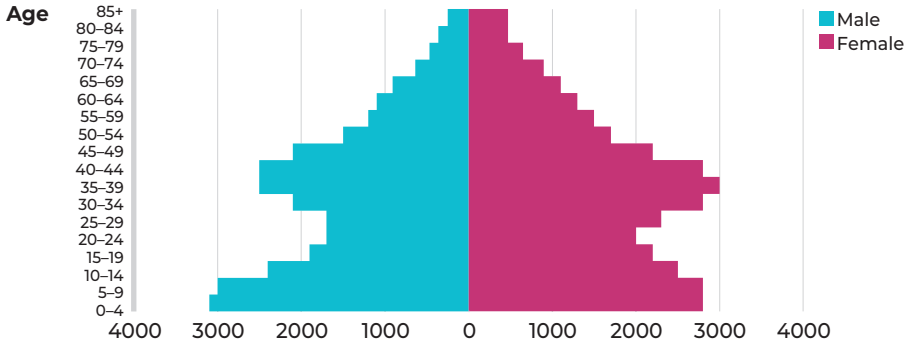


FIGURE 17 Shire of Serpentine Jarrahdale — DPLH 2031 population projection

Shire of Waroona

Figure 18 demonstrates the Shire of Waroona estimated age/sex population distribution by age cohort in the Shire of Waroona by 2031. In 2016, the significant representative population cohort is the working age population (35–64) followed by the proportion within the child cohort (0–14). Anticipated increase in the proportion of people within the Aged 65–84 cohort, and an estimated increase in the child cohort in 2031 as a result of early working aged persons in the Shire of Waroona.

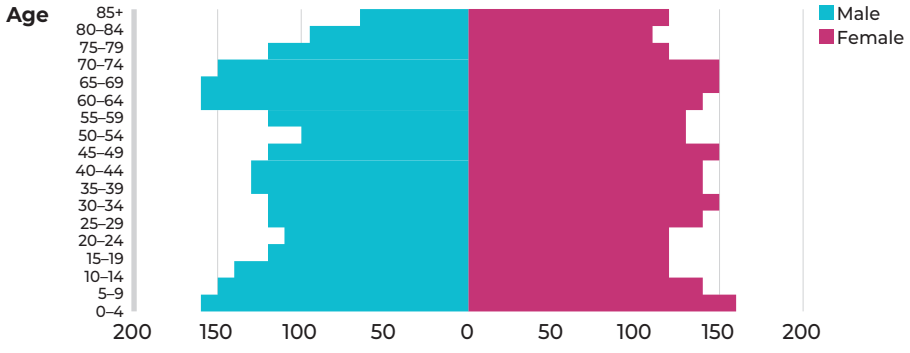


FIGURE 18 Shire of Waroona — DPLH 2031 population projection (Band c)

Demographic change (continued)

Table 1 provides a summary of the population change since the 2006 Census to the 2016 Census, and the projected size of the age cohorts to 2031 based on the Department of Planning, Lands and Heritage 'WA Tomorrow' — Band C projections. This demonstrates the broader demographic changes which have occurred since 2006–16, and the potential age distribution of the population to 2031.

Key matters for consideration in Peel (servicing/ policy response)

Service demand

- Population growth of the Peel will require additional investment in the delivery of population services (healthcare, aged care and education) and supporting infrastructure.
- Service delivery planning will need to consider priority areas in terms of population growth, the statistical significance of age cohorts (in terms of current and anticipated population change) and service delivery thresholds within respective Peel local governments.
- Strong engagement between service providers, government departments and agencies will be required to provide short, medium and long-term project identification and delivery. These include ancillary support service development around key population cohort clusters and priority populations.
- Given the population distribution in the Peel, future service delivery planning and delivery will need to take into account population density, servicing district sizes (geographical footprint and population catchment) to ensure equitable service delivery based on service type in terms of low, medium and high order goods and services (local services, regional services and inter-regional services).
- A common approach to the analysis of demographic trends and shared undertaking threshold planning and service delivery in all mechanisms of government ((utilities, population services (health, education, and community services) and land supply (supporting housing diversity)).
- All population age cohorts in the Peel are experiencing population increases between 2006 and 2016 and are anticipated to increase to 2031 (Table 1).
- Specific demographic changes involving the 0–14 and 15–34+ Age Cohorts between 2021 and 2031 will require threshold planning to support the identification of service delivery thresholds for population services, specifically education and training and population health (Table 1).
- The development of additional tertiary education facilities and linked training facilities with Perth Metropolitan Region universities within the Peel region will support the retention and development of the Peel skills base and reduce outmigration of this cohort.
- Specific demographic changes involving the 65–84+ and 85+ Age Cohorts between 2021 and 2031 represent a strong economic opportunity and population service demand source for the Peel region in allied health service provision and aged care service delivery (Table 1).

TABLE 1 Population cohort analysis and population representative distribution — 2006–31

	Children 0–14		Working age population (early age) 15–34		Working age population (mid age) 35–64		Aged 65–84		Population aged 85+		Total
	#	%	#	%	#	%	#	%	#	%	#
Peel region											
2006	16,935	19.80	17,661	20.65	35,365	41.35	14,224	16.63	1340	1.57	85,525
2011	21,236	19.73	24,455	22.72	42,609	39.59	17,383	16.15	1935	1.80	107,618
2016	25,267	19.38	30,608	23.48	49,009	37.59	22,773	17.47	2717	2.08	130,374
2021	31,955	20.26	39,090	24.78	58,160	36.87	25,180	15.96	3350	2.12	157,735
2026	38,025	20.38	48,050	25.76	67,605	36.24	28,310	15.18	4550	2.44	186,540
2031	43,635	20.53	54,790	25.78	76,250	35.88	32,170	15.14	5695	2.68	212,540
Shire of Boddington											
2006	324	23.41	266	19.22	642	46.39	147	10.62	5	0.36	1384
2011	381	17.16	597	26.89	1061	47.79	163	7.34	18	0.81	2220
2016	398	21.28	392	20.96	841	44.97	229	12.25	10	0.53	1870
2021	395	20.73	320	16.80	880	46.19	285	14.96	25	1.31	1905
2026	325	16.62	360	18.41	895	45.78	330	16.88	45	2.30	1955
2031	245	12.19	450	22.39	830	41.29	425	21.14	60	2.99	2010
Shire of Mandurah											
2006	10,486	18.79	11,530	20.66	22,148	39.68	10,575	18.94	1082	1.94	55,821
2011	13,149	18.81	15,767	22.55	26,724	38.22	12,713	18.18	1560	2.23	69,913
2016	14,551	18.01	17,995	22.27	29,949	37.06	16,203	20.05	2118	2.62	80,816
2021	17,400	18.63	21,800	23.34	34,400	36.83	17,200	18.42	2600	2.78	93,400
2026	19,500	18.21	26,600	24.84	38,800	36.23	18,800	17.55	3400	3.17	107,100
2031	22,200	18.30	31,100	25.64	43,100	35.53	20,800	17.15	4100	3.38	121,300
Shire of Murray											
2006	2330	19.48	2275	19.02	5246	43.86	1997	16.70	112	0.94	11,960
2011	2792	19.72	2855	20.17	5810	41.04	2518	17.79	181	1.28	14,156
2016	3143	18.83	3454	20.69	6493	38.89	3303	19.78	302	1.81	16,695
2021	3420	18.71	3920	21.44	6960	38.07	3620	19.80	360	1.97	18,280
2026	3430	17.32	4710	23.79	7230	36.52	3940	19.90	490	2.47	19,800
2031	3720	17.21	5540	25.64	7330	33.92	4390	20.31	630	2.92	21,610
Shire of Serpentine Jarrahdale											
2006	3011	23.35	2880	22.34	5867	45.50	1037	8.04	99	0.77	12,894
2011	4182	23.55	4477	25.21	7503	42.25	1475	8.31	120	0.68	17,757
2016	6404	23.86	7949	29.62	10039	37.40	2262	8.43	186	0.69	26,840
2021	10,000	25.12	12,100	30.39	14260	35.82	3200	8.04	250	0.63	39,810
2026	14,000	26.32	15,400	28.95	19060	35.83	4290	8.06	450	0.85	53,200
2031	16,600	26.38	16,700	26.54	23400	37.19	5500	8.74	720	1.14	62,920
Shire of Waroona											
2006	784	22.62	710	20.48	1462	42.18	468	13.50	42	1.21	3466
2011	732	20.49	759	21.25	1511	42.30	514	14.39	56	1.57	3572
2016	771	18.56	818	19.70	1687	40.62	776	18.69	101	2.43	4153
2021	740	17.05	950	21.89	1660	38.25	875	20.16	115	2.65	4340
2026	770	17.17	980	21.85	1620	36.12	950	21.18	165	3.68	4485
2031	870	18.51	1000	21.28	1590	33.83	1055	22.45	185	3.94	4700

Source: Australian Bureau of Statistics. 2016. ABS Tablebuilder Extract Of Local Government Population — Census Years (2006, 2011, 2016) Population By AGEP5. Australian Bureau of Statistics, Government of Australia and Department of Planning, Lands & Heritage. 2017. WA Tomorrow Population Forecast (Band C) (2021, 2026 & 2031) By Age Cohorts. Department of Planning, Lands & Heritage, Government of Western Australia.

Demographic change (continued)

Urban development

- To increase community resilience and sustainability for the Peel, further generation of local employment opportunities is required. This involves the delivery of land use planning under the Peel region Scheme (DPLH), along with the respective Local Planning Schemes and land use planning mechanisms of the Shires of Boddington, Murray, Serpentine Jarrahdale, Waroona and City of Mandurah
- Regional marketing and promotion of key industrial and commercial nodes will assist with investment attraction, and establishing additional presence in commercialisation of research and development in the Peel will assist in the growth of the services economy
- Urban development utilising universal access design, along with increased housing diversity will be significant to support different population cohorts and household sizes within the Peel
- The greenfield expansion of urban areas and brownfield redevelopment should encourage the development of liveable neighbourhoods, and age friendly communities
- Development of urban areas should take into account dementia-friendly design, including waymarking, and a consistent urban form (well networked, walkable and navigable urban form)

Key planning instruments, considerations and partnerships to assist in creating/promoting universally accessible and pedestrian orientated/active communities:

Public open space planning (Planning Framework)

- DLGSC — Public Parklands Planning and Design Guide
- DLGSC — Classification Framework For Public Open Space
- DLGSC — Active Open Space (Playing Fields) In A Growing Perth-Peel
- DLGSC — Needs Assessment Guide — Sport and Recreation Facilities
- Heart Foundation — Healthy Active By Design
- Community Walkability Checklist
- Healthy Active By Design Checklist
- Urban Design Study — Active Travel To School
- Blueprint For An Active Australia
- DPLH — Liveable Neighbourhoods
- DPLH — Development Control Policy 2.3 — Public Open Space In Residential Areas
- DPLH — Development Control Policy 5.3 Use Of Land Reserved For Parks and Recreation and Open Space

Public infrastructure considerations

- Climate adaptation measures and pedestrian environment enhancement
  - Streetscaping (amenity improvement and infrastructure provisioning)
  - Urban forest canopy expansion (improve walkability during summer and High/Extreme UV)
  - Alternative pavement treatments (reduce urban heat island effect)
  - Dual purpose parklands (district drainage infrastructure/parkland)
    - » Ability to deliver interconnected stormwater drainage/storage detention basins and deliver integrated parkland network

    - » Utilising high pressure gas pipeline corridors in planning strategic pedestrian network connections (Principal Shared Paths (PSP) and bike path networks)
  - Public health infrastructure (youth cohort appropriate park infrastructure, adult park gym equipment — free and accessible)
- Auditing
  - Dusk/dawn illuminated precincts and urban walk trails (in accordance with *DPLH Designing Out Crime Guidelines 2006*)
  - Encouraging urban bike path development/ strategic pedestrian network enhancement (considering walkable catchment — destination/ trip analysis)
  - Aged access/disability access (designing communities accessible to all user groups — universal access design)
  - Identify demographic demand locally and plan and build towards aged friendly communities/ dementia friendly communities (either in the form of localised precinct or in greenfield development areas)

Liaison with service providers (NFP, NGO, health professionals government, private)

- Ancillary health service delivery
- Shared health promotion programs
- Developing localised priority action plans (items that can be implemented by LGA, State Government, health professionals — track outcomes over time)

Key actions in summary: demographics

The region's most significant challenge will be overall population growth and servicing a broad geographic profile. The Peel has a currently estimated population of 142,960 in 2019 and will be home to an estimated 212,540 persons by 2031.

There will be distinct challenges for Peel Local Governments, with some cohorts predicted to experience considerable population growth, such as an ageing population in the City of Mandurah, and a significant increase in the youth population in the Shire of Serpentine Jarrahdale. Several local governments will have shared priority areas, between a growing youth population, the increase in young families and middle-aged persons, along with an increase in the retiree and ageing population.

All stakeholders will need to collaborate to deliver population health services, welfare services and universal access design infrastructure. Together, the Peel can undertake coordinated regional planning that assists in the delivery of sustainable and appropriate services to cater to the region's growing population and increase the health and wellbeing of the Peel. This will require the participation of Local Government, State Government, Federal Government along with public and private partners and the NFP/ Community organisations.

Socio-Economic Indexes for Areas

Key actions in summary: demographics

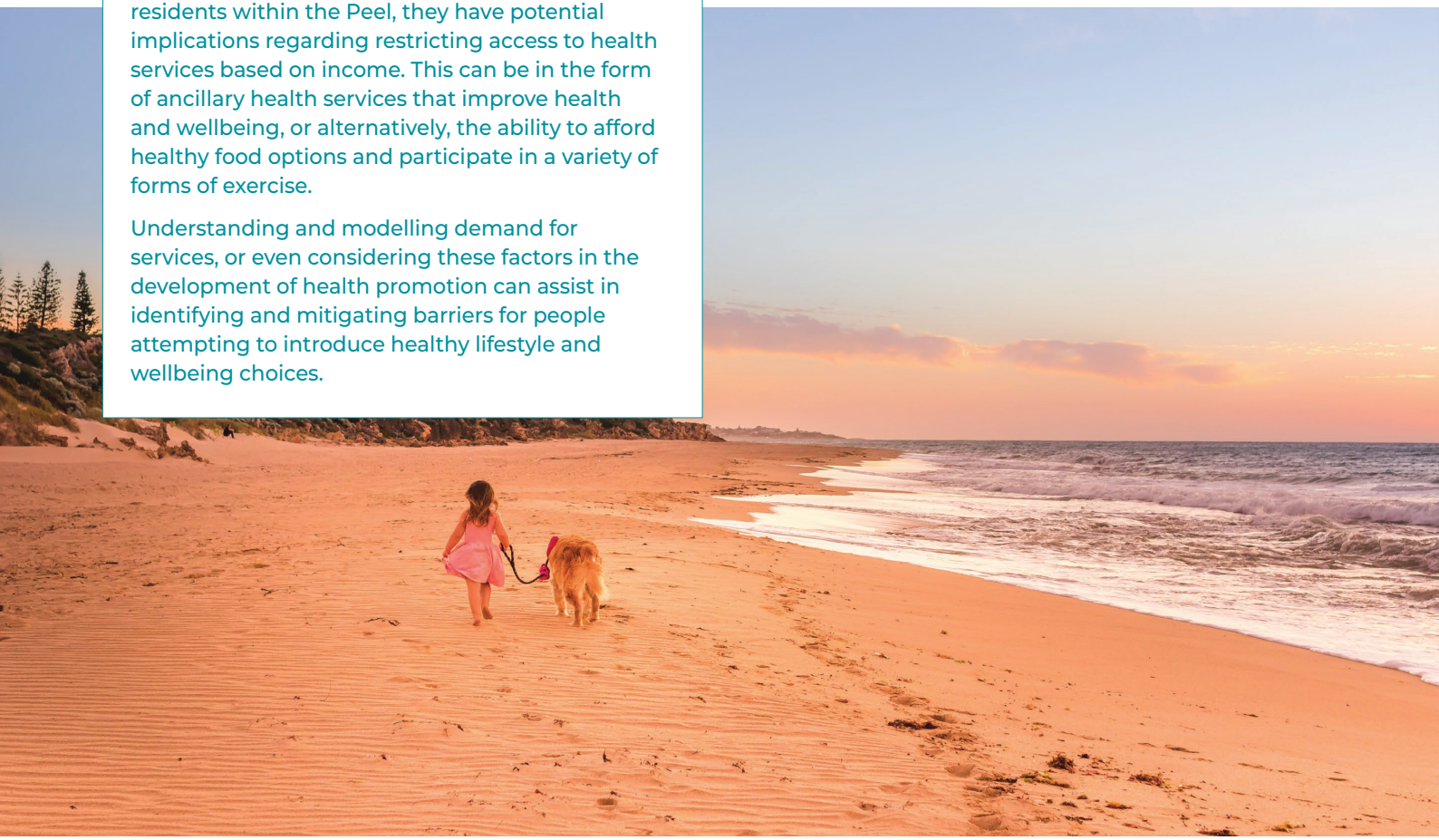
There is significant relevance in understanding the underpinning socio-economic profile and potential implications on health, service demand and infrastructure provision. By understanding key social, education and economic factors, we can identify areas that will be priorities, such as low cost healthcare access, educational resourcing and pressures which may underpin broader economic, social and wellbeing issues.

Low incomes are a significant challenge across the Peel, along with unemployment and the prevalence of low-skill employment. Whilst these factors do not directly affect the healthcare of residents within the Peel, they have potential implications regarding restricting access to health services based on income. This can be in the form of ancillary health services that improve health and wellbeing, or alternatively, the ability to afford healthy food options and participate in a variety of forms of exercise.

Understanding and modelling demand for services, or even considering these factors in the development of health promotion can assist in identifying and mitigating barriers for people attempting to introduce healthy lifestyle and wellbeing choices.

Implications for health and nutrition

Socio-Economic Indexes for Areas (SEIFA) scores and their underlying variables, particularly those of the Index of Relative Socio-Economic Disadvantage, highlight relevant considerations with respect to the Health Profile of the Peel. Incomes will have a direct impact upon uptake of balanced and healthy diet and nutrition practices to an extent, along with the ability to participate in all forms of private and public exercise. This has implications for physical activity and wellbeing, and therefore has a structural impact on health and wellbeing that will take a longitudinal approach over time, across multiple levels of government (health, education and social welfare) to assist in uplifting the health of the Peel.



SEIFA are prepared by the Australian Bureau of Statistics utilising Australian Census Data, with the most recent SEIFA data available from the analysis of the 2016 Census. SEIFA is utilised in formation of policies, government investment and business case development, and furthering socio-economic research to reduce disadvantage within Australia. Therefore, it is relevant to determine how SEIFA is calculated, how each Index is utilised and what datasets comprise SEIFA's 2016 indexes.

SEIFA are constructed at Statistical Area Level 1, which are small geographical areas of Australia, which when calculated are built up to the relevant SA2, SA3, SA4 and Local Government boundaries.

SEIFA are constructed and assigned as an area score (not a personal indexation) utilising specific Census datasets.

- Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)
  - Examining variables relating the relative advantage or disadvantage of an area (Table 3 on page 16).
- Index of Relative Socio-Economic Disadvantage (IRSD)
  - Examining variables relating to the relative disadvantage of an area (Table 4 on page 17).
- Index of Education and Occupation (IEO)
  - Specifically examines variables relating to the relative educational and occupational aspects of relative socio-economic advantage and disadvantage (Table 5 on page 18).
- Index of Economic Resources (IER)
  - Specifically examines variables relating to the relative financial aspects of socio-economic advantage and disadvantage (Table 6 on page 19).

Three of the indexes (IRSAD, IEO and IER) utilise both positive and negative variables to determine an areas level of relative advantage and disadvantage, whilst the Index of Relative Socio-Economic Disadvantage (IRSD) utilises solely negative variables to determine the relative disadvantage of an area.

Table 2 provides the ranking of the Local Governments of the Peel in the context of the four SEIFA Indexes.

TABLE 2 Peel region SEIFA — Western Australian ranking (decile and percentile)

	IRSD			IRSAD			IER			IEO		
	Score	Decile	Percentile	Score	Decile	Percentile	Score	Decile	Percentile	Score	Decile	Percentile
Boddington (S)	991	6	51	978	5	49	1027	8	72	932	3	26
Mandurah (C)	971	4	37	958	4	38	1006	6	56	927	2	20
Murray (S)	962	4	32	947	3	29	1025	8	72	896	1	7
Serpentine Jarrahdale (S)	1040	9	87	1022	9	82	1101	10	97	946	4	36
Waroona (S)	945	3	22	930	2	18	1008	6	57	886	1	6

Source: Australian Bureau of Statistics. 2018. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 — Local Government Area, Indexes (STE: WA Ranking Data — IRSD, IRSAD, IER, IEO), SEIFA 2016 Datacube.

TABLE 3 Index of **RELATIVE SOCIO-ECONOMIC** Advantage and Disadvantage

Index factor	Variable loading	(%)								
		WA	Regional WA	Greater Perth	Peel	Boddington	Mandurah	Murray	Serpentine-Jarrahdale	Waroona
% people with stated annual income between $1–$25,999 (1st, 2nd deciles)	-0.89	18.02	22.25	16.66	22.67	17.75	25.48	24.91	13.07	25.30
% people aged 15+ whose highest level of education is Yr11 < (includes Certificate I and II)	-0.85	23.40	32.18	20.48	32.50	35.11	32.47	38.16	27.60	39.95
% employed persons classed as 'labourers'	-0.79	9.89	12.57	8.93	11.17	8.61	11.29	12.99	9.94	13.83
% occupied private dwellings with no internet connection	-0.78	13.08	17.96	11.34	14.33	17.43	15.27	16.42	8.02	21.37
% families with children under 15 who live with jobless parents	-0.76	5.15	6.39	4.74	6.30	5.24	6.88	6.89	4.33	5.70
% people aged under 70 who have a long-term health condition/disability and need assistance with core activities	-0.69	2.49	2.82	2.38	3.34	2.50	3.67	3.92	2.18	3.32
% people in the labour force unemployed	-0.66	7.76	6.94	8.03	9.72	6.14	10.90	9.63	7.12	8.90
% one parent families with dependent offspring only	-0.65	8.34	9.03	8.10	9.09	8.33	9.80	8.90	7.18	8.53
% occupied private dwellings paying rent < $215/pw (excluding $0/pw)	-0.64	7.03	12.14	5.39	5.42	6.20	6.63	5.86	1.15	8.13
% employed persons classed as 'machinery operators and drivers'	-0.62	7.64	11.74	6.16	11.18	27.43	9.56	13.42	11.67	16.18
% people aged 15+ who are separated/divorced	-0.6	11.45	12.46	11.06	13.48	13.51	14.30	14.33	10.13	14.58
% employed persons classed as 'low skill community' and 'personal service workers'	-0.54	10.77	7.35	7.86	11.86	5.31	12.74	10.74	10.97	11.81
% people aged 15+ whose highest level of educational attainment is Certificate III or IV	-0.36	19.85	24.76	18.21	25.50	23.87	24.72	25.78	27.76	26.64
% people aged 15+ who have no educational attainment	-0.34	0.60	0.38	0.67	0.24	0.00	0.21	0.24	0.26	0.91
% occupied private dwellings with no cars	-0.33	5.21	5.20	5.22	3.75	4.53	4.76	2.66	1.06	2.56
% occupied private dwellings requiring one or more extra bedrooms^	-0.33	2.63	2.82	2.56	1.66	2.81	1.41	2.13	1.83	3.25
% employed people classified 'low skill sales'	-0.32	6.74	6.44	6.83	7.45	2.22	8.14	7.41	6.41	5.33
% people aged 15+ at university/tertiary institutions	0.36	5.78	1.97	7.18	3.19	1.28	3.31	2.51	3.66	1.58
% occupied private dwellings with 4+ bedrooms	0.44	44.93	42.94	45.60	53.54	47.87	50.13	50.06	70.20	44.60
% occupied private dwellings paying rent $470 >/pw	0.47	6.31	2.91	7.41	1.99	0.00	2.14	1.82	1.90	1.00
% employed persons classed as managers	0.47	12.22	13.35	11.81	9.83	10.70	9.27	11.06	10.41	10.31
% people aged 15+ whose highest level of education is diploma qualification	0.5	4.72	4.12	4.92	4.49	3.77	4.79	4.03	4.02	3.69
% employed persons classed as professionals	0.71	20.81	14.22	23.19	13.34	11.02	14.66	11.11	12.14	8.61
% occupied private dwellings paying mortgage greater than $2,800/pm	0.72	11.81	7.25	13.28	9.88	8.01	7.82	11.17	15.60	9.13
% people with stated annual household equivalised income greater than $78,000 (9th, 10th deciles)	0.83	26.47	22.07	27.88	19.87	30.95	18.96	19.49	22.00	20.44

^ Based on Canadian National Occupancy Standard

Source: ABS 2016 Census

TABLE 4 Index of Relative **SOCIO-ECONOMIC** Disadvantage

Index factor	Variable loading	(%)								
		WA	Regional WA	Greater Perth	Peel	Boddington	Mandurah	Murray	Serpentine-Jarrahdale	Waroona
% people with stated annual income between $1–$25,999 (1st, 2nd deciles)	-0.91	18.02	22.25	16.66	22.67	17.75	25.48	24.91	13.07	25.30
% families with children under 15 who live with jobless parents	-0.83	5.15	6.39	4.74	6.30	5.24	6.88	6.89	4.33	5.70
% occupied private dwellings with no internet connection	-0.79	13.08	17.96	11.34	14.33	17.43	15.27	16.42	8.02	21.37
People aged 15+ whose highest level of education is Yr11 or lower. Includes Certificate I and II	-0.77	23.40	32.18	20.48	32.50	35.11	32.47	38.16	27.60	39.95
% people (in the labour force) unemployed	-0.75	7.76	6.94	8.03	9.72	6.14	10.90	9.63	7.12	8.90
% employed persons classed as 'labourers'	-0.74	9.89	12.57	8.93	11.17	8.61	11.29	12.99	9.94	13.83
% occupied private dwellings paying rent <$215/pw (excluding $0/pw)	-0.73	7.03	12.14	5.39	5.42	6.20	6.63	5.86	1.15	8.13
% one parent families with dependent offspring only	-0.67	8.34	9.03	8.10	9.09	8.33	9.80	8.90	7.18	8.53
% people aged under 70 who have a long-term health condition/disability and need assistance with core activities	-0.67	2.49	2.82	2.38	3.34	2.50	3.67	3.92	2.18	3.32
% people aged 15+ who are separated/divorced	-0.55	11.45	12.46	11.06	13.48	13.51	14.30	14.33	10.13	14.58
% employed persons classed as 'machinery operators and drivers'	-0.54	7.64	11.74	6.16	11.18	27.43	9.56	13.42	11.67	16.18
% employed persons classed as 'low skill community' and 'personal service workers'	-0.53	7.74	7.35	7.86	8.51	4.56	9.12	7.70	7.67	8.80
% occupied private dwellings with no cars	-0.49	5.21	5.20	5.22	3.75	4.53	4.76	2.66	1.06	2.56
% occupied private dwellings requiring one or more extra bedrooms^	-0.46	2.63	2.82	2.56	1.66	2.81	1.41	2.13	1.83	3.25
% people aged 15+ who have no educational attainment	-0.43	0.60	0.38	0.67	0.24	0.00	0.21	0.24	0.26	0.91
% people who do not speak English well	-0.3	2.15	0.63	2.71	0.41	0.00	0.46	0.12	0.49	0.44

^ Based on Canadian National Occupancy Standard

Source: ABS 2016 Census

TABLE 5 Index of Education and Occupation

Index factor	Variable loading	(%)								
		WA	Regional WA	Greater Perth	Peel	Boddington	Mandurah	Murray	Serpentine-Jarrahdale	Waroona
People aged 15+ whose highest level of education is Yr11 or lower. Includes Certificate I and II	-0.87	23.40	32.18	20.48	32.50	35.11	32.47	38.16	27.60	39.95
% employed who work in skill Level 5 occupation	-0.81	17.01	18.46	16.54	18.85	12.68	19.60	20.08	16.80	19.33
% employed who work in skill Level 4 occupation	-0.77	24.04	26.80	23.16	28.78	36.70	27.65	29.92	30.06	31.93
% people aged 15+ whose highest level of educational attainment is Certificate III or IV	-0.55	19.85	24.76	18.21	25.50	23.87	24.72	25.78	27.76	26.64
% people (in the labour force) unemployed	-0.55	7.76	6.94	8.03	9.72	6.14	10.90	9.63	7.12	8.90
% people aged 15+ who have no educational attainment	-0.31	0.60	0.38	0.67	0.24	0.00	0.21	0.24	0.26	0.91
% employed people who work in a skill Level 2 occupation	0.35	12.83	12.26	13.01	12.41	11.58	12.74	11.86	12.08	11.13
% people aged 15+ at university or other tertiary institution	0.48	5.78	1.97	7.18	3.19	1.28	3.31	2.51	3.66	1.58
% people aged 15+ whose highest level of educational attainment is a diploma qualification	0.51	4.72	4.12	4.92	4.49	3.77	4.79	4.03	4.02	3.69
% employed people who work in skill Level 1 occupation	0.89	28.85	23.13	30.69	18.76	23.15	19.24	17.11	18.58	15.07

Source: ABS 2016 Census

TABLE 6 Index of Economic Resources

Index factor	Variable loading	(%)								
		WA	Regional WA	Greater Perth	Peel	Boddington	Mandurah	Murray	Serpentine-Jarrahdale	Waroona
% people with stated annual income between $1–$25,999 (1st, 2nd Deciles)	-0.77	18.02	22.25	16.66	22.67	17.75	25.48	24.91	13.07	25.30
% occupied private dwellings with no cars	-0.73	5.21	5.20	5.22	3.75	4.53	4.76	2.66	1.06	2.56
% occupied private dwellings paying rent <$215/pw (excluding $0/pw)	-0.72	7.03	12.14	5.39	5.42	6.20	6.63	5.86	1.15	8.13
% occupied private dwellings who are lone person occupied private dwellings	-0.66	22.46	23.59	22.07	21.84	22.97	24.35	21.71	12.49	23.35
% one parent families with dependent offspring only	-0.63	8.34	9.03	8.10	9.09	8.33	9.80	8.90	7.18	8.53
% people (in the labour force) unemployed	-0.54	7.76	6.94	8.03	9.72	6.14	10.90	9.63	7.12	8.90
% occupied private dwellings requiring one or more extra bedrooms^	-0.51	2.63	2.82	2.56	1.66	2.81	1.41	2.13	1.83	3.25
% occupied private dwellings who are group occupied dwellings	-0.37	3.59	2.58	3.93	2.34	0.96	2.60	1.87	1.89	1.92
% occupied private dwellings owning dwelling without a mortgage	0.36	27.46	29.31	26.83	28.42	28.60	29.67	32.57	20.40	38.60
% dwellings with at least one person who is an owner of an unincorporated enterprise	0.52	8.14	9.92	7.60	8.72	7.21	8.47	9.69	9.02	8.08
% people with stated annual household equivalised income greater than $78,000 (9th, 10th deciles)	0.55	26.47	22.07	27.88	19.87	30.95	18.96	19.49	22.00	20.44
% occupied private dwelling owning dwelling (with a mortgage)	0.67	46.02	39.03	48.38	47.28	41.51	42.31	44.53	65.65	41.40
% occupied private dwellings paying mortgage greater than $2,800/pm	0.68	11.81	7.25	13.28	9.88	8.01	7.82	11.17	15.60	9.13
% occupied private dwellings with 4+ bedrooms	0.74	44.93	42.94	45.60	53.54	47.87	50.13	50.06	70.20	44.60

^ Based on Canadian National Occupancy Standard

Source: ABS 2016 Census

Socio-Economic Indexes for Areas (continued)

Key observations

IRSAD

- Proportion of those on low incomes as a percentage of their population is higher in Mandurah (25.48%), Murray (24.91%) and Waroona (25.30%) compared to WA (18.02%), Regional WA (22.79%) and Greater Perth (16.58%). The Peel overall is in-line with WA as a result of the broader middle-income profile of Boddington and Serpentine Jarrahdale (low income percentage as proportion of their population is 17.75% and 13.07% respectively)
- Significantly higher proportion of low skill occupations in the Peel compared to WA. 'Low Skill Sales' and 'Low Skill Community and Personal Service Workers'
- Housing diversity is significantly lower in Serpentine Jarrahdale as recorded at the 2016 Census. More than 70% of dwelling contained four bedrooms or more, whilst the WA Average was 44.93% of housing stock. This may pose additional socio-economic pressures on low income persons in Serpentine Jarrahdale due to equitable access to a diversity of housing options. Whilst being a positive factor for the IRSAD Index, the proportion of persons paying more than $2,800 per month for their mortgage highlights the potential for mortgage stress in Serpentine Jarrahdale, given the high proportion (15.6%)
- Mandurah has a high concentration of those with Diploma Qualifications or higher compared to WA, Regional WA and Local Governments of the Peel more broadly
- The City of Mandurah, Shire of Murray and Shire of Waroona contain a high proportion of low-income earners, and the relative variable loading of this factor is a significant contributing factor to the SEIFA scores for the Index of Relative Socio-Economic Disadvantage. Unemployment is a significant factor which also contributes to this. The level of educational attainment within the respective local government areas (LGAs) is also an influencing factor contributing to the lower SEIFA scores in these LGAs. Further analysis of this is to be made within a Human Capital Report into the Peel
- Labourers and machinery operators/drivers are considered low skill workforces, and to this extent are therefore negative variable loading factors. Mandurah, Murray and Waroona are negatively affected by these factors. It is interesting to note that Machinery operators/drivers are a substantial cohort in the Shire of Boddington, which is significant to note given the mining industry and the relative wages of this industry (Boddington has the highest proportion of persons with an annual income of $78,000+)

IRSD

- The Shire of Serpentine Jarrahdale is a strong performer across almost all variables within the Index of Relative Socio-Economic Disadvantage, hence its SEIFA score. A low proportion of low-income earners, strong educational attainment, limited social wellbeing constraints and a diversified labour force (skills) are all positive factors for the Shire

- The City of Mandurah and Shire of Murray are strongly aligned in terms of a high proportion of persons requiring assistance with a disability (need assistance with core activities). In terms of family welfare, a high proportion of families with children under 15 years resided with jobless parents, more that 2.13%–2.14% higher than the Greater Perth Metropolitan Region
- The City of Mandurah, Shire of Murray and Shire of Waroona contain a high proportion of low-income earners, and the relative variable loading of this factor is a significant contributing factor to the SEIFA scores for the Index of Relative Socio-Economic Disadvantage. Unemployment is a significant factor which also contributes to this. The level of educational attainment within the respective LGAs is also an influencing factor contributing to the lower SEIFA scores in these LGAs. Further analysis of this is to be made within a Human Capital Report into the Peel

IEO

- Waroona performs poorly in the Index of Education and Occupation variables, however it is relevant to note that the predominant industries of employment for residents are within the Agriculture, Forestry and Fishing sector, and the Mining sector
- Within both the Shire of Waroona and the Shire of Murray, it is relevant to note that the ageing and retiree population will likely hide the skillsets of the young adult and middle aged persons cohorts (21.59% of the Shire of Murray's population above the age of 65+, 21.12% in the Shire of Waroona). This is relevant in examining those variables denoted 'aged 15 years+'
- Unemployment was identified as an area of concern for Mandurah, Murray and Waroona in the 2016 Census, and is an ongoing focus area

IER

- Housing diversity is significantly lower in Serpentine Jarrahdale as recorded at the 2016 Census. More than 70% of dwelling contained four bedrooms or more, whilst the WA Average was 44.93% of housing stock. This may pose additional socio-economic pressures on low- medium income persons in Serpentine Jarrahdale due to equitable access to a diversity of housing options. Whilst being a positive factor for the IER Index, the proportion of persons paying more than $2,800 per month for their mortgage highlights the potential for mortgage stress in Serpentine Jarrahdale, given the high proportion (15.6%). This is relevant as the Shire of Serpentine Jarrahdale from examining the cross section, has the highest proportion of those with a mortgage (65.65%)
- Boddington's bauxite mining and gold mining operations are strongly demonstrated in annual household equivalised incomes, with more than 30.95% of incomes within the income bracket of $78,000+
- 3.25% of dwellings within the Shire of Waroona are reported as requiring one or more extra bedrooms. This data highlights the potential need for increased housing diversity
- The data for Mandurah in terms of occupied dwellings that are lone person households (24.35%) highlights a mismatch of housing stock to household size, or the resistance to downsizing within certain cohorts

Health priorities

The Peel region Health Indicators seeks to identify priorities per the Department of Health (South Metropolitan Health Service and East Metropolitan Health Service), along with the supporting strategies and objectives relevant to the subject health criteria.

As the population of the Peel region increases, additional demand upon existing health services and ancillary health providers will require consideration of service delivery reform, service planning and expansion. A shared objective of local, state and federal government, along with the private and community (NFP and NGO) sectors, is the delivery of a sustainable health system. Underpinning this will be health promotion, prevention and early intervention into lifestyle risk factors.

Within the Peel region, diet and nutrition, exercise, alcohol consumption and smoking are all significant lifestyle risk factors which have the potential to impact on health conditions. It is also relevant to note that for those affected factors, their prevalence in the Peel is already statistically significant compared to WA.

The challenge for all participating members in creating a sustainable health network in the Peel is to plan for the significant population growth over the next decade, whilst improving the existing population health profile. For local government, the most significant aspects in identifying and delivering long term planning in this area includes utilising mechanisms of strategic town planning, health promotion, and advocacy for service delivery reform and provisioning of health services based on local population demand.

Mental health, aged care, disability care along with interventions into the rate of drug and alcohol use will be shared priority areas across all local government areas (LGAs) of the Peel region, all of which represent complex health service demand requirements. By working as a region on these issues, strong and effective engagement with both the public and private sector can assist in delivering positive health outcomes, and assist in improving the health and wellbeing of priority populations.

Life expectancy

Figure 19 highlights the estimated life expectancy of the City of Mandurah, the Peel and WA. A male and female residing in the Peel in 2017 had an estimated life expectancy of 81.1 and 86.7 years. Males have a higher life expectancy in Western Australia (81.3) compared to the Peel (81.1), whilst Females have a higher life expectancy in the Peel region (86.7) compared to Western Australia (85.8). To maintain, and to increase life expectancy of the broader population, consideration of health risk and lifestyle risk factors need to be determined to stage short, medium and long-term population health interventions.

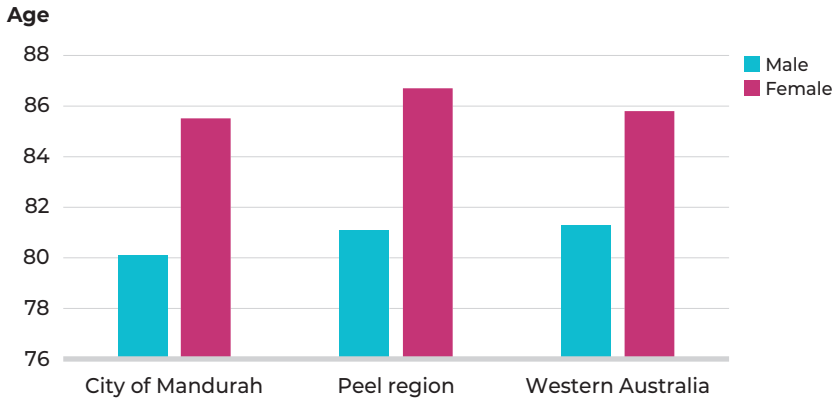


FIGURE 19 Life expectancy
Source: 2017 — Epidemiology Branch, Department of Health

Targeted approaches are necessary to assist in improving WA Aboriginal and Torres Strait Islander life expectancy, in which a male and female born between 2015 and 2017 was anticipated to have a life expectancy of 66.9 and 71.8 years respectively. These rates are approximately 15 years below the overall male and female populations life expectancy. Based on the WA Aboriginal Health and Wellbeing Framework, there has been a limited improvement since 2010–12 data in which the Aboriginal and Torres Straight Islander males and females were anticipated to live to 65.0 and 70.2 years respectively (increase of 1.9 years for males and 1.6 for females).

Figure 20 graphs Western Australia and Peel, in terms of the proportion of Aboriginal and Torres Strait Islanders and the broader population (total population) by age cohorts. It demonstrates that Aboriginal and Torres Strait Islanders within the 0–4, 5–9, 10–14, 15–19 and 20–24 year cohorts are over-represented compared to the overall population in both WA and the Peel region in terms of the population distribution (proportion of population sub-group by age). It also highlights that there is under-representation of Aboriginal and Torres Strait Islanders aged 35–39 to 85+ cohorts inclusive in terms of Aboriginal and Torres Strait Islanders compared to the broader population.

Smoking

The prevalence estimates of smoking in the Peel region is lower than Western Australia (estimated 10% of the adult population who are currently smoking compared to 11.6% in WA) (Figure 21). However, both the Shire of Murray (12%) and the Shire of Serpentine Jarrahdale (13.7%) are higher than the prevalence estimates for the Peel region and WA. 2014–15 data published within the 2017 Aboriginal and Torres Strait Islander Health Performance Framework for Western Australia indicated an estimated 42% of Aboriginals aged 15+ were smokers, with the ratio of indigenous smokers to non-indigenous smokers being 3:1 (45% — Indigenous, 15% Non-Indigenous).

Current mechanisms have seen a curbing of smoking rates over time, including:

- Plain packaging and health warnings on packaging;
- Restriction of tobacco usage in prominent public places and all Government facilities;
- Taxation on tobacco products; and
- Health advocacy for prevention (including advertisements and health professionals).

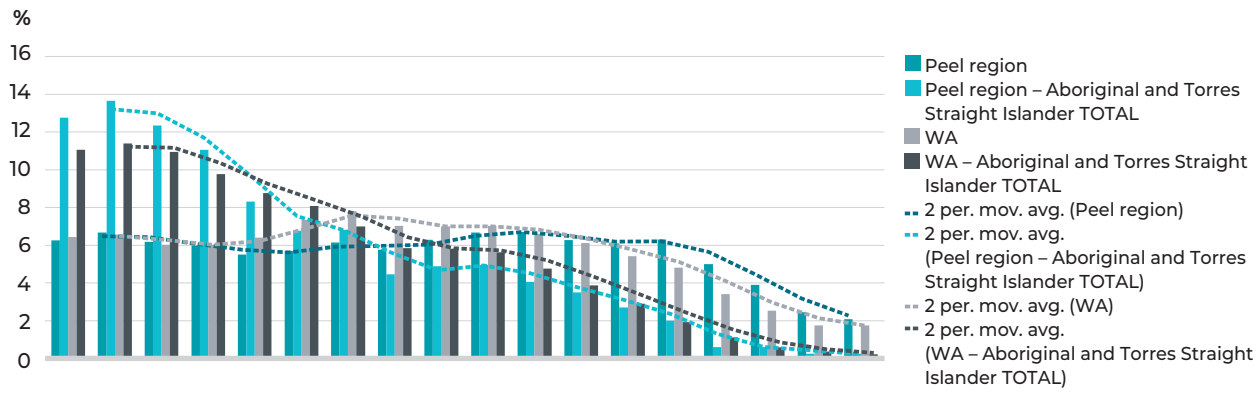


FIGURE 20 Proportion of Aboriginal and Torres Strait Islanders and non-indigenous age cohort by population group
Source: 2016 Census (ABS Tablebuilder)

Health priorities (continued)

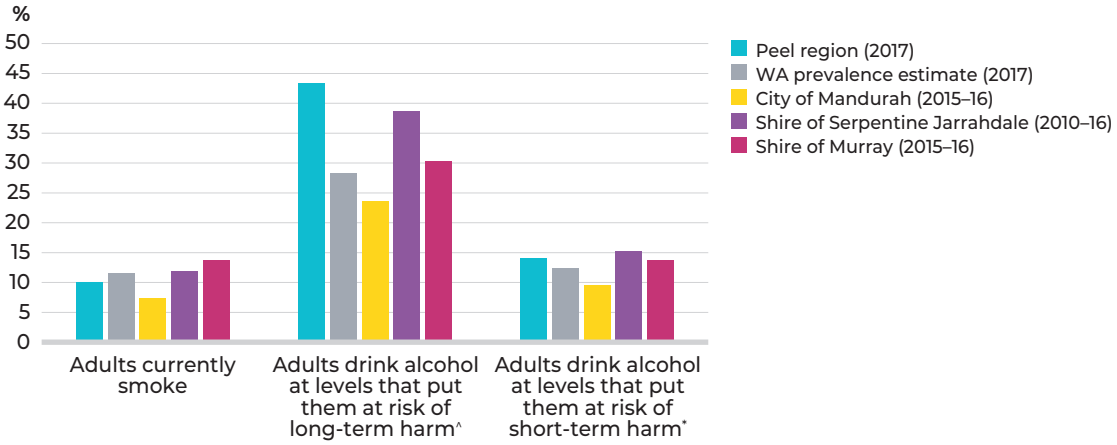


FIGURE 21 Health risk factors — Peel and select local government areas

^ As proportion of all adult respondents 16Yr+ — drinks more than 2 standard drinks on any day (alcohol consumption 16–17Yr high risk classification
** As proportion of all adult respondents 16Yr+ — drinks more than 4 standard drinks on any day (alcohol consumption 16–17Yr high risk classification*

Source: South Metropolitan Health Service and Eastern Metropolitan Health Service

Potential interventions in the Peel region include a combined effort of all levels of government to deliver and monitor coordinated health campaigns, including targeted cultural awareness and support programs. Individuals in the Peel region who are fiscally constrained should also be made aware of PBS Concessions or the Closing the Gap PBS Concession program which financially subsidises nicotine replacement therapy. This requires a strong collective approach of health professionals, pharmacists, and community health organisations to advocate as a health intervention affected individuals can access, and available tailored treatment pathways.

Alcohol and drug use

Drinking alcohol at levels which place persons at short-term harm, along with the consumption of alcohol at levels which place persons at long term harm are both statistically significant factors for the Peel region (Figure 21). Alcohol consumption by 16 and 17 year olds is considered a high risk classification in respect to these prevalence estimates.

The prevalence estimate for the Peel region is significantly higher than Western Australia with respect to alcohol consumption which places adults at risk of long term harm (43.3% to 28.2%). The City of Mandurah has a lower prevalence estimate compared to Western Australia (23.5% to 28.2%), however the Shire of Serpentine Jarrahdale and Shire of Murray both exceed the prevalence estimate for Western Australia (30.4% and 38.6% to 28.2% respectively).

In terms of consumption which places adults at short term harm, the Peel region is higher than the Western Australia prevalence estimates (14.1% to 12.4%). Community Health Profile data for the Local Governments of Murray and Serpentine Jarrahdale indicate that alcohol consumption is statistically higher than the WA prevalence estimate and is statistically lower in the City of Mandurah (9.6%).

There is the need for ongoing reduction in harmful levels of alcohol consumption, alleviating the potential for short term and long-term harm. The Western Australian Alcohol and Drug Interagency Strategy 2018–22 outlines priority focus groups in terms of targeting alcohol and drug use, and should be considered for initial guidance for the delivery of specific programs in the Peel region.

Lifestyle risk factors (diet, nutrition and physical health)

Lifestyle risk factors impair population health, and provide the potential to be impaired by chronic health conditions. The statistical prevalence across all lifestyle risk factors denoted in Figure 22 are high, all exceeding 29% of the population. Regular fast food consumption (at least weekly) is higher in the Peel region (35.8%) compared to WA (0.6% higher). The City of Mandurah has the highest prevalence, (38%) compared to the Shire of Murray with a prevalence of 29.7%. It is pertinent to note that poor diet and nutrition is broadly evident in the wider population, with more than 50% of adults not meeting the recommended daily intake of two fruit serves per day, and approximately 89–90% not meeting the recommended daily intake of five vegetable serves per day (limited dietary variety).

Figure 23 highlights that broadly, the Peel region has 32.7% of adults who do undertake enough physical activity weekly to provide health benefits (150min). The level of physical activity of adults is higher in the Peel and the reported Peel LGA's compared to WA, however there is the need to continue to improve both nutrition and physical activity to improve population health.

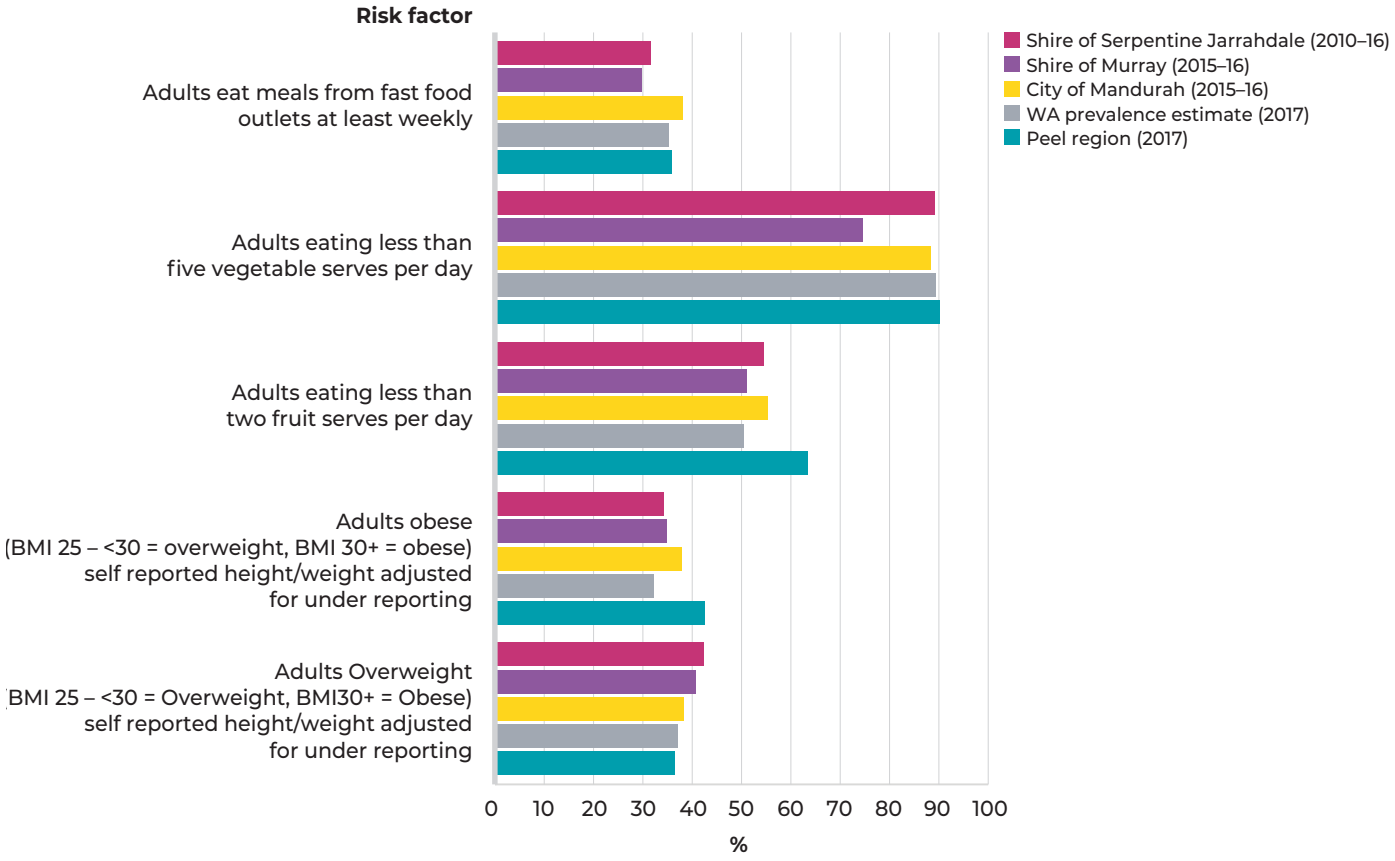


FIGURE 22 Lifestyle and health risk factors — Peel and select local government areas

Source: South Metropolitan Health Service and Eastern Metropolitan Health Service

Health priorities (continued)

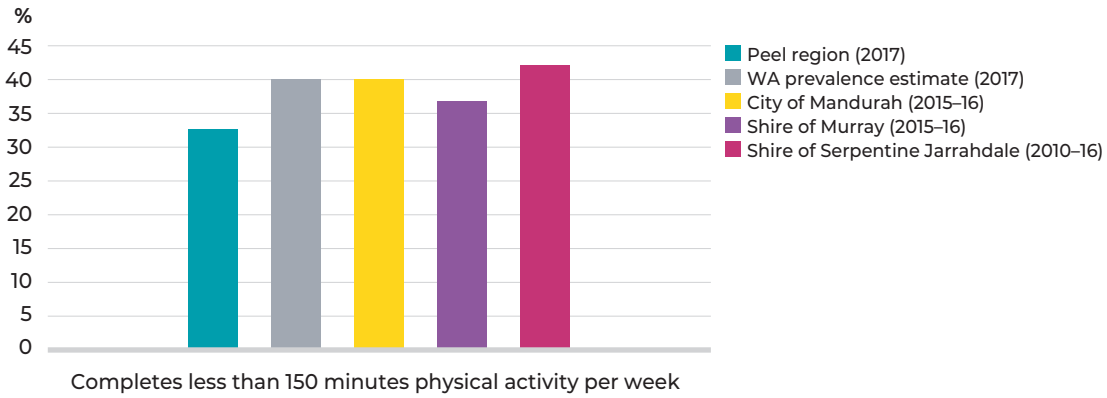


FIGURE 23 Prevalence estimates for adults who are not active enough for health benefits — Peel and select local government areas

Source: South Metropolitan Health Service and Eastern Metropolitan Health Service

Figure 22 provides the prevalence estimates of adults who are obese (BMI – 30+) and overweight (BMI 25–30). Unfortunately, more than 79% of adults in the Peel are overweight and obese compared to 69.3% in WA. Overweight adults comprise 36.5% in Peel compared to 37.1% in WA. Alarmingly, obesity prevalence estimates indicate 42.5% are obese in the Peel, and 32.2 in WA. Poor diet, nutrition and irregular or limited physical activity are all relevant factors which contribute to the proportion, and potential for persons becoming overweight and obese.

To combat poor health in the Peel, it is recommended to implement several health priorities and actions per the WA Healthy Weight Action Plan 2019–24.

Significant health factors

Figure 24 highlights the statistically higher prevalence of respiratory problems, osteoporosis, stroke, cancer, heart disease and diabetes in the Peel compared to Western Australia. These factors are all impacted by lifestyle risk factors, and therefore the reduction of/migration of health/ lifestyle risk factors can also assist to reduce future population health burden on Western Australia's health system.

In examining Figure 25, it is demonstrated that Ischemic Heart Disease, Cancers, Chronic obstructive plumonary disease (COPD), and Diabetes are among the most significant causes of avoidable death within the Peel region. Notwithstanding the importance that genetics, age and other factors may have in the prevalence of these statistics, it is relevant to note that improvement in overall population health may assist in reducing the prevalence or severity of conditions identified in Figure 24.

To effectively mitigate these factors, broad population health programs, along with targeted health interventions, are necessary undertake to improve population health.

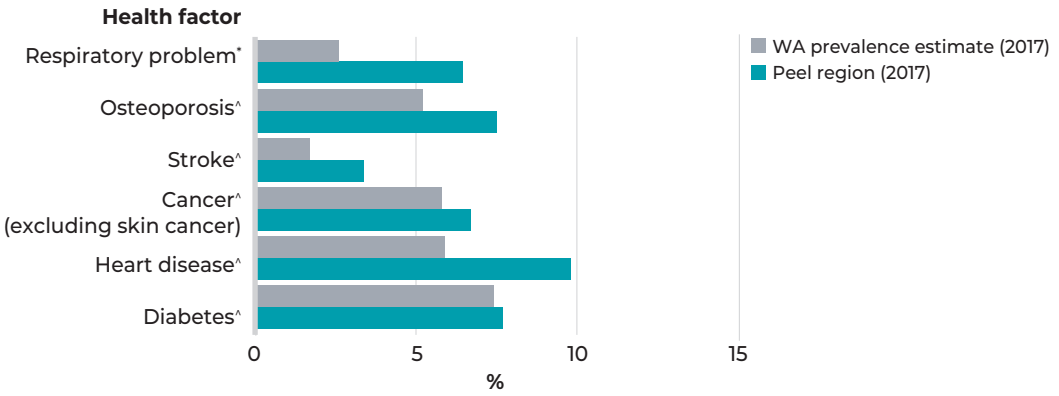


FIGURE 24 Prevalence estimates of population health factors

** Respiratory problem diagnosed by a doctor lasting more than six months, excludes asthma(e.g. bronchitis, emphysema, chronic lung disease)*

^ Diagnosed by a doctor in last 12 months

Source: South Metropolitan Health Service and Eastern Metropolitan Health Service

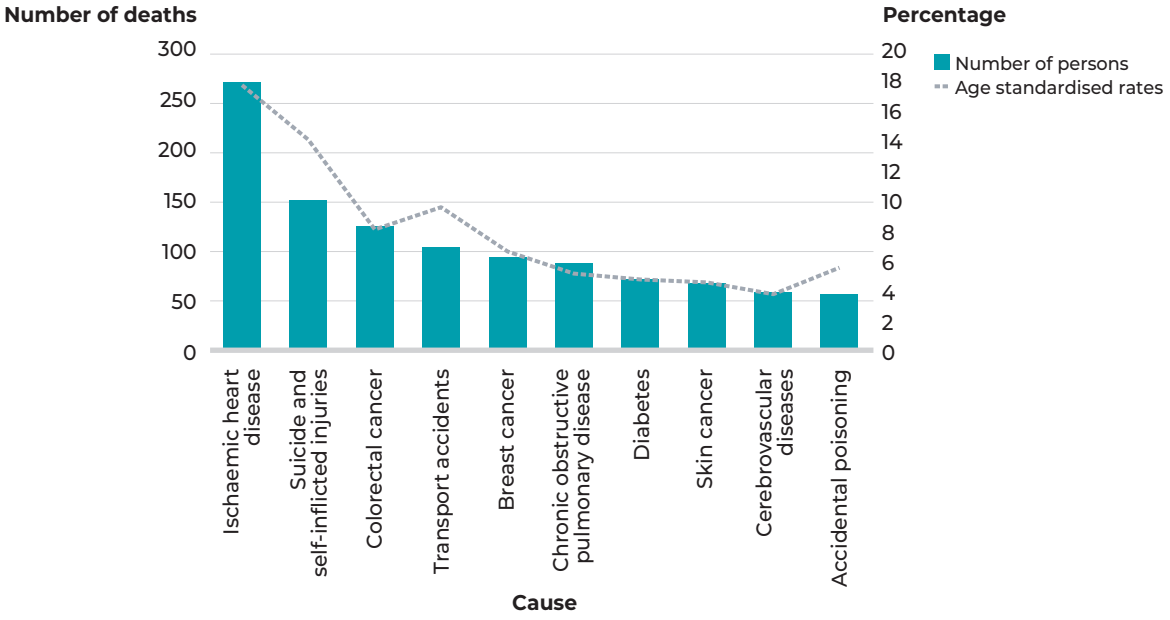


FIGURE 25 Top 10 total avoidable deaths: Peel region (2007–16) — age standardised rates and number of persons

Source: South Metropolitan Health Service and Eastern Metropolitan Health Service

Aged care and disability service demand

Aged care demand

Given ongoing increases to the aged demographic in the Peel region, there is the need to continue to strongly invest in general and allied health services, along with low, medium and high care aged care services and residential care facilities. This includes ensuring that services are delivered which assist in servicing the cultural and health requirements of indigenous persons to enable the people of the Peel region to holistically age in place. Given the population distribution of the Peel region, consideration for the provision of regionally based population health services, along with alternative servicing models may need to be considered to ensure that an appropriate level of care is retained within communities to enable ageing in place.

Given the potential size of the aged care population, workforce planning for the Peel region is necessary to support the ongoing increase in occupational requirements to service this population base.

Whilst private healthcare providers are likely to engage directly with this market, there is the need to plan for ancillary and public services to ensure that servicing thresholds are maintained or expanded upon to support the industries growth and diversification in the Peel.

Disability care and assistance

The Peel region has a diverse demographic of persons that require assistance with 'core activities'. In the 2016 Census, assistance with 'core activities' was defined as follows:

> *Core activity need for assistance:*
> *"This population is defined as people with a disability who need assistance in their day to day lives with any or all of the following core activities — self care, body movements or communication."*

As demonstrated in Figure 26, the Peel region has a large proportion of aged persons between 65–84 years who require assistance with core activities. Figure 26 highlights that the requirement for assistance with core activities increases with age from the 35–64 year cohort. It is also relevant to highlight that there is a statistically significant representation of 0–14. Further study is necessary to determine if requiring core activity need for assistance of persons aged 40–65+, and ascertain whether any disabilities can be mitigated or reduced as a result of population health interventions. It is necessary to provide sustainable health resources and NDIS services to support the current and future health demands of the Peel.

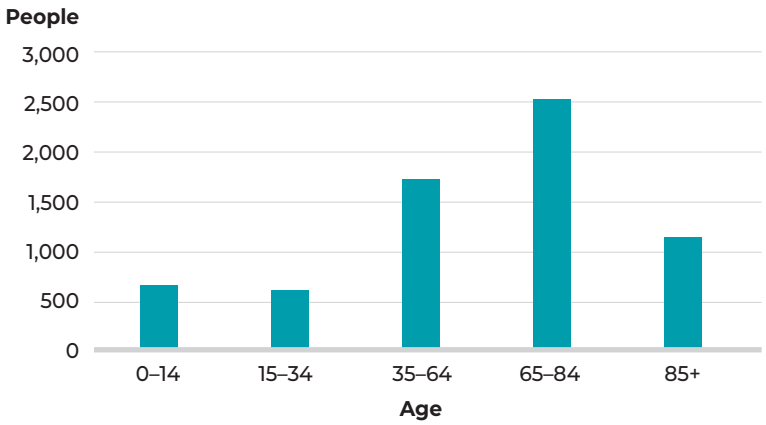


FIGURE 26 Peel region — has core activity need for assistance (disability)
Source: ABS Census 2016

Figure 27 is based on the presentation of estimates prepared by the Australian Bureau of Statistics. *The Survey of Disability, Ageing and Carers Australia Mental Health* provides a definition schedule as follows:

Severe core activity limitation

- Sometimes needs help with core activity task; and/or
- Has difficulty understanding or being understood by family or friends; or
- Can communicate more easily using sign language or other non-spoken forms of communication.

Moderate core activity limitation

- The person needs no help, but has difficulty with a core activity task.

Mild core activity limitation

- The person needs no help and has no difficulty with any of the core activity tasks, but:
- Uses aids or equipment, or has one or more of the following limitations:
  - Cannot easily walk 200m;
  - Cannot walk up and down stairs without a handrail;
  - Cannot easily bend to pick up an object from the floor
  - Cannot use public transport;
  - Can use public transport, but needs help or supervision;
  - Needs no help or supervision, but has difficulty using public transport.

In considering disabilities broadly, modelled estimates for the Peel highlight that approximately 21.76% of the population may be impacted by some form of disability. For those aged 65+, more than half (52.27%) are estimated to be affected by a disability. The estimated prevalence of disabilities increases from the 25–34 year cohort from 9.85% to 52.27% for the 65+ cohort as seen in Figure 27. It is also relevant to note that children and young adults remain a key cohort to consider, representing 9.04% and 11.5% of the cohort population based on the disability prevalence estimate modelling.

Whilst noting that Figure 27 represents modelled estimates for the Peel region, it indicates potential service demand which needs to be considered. Furthermore, there is the need to undertake more detailed analysis of the prevalence of conditions within the community, to determine if the disability is the result of lifestyle factors, genetics, or injury. Such analysis will enable government service providers to respond to create more inclusive communities based on predominant disabilities and restrictions, and local health networks to priority target cohorts and disability types. This will strengthen the health outcomes for the Peel region.

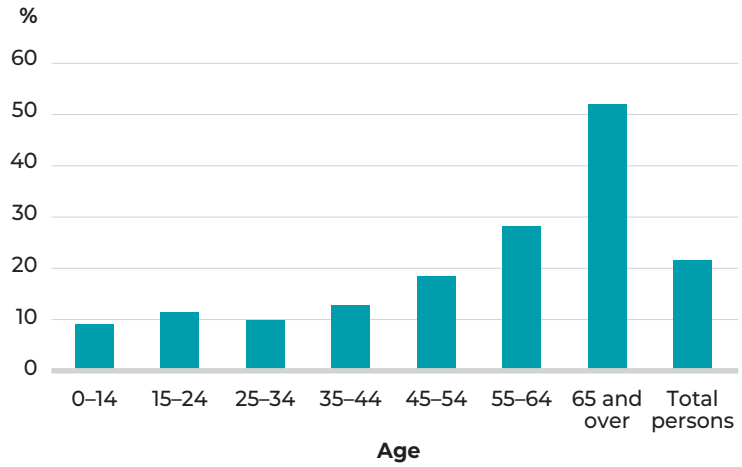


FIGURE 27 Peel region estimates of persons with disability by age cohort (2018)
Source: Survey of Disability, Ageing and Carers Australia Mental Health

Mental health — a shared challenge

If you or anyone you know needs help:

- Lifeline — **13 11 14**
- Kids Helpline — **1800 551 800**
- MensLine Australia — **1300 789 978**
- Suicide Call Back Service — **1300 659 467**
- Beyond Blue — **1300 22 46 36**
- Headspace — **1800 650 890**

There is a demonstrated need to target mental health and wellbeing within the Local Governments in the Peel region. Figure 28 highlights the prevalence estimates within the Peel region and Western Australia, along with specific local government areas. It is relevant to note that of these factors, that both the South Metropolitan Health Service and the Eastern Metropolitan Health Service indicate that these prevalence estimates should be used with caution.

The prevalence estimates infer that the Peel region are potentially more statistically significant compared to WA for Depression, Anxiety, Stress Related Problems and Mental Health Problems. These are all health conditions which have been diagnosed by a GP within the prior 12 months, and potentially indicates a higher service demand for mental health services in the Peel. In addition, prevalence estimates indicate that the Peel may have a higher incidence of persons with High/Very High Psychological Distress.

This requires a shared approach from all levels of government, community and WA Health/Mental Health Commission to target the prevalence of these factors in the Peel. There is the need to reduce stigma associated with mental illness and strengthen community awareness and resilience factors that support people to recover from their mental illness to live full and productive lives. This requires a targeted response from health professionals to continue to deliver effective mental health programs, and to engage with government and the community to deliver community awareness and support programs. As a component of this, there is also the need to ensure that culturally appropriate services, and age-appropriate services are provided to support those with a mental illness to recover and live full and productive lives.

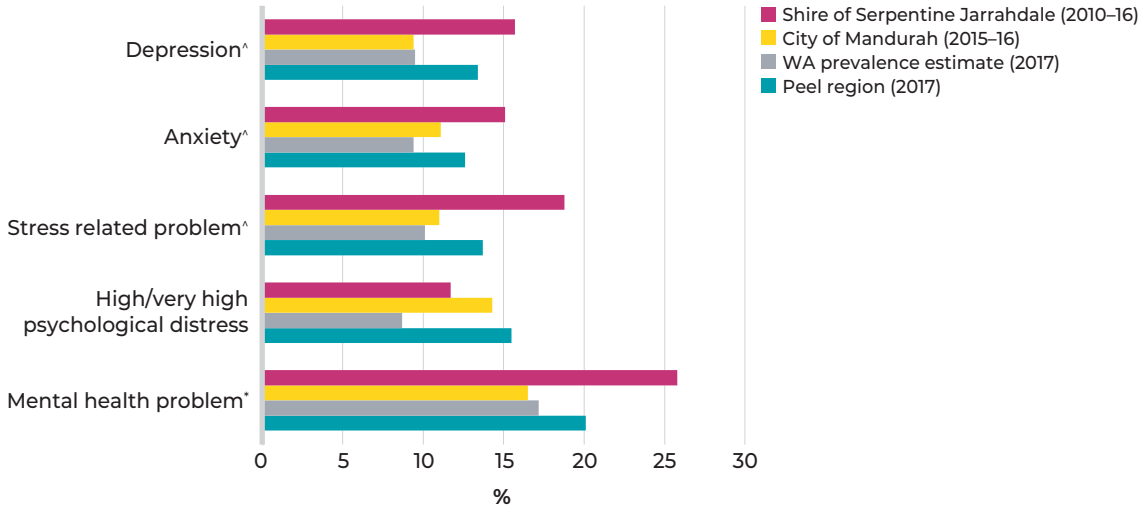


FIGURE 28 Prevalence estimates of mental health and wellbeing — Peel and selected local government areas

^ *Diagnosed by a doctor in last 12 months*
* *Diagnosed by a doctor with a stress related problem, depression, anxiety or other mental health problem in last 12 months*

Source: South Metropolitan Health Service and Eastern Metropolitan Health Service

Social services — population service delivery

To deliver targeted health interventions, there is the need to deeply understand intrinsic socio-economic forces that may restrict a persons access to healthcare, healthy dietary choices and exercise, and where priority populations are located to target services in an effective manner.

To this extent, the examination of the Social Services Payment Data enables local and state government to identify areas to target service delivery, or advocacy for services, in respect to priority populations. It is relevant to observe that the data prepared for this report does include observations in respect to COVID-19, and therefore for the reporting periods from March 2020 onwards, it is important to note its influence. Pre-March 2020 represents the longer-term overall trend, and this should be utilised in planning for and advocacy of services.

Overall, the Department of Social Services Payment Data outlines over time that a growing proportion of Peel region's population access social assistance payments relative to the proportion in WA overall. Low Income Card, Jobseeker, Parenting Payment — Single, Disability Support Pension, Carer Payment, Carer Allowance, Age Pension and the Pension Concession Card have seen the Peel increase its proportion of recipients relative to WA overall. These payments are significant given they identify families, unemployed persons (or insufficient hours) along with low income and aged care/disability care persons who may be fiscally constrained, and therefore may be forced to make alternative choices in relation to their health and wellbeing compared to persons who are socio-economically better off. This potential trade-off due to either service cost, or restriction on the persons lifestyle may therefore have implications for health service access and the health sector over a longitudinal period.

Therefore, it is highly relevant that priority populations and their general and specialist service demands are identified, and wraparound services provided that assist in both socio-economic and health uplift.

Data on Social Assistance payments in the Peel has been prepared to ascertain potential service demand from cohorts of persons, including consideration of how the delivery of public and private healthcare or assistance services are meeting the socio-economic demand of persons. This data may also assist in determining means to enhance population health program efficacy, by targeting priority groups or target populations in certain geographic footprints. A Peel overview is provided as a percentage of the WA total payments, and is followed by the individual Peel LGA reporting for the Peel. It is advised that some datasets make small numbers of payment recipients confidential, and hence programs such as ABStudy and the Carer's Allowance have data gaps.

For detailed information on Social Assistance Payments in Peel, please refer to the full report *Peel Region Healthcare and Social Assistance Snapshot*.

Our common focus — strategies for Peel

The Peel region is undergoing significant growth, however there are significant socio-economic challenges along with public health issues to overcome. Particularly relevant is noting that the population of the Peel, as it increases to 2031, will require additional services broadly, as well as specialised services that account for existing and projected demand.

Socio-economically disadvantaged persons, priority populations, and the population presenting health risk factors that are modifiable will be the three key challenges to improving population health and wellbeing.

In preparing this snapshot, three key priority areas have been identified which will assist the Peel local governments and strategic partners to engage and deliver within to assist in uplifting the health of the region.

Priority Area 1: Local health promotion

The promotion of physical activity, healthy diet, nutrition; community engagement; and participation and social wellbeing are three key protective health factors that will assist in enhancing population health. Local government, the Department of Health along with health service providers can assist in delivering targeted health promotion campaigns to assist in generating positive behavioural change.

Priority Area 2: Local planning implementation

The redevelopment of existing built environments, along with the construction of new greenfield subdivisions provides the opportunity to shape and build an urban form that is conducive to healthy and active lifestyles.

To assist local government, there is already an extensive strategic and statutory planning framework which can assist and guide developers, local government, and state government to develop walkable, active and engaging urban environments. These include the following:

- DLGSC: Public Parklands Planning and Design Guide
- DLGSC: Classification Framework For Public Open Space
- DLGSC: Active Open Space (Playing Fields) In A Growing Perth-Peel
- DLGSC: Needs Assessment Guide — Sport and Recreation Facilities
- Heart Foundation: Healthy Active By Design
- Community Walkability Checklist
- Healthy Active By Design Checklist
- Urban Design Study: Active Travel To School
- Blueprint For An Active Australia
- DPLH: Liveable Neighbourhoods
- DPLH: Development Control Policy 2.3 — Public Open Space In Residential Areas
- DPLH: Development Control Policy 5.3 Use Of Land Reserved For Parks and Recreation and Open Space

In considering the ageing population, it is relevant that demographic demand is considered in infrastructure provision, and to plan and build towards Aged Friendly Communities/Dementia Friendly Communities. To this extent, universally accessible design across the built environment will assist in ensuring that all persons are able to take part and engage in healthy lifestyles, across all capability levels. Creating engaging urban environments that are walkable, adapt to climate change and use space efficiently to maximise the contribution of public open space to the urban environment will greatly assist in providing the fundamental environments to strengthen the regions health.

Priority Area 3: Regional collaboration

Finally, regional collaboration on shared priority areas will assist all participants in the public health realm to identify, develop and commit the resources necessary to meet service demand challenges. Developing tools that assist service providers and local governments in strengthening their shared understanding and capability to respond to service demand will increase and scale efficiencies and the impacts of economies of scale. The pooling of regional knowledge and expertise offers the ability for all members in this space to act proactively, rather than reactively, to form resolutions and projects that assist in improving health outcomes.

The Peel Health and Wellbeing Taskforce forms an integral process towards this goal, and the broader membership of NGOs, NFPs the private sector and all levels of government will assist in steering the health promotion and policy advocacy which is appropriate to the current and future health demand of the Peel.

In summary

Improving the population health and wellbeing of the Peel region will require a shared undertaking over time by all stakeholders. Within this shared undertaking, the objectives are to mitigate health risk factors, improve health and wellbeing, and enhance service provision. Relevant to improving the health and wellbeing of the Peel will be an understanding of the limiting factors and how these can be overcome.

Socio-economic factors in the Peel are extremely relevant in this regard, particularly low-medium income earners and their ability to participate in all forms of exercise and equitable access to healthy and nutritional food choices. Aspects including community gardens, and diversification of the economy over time can assist with uplift, however a myriad of interventions and programs will need to be identified and undertaken to enhance health outcomes impacted by socio-economic circumstances.

Further consultation at a local and regional level will provide additional pathways for the Peel Health and Wellbeing Taskforce to identify areas of advocacy, priority initiatives and service reform.

Together, we can contribute to making the Peel a region made of people that live life to their greatest potential.

References

Australian Bureau of Statistics. 2016a. ABS Tablebuilder Basic 2006, 2011 and 2016 (AGEP5 by SEXP). Canberra, ACT: Australian Bureau of Statistics. www.censusdata.abs.gov.au/webapi/jsf/login.xhtml

Australian Bureau of Statistics. 2016b. ABS Tablebuilder Basic 2016 Census — Internal Migration (State (UR), State (5Yr) and LGA (UR) By SA3 (5Yr). Canberra, ACT: Australian Bureau of Statistics. www.censusdata.abs.gov.au/webapi/jsf/login.xhtml

Australian Bureau of Statistics. 2016c. ABS Tablebuilder Basic 2016 (AGEP5 by ASSNP) — WA Construct. Canberra, ACT: Australian Bureau of Statistics. www.censusdata.abs.gov.au/webapi/jsf/login.xhtml

Australian Bureau of Statistics. 2016d. ABS Tablebuilder Basic 2016 (AGEP5 by SEXP & INGP) — Peel Construct. Canberra, ACT: Australian Bureau of Statistics. www.censusdata.abs.gov.au/webapi/jsf/login.xhtml

Australian Bureau of Statistics. 2016e. ABS Tablebuilder Basic 2016 (AGEP5 by SEXP & INGP) — WA Construct. www.censusdata.abs.gov.au/webapi/jsf/login.xhtml

Australian Bureau of Statistics. 2016f. Core Activity Need for Assistance (ASSNP) — Definition Of Core Activity. Canberra , ACT: Australian Bureau of Statistics. www.abs.gov.au/websitedbs/censushome.nsf/4a256353001af3ed4b2562bb00121564/ee5261c88952cf90ca257aa10005f567!OpenDocument

Australian Bureau of Statistics. 2016g. Quickstats Community Profiles — Peel Local Governments & STE WA Region. Canberra, ACT: Australian Bureau of Statistics.

Australian Bureau of Statistics. 2018a. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 — Local Government Area, Indexes (STE: WA Ranking Data — IRSD, IRSAD, IER, IEO), SEIFA 2016 Datacube. Canberra, ACT: Australian Bureau of Statistics.

Australian Bureau of Statistics. 2018b. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 — Local Government Area, Indexes (Australia Ranking Data — IRSD, IRSAD, IER, IEO), SEIFA 2016 Datacube. Canberra, ACT: Australian Bureau of Statistics.

Australian Bureau of Statistics. 2018c. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 — Statistical Area Level 1, Indexes, SEIFA 2016 Datacube. Canberra, ACT: Australian Bureau of Statistics.

Australian Bureau of Statistics. 2020a. 3218.0 — (Table 5) Regional Population Growth, Australia — Peel Local Government Areas, Western Australia. Canberra, ACT: Australian Bureau of Statistics. www.abs.gov.au/statistics/people/population/regional-population/2018-19

Australian Bureau of Statistics. 2020b. Estimated Resident Population By LGA (ASGS 2019) 2001–2019 (ABS.Stat). Canberra, ACT: Australian Bureau of Statistics. http://stat.data.abs.gov.au/

Australian Bureau of Statistics. 2018d. Life Tables For Aboriginal and Torres Strait Islander Australians (2015–2017) — WA Headline Estimates (Table 1). Canberra, ACT: Australian Bureau of Statistics. www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/life-tables-aboriginal-and-torres-strait-islander-australians/2015-2017/3302055003do001_20152017.xls

Australian Bureau of Statistics. 2020c. Survey Of Disability, Ageing and Carers Australia Mental Health — Peel region Construct (2018 SDAC LGA Modelled Estimates). Canberra, ACT: Australian Bureau of Statistics. www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/2018/2018%20sdac%20lga%20modelled%20estimates.xlsx

Australian Bureau of Statistics. 2020d. Survey Of Disability, Ageing and Carers Australia Mental Health — Summary Of Findings Methodology. Canberra, ACT: Australian Bureau of Statistics. www.abs.gov.au/methodologies/disability-ageing-and-carers-australia-summary-findings/2018

Australian Bureau of Statistics. 2018e. Technical Paper No.5. Socio-Economic Indexes for Areas (SEIFA) 2016. Canberra, ACT: Australian Bureau of Statistics. www.abs.gov.au/ausstats/subscriber.nsf/log?openagent&SEIFA%202016%20Technical%20Paper.pdf&2033.0.55.001&Publication&756 EE3DBEFA869EFCA258259000BA746&&20 16&27.03.2018&Latest

SEIFA Variables (Constructed In Accordance With SEIFA Technical Paper No.5 — Tablebuilder Basic — ABS 2016 Census Data): Australian Institute of Health and Welfare (AIHW). 2020a. Aged Care Approvals Round (ACAR) Residential Aged Care Places and Capital Grants — 2018–2019FY. Canberra, ACT: Australian Institute of Health and Welfare (Department of Health). www.health.gov.au/sites/default/files/documents/2020/01/2018-19-acar-results-residential-aged-care-places-and-capital-grants_0.xlsx

Australian Institute of Health and Welfare (AIHW). 2020b. Aged Care Service List: 30 June 2020. Canberra, ACT: Australian Institute of Health and Welfare (Department of Health). https://gen-agedcaredata.gov.au/www_aihwgen/media/2020-Aged-care-service-list/WA- 30-June-2020.xlsx

Australian Institute of Health and Welfare. 2017. Aboriginal and Torres Strait Islander Health Performance Framework 2017: Western Australia. Canberra, ACT: Australian Institute of Health and Welfare (Department of Health). www.aihw.gov.au/getmedia/faa97fba-2ae7-4215-b04f-e97289f937d4/Aboriginal-and-Torres-Strait-Islander-Health-Performance-Framework-2017-report-Western-Australia.pdf.aspx?inline=true

Australian Institute of Health and Welfare. 2019. Mental Health Services In Australia: Services Provided In Public Hospital Emergency Departments (Table ED.17 and 18 — SA3 Mandurah and Serpentine Jarrahdale Extract). Canberra, ACT: Australian Institute of Health and Welfare (Department of Health). www.aihw.gov.au/getmedia/34def0aa-b250-404c-9a90-512d6c9655f5/Mental-health-services-provided-in-emergency-departments-tables_1819.xlsx.aspx

Department of Health (East Metropolitan Health Service. 2019a. Shire of Serpentine Jarrahdale Community Health Profile 2019. Perth, WA: Department of Health. https://emhs.health.wa.gov.au/

Department of Health (South Metropolitan Health Service). 2014a. Pathway To Reducing Harm From Tobacco Use — A Guide For Local Government. Perth, WA: Department of Health. https://ww2.health.wa.gov.au/~/media / Files/Corporate/ general%20documents/ SMHS/Reports%20and%20Publications/ SMPHU/PathwayToReducing HarmFromTobaccoUse.pdf

Department of Health (South Metropolitan Health Service). 2014b. Pathway To Reducing Harm From Alcohol Consumption — A Guide For Local Government. Perth, WA: Department of Health. https://ww2.health.wa.gov.au/-/media/Files/Corporate/general-documents/SMHS/Reports-and-Publications/SMPHU/PathwayToReducingHarmFromAlcohol.pdf

Department of Health (South Metropolitan Health Service). 2019b. City of Mandurah Community Health and Wellbeing Profile 2019. Perth, WA: Department of Health. https://ww2.health.wa.gov.au/-/media/Files/Corporate/general-documents/SMHS/Reports-and-Publications/SMPHU/SMPHU-Mandurah-HW-profile.pdf

Department of Health (South Metropolitan Health Service). 2019c. Peel region Health and Wellbeing Profile 2019 (Combined LGA Health Profile — Mandurah, Waroona, Serpentine Jarrahdale and Boddington). Perth, WA: Department of Health. https://ww2.health.wa.gov.au/-/media/Files/Corporate/general-documents/SMHS/Reports-and-Publications/SMPHU/SMPHU-Peel-HW-profile.pdf

Department of Health (South Metropolitan Health Service). 2019d. Shire of Murray Community Health and Wellbeing Profile 2019. Perth, WA: Department of Health. https://ww2.health.wa.gov.au/-/media/Files/Corporate/general-documents/SMHS/Reports-and-Publications/SMPHU/SMPHU-Murray-HW-profile.pdf

Department of Health. 2015. WA Aboriginal Health and Wellbeing Framework 2015–2030. Perth, WA: Department of Health. https://ww2.health.wa.gov.au/-/media/Files/Corporate/general-documents/Aboriginal-health/PDF/12853_WA_Aboriginal_Health_and_Wellbeing_Framework.pdf

Department of Health. 2019e. WA Healthy Weight Action Plan 2019–2024. Perth, WA: Department of Health. https://ww2.health.wa.gov.au/-/media/Files/Corporate/general-documents/Health-Networks/WA-Healthy-Weight-Action-Plan/PDF/Healthy-Weight-Action-Plan-2019-2024.pdf

Department of Planning, Lands and Heritage. 2018a. WA Tomorrow Population Report No.11 — 2016–2031 State Forecast By Age and Sex. Perth, WA: Department of Planning, Lands and Heritage. www.dplh.wa.gov.au/getmedia/a9df28dd-3821-46b7-850f-75b4f4801db2/LSD_WAT_2016-2031_State_forecast_by_age_and_sex

Department of Planning, Lands and Heritage. 2018b. WA Tomorrow Population Forecasts: Band C (2021,2026, 2031). Perth, WA: Department of Planning, Lands and Heritage. www.dplh.wa.gov.au/getmedia/c0532868-8989-4b84-9ae1-b128ff394495/LSD-WAT-2016-2031-sub-State-LGA-forecast-by-age-and-sex

References (continued)

Department of Social Services. 2020. DSS Payment Recipient Data (LGA and WA), September 2013 – June 2020 Datafiles Inclusive (24 Excel Files). Canberra, ACT: Department of Social Services.

Mental Health Commission. 2018. Western Australian Alcohol and Drug Interagency Strategy 2018–2022. Perth, WA: Mental Health Commission. www.mhc.wa.gov.au/media/2831/western-australian-alcohol-and-drug-interagency-strategy-2018-2022.pdf

Mental Health Commission. 2020. Suicide Prevention 2020: Together We Can Save Lives. Perth, WA: Mental Health Commission. www.mhc.wa.gov.au/media/1220/suicide-prevention-2020-strategy-final.pdf

National Asthma Council Australia. 2018. National Asthma Strategy 2018. Melbourne, VIC: National Asthma Council Australia Ltd. www.nationalasthma.org.au/living-with-asthma/resources/health-professionals/reports-and-statistics/national-asthma-strategy-2018

Senate Select Committee on COVID-19. 2020a. Income Support Payment Data by State and SA2 As At 14th August Provided by Department of Social Services (Received 21 August 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=d9146d44-9bbf-4c58-8fb0-14b91187021d

Senate Select Committee on COVID-19. 2020b. Income Support Payment Data by State and SA2 As At 28th August Provided by Department of Social Services (Received 4th September). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=fd8676c7-e0ed-4cc2-b732-419a9c559973

Senate Select Committee on COVID-19. 2020c. Income Support Payment Data by State and SA2 As At 11th September Provided by Department of Social Services (Received 18th September 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=0750ea97-5280-4bd3-8fab-c8b54bf68a31

Senate Select Committee on COVID-19. 2020d. Income Support Payment Data by State and SA2 As At 25th September Provided by Department of Social Services (Received 7th October 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=300fcbe9-1b0a-4be9-b896-c74f150d7fdd

Senate Select Committee on COVID-19. 2020e. Income Support Payment Data by State and SA2 As At 9th October Provided by Department of Social Services (Received 16th October 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=362639c0-648e-40d7-9dd0-ad119a422c6a

Senate Select Committee on COVID-19. 2020f. Income Support Payment Data by State and SA2 As At 30th October Provided by Department of Social Services (Received 9th November 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=6c8060e6-6bcd-48d0-9804-61a4f0788a9c

Senate Select Committee on COVID-19. 2020g. Income Support Payment Data by State and SA2 As At 13th November Provided by Department of Social Services (Received 20th November 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=6f19712a-b9ea-431e-8e78-53a5e9cd2992

Senate Select Committee on COVID-19. 2020h. Income Support Payment Data by State and SA2 As At 27th October Provided by Department of Social Services (Received 9th December 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=f0d97a6d-e6c9-4504-b5be-e9c2e6bcd8ff

Senate Select Committee on COVID-19. 2020i. Income Support Payment Data by State and SA2 As At 11th December Provided by Department of Social Services (Received 18th December 2020). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=8979ceda-9684-4945-89e8-ba515718cd6b

Senate Select Committee on COVID-19. 2020j. Income Support Payment Data by State and SA2 As At 25th December Provided by Department of Social Services (Received 8th January 2021). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=ba9145eb-e835-415d-97c2-e2146ad5483f

Senate Select Committee on COVID-19. 2020k. Income Support Payment Data by State and SA2 As At 8th December Provided by Department of Social Services (Received 15th January 2021). Canberra, ACT: Australian Parliament House. www.aph.gov.au/DocumentStore.ashx?id=ba9145eb-e835-415d-97c2-e2146ad5483f

Services Australia. 2020a. Low Income Healthcare Card — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/low-income-health-care-card

Services Australia. 2020b. Rent Assistance — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/rent-assistance

Services Australia. 2020c. Jobseeker Payment — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/jobseeker-payment

Services Australia. 2020d. ABStudy — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/abstudy

Services Australia. 2020e. Youth Allowance (Jobseekers) — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/youth-allowance-students-and-australian-apprentices

Services Australia. 2020f. Youth Allowance (Students and Australian Apprentices) — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/youth-allowance-students-and-australian-apprentices

Services Australia. 2020g. Parenting Payment — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/parenting-payment

Services Australia. 2020h. Disability Support Pension — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/disability-support-pension

Services Australia. 2020i. Carer Payment — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/carer-payment

Services Australia. 2020j. Carer Allowance — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/carer-allowance

Services Australia. 2020k. Commonwealth Seniors Health Card — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/commonwealth-seniors-health-card

Services Australia. 2020l. Aged Pension — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/age-pension

Services Australia. 2020m. Pension Concession Card — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/pensioner-concession-card

Services Australia. 2020n. Health Care Card — Summary Information. Canberra, ACT: Services Australia (Australian Government). www.servicesaustralia.gov.au/individuals/services/centrelink/health-care-card

Western Australian Police. 2020. Suburb Construct Of WA Police Data: Peel region — All Offence Types (Peel Suburbs and WA). Perth, WA: Western Australian Police. www.police.wa.gov.au/Crime/CrimeStatistics#/

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