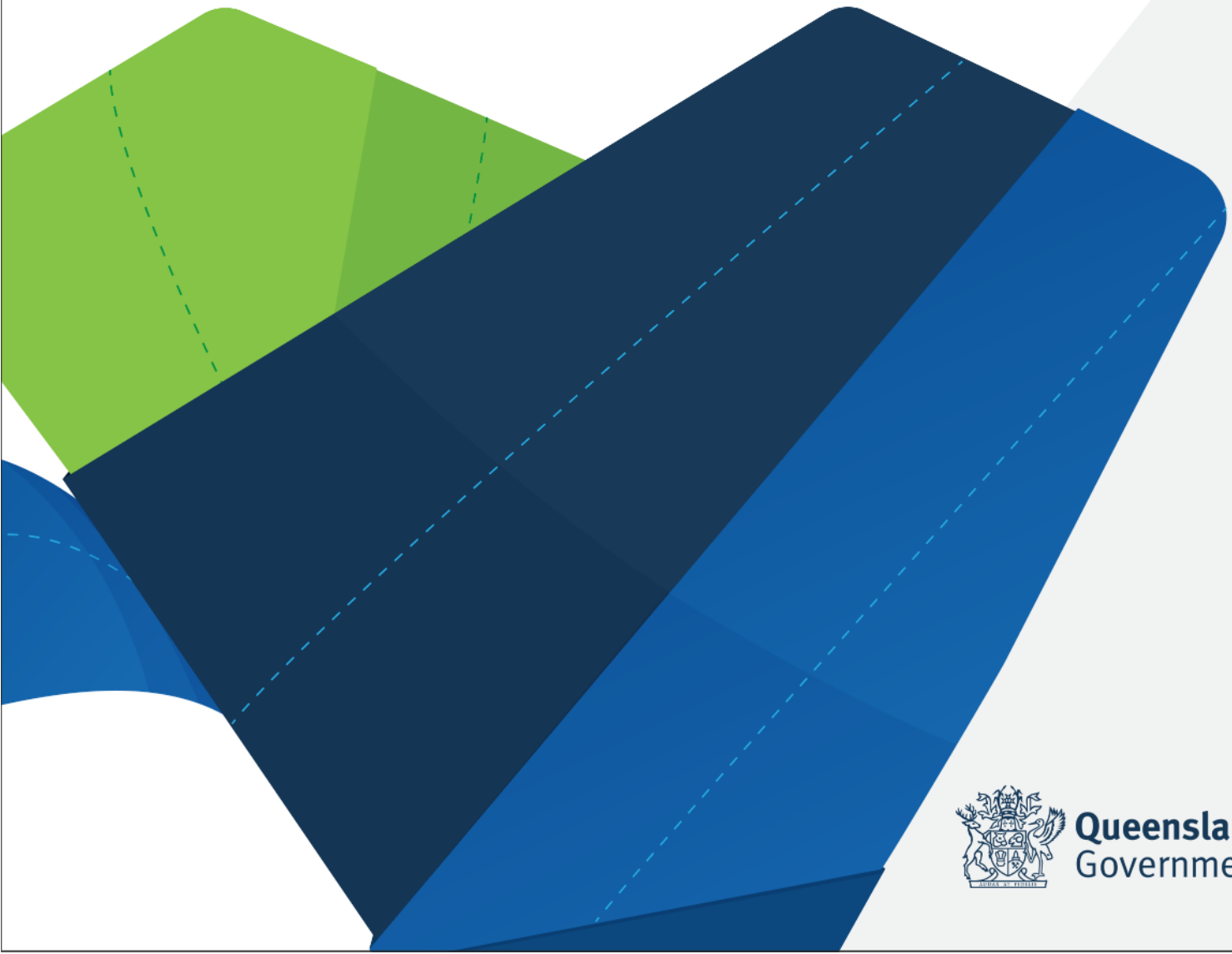
SCHHS Local area needs assessment (LANA) Quantitative Report 2022

Data analysis - quantitative paper
Sunshine Coast Hospital and Health Service



Queensland Government

Contents

Abbreviations and terminology

ABS	Australian Bureau of Statistics
AEDC	Australian Early Development Census
AIHW	Australian Institute of Health and Welfare
ASR	Age-standardised rate
ATS	Australasian Triage Scale
ATSICHHO	Aboriginal and Torres Strait Islander Community Controlled Health Organisation
BMI	Body Mass Index
CAGR	Compound annual growth rate
CALD	Culturally and linguistically diverse
CAOHS	Child and adolescent oral health services
CI	Confidence interval
COPD	Chronic obstructive pulmonary disease
DWS	District of workforce shortage
FTE	Full time equivalent
GP	General Practitioner
HHS	Hospital and Health Service
ICD	International Classification of Disease
IDR	Insufficient data recorded
IRSD	Index of Relative Socioeconomic Disadvantage
LANA	Local area needs assessment
LGA	Local Government Area
LGBTIQ+	Lesbian, Gay, Bisexual, Transgender, Intersex, Queer people
MAC	Monthly Activity Collection
MBS	Medicare Benefits Schedule
NGO	Nongovernmental organisation
PHN	Primary Health Network
OBD	Occupied Bed Day
OOS	Occasion of service
PHIDU	Public Health Information Development Unit
QAS	Queensland Ambulance Service
QHAPDC	Queensland Health Admitted Patient Data Collection
QHNAPDC	Queensland Health Non-admitted Patient Data Collection
Qld	Queensland
QPHU	Queensland Preventive Health Survey
SEIFA	Socio-Economic Indexes for Areas
SA2	Statistical Area Level Two
SA3	Statistical Area Level Three
SRG	Service Related Group

STI	Sexually Transmitted Infections
TAFE	Technical and Further Education

1 Background to this report

1.1 Introduction

Queensland Health aims to improve relative equity across the health system by transforming its approach to health service planning, models of care development and service commissioning, utilising a comprehensive assessment of community health and service needs.

Introducing a Local Area Needs Assessment (LANA) across each region will enable a detailed assessment of health needs based on data analysis. It will encompass multiple domains and consultation with local stakeholders, clinicians, consumers, and health organisations. Queensland Health System Planning has requested Hospital and Health Services (HHSs) perform the LANA for their jurisdictions and publish a report on community health needs, service needs, gaps, and priorities. Sunshine Coast Hospital and Health Service (SCHHS) have developed this paper to capture the LANA's data and quantitative analysis components.

1.2 Methods

1.2.1 LANA minimum data set

The LANA Framework guides a minimum data set for analysis by all HHSs in the development of its LANA. Data based on the following elements categorises the minimum data set for population health:

- The 'region' - geography and demography
- Health risks - social determinants, health determinants/behaviours
- Health status – morbidity and mortality rates
- Service utilisation
- Service mapping

1.2.2 Data sources

The development of each LANA utilises both quantitative and qualitative data extracted from national, state and local sources. The HHS has used data presented through the minimum data set and any additional information available that supports the priorities put forward for their region.

Data sources used in the preparation of this report include data derived from the following national surveys:

- Australian Bureau of Statistics (ABS) Census of Population and Housing 2016
- ABS National Health Survey 2017-18 and 2014-15

Due to Australian Bureau of Statistics data release schedules for the above surveys, this was the most current data available at the time of writing. New releases from the ABS Census of Population and Housing 2021 have since been released and will be included in a refresh of this report in the last quarter of 2023. Data from the National Health Survey will be updated when it becomes available.

Other data sources include:

- Australian Institute of Health and Welfare (AIHW) – Medicare Subsidised Services 2018-19
- AIHW – National Cancer Screening Register 2018-19

- Australian Immunisation Register Coverage Report 2020-21
- Queensland Health Decision Support System – Activity Based Funding Module (2021-21 financial year)
- Queensland Health Planning Portal (various years)

Updated data from these sources will be included in future LANA refresh and development cycles when available.

All persons engaging with the data presented in this paper are requested to review the Data Quality Statement published in the LANA Framework, and adhere to data quality standards. Additionally, the Australian Bureau of Statistics (ABS) tutorial "Managing the risk of disclosure: Treating aggregate data" should also be reviewed. This paper includes a list of data sources used in developing the LANA in the appendix.

1.2.3 Consultation

During the period from 2019 to 2021, throughout the onset of the Covid-19 pandemic the SCHHS Health Service Planning (HSP) team completed a comprehensive planning exercise to inform the development of a new Master Clinical Service Plan (MCSP), with a 10-year outlook.

Consultation to inform planning was conducted by the HSP team, and involved a series of targeted workshops, interviews, forums, and surveys. These involved SCHHS leadership, frontline clinical and non-clinical health service employees, key external partners, and stakeholder representatives, as well as healthcare consumer representatives and members of the community. Results from this consultation process have been used to inform the SCHHS LANA process.

1.2.4 Prioritisation strategy

The objective of the prioritisation strategy was to bring together key stakeholders to conduct a measured process to articulate an order of significance of the identified health needs and service requirements for the Sunshine Coast community.

At the time of prioritisation, the SCHHS was required to address the unfolding complexities of the Covid-19 pandemic Omicron response. It had also only recently completed extensive engagement to inform the development of the Master Clinical Service Plan. Due to these factors, and to ensure responsible use of resources, the SCHHS chose to streamline prioritisation. See strategy overleaf.

The SCHHS chose to leverage off existing executive and senior leadership governance by including the LANA prioritisation within the Operational Finance and Performance (OFPC) meetings.

The OFPC was responsible for:

- Determining prioritisation methodology, including prioritisation approach, criteria, and deliberative process
- Oversight of actual ranking of needs
- Approval of final prioritised needs list for inclusion within the LANA

Overview of techniques

In considering the local context of the SCHHS, namely timing in relation to the pandemic and MCSP engagement, the following techniques were utilised to inform prioritisation:

Method one: Prioritisation Matrix

- This method involves the development of a matrix of validation criteria for each need and the rating of needs against criteria to calculate overall needs scores.

  Note: The SCHHS have elected to include some of the criteria from the Hanlon Method of prioritisation.

  Method two: Multi-voting Technique

- This method involves the development of a list of needs and then conducting rounds of scoring/ voting against the needs to calculate prioritisation.

  Method three: Consensus Voting

- This method involves bringing a group together in discussion, obtaining perspectives and working towards obtaining agreement. This will be completed only as required, by a suitable group of panel members.

2 The Region

2.1 Geography

2.1.1 Geographic catchment

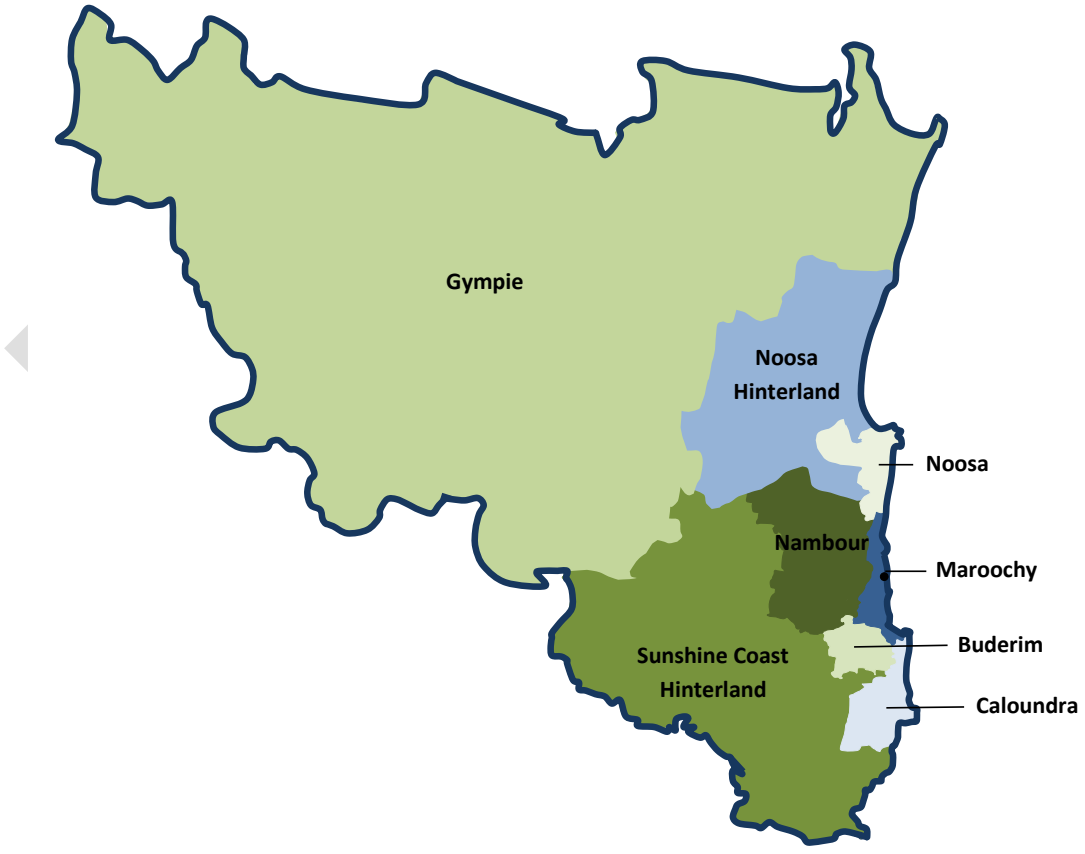
The SCHHS catchment covers 10,061 square kilometres of South-East Queensland, incorporating the Sunshine Coast, Noosa Shire and Gympie Regional Councils' local government areas. The HHS boundaries extend from northwest of Kilkivan to Rainbow Beach, and Tin Can Bay on the northeast coast. In addition, they continue to Caloundra in the south and into the hinterland and Glasshouse Mountain areas in the southwest.

Although most of the population reside in the coastal regions, a substantial proportion lives in the northern areas, hinterland, and associated rural communities.

The SCHHS geographic catchment consists of three Local Government Areas (LGAs), further categorised into 8 Statistical Areas Level 3 (SA3), 9 Planning Regions and 38 Statistical Areas Level 2 (SA2). Statistical Areas and Planning Regions are defined based on population size, access to services, social and economic interaction, and physical boundaries such as rivers, highways, and townships. With the exception of remoteness, population density and travel time statistics, which are provided by SA2, data in this report is presented by either SA3 or Planning Region, depending on the data source and availability at the time of writing.

The map in Figure 1 outlines the 8 SA3s that make up the SCHHS catchment, and Table 1 demonstrates the mapping and alignment of the various area types.

Figure 1: SCHHS catchment and SA3s



Australia's Accessibility and Remoteness Index (ARIA+) classifies each SA2 according to its relative access to services or remoteness. The distances people must travel to access goods, services, and social interaction opportunities define their level of remoteness (Australian Bureau of Statistics, 2001). As demonstrated in Table 1, the majority of the population of the SCHHS catchment are classified as residing in major cities or inner regional areas.

However, Kilkivan SA2 contains areas classified as outer regional; 57 per cent of the population of this SA2 reside in its outlying sections. Given its relative lack of outer regions, the people of the SCHHS are generally considered to have relatively high access to essential services such as health services and transportation networks. Such accessibility is an important consideration in assessing need for health services. People residing in rural and remote areas have proven poorer health outcomes and less access to essential health services, particularly primary health care (Australian Institute of Health and Welfare, 2020).

Table 1. SCHHS, geographic regions and remoteness scores

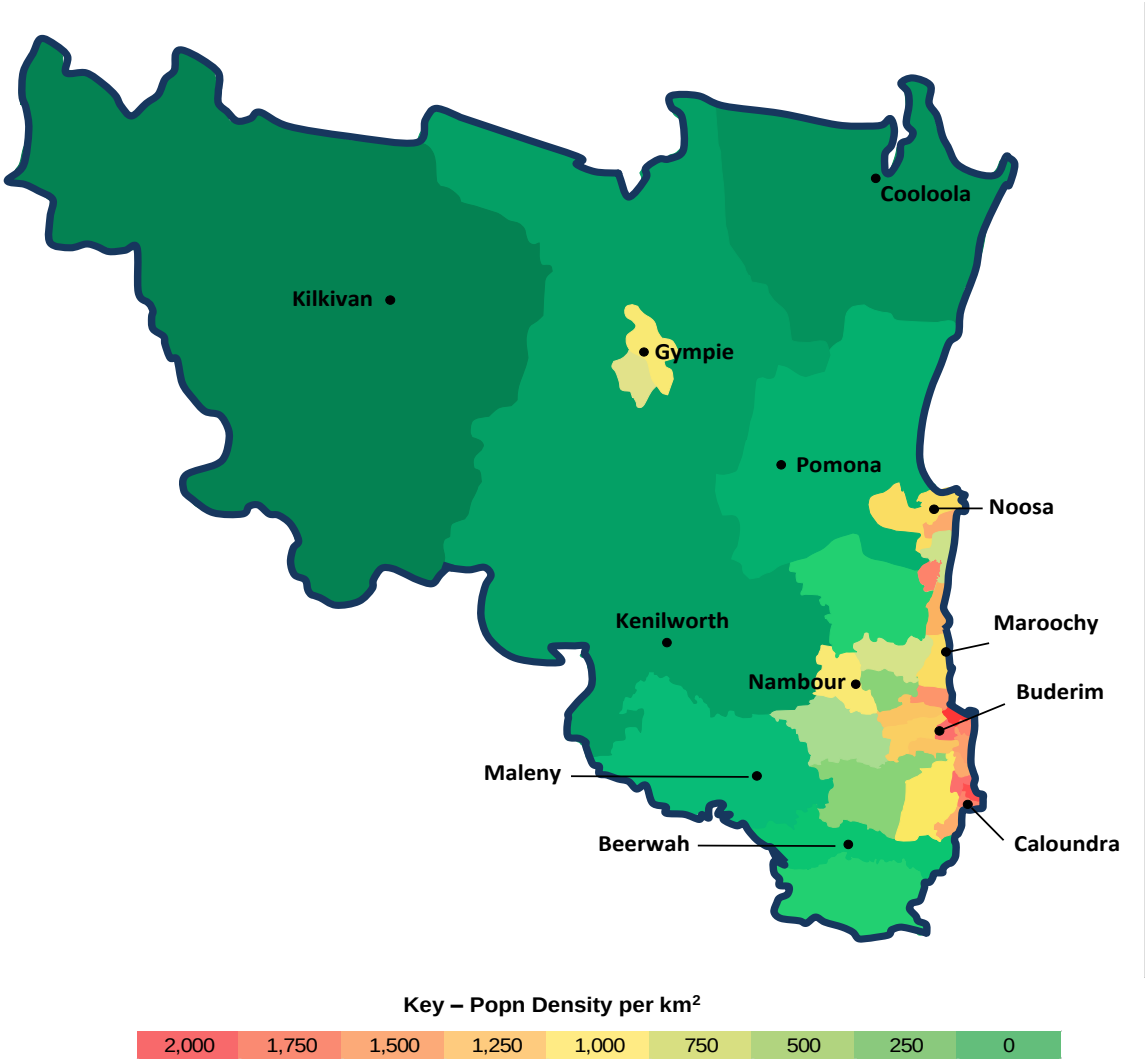
LGA name (2020)	SA3 name (2016)	Planning Region	SA2 name (2016)	Major Cities	Inner Regional	Outer Regional	Remote	Very Remote
Gympie (R)	Gympie - Cooloola	Gympie	Cooloola	0%	100%	0%	0%	0%
Gympie (R)	Gympie - Cooloola	Gympie	Gympie - North	0%	100%	0%	0%	0%
Gympie (R)	Gympie - Cooloola	Gympie	Gympie - South	0%	100%	0%	0%	0%
Gympie (R)	Gympie - Cooloola	Gympie	Gympie Region	0%	100%	0%	0%	0%
Gympie (R)	Gympie - Cooloola	Gympie	Kilkivan	0%	43%	57%	0%	0%
Noosa (S)	Noosa	Noosa	Noosa Heads	100%	0%	0%	0%	0%
Noosa (S)	Noosa	Noosa	Noosaville	100%	0%	0%	0%	0%
Noosa (S)	Noosa	Noosa	Sunshine Beach	100%	0%	0%	0%	0%
Noosa (S)	Noosa	Noosa	Tewantin	100%	0%	0%	0%	0%
Noosa (S)	Noosa	Noosa	Peregian Beach - Marcus Beach	100%	0%	0%	0%	0%
Noosa (S)	Noosa	Noosa	Peregian Springs	100%	0%	0%	0%	0%
Noosa (S)	Noosa Hinterland	Noosa Hinterland	Noosa Hinterland	23%	77%	0%	0%	0%
Sunshine Coast (R)	Buderim	Buderim	Buderim - North	100%	0%	0%	0%	0%
Sunshine Coast (R)	Buderim	Buderim	Buderim - South	100%	0%	0%	0%	0%
Sunshine Coast (R)	Buderim	Buderim	Mountain Creek	100%	0%	0%	0%	0%
Sunshine Coast (R)	Buderim	Buderim	Sippy Downs	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Aroona - Currimundi	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Buddina - Minyama	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Caloundra - Kings Beach	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Caloundra - West	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Golden Beach - Pelican Waters	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Moffat Beach - Battery Hill	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Parrearra - Warana	100%	0%	0%	0%	0%
Sunshine Coast (R)	Caloundra	Caloundra	Wurtulla - Birtinya	100%	0%	0%	0%	0%
Sunshine Coast (R)	Maroochy	Maroochy	Coolum Beach	100%	0%	0%	0%	0%
Sunshine Coast (R)	Maroochy	Maroochy	Marcoola - Mudjimba	100%	0%	0%	0%	0%
Sunshine Coast (R)	Maroochy	Maroochy	Maroochydore - Kuluin	100%	0%	0%	0%	0%
Sunshine Coast (R)	Maroochy	Maroochy	Mooloolaba - Alexandra Headland	100%	0%	0%	0%	0%
Sunshine Coast (R)	Nambour	Nambour	Bli Bli	100%	0%	0%	0%	0%
Sunshine Coast (R)	Nambour	Nambour	Diddillibah - Rosemount	100%	0%	0%	0%	0%
Sunshine Coast (R)	Nambour	Nambour	Eumundi - Yandina	0%	100%	0%	0%	0%
Sunshine Coast (R)	Nambour	Nambour	Nambour	94%	6%	0%	0%	0%
Sunshine Coast (R)	Sunshine Coast Hinterland	Southern Sunshine Coast	Beerwah	0%	100%	0%	0%	0%
Sunshine Coast (R)	Sunshine Coast Hinterland	Southern Sunshine Coast	Glass House Mountains	0%	100%	0%	0%	0%
Sunshine Coast (R)	Sunshine Coast Hinterland	Southern Sunshine Coast	Landsborough	7%	93%	0%	0%	0%
Sunshine Coast (R)	Sunshine Coast Hinterland	Sunshine Coast Hinterland	Caloundra Hinterland	0%	100%	0%	0%	0%
Sunshine Coast (R)	Sunshine Coast Hinterland	Sunshine Coast Hinterland	Maroochy Hinterland	0%	100%	0%	0%	0%
Sunshine Coast (R)	Sunshine Coast Hinterland	Sunshine Coast Hinterland	Palmwoods	42%	58%	0%	0%	0%
				69.6%	**29.9%**	**0.5%**	**0.0%**	**0.0%**

Data source: Queensland Government Statistician's Office, Place Names Concordance 2020 to ASGS 2011 and 2016, LGA and Hospital and Health Services

2.1.2 Population density

Population density varies across the SCHHS catchment from 1 person per km^2 in the Kilkivan SA2 to 2,256 people per km^2 in the Mooloolaba-Alexandra Headland SA2. Population density is highest in the central coastal regions of the catchment, and lowest in the Hinterland, Southern Sunshine Coast and outer Gympie regions (see Figure 2).

Figure 2: SCHHS catchment, population density (number of people per km^2), by SA2, 2016



Source: Australian Bureau of Statistics, Regional population growth, Australia, Cat. No. 3218.0

2.1.3 Travel time to facilities

Travel time to acute facilities from the various SA2s across the region varies widely. The Cooloola and Kilkivan SA2s are the furthest from acute Level 3 (Nambour General Hospital or Gympie Hospital) and tertiary services (Sunshine Coast University Hospital, SCUH), while average drive times to Level 3 and tertiary facilities are also quite high from the Noosa and Caloundra Hinterland. Gympie-North, Gympie-South and the Gympie Region SA2s are over an hour's drive time on average to the closest tertiary facility, SCUH (see Table 2).

Table 2: Driving time (minutes) to Level 3 and tertiary facilities by SA2

SA2	Average to Level 3	Max to Level 3	Average to Tertiary
Buderim - North	17	24	19
Buderim - South	15	18	15
Mountain Creek	12	15	12
Sippy Downs	16	18	16
Aroona-Currimundi	7	11	7
Buddina-Minyama	16	14	16
Caloundra-Kings Beach	15	16	15
Caloundra-West	14	13	14
Golden Beach-Pelican Waters	17	21	17
Moffat Beach-Battery Hill	14	15	14
Parrearra-Warana	8	11	8
Wurtulla-Birtinya	5	8	5
Coolum Beach	27	30	34
Marcoola-Mudjimba	20	25	24
Maroochydore-Kuluin	18	22	18
Mooloolaba-Alexandra Headland	15	17	15
Noosa Heads	12	15	47
Noosaville	6	8	45
Sunshine Beach	11	14	42
Tewantin	7	10	46
Beerwah	27	38	27
Caloundra Hinterland	41	52	41
Glass House Mountains	28	41	28
Landsborough	19	27	19
Maroochy Hinterland	21	36	46
Palmwoods	17	20	30
Cooloola	48	56	106
Gympie-North	6	10	65
Gympie-South	7	10	64
Gympie Region	28	40	82
Kilkivan	54	86	115
Peregian Beach-Marcus Beach	18	20	34
Peregian Springs	17	20	31
Bli Bli	12	17	26
Diddillibah-Rosemount	12	15	28
Eumundi-Yandina	17	25	32
Nambour	6	10	26
Noosa Hinterland	33	37	51

2.3 Demography

2.3.1 Total estimated and projected resident population

As of 2019, the Estimated Resident Population (ERP) of the SCHHS was 436,584. The region is growing faster than Queensland as a whole - 2.3 per cent per annum from 2016 to 2019, compared to a 1.7 per cent annual growth rate for the state. As a result, the population of the SCHHS is projected to increase to 554,782 by 2031 (see Error! Reference source not found.).

Within the SCHHS, the Caloundra and Sunshine Coast Hinterland are the fastest growing SA3s, anticipated to increase by 3.4 per cent and 3.0 per cent per annum respectively between 2026 and 2031. New urban housing expansions in these areas are driving this rapid population growth, including the Caloundra West Aura development and the developments at Beerwah and Landsborough.

Recent migration data also indicates an increase in net movement to regional areas from capital cities as a result of the COVID19 pandemic and its consequent increased flexibility of Australia's workforce (Australian Government Centre for Population, 2020). If this migration is sustained, it may result in fundamental changes to the SCHHS population, including more rapid growth than expected and changes to the population's demographic composition.

Table 3: SCHHS, Estimated Resident Population and projected population by SA3

SA3	Estimated population (ERP)			Projected population (PRP)		
	2016	2019	Compound annual growth rate (%)	2026	2031	Projected annual growth (2021 to 2031)
Buderim	56,284	60,103	2.2%	66,525	67,632	0.3%
Caloundra	82,926	90,960	3.1%	119,175	141,166	3.4%
Gympie	50,216	52,350	1.4%	54,297	56,357	0.7%
Maroochy	58,359	61,711	1.9%	70,439	74,061	1.0%
Nambour	43,662	47,243	2.7%	54,834	58,448	1.3%
Noosa	42,626	45,971	2.6%	47,552	49,015	0.6%
Noosa Hinterland	22,667	23,827	1.7%	25,535	26,771	1.0%
Sunshine Coast Hinterland	50,898	54,419	2.3%	70,139	81,331	3.0%
SCHHS Total	**407,638**	**436,584**	**2.3%**	**508,495**	**554,782**	**1.8%**
QLD Total	**4,848,877**	**5,093,884**	**1.7%**	**5,722,780**	**6,206,566**	**1.6%**

Source: ERP: Queensland Government Statistician's Office (QGSO) – ABS consultancy for QGSO, September 2020. These estimates correspond with 30 June 2001-2019. ERP by SA2 as released in Regional Population Growth, Australia, 2018-19 (cat.no. 3218.0) and Regional Population by Age and Sex, Australia, 2019 (cat no. 3235.0). Prepared by QGSO, Statistical Reporting and Coordination Unit (SRC) and Statistical Analysis Linkage Unit (SALU). PRP: Queensland Government population projections, 2018 edition; Australian Bureau of Statistics, Population by age and sex, regions of Australia, 2016 (cat. no. 3235.0).

2.3.2 Population by age

The SCHHS has a generally older population compared to Queensland. For example, the median age of residents of the SCHHS was 44.3 years in 2020, compared to 37.8 years for Queensland (see Table 4). Overall, the population of the SCHHS is projected to experience rapid growth in the older age groups, with anticipated growth of 81 per cent and 98 per cent respectively for the 70 to 84 years and 85 years and over age groups from 2016 to 2031 (see

Figure 3).

The population's age distribution is not uniform across the region, with the Gympie, Noosa, Noosa Hinterland and Noosa Hinterland SA3s having a higher median age than the rest of the region.

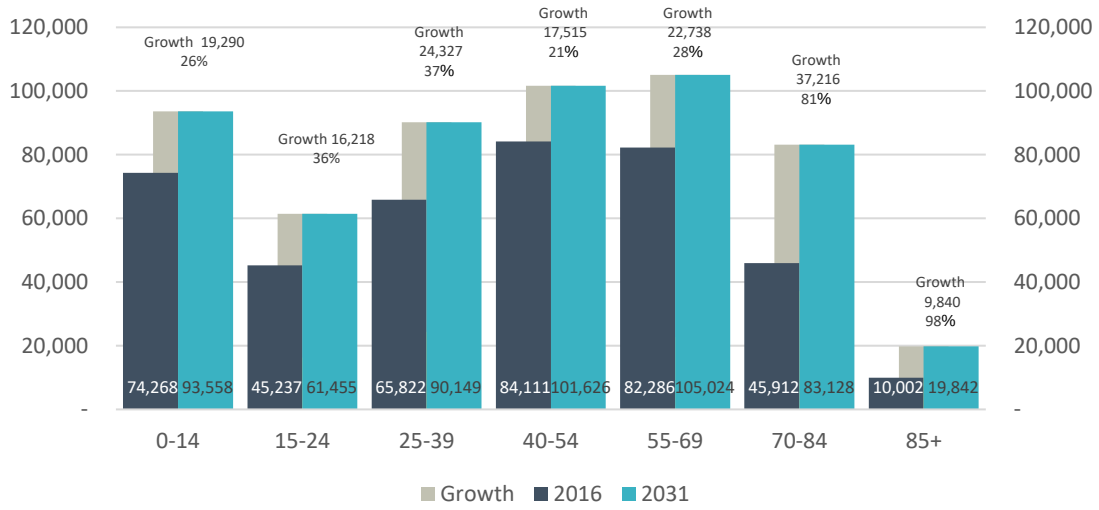
Differences in the age distribution and projected growth profiles across the region have implications for health care needs. For example, the association between age and increasing levels of chronic disease and health service utilisation is an essential consideration for the ageing population. In contrast, growth in the younger people will necessitate targeted services such as child development, public health and health promotion, sexual health, maternity and mental health services (Australian Institute of Health and Welfare, 2011).

Table 4. SCHHS population by age group and SA3, 2019

SA3	Age bands (years)										Median Age
	Number (#)					Proportion (%)					
	0-14	15-44	45-69	70-84	85+	0-14	15-44	45-69	70-84	85+	
Buderim	11,571	22,331	17,913	6,545	1,743	19%	37%	30%	11%	3%	40.3
Caloundra	16,343	30,796	28,773	12,204	2,844	18%	34%	32%	13%	3%	43.4
Gympie	9,478	15,519	18,868	7,268	1,217	18%	30%	36%	14%	2%	47.6
Maroochy	9,038	22,218	21,456	7,368	1,631	15%	36%	35%	12%	3%	44.9
Nambour	9,511	16,495	15,143	5,122	972	20%	35%	32%	11%	2%	41.0
Noosa	7,971	13,891	16,128	6,645	1,336	17%	30%	35%	14%	3%	47.1
Noosa Hinterland	4,285	6,643	9,553	2,985	361	18%	28%	40%	13%	2%	47.9
Sunshine Coast Hinterland	9,816	17,244	19,570	6,759	1,030	18%	32%	36%	12%	2%	44.1
SCHHS Total	**78,013**	**145,137**	**147,404**	**54,896**	**11,134**	**18%**	**34%**	**34%**	**13%**	**2%**	**44.3**
QLD Total	990,331	2,049,306	1,503,901	458,761	91,585	20%	41%	30%	9%	2%	37.8

Source: Queensland Government Statistician's Office (QGSO) – ABS consultancy for QGSO, September 2020. These estimates correspond with 30 June 2001-2019. ERP by SA2 as released in Regional Population Growth, Australia, 2018-19 (cat.no. 3218.0) and Regional Population by Age and Sex, Australia, 2019 (cat no. 3235.0). Prepared by QGSO, Statistical Reporting and Coordination Unit (SRC) and Statistical Analysis Linkage Unit (SALU).

Figure 3: SCHHS, population growth by age group, 2016-2031



Source: Queensland Government population projections, 2018 edition; Australian Bureau of Statistics, Population by age and sex, regions of Australia, 2016 (cat. no. 3235.0).

2.3.3 Aboriginal and Torres Strait Islander population

In 2019, 11,252 people, or 2.6 per cent of the total SCHHS population, identified as Aboriginal and Torres Strait Islander (see Table 5), with the most significant proportion residing in the Gympie-Cooloola (21 per cent) and Caloundra (20 per cent) SA3s (see Figure 4). In comparison to the total SCHHS population, the Aboriginal and Torres Strait Islander population are much younger, with 34 per cent aged 14 years or under and only 16 per cent aged 50 years or over. Figure 5 demonstrates that the majority of the Aboriginal and Torres Strait Islander population fall into the younger age categories, with very few people aged 65 years and over. This is a reflection of the significantly lower median age of death of the SCHHS Aboriginal and Torres Strait Islander population, which is 61.8 years compared with 82.0 years for the general SCHHS population (see Table 7).

The SCHHS needs to ensure it delivers culturally appropriate services to the Aboriginal and Torres Strait Islander population. These would include appropriate services aimed at providing a healthy start to life and primary and preventative services aimed at reducing levels of chronic disease and improving life expectancy and equity of outcomes.

Table 5. SCHHS, Indigenous Population by SA3, 2019

SA3	Number of Indigenous residents	Among Indigenous residents, proportion aged 0-14 years (%)	Among Indigenous residents, proportion aged 50+ years (%)	Among all SA2 residents, proportion who identify as Indigenous (%)	Total Population
Buderim	1,067	32%	15%	1.8%	60,103
Caloundra	2,212	37%	13%	2.4%	90,960
Gympie-Cooloola	2,363	39%	17%	4.5%	52,350
Maroochy	1,433	29%	21%	2.3%	61,711
Nambour	1,604	32%	15%	3.4%	47,243
Noosa	714	31%	17%	1.6%	45,971
Noosa Hinterland	602	35%	21%	2.5%	23,827
Sunshine Coast Hinterland	1,257	37%	16%	2.3%	54,419
SCHHS Total	**11,252**	**34%**	**16%**	**2.6%**	**436,584**
QLD	235,962	35%	16%	4.6%	5,093,884

Figure 4: SCHHS, Indigenous Population by SA3, 2019

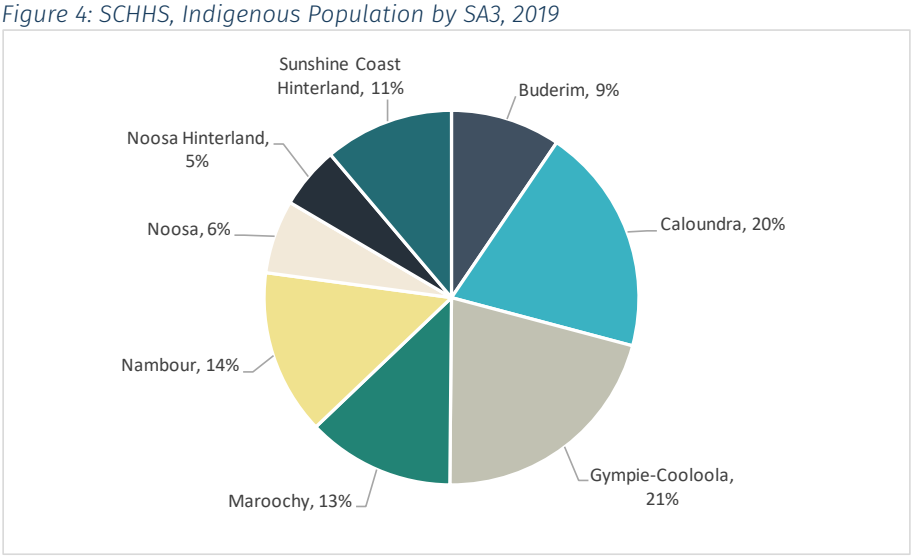
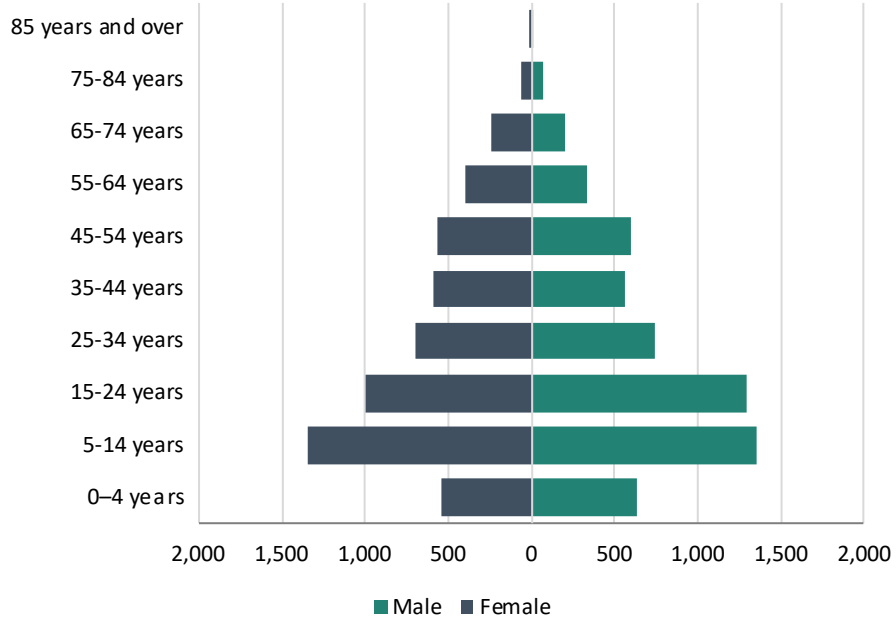


Figure 5: SCHHS, Aboriginal and Torres Strait Islander population by age and sex, 2019



Source: Australian Bureau of Statistics Catalogue No. 3235.0 – Regional Population by Age and Sex, Australia. ABS source data modified and rebased by Queensland Government Statistician's Office (QGSO) via ABS consultancy – August 2020, data file released to QH – November 2020. Hospital and Health Service level data derived by Statistical Analysis Linkage Team, Statistical Services Branch, Department of Health, Queensland. Prepared by: Statistical Reporting and Coordination Unit, Statistical Services Branch, Department of Health.

Table 7. SCHHS, Aboriginal and Torres Strait Islander median age at death by Indigenous Area, 2014-2018

Indigenous Area Name	Median age at death (years)
Caloundra	66.0
Cooloola - Gympie	58.0
Maroochy	58.0
Noosa	75.5
SCHHS Aboriginal and Torres Strait Islander median age at death	**61.8**
SCHHS median age at death	**82.0**

Source: Queensland Health Planning Portal, derived from Public Health Information Development Unit, Social Health Atlas of Australia: Indigenous Areas

2.3.4 Country of birth and languages spoken

Health service considerations for Culturally and Linguistically Diverse (CALD) populations include translation services, culturally appropriate health services, and targeted health care, advice and assistance navigating the system for those recently arrived in Australia.

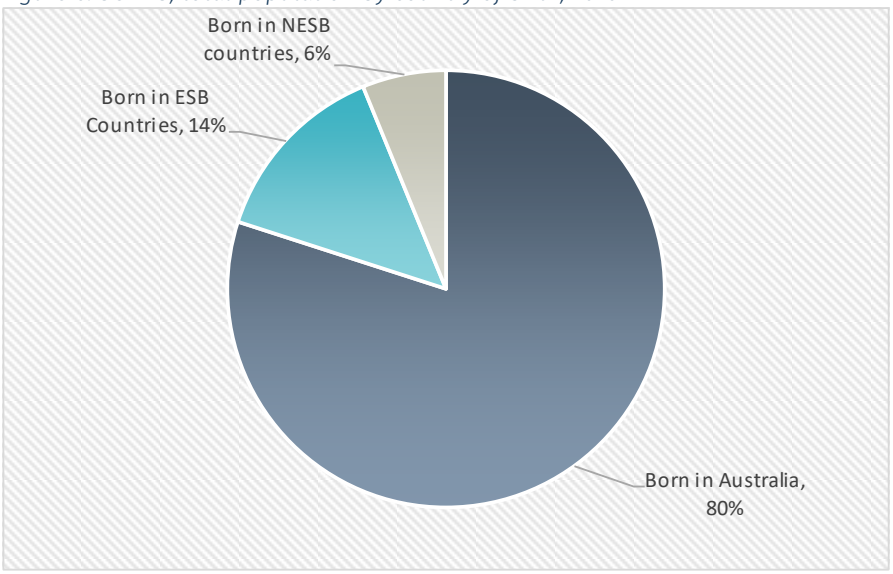
In 2016, 80 per cent of the population of the SCHHS were born in Australia, 14 per cent were born in other English Speaking Background (ESB) countries, and 6 per cent were born in Non-English Speaking Background (NESB) countries (see Figure 6). The proportion of people born in NESB countries is lower than that of Queensland at 12 per cent.

The top five countries for those born in ESB countries are England, New Zealand, South Africa, Scotland and the United States of America (see Table 6). The top five NESB countries of birth are Germany, The Netherlands, The Philippines, India and Papua New Guinea. Of those born in NESB countries, 17 per cent have been resident in Australia for less than five years (see Table 7).

Place of birth varies moderately between planning regions across the SCHHS. For example, the Gympie region has the highest proportion of residents born in Australia at 88 per cent. In contrast, the Noosa region has the highest proportion of residents born overseas, with 18 per cent of the population born overseas in ESB countries and 8 per cent born in NESB countries. The Buderim region also has a higher proportion of residents born overseas, with 17 per cent and 8 per cent of residents born in other ESB and NESB countries respectively (see Table 8).

The majority of SCHHS residents (89 per cent) speak English at home, with the most common languages other than English being German, French, Italian, Afrikaans, and Mandarin (see Table 9).

Figure 6: SCHHS, total population by country of birth, 2016



Source: Queensland Government Statistician's Office, Regional Profile for SCHHS SA2. Data derived from ABS Census 2016.

Table 6: SCHHS residents, top 5 ESB countries of birth, 2016

Country of birth	Population
England	23,329
New Zealand	16,686
South Africa	3,539
Scotland	2,314
United States Of America	1,883
All other ESB Countries	3,305
Total ESB Countries	**51,056**

Source: ABS Stats Data Item B09, derived from ABS Census 2016

Table 7: SCHHS residents, top 5 NESB countries of birth, 2016

Country of birth	Population
Germany	2,563
Netherlands	1,757
Philippines	1,573
India	1,513
Papua New Guinea	869
All other NESB countries	14,587
Total NESB countries	**22,862**
Resident in Australia for less than 5 years	3,864 (17%)

Source: ABS Stats Data Item B09, derived from ABS Census 2016

Table 8: SCHHS population by country of birth and Planning Region, 2016

Planning Region	Population			% Population		
	Born in Australia	Born in ESB Countries	Born in NESB countries	Born in Australia	Born in ESB Countries	Born in NESB countries
Buderim	39,110	8,585	3,904	76%	17%	8%
Caloundra	60,223	11,163	4,474	79%	15%	6%
Gympie - Cooloola	39,617	3,513	1,790	88%	8%	4%
Maroochy	40,587	7,327	3,916	78%	14%	8%
Nambour	33,116	4,560	2,288	83%	11%	6%
Noosa	28,468	6,939	2,902	74%	18%	8%
Noosa Hinterland	16,322	2,863	1,138	80%	14%	6%
Southern Sunshine Coast	18,683	2,796	1,028	83%	12%	5%
Sunshine Coast Hinterland	18,975	3,310	1,422	80%	14%	6%
SCHHS Total	**295,101**	**51,056**	**22,862**	**80%**	**14%**	**6%**

Source: Queensland Government Statistician's Office, Regional Profile for SCHHS SA2. Data derived from ABS Census 2016.

Table 9: SCHHS residents, Language spoken at home, 2016

Language	No. of persons	%Total
German	2,193	0.6%
French	1,140	0.3%
Italian	1,037	0.3%
Afrikaans	984	0.2%
Mandarin	937	0.2%
All other Languages	36,504	9.2%
Total Non-English	**42,795**	**10.8%**
English	352,973	89.2%
SCHHS Total	**395,768**	**100%**

Source: ABS Stats, Data Item B13, derived from ABS Census 2016

2.3.5 Annual births and fertility rates

Fertility rates represent the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each year of her life. The fertility rate of the SCHHS, 1.82 children per woman, is similar to that of Queensland at 1.81 children per woman. Some regions of the SCHHS experience higher fertility rates, particularly Nambour (2.16), Gympie (2.12) and the Southern Sunshine Coast (2.07), indicating an increased need for antenatal services within these regions. The Maroochy planning region has the lowest fertility rate of all areas of the SCHHS at 1.48 children per woman (see Table 10).

Table 10. SCHHS, total births and fertility rate by Planning Region, 2019

Planning Region	Number of registered births	Total fertility rate*
Buderim	566	1.56
Caloundra	898	1.81
Gympie	529	2.12
Maroochy	555	1.48
Nambour	592	2.16
Noosa	350	1.68
Noosa Hinterland	160	1.90
Southern Sunshine Coast	363	2.07
Sunshine Coast Hinterland	207	1.97
SCHHS Total	**4,220**	**1.82**
Queensland Total	**61,735**	**1.81**

Notes: *Total fertility rate is calculated as the sum of age-specific fertility rates per woman. It represents the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life. Age-specific fertility rates are the number of live births during the calendar year, according to the age band of the mother, per 1,000 of the female resident population of the same age at 30 June.

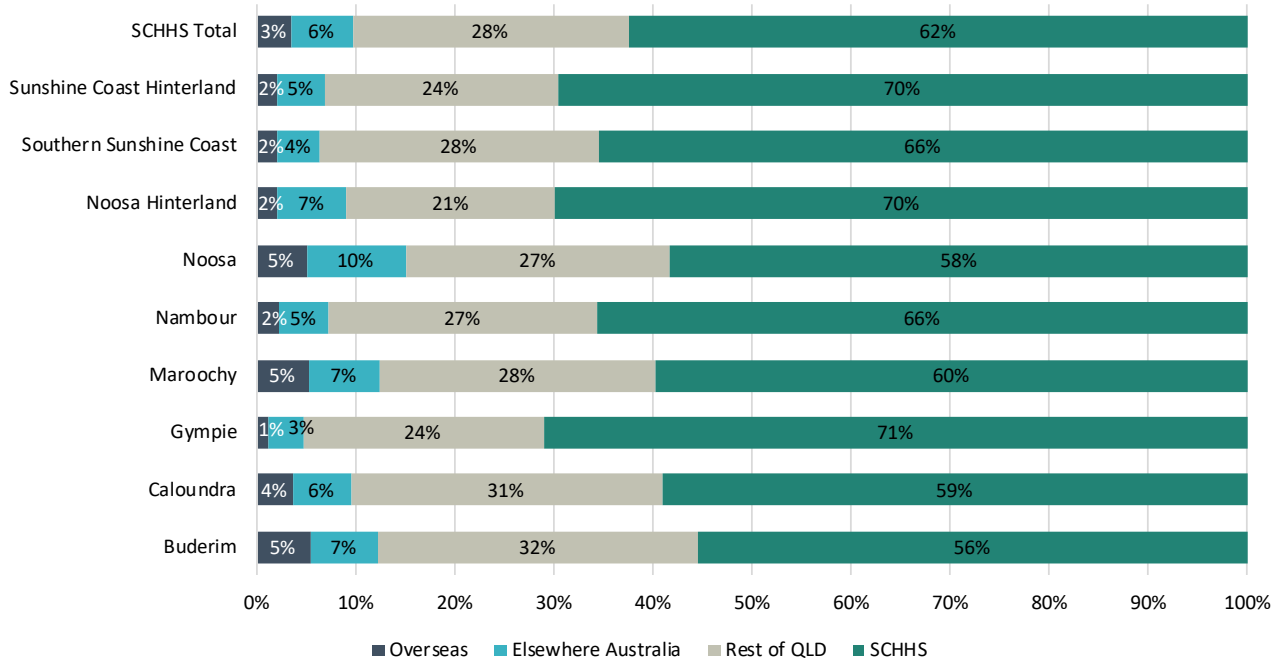
Source: Queensland Perinatal Data Collection (QPDC), Statistical Services Branch, Queensland Health. Prepared by: Statistical Reporting and Coordination, Statistical Services Branch, Queensland Health. Date: 4 March 2020. QPDC includes all live births and stillbirths of at least 20 weeks' gestation and/or at least 400 grams in weight.

2.3.6 Migration

In 2016, 62 per cent of the population had resided within the region for over five years, 28 per cent lived elsewhere in Queensland five years previously, 6 per cent elsewhere in Australia, and 3 per cent overseas. The proportion of the population who migrated to the area in the previous five years varied across the region. Buderim and Caloundra experienced higher migration rates from elsewhere in Queensland (32 per cent and 31 per cent of the population, respectively). The Noosa region experienced higher rates of interstate migration (10 per cent of the population). The Maroochy, Noosa and Buderim areas also had a higher proportion of people who had migrated from overseas in the last five years, at 5 per cent of the total population each (see Figure 7).

Migration rates impact the need for health services in that they result in increases to and changes to the demographic and cultural profile of the population. Recent migration data indicates an increase in net migration to regional areas from capital cities as a result of the pandemic and the subsequent increase in the flexibility of Australia's workforce (Australian Government Centre for Population, 2020). If this migration is sustained, it may result in fundamental changes to the SCHHS population, including more rapid growth than expected and changes to the demographic composition.

Figure 7: SCHHS residents, place of residence five years ago by planning region, 2016



Source: Queensland Government Statistician's Office, Regional Profile for SCHHS SA2. Data derived from ABS Census 2016.

3 Health risks

3.1 Social determinants

The World Health Organisation (WHO) defines the social determinants of health as “the conditions in which people are born, grown, work, live and age, and the wider set of forces and systems shaping the conditions of daily life”[1]. These determinants have a direct influence on health outcomes and indirect effects by influencing downstream behavioural and biomedical risk factors (Austraian Institute of Health and Welfare , 2020).

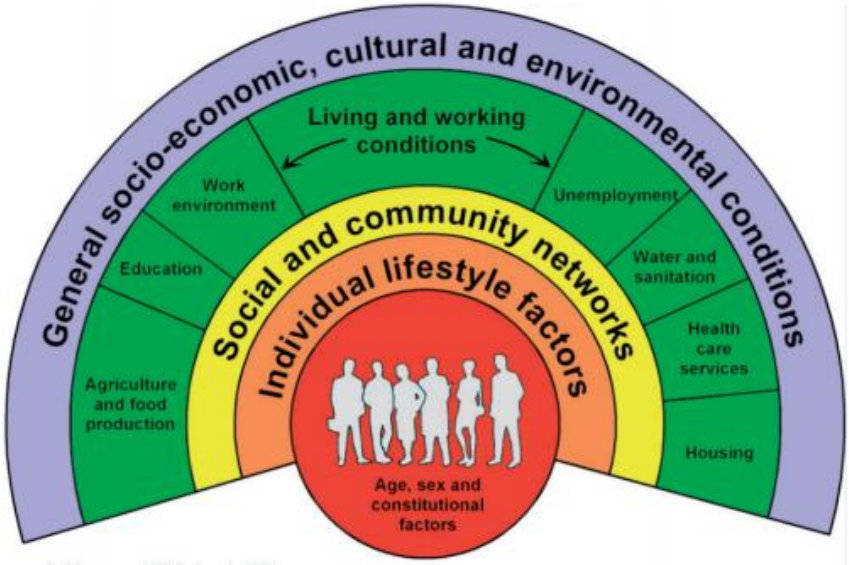


Figure 8. Dahlgren and Whitehead (1991) model of the determinants of health

Source: Dahlgren, G. and Whitehead, M. (1991). Policies and Strategies to Promote Social Equity in Health. Stockholm: Institute for Futures Studies.

According to the WHO, most variation in health status between and within countries is due to social determinants of health. (Booske, Athens, Kindig, Park, & Remington, 2010) estimated that 20 per cent of the modifiable variation in health outcomes are the result of clinical care, with 40 per cent due to social and economic determinants, 30 per cent to health behaviours and 10 per cent to environmental factors. Health inequities caused by social determinants are viewed as avoidable and thus, there is impetus placed on implementing policies to address these inequities and improve population health (Commission on the Social Determinants of Health, 2008).

3.1.1 Economic

3.1.1.1 Socioeconomic status

The Socio-Economic Indexes for Areas (SEIFA) comprise a set of 4 indexes that ranks areas of Australia according to their socio-economic and disadvantage, which can be used to identify funding priorities for social and health services, business opportunities and for researching and explaining the relationship between socio-economic status and health and educational outcomes (Australian Bureau of Statistics, 2018). The Index of Relative Socio-Economic Advantage and Disadvantage is one such index (IRSAD) that summarises a range of information about the economic and social conditions of people and households in an area, and ranks areas in deciles on a continuum from most disadvantaged (decile one) to most advantaged (decile ten).

In 2016, 34 per cent of the SCHHS population resided in areas that fell into the four most disadvantaged quintiles. The population of the Gympie region demonstrates high levels of socio-economic disadvantage, with 79 per cent of this population falling into the four most disadvantaged deciles. The Buderim region is the most advantaged of all SA3s, with 60 per cent of the population residing in areas in the four highest deciles (see Figure 9).

Socio-economic status is closely linked with health outcomes. People from more disadvantaged backgrounds generally have poorer health status, shorter life expectancy, and higher health risk levels than those from higher socio-economic backgrounds (Australian Institute of Health and Welfare, 2020). It is also widely reported that those living in areas of relative socio-economic disadvantage are more likely to experience barriers to accessing health care outside of their place of residence (Arpey, Gaglioti, & Rosenbaum, 2017).

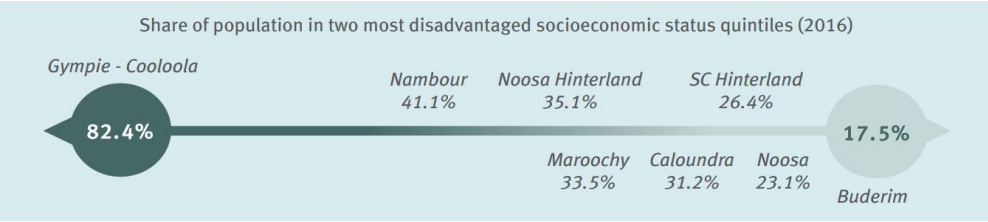
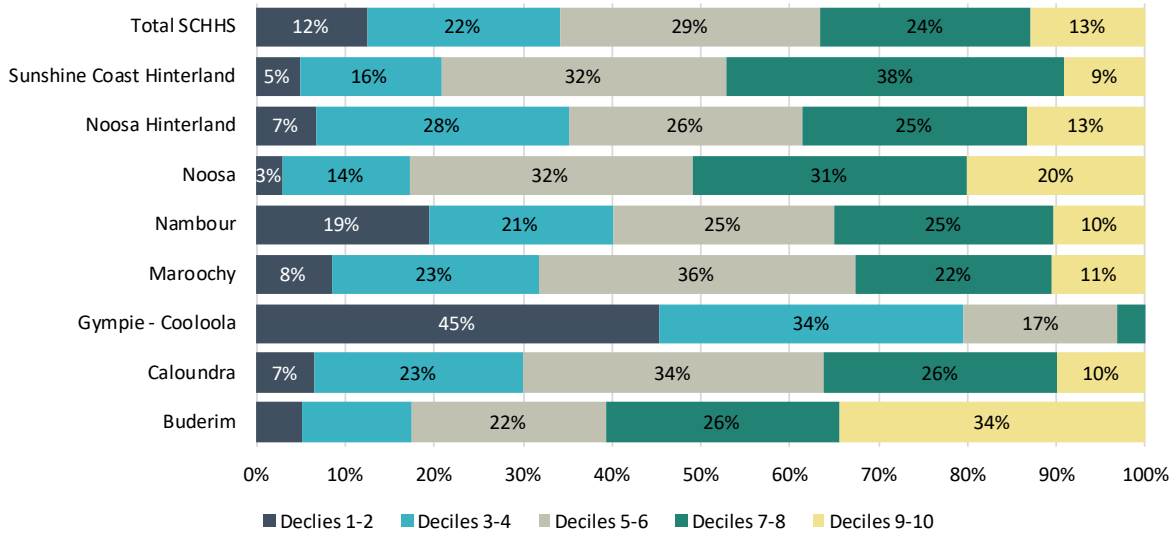


Figure 9. Index of Relative Socio-Economic Disadvantage (IRSAD – SEIFA) by SA3

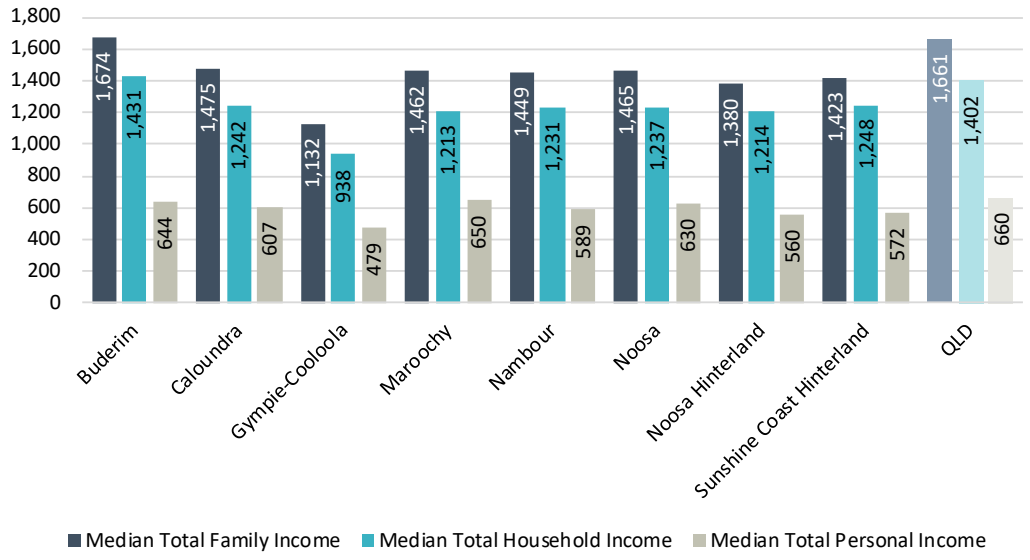


Source: Queensland Health Planning Portal, derived from Australian Bureau of Statistics 2033.0.55.001 Socio-Economic Indexes for Australia (SEIFA) 2016; Australian Statistical Geography Standard (ASGS 2016).

3.1.1.2 Total family income

There is a wide variation in median income across the regions of the SCHHS. For example, the Gympie-Cooloola SA3 has the region's lowest family, household, and personal income levels, while the Buderim SA3 has the highest. Except for the Buderim SA3, all SA3s in the SCHHS catchment have lower median income on all measures (family, household and personal) than Queensland (see Figure 10).

Figure 10: SCHHS residents, median family, household and personal income by SA3, 2016



Source: Queensland Health Planning Portal, derived from Australian Bureau of Statistics 2033.0.55.001 Socio-Economic Indexes for Australia (SEIFA) 2016; Australian Statistical Geography Standard (ASGS 2016).

3.1.1.3 Financial hardship

Aside from median income, reliance on government support payments, the ability to raise emergency funds, and financial stress are indicators of financial position. In 2014, a large proportion of residents living in the Gympie-Cooloola SA3 relied on government support as their primary source of income, with 41.9 residents per 100 population receiving income support at some stage in the previous two years, and 33.3 per 100 relying on government support for 13 months or more during this period. The Gympie-Cooloola region also had the lowest Age Standardised Rate (ASR) of people reporting that they would be able to raise $2,000 within a week if needed, at 77.1 residents per 100 population. Caloundra and Maroochy SA3s also had relatively high rates of people who had claimed government support as their primary source of income at any point in the previous two years (33.0 and 32.9 per 100 population, respectively). But the rate of residents in these areas who relied on payments for 13 months or more was much lower at 22.7 and 21.7 per 100 population, indicating a short-term reliance in these areas (see Table 11).

Despite lower median income levels and higher rates of reliance on government payments for residents of the Gympie-Cooloola SA3, this SA3 has one of the lowest proportions of people under financial stress from rent or mortgage payments, at only 24 per cent of the total population (see Table 12). The availability of more affordable housing in the region and, potentially, government-provided rental assistance may be the reason for this anomaly. The Maroochy and Noosa SA3s reported higher rates of financial stress from rent or mortgage payments, likely also linked to housing affordability in these regions.

Table 11: SCHHS, financial hardship – government support and ability to raise funds by SA3 (ASR), 2014

SA3	Estimated number of people aged 18 years and over who had government support as their main source of income in the last 2 years	Estimated number of people aged 18 years and over who had government support as their main source of income, for 13 months or more, within the past 24 months	Estimated number of people aged 18 years and over whose household could raise $2,000 within a week
Buderim	27.5	18.7	87.2
Caloundra	33.0	22.7	83.4
Gympie-Cooloola	41.3	32.2	77.1
Maroochy	32.9	21.7	81.2
Nambour	29.2	19.5	84.0
Noosa	27.2	20.4	83.3
Noosa Hinterland	28.9	21.2	81.5
Sunshine Coast Hinterland	28.9	21.2	81.5
QLD	**27.5**	**20.1**	**81.9**

Source: Public Health Development Unit Social Health Atlas

Table 12: SCHHS, low income households under financial stress by SA3, 2016

SA3	Low income households under financial stress from mortgage or rent	Total low income households	%Low income households under financial stress from mortgage or rent
Buderim	2,181	7,847	28%
Caloundra	4,000	13,748	29%
Gympie - Cooloola	2,721	11,164	24%
Maroochy	3,419	9,680	35%
Noosa	2,200	7,019	31%
Sunshine Coast Hinterland	2,057	8,268	25%
Nambour	2,098	7,249	29%
Noosa Hinterland	903	3,801	24%
Total SCHHS	**19,579**	**68,776**	**28%**
QLD	204,677	680,126	30%

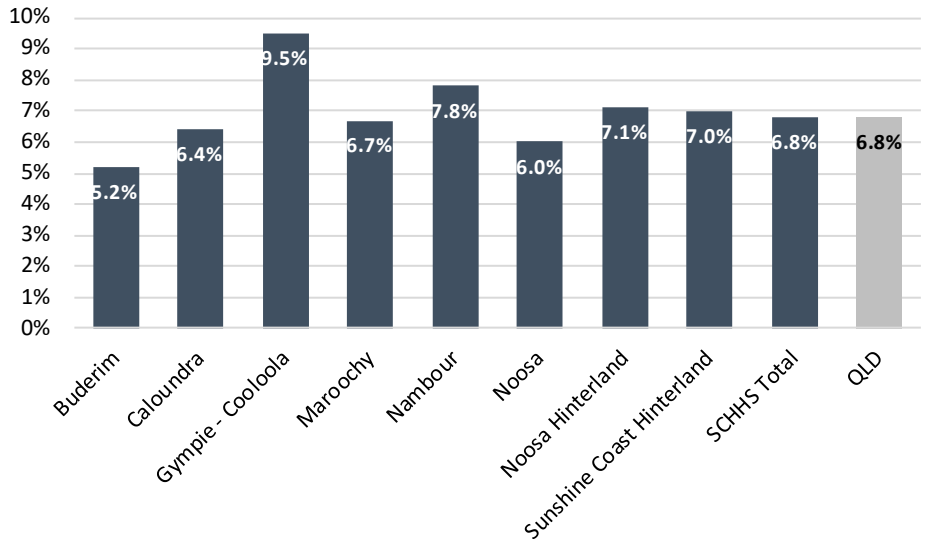
Source: Public Health Development Unit Social Health Atlas

3.1.1.4 Unemployment rates

Research demonstrates that unemployment has negative impacts on physical and mental health, resulting in higher levels of health service utilisation and cost to the health system (Parliament of Australia Standing Committee on Employment and Workplace Relations, 1999). Furthermore, these impacts often persist beyond the period of unemployment (Nortstrom, et al., 2019).

Unemployment rates vary widely across the SCHHS, ranging from 5.2 per cent in Buderim to 9.5 per cent in the Gympie-Cooloola SA3. The Nambour SA3 also has a relatively high unemployment rate at 7.8 per cent (see Figure 11).

Figure 11: SCHHS unemployment rates by SA3, June 2021



Source: Queensland Government Statistician's Office Regional Profiles

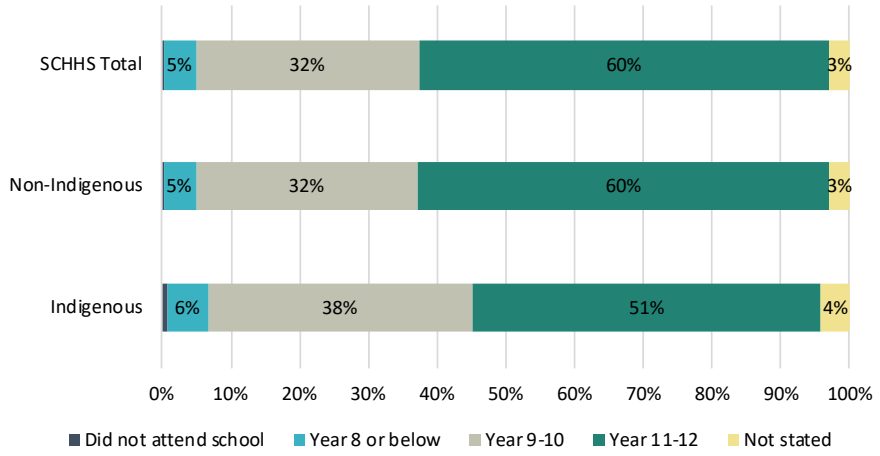
3.1.2 Education

3.1.2.1 Highest level of schooling

Education and health are intrinsically linked, with the level of educational attainment strongly associated with life expectancy, morbidity and health behaviours (The Lancet Public Health, 2020). In addition, education can also increase the capacity for better decision-making regarding one's health and provide scope for improving social and personal resources vital for physical and mental health (Shankar, Ip, Couture, Tan, & Zulla, 2013).

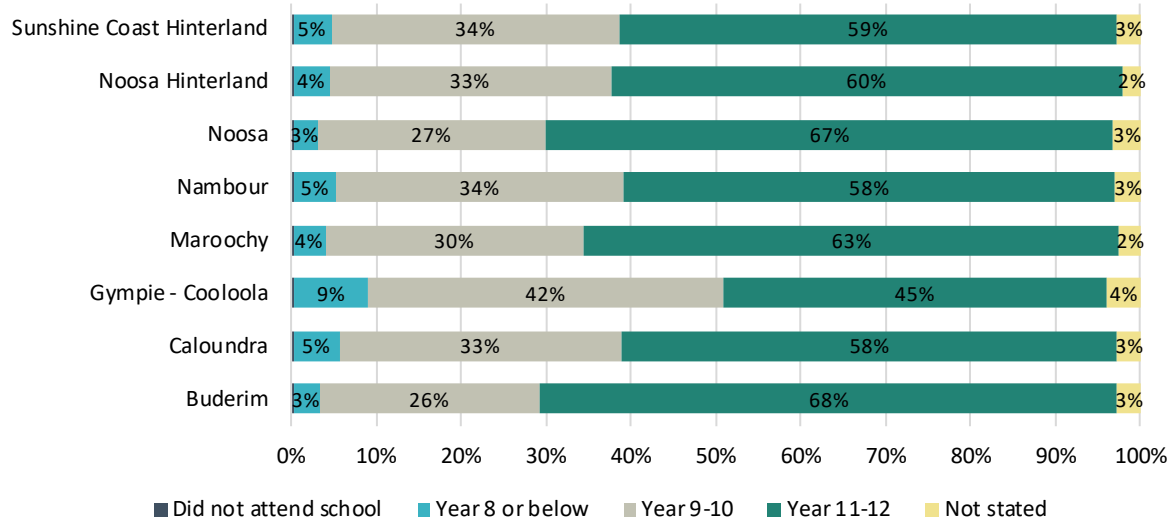
In 2016, 60 per cent of SCHHS adults had completed year 11 or 12. This proportion was lower for the Indigenous population at 51 per cent, with the highest level of school achieved being year 9 or 10 for 38 per cent of the Indigenous population. The proportion of people who had only completed year 8 or below was similar for the Indigenous and non-Indigenous population at 5 per cent and 6 per cent, respectively (see Figure 12). The highest level of schooling completed varies across SA3s; in Gympie-Cooloola, 9 per cent of people completed year 8 or below, and 45 per cent completed year 11 or 12. The Buderim and Noosa regions have the highest rates of completion of year 11 or 12 at 68 per cent and 67 per cent, respectively (see Figure 13).

Figure 12: SCHHS, highest level of schooling by Indigenous Status, 2016



Source: Queensland Health Planning Portal, derived from ABS Census 2016 Category: G16 Highest year of school completed (2016).

Figure 13: SCHHS, highest level of schooling by SA3, 2016



Source: Queensland Health Planning Portal, derived from ABS Census 2016 Category: G16 Highest year of school completed (2016).

3.1.2.2 Developmentally vulnerable children

The Australian Early Development Census (AEDC) is an Australian Government initiative to measure five areas, or domains, of early childhood development that form the foundations for later good health, education and social outcomes. The five developmental domains include:

- Physical health and wellbeing
- Social competence
- Emotional maturity
- Language and cognitive skills (school-based)
- Communication skills and general knowledge

Children considered "developmentally vulnerable" are those who score in the lowest 10 per cent of the national population, based on a teacher-completed instrument (Australian Government, 2019).

In general, the proportion of developmentally vulnerable children across the SCHHS is lower than Queensland rates. However, rates of developmental vulnerability do vary across the region, with a higher proportion of children in the Maroochy (26 per cent) and Gympie-Cooloola (27 per cent) SA3s assessed as developmentally vulnerable on at least one domain. In addition, a higher proportion of children are developmentally vulnerable on two or more domains in the Maroochy (14 per cent), Noosa Hinterland (14 per cent) and Gympie-Cooloola (15 per cent) SA3s compared to the SCHHS as a whole (see Table 13).

Table 13. SCHHS, developmentally vulnerable children by SA2, 2018

SA3	Early childhood development: AEDC, Developmentally vulnerable on one or more domains			Early childhood development: AEDC, Developmentally vulnerable on two or more domains		
	Children developmentally vulnerable on one or more domains	Children assessed in AEDC (first year of school)	% Children developmentally vulnerable on one or more domains	Children developmentally vulnerable on two or more domains	Children assessed in AEDC (first year of school)	% Children developmentally vulnerable on two or more domains
Buderim	114	633	18%	53	633	8%
Caloundra	225	950	24%	116	953	12%
Maroochy	150	573	26%	82	573	14%
Noosa	55	458	12%	25	458	5%
Sunshine Coast Hinterland	116	545	21%	53	545	10%
Nambour	138	568	24%	70	568	12%
Noosa Hinterland	57	242	24%	34	242	14%
Gympie - Cooloola	146	549	27%	85	549	15%
SCHHS Total	**1,001**	**4,518**	**22%**	**518**	**4,521**	**11%**
QLD	15,954	61,673	26%	8,576	61,781	14%

Source: Public Health Information Development Unit (PHIDU) material from Social Health Atlas of Australia: Population Health Areas. Derived from Australian Early Development Census (AEDC): Developmentally Vulnerable, Developmentally on track, Developmentally at Risk (2018).

3.1.3 Housing

3.1.3.1 Access to housing

Homelessness or a lack of access to stable housing can have significant detrimental impacts on a person's health and wellbeing, including their ability to access health services and their physical and mental health outcomes (Office of Disease Prevention and Health Promotion, 2020).

One way we can measure access to housing is the number of people on the waitlist for social housing and rates of homelessness in an area. Across the SCHHS in September 2020, there were a total of 1,780 people on the housing register, with larger numbers in the more densely populated regions of Buderim, Caloundra and Maroochy SA3s (see Table 14). The Housing Register prioritises people according to their level of need, from low to very high. A larger proportion of registrants in the Gympie-Cooloola and Nambour SA3s are in the very high need segment (67 per cent and 66 per cent of total applications, respectively) (see Figure 14).

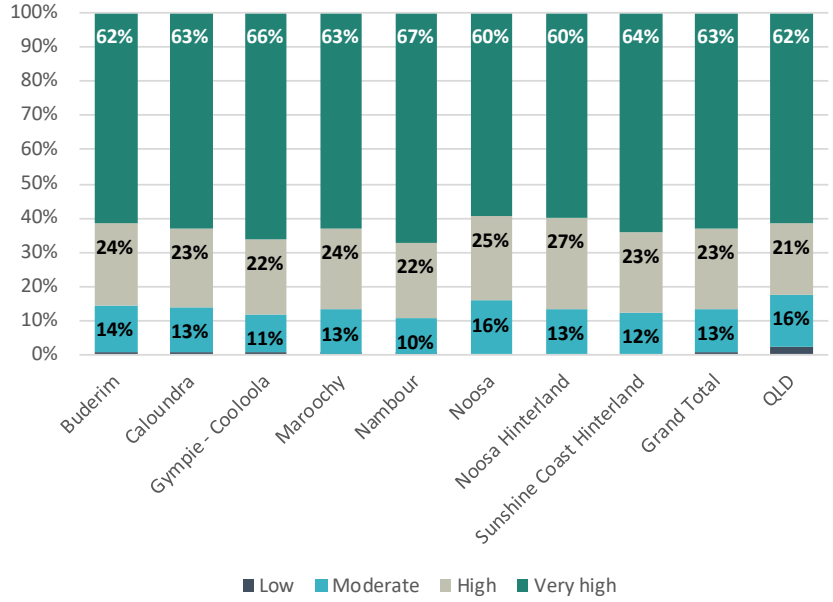
In terms of homelessness, the rate of homelessness in the SCHHS catchment (29 people per 10,000 population) was substantially lower than that of Queensland (46 people per 10,000 population) in 2016. Rates were higher in the Gympie-Cooloola (59 people per 10,000 population) and Nambour (51 people per 10,000 population) SA3s (see Figure 15).

Table 14: SCHHS, number of people on the housing register by segment of need and SA3, 30 September 2020

SA3	Segment of Need				Total
	Low	Moderate	High	Very high	
Buderim	2	42	73	187	304
Caloundra	3	53	93	254	403
Gympie - Cooloola	1	17	34	102	154
Maroochy	2	52	99	260	413
Nambour	1	22	48	146	217
Noosa	0	28	44	106	178
Noosa Hinterland	0	4	8	18	30
Sunshine Coast Hinterland	0	10	19	52	81
Grand Total	**9**	**228**	**418**	**1,125**	**1,780**

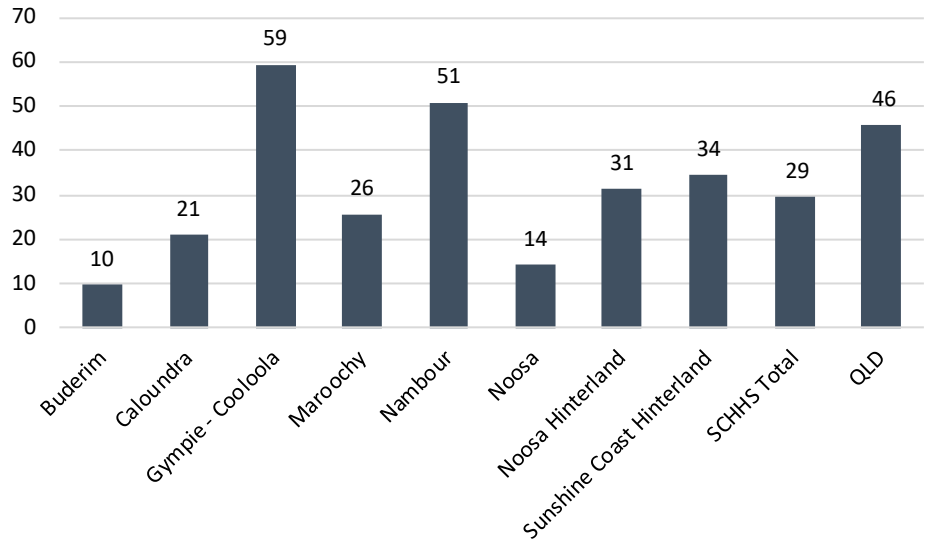
Source: Queensland Government Statistician's Office, Queensland Housing Profiles

Figure 14: SCHHS, people on the housing register by segment of need and SA3, 30 September 2020



Source: Queensland Government Statistician's Office, Queensland Housing Profiles

Figure 15: SCHHS homelessness rates (people per 10,000 population) by SA3, 2016



Source: Queensland Government Statistician's Office, Queensland Housing Profiles

3.1.3.2 Crowded dwellings

Australian national and state governments review crowding as a factor in determining social policy about housing. The Australian Bureau of Statistics (ABS) follows principles established by the Canadian National Occupancy Standard (CNOS), based on density measures of the number of bedrooms in a dwelling and household demographic factors that include the number of usual residents, their relationships, age and sex.

This standard determines a "severely" crowded dwelling as needing four or more additional bedrooms to accommodate all persons currently living in the household. The ABS defines "severely" crowded dwellings as one of their six "Homeless Operational Groups". People in these groups have been determined to have "lack of control of and access to space for social relations…and are considered not to have accommodation alternatives when remaining in such extreme living arrangements" (Australian Bureau of Statistics, 2012). Living in a severely crowded dwelling can have adverse impacts on health and health status, including an increased risk of infectious diseases and poor mental health status (World Health Organization, 2018).

In 2016, 4 per cent of the total population of the SCHHS catchment resided in crowded dwellings, while 6 per cent resided in severely crowded dwellings. The proportion of Indigenous persons in crowded dwellings was higher at 12 per cent, however the proportion of this population residing in severely crowded dwellings was less than 1 per cent (see

Table 15). This is an important distinction - there is evidence that health outcomes may not be compromised by slight or short-term overcrowding; severe overcrowding poses a much larger risk to health and wellbeing (Public Health Information Development Unit, 2016).

Across the SCHHS region, rates of severe crowding are highest in the Gympie-Cooloola (17 per cent) and Sunshine Coast Hinterland (11 per cent) SA3s.

Table 15. SCHHS, persons living in severely crowded dwellings, by SA3 and Indigenous status, 2016

SA3	Total persons					Indigenous				
	Persons living in crowded dwellings	% persons living in crowded dwellings	Persons living in severely crowded dwellings	% persons living in severely crowded dwellings	Total persons in private dwellings	Persons living in crowded dwellings	% persons living in crowded dwellings	Persons living in severely crowded dwellings	% persons living in severely crowded dwellings	Total persons in private dwellings
Buderim	1,390	3%	0	0%	50,664	62	8%	0	0%	774
Caloundra	2,468	3%	9	1%	75,104	173	11%	0	0%	1,567
Gympie - Cooloola	2,478	6%	76	17%	44,992	210	12%	3	0%	1,729
Maroochy	2,172	4%	15	3%	50,982	106	10%	8	1%	1,027
Noosa	918	2%	15	4%	37,723	58	12%	0	0%	490
Sunshine Coast Hinterland	2,245	5%	49	11%	46,242	121	13%	0	0%	960
Nambour	1,907	5%	22	6%	39,409	209	18%	0	0%	1,191
Noosa Hinterland	817	4%	16	8%	20,297	41	10%	0	0%	401
Total SCHHS	**14,395**	**4%**	**202**	**6%**	**365,413**	**980**	**12%**	**11**	**0%**	**8,139**
QLD	243,689	6%	7,914	18%	4,302,315	33,097	19%	2,955	0%	176,344

Data source: Public Health Information Development Unit Social Health Atlas of Australia. Derived from Australian Bureau of Statistics, Census of Population and Housing, August 2016.

3.1.3.3 Household and family composition

Household arrangements represent the context in which individuals with a family tie perform a daily exchange of resources of a diverse nature (economic, emotional, care, information) (Commission on the Social Determinants of Health, 2008). The ABS defines a family as two or more people, with one person aged 15 years or more, related by blood, marriage (registered or de-facto), adoption or fostering or in a step-family relationship, and who are usually resident in the same household. It defines a household as one person or two or more related or unrelated persons who typically live in the same private dwelling.

Household composition can influence health outcomes in many ways. The effects may differ by specific family ties, such as persons living with a partner versus alone or families living with children. Social determinants of health such as education level attained, and economic status further mediate outcomes (Guma, Sole-Auro, & Arpino, 2019).

In 2016, 70 per cent of households within the SCHHS were one family households, and 24 per cent were lone person households. Multi-family and group households accounted for only 2 per cent and 4 per cent of households, respectively (see Table 16). Families comprised of 46 per cent couple families with no children, 38 per cent couple families with children and 16 per cent one-parent families (see Figure 16).

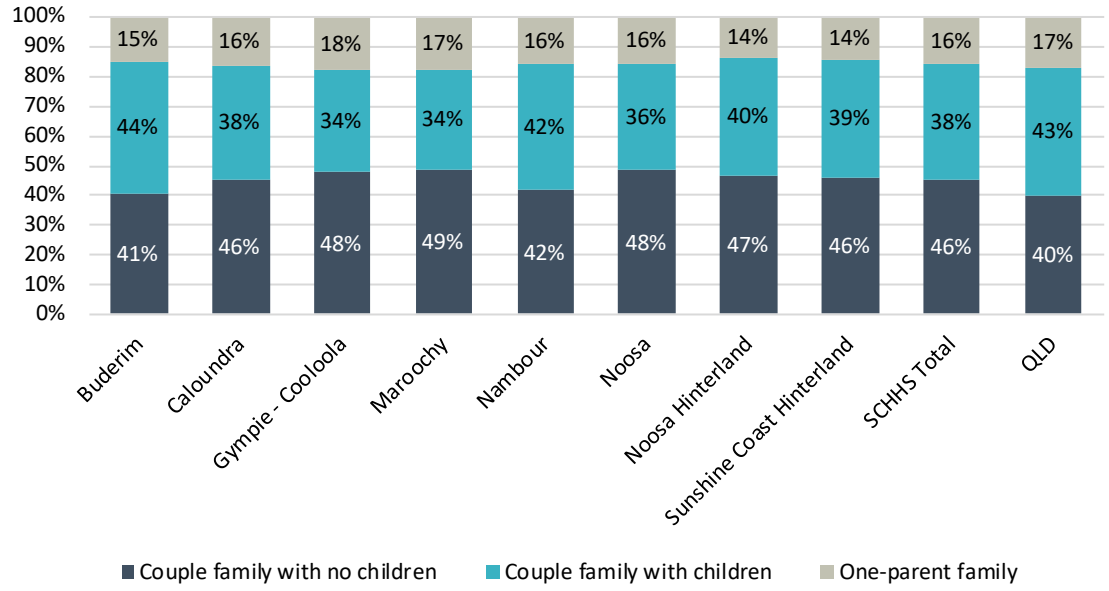
These proportions vary across the region. For example, the Buderim, Noosa Hinterland and Sunshine Coast Hinterland SA3s had marginally higher proportions of one-family households. However, family composition differed slightly between these regions, with Buderim having a higher proportion of couple families with children. The Noosa and Sunshine Coast Hinterland SA3s had a higher proportion of couple families with no children. This is likely due to the Noosa and Sunshine Coast Hinterland having a slightly older population and thus a higher number of couples whose children may have left home. On the other hand, the Gympie-Cooloola and Maroochy SA3s have higher proportions of lone person households at 27 and 30 per cent of total households, respectively.

Table 16. SCHHS, household composition by SA3, 2016

SA3	One family households	Multiple family households	Group households	Lone person households
Buderim	74%	1%	4%	20%
Caloundra	71%	1%	4%	24%
Gympie - Cooloola	68%	2%	3%	27%
Maroochy	63%	1%	6%	30%
Nambour	71%	2%	3%	23%
Noosa	71%	1%	4%	24%
Noosa Hinterland	75%	3%	3%	20%
Sunshine Coast Hinterland	75%	2%	3%	20%
SCHHS Total	**70%**	**2%**	**4%**	**24%**
QLD	70%	2%	5%	23%

Data source: Public Health Information Development Unit Social Health Atlas of Australia. Derived from Australian Bureau of Statistics, Census of Population and Housing, August 2016.

Figure 16: SCHHS, family composition by SA3, 2016



Source: Public Health Information Development Unit Social Health Atlas of Australia. Derived from Australian Bureau of Statistics, Census of Population and Housing, August 2016.

3.1.4 Reported offences

There are multiple links between crime rates and public health - crime can directly impact its victims' physical and mental health. Those living in neighbourhoods with high crime rates may experience adverse health outcomes due to stress and reduced participation in healthy activities such as physical and social activity (Office of Disease Prevention and Health Promotion , ND).

The Queensland Police Service release a monthly report providing an overview of reported offences by LGA. In December 2020, the rate of offences against property was highest in the Noosa LGA, while offences against the person and other offence rates were highest in the Gympie LGA (see Table 17).

Table 17: SCHHS, reported offences by LGA, rate per 100,000 population, December 2020

LGA	Offences Against Property	Offences Against the Person	Other Offences
Gympie	200.6	86.3	371.3
Noosa	228.7	53.2	260.7
Sunshine Coast	185.0	41.2	186.8

Source: Queensland Health Planning Portal, derived from Queensland Police Service Reported crime trend data

3.1.5 Social capital

We can define social capital as resources generated through shared values and networks of relationships amongst people and facilitating society's effective functioning (Keely, 2007). Social capital includes cognitive capital, trust, social support and neighbourhood connection, and structural capital, including participation in community activities, volunteering, and membership of community organisations (Uphoff, Pickett, Cabieses, Small, & Wright, 2013). It has significant impacts on health outcomes, both physical and psychological, through mechanisms such as increased social and psychological support, social norms that encourage healthy lifestyle choices and behaviours, collective action, and sharing of health-related information (Uphoff, Pickett, Cabieses, Small, & Wright, 2013). This analysis considers three measures of social capital here:

- rates of participation in voluntary work
- the number of people who can get support in times of crisis
- the number of people who have provided support to those outside their household.

3.1.5.1 Voluntary work

Participation in volunteer work can improve health through increasing social interaction and social networks, creating a sense of purpose and improving self-esteem (Public Health Information Development Unit, 2016). In 2016, 21 per cent of SCHHS residents reported having participated in voluntary work in the 12 months prior, slightly higher than the Queensland rate of 19 per cent (see Table 18). Participation rates did not vary significantly across SA3s, with marginally higher rates in the Sunshine Coast Hinterland SA3.

Table 18: SCHHS, people aged 15 years and over who participated in voluntary work by SA3, 2016

SA3	No. of people who participated in voluntary work	Population aged 15 years and over	% volunteers
Buderim	9,357	43,785	21%
Caloundra	12,694	66,079	19%
Gympie - Cooloola	8,574	40,444	21%
Maroochy	9,132	48,062	19%
Noosa	6,865	33,986	20%
Sunshine Coast Hinterland	9,686	40,653	24%
Nambour	7,258	34,293	21%
Noosa Hinterland	4,009	17,842	22%
Total SCHHS	**67,575**	**325,144**	**21%**
QLD	714,138	3,790,497	19%

Source: Public Health Information Development Unit, derived from ABS Census 2016

3.1.5.2 Crisis support

The ability to draw on support from others and willingness to offer support to others in a time of crisis are important indicators of social capital and community strength that can improve health and wellbeing (Public Health Information Development Unit, 2016). In 2016, the proportion of people in the SCHHS who reported the ability to get support from a person outside of their household in a time of crisis was around 93 per cent in all SA3s (see Table 19). This percentage did not differ significantly across the region and was comparable to that of Queensland.

The percentage of people who had provided support to people outside their household in the last 12 months ranged from 25.5 per cent in Caloundra to 30.4 per cent in the Caloundra Hinterland (see Table 20).

Table 19: SCHHS, estimated number of people aged 18 years and over who are able to get support in times of crisis from person outside the household by SA3, 2016

SA3	Number	ASR per 100
Buderim	35,747	93.8
Caloundra	56,374	93.5
Gympie - Cooloola	33,981	92.4
Maroochy	42,665	92.8
Noosa	28,378	93.2
Sunshine Coast Hinterland	35,625	93.5
Nambour	28,861	93.3
Noosa Hinterland	15,542	93.3
QLD	**3,282,486**	**93.0**

Source: Public Health Information Development Unit, derived from ABS Census 2016

Table 20: SCHHS, estimated number of people aged 18 years and over who have provided support to a person outside the household within the last 12 months by SA3, 2016

SA3	Number	ASR per 100
Buderim	10,378	27.2
Caloundra	15,505	25.5
Gympie - Cooloola	10,381	27.2
Maroochy	12,465	27.1
Noosa	8,573	27.2
Sunshine Coast Hinterland	12,103	30.4
Nambour	8,337	25.9
Noosa Hinterland	4,490	25.9
QLD	**983,579**	**27.9**

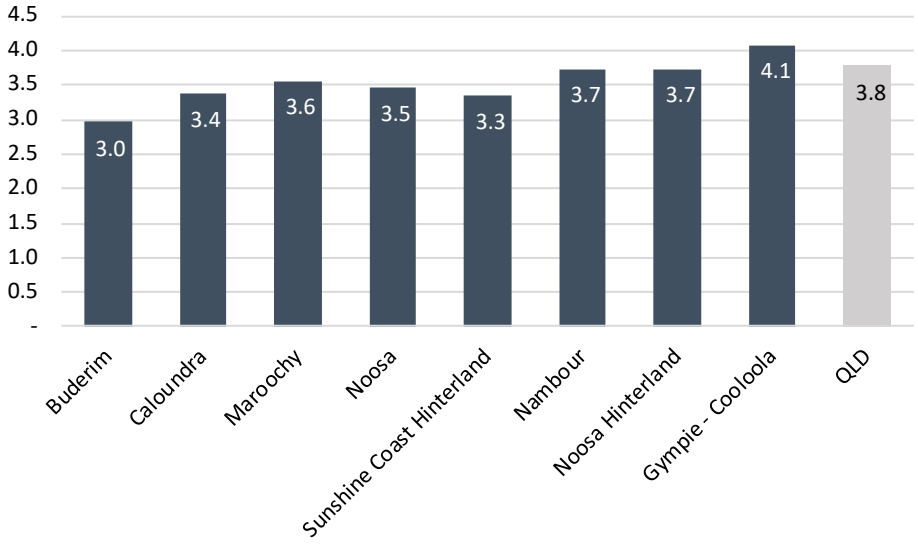
Source: Public Health Information Development Unit, derived from ABS Census 2016

3.1.6 Access to transport and services

3.1.6.1 Access to transport

A person's access to transport can have direct and indirect effects on health, by impacting their ability to access vital services, including health services, and indirectly by affecting their ability to fully participate in society (van Schalwyk & Mindell, 2018). In 2016, the ASR of people reporting difficulty in accessing transport ranged from 3.0 persons per 100 population in Buderim to 4.1 persons per 100 population in Gympie (see Figure 17). The proportion of people without access to a motor vehicle was lower in the Noosa and Sunshine Coast Hinterland SA3s (2 per cent), and higher in the more urban areas of Caloundra and Maroochy (5 per cent) (see Table 21). Gympie also had a higher proportion of people without a motor vehicle at 5 per cent, which is more of a concern as the impact of access to transport is often more pronounced for those living in more disadvantaged areas (van Schalwyk & Mindell, 2018).

Figure 17: SCHHS, Estimated number of people aged 18 years and over who often have a difficulty or cannot get to places needed with transport, including housebound, by SA3, 2014



Source: Public Health Information Development Unit, Social Health Atlas

Table 21: SCHHS, Dwellings with no motor vehicle by SA3, 2016

SA3	Private dwellings with no motor vehicle	Total private dwellings	% dwellings with no motor vehicle
Buderim	772	19,226	4%
Caloundra	1,538	30,529	5%
Maroochy	1,234	22,549	5%
Noosa	709	15,772	4%
Sunshine Coast Hinterland	394	17,701	2%
Nambour	700	15,155	5%
Noosa Hinterland	151	7,789	2%
Gympie - Cooloola	911	18,644	5%
SCHHS Total	**6,409**	**147,365**	**4%**
QLD	99,133	1,656,831	6%

Source: Public Health Information Development Unit, derived from ABS Census 2016

3.1.6.2 Internet Access

Access to the digital world, including access to the internet, is increasingly recognised as one of the social determinants of health due to the expanding use of digital solutions in health care and the impact of internet access on a person's ability to obtain health information and resources (Benda, Veinot, Sieck, & Ancker, 2020). Lower internet access rates are often observed in lower-socioeconomic households and in households without school age children (Public Health Information Development Unit, 2016).

SCHHS internet access rates reflect this observation. In 2016, 85 per cent of SCHHS residents had access to the internet at home; however, the rate of access in the Gympie-Cooloola SA3 was lower than the rest of the catchment at 77 per cent, and the Buderim region demonstrated the highest level of internet access at 88 per cent of all dwellings (see Table 22). Rates of internet access were much higher in households with children aged 15 years or under, with only 4 per cent of all of these households reporting no internet access (see Table 22).

Table 22: SCHHS residents, internet access at home by SA3, 2016

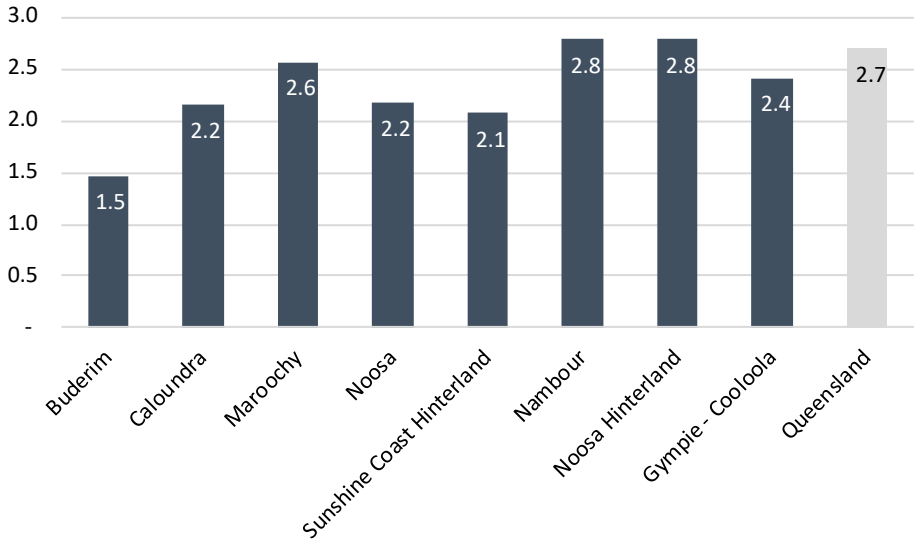
SA3	Internet accessed from dwelling			Internet not accessed from dwelling			Children aged less than 15 years living in dwellings from which Internet was not accessed		
	Internet accessed from dwelling	Total private dwellings	% dwellings where Internet accessed	Internet not accessed from dwelling	Total private dwellings	% dwellings where Internet not accessed	Children aged less than 15 years living in dwellings from which Internet was not accessed	Total children aged less than 15 years in private dwellings	% children aged less than 15 years living in dwellings from which Internet was not accessed
Buderim	16,968	19,226	88%	1,764	19,226	9%	174	10,361	2%
Caloundra	25,754	30,529	84%	4,109	30,529	13%	540	13,911	4%
Gympie - Cooloola	14,322	18,644	77%	3,783	18,644	20%	683	8,512	8%
Maroochy	18,974	22,549	84%	2,936	22,549	13%	379	7,926	5%
Noosa	13,710	15,772	87%	1,655	15,772	10%	226	6,821	3%
Sunshine Coast Hinterland	15,304	17,701	86%	2,026	17,701	11%	349	8,620	4%
Nambour	12,805	15,155	84%	1,980	15,155	13%	316	7,999	4%
Noosa Hinterland	6,756	7,789	87%	855	7,789	11%	133	3,850	3%
SCHHS Total	**124,593**	**147,365**	**85%**	**19,108**	**147,365**	**13%**	**2,800**	**68,000**	**4%**
QLD	1,387,499	1,656,831	84%	224,855	1,656,831	14%	47,100	863,706	5%

Source: Public Health Information Development Unit, derived from ABS Census 2016

3.1.6.3 Barriers to accessing health care

Access to health care is considered to be one of the social determinants of health. While geographic access and availability of services are one factor impacting a person's ability to access health care, the cost of services is often a barrier to heath care for those with limited resources (Australian Institute of Health and Welfare, 2016). In 2016, the proportion of people reporting having experienced barriers to accessing health care, with the main reason being cost, varied across the region from 1.5 people per 100 population in Buderim to 2.8 people per 100 population in Nambour and the Sunshine Coast Hinterland (see Figure 18).

Figure 18: SCHHS, estimated number of people aged 18 years and over who experienced a barrier to accessing healthcare when needed it in the last 12 months (ASR per 100 people), with main reason being cost of service, by SA3, 2014



Source: Public Health Information Development Unit, Social Health Atlas

3.2 Health risks and behaviours

3.2.1 Overweight and obesity

3.2.1.1 Overweight and Obesity (adults)

Overweight and obesity increase the risk of some chronic conditions, including cardiovascular disease, Type 2 diabetes, hypertension, cancer, musculoskeletal disorders and mental health conditions, and also increase the rate of premature death (Australian Institute of Health and Welfare, 2017). The resulting impact on health care services is estimated at 8.4 per cent of the total disease burden in Australia (Australian Institute of Health and Welfare, 2020).

In 2018/19, the SCHHS had a slightly lower proportion of overweight or obese adult residents than Queensland (58 per cent compared to 60 per cent). Rates of adult obesity were highest in the Gympie-Cooloola (30 per cent) and Noosa Hinterland (28 per cent), while the Sunshine Coast Hinterland had the highest proportion of overweight (not obese) residents at 45 per cent (see Table 23).

Table 23: SCHHS residents, overweight and obesity by SA3, 2018/19

SA3	Underweight/ healthy weight	Overweight (not obese)	Obese	Overweight or obese
Buderim	47%	38%	15%	53%
Caloundra	41%	42%	18%	59%
Gympie - Cooloola	35%	35%	30%	65%
Maroochy	45%	33%	22%	55%
Nambour	43%	40%	17%	57%
Noosa	49%	34%	17%	51%
Noosa Hinterland	41%	31%	28%	59%
Sunshine Coast Hinterland	33%	45%	22%	67%
SCHHS Total	**42%**	**37%**	**21%**	**58%**
QLD Total	40%	35%	25%	60%

Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2018-2019

3.2.1.2 Overweight and obesity (children)

Similar to adults, excess weight and obesity in childhood are associated with poorer health outcomes and increased health care costs, as well as poorer educational outcomes and a higher risk of overweight and obesity in adulthood (Australian Institute of Health and Welfare, 2020). Overweight and obesity rates for children are not available at the local (SA3) level; however HHS wide rates indicate that in 2019/20, compared to Queensland, a higher proportion of children within the SCHHS catchment were obese (9 per cent compared to 8 per cent) (see Table 24). Rates of obesity were highest in the 5-11-year age group, at 12 per cent.

Table 24: SCHHS and Queensland, childhood overweight and obesity rates, 2019/20

Age Group	Obese	Overweight	Under/healthy weight
Children 12-17	6%	13%	81%
Children 5-11	12%	15%	73%
SCHHS total	**9%**	**14%**	**77%**
QLD Total	**8%**	**17%**	**74%**

Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2019-2020

3.2.2 Physical activity

3.2.2.1 Insufficient physical activity (adults)

Physical activity is closely linked to health outcomes, improving both physical and mental health and wellbeing. Benefits of physical activity include maintaining a healthy body weight, reduced risk of chronic disease, including cardiovascular disease, diabetes, cancer and depression, reduced risk of falls and fractures in the elderly, and improvements to bone health (World Health Organisation, 2020).

Unfortunately, a large proportion of the Australian population (over 50 per cent) does not meet Australian guidelines for physical activity and exercise (Australian Government Department of Health, 2021). Residents of the SCHHS perform slightly better than the rest of the country and Queensland concerning physical activity levels, with only 38 per cent of adults not undertaking sufficient physical activity (compared to 42 per cent of Queenslanders) (see Table 25). The Gympie-Cooloola (53 per cent), Nambour (45 per cent) and Sunshine Coast Hinterland (45 per cent) SA3s had the highest rate of adults reporting insufficient physical activity in 2018/19.

Table 25: SCHHS residents, insufficient physical activity in the past week by SA3, 2018/19

SA3 Name	% insufficient
Buderim	31%
Caloundra	28%
Gympie - Cooloola	53%
Maroochy	32%
Nambour	45%
Noosa	26%
Noosa Hinterland	41%
Sunshine Coast Hinterland	45%
SCHHS Total	**38%**
QLD	42%

Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2018-2019

3.2.2.2 Physical activity (children)

Regular physical activity is vital for children, helping to promote physical and mental development, including brain development, bone health, balance and coordination, and improving sleep, concentration, self-esteem and overall mental wellbeing (Australian Institute of Health and Welfare, 2020). In 2019/20, children (aged 17 years and under) in the SCHHS catchment reported lower levels of physical activity than Queensland, with only 42 per cent reporting having been active for 60 or more minutes daily compared to 47 per cent of Queensland children. Children aged 5 to 11 years were much more physically active than their adolescent counterparts (60 per cent active for 60 minutes or more daily compared to 31 per cent).

Table 26: SCHHS and QLD, levels of physical activity, children (5-17 years), 2019/20

Age Group	Active 60 minutes or more daily	Not active 60 minutes or more daily
Children 5-11	60%	40%
Children 12-17	31%	69%
Total SCHHS (5-17)	**42%**	**58%**
Total Queensland (5-17)	**47%**	**53%**

Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2019-2020

3.2.3 Nutrition

3.2.3.1 Fruit and vegetable intake (adults)

Inadequate intake of fruit and vegetables is associated with poorer health outcomes, increasing the risk of lifestyle-related illnesses including cardiovascular disease, Type 2 diabetes, chronic kidney disease. Unfortunately, most Australians do not consume the recommended daily serves of fruit and vegetables according to their age (Australian Institute of Health and Welfare, 2019). In 2018/19, 45 per cent of SCHHS residents reported insufficient daily fruit intake and 90 per cent inadequate vegetable intake, similar rates to Queensland (see Table 27). The Sunshine Coast Hinterland SA3 had the highest proportion of residents with insufficient fruit intake (55 per cent). In contrast, the Buderim SA3 had the highest proportion of residents with inadequate vegetable intake (95 per cent).

Table 27: SCHHS residents, insufficient daily fruit and vegetable consumption (2013 guidelines), adults, by SA3, 2018/19

SA3	Daily fruit consumption - Insufficient	Daily vegetable consumption - Insufficient
Buderim	45%	95%
Caloundra	46%	90%
Gympie - Cooloola	48%	91%
Maroochy	41%	81%
Nambour	41%	90%
Noosa	42%	90%
Noosa Hinterland	44%	91%
Sunshine Coast Hinterland	55%	92%
SCHHS Total	**45%**	**90%**
QLD	48%	92%

Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2018-2019

3.2.3.2 Fruit and vegetable intake (children)

As with most health behaviours, adequate nutrition is important for children to support physical and cognitive growth and development, improve concentration and energy, and minimise risks of lifestyle related health conditions later in life (Graham, 2016). In 2019/20, 26 per cent of children residing in the SCHHS catchment had insufficient fruit intake – slightly lower than the Queensland proportion of 31 percent – while 96 per cent of children had insufficient vegetable intake, comparable to the Queensland rate (see Table 28).

Table 28: SCHHS and QLD, insufficient fruit and vegetable intake, children (5-17 years), 2019/20

Age Group	Insufficient daily fruit consumption	Insufficient daily vegetable consumption
Children 5-11	15%	96%
Children 12-17	37%	96%
Total SCHHS	**26%**	**96%**
Total QLD	**31%**	**96%**

Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2019-2020

3.2.4 Substance use

3.2.4.1 Smoking (adult)

Numerous studies have documented the negative impacts of smoking on health, including increasing the risk of chronic disease – particularly cancer, cardiovascular disease, diabetes and chronic respiratory illness – and a reduction in life expectancy and quality of life (Australian Government Department of

Health, 2020). While smoking rates have steadily declined over the past 30 years, they remain at 12 per cent of the total adult population in Australia and are higher in populations who often have a range of other health risk factors. For example, those from lower socio-economic backgrounds, those living in rural and remote areas, and Aboriginal and Torres Strait Islanders (Australian Institute of Health and Welfare, 2021).

In 2018/19, 9 per cent of SCHHS residents were daily smokers, compared to 11 per cent of Queensland residents. Smoking rates were highest in the Gympie-Cooloola (12 per cent) and Noosa Hinterland (12 per cent) SA3s (see Table 29).

Table 29: SCHHS, daily smokers by SA3 (adults), 2018/19

SA3 Name	Daily smokers (%)
Buderim	9%
Caloundra	7%
Gympie - Cooloola	12%
Maroochy	7%
Nambour	8%
Noosa	7%
Noosa Hinterland	12%
Sunshine Coast Hinterland	9%
SCHHS Total	**9%**
QLD	11%

Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2018-2019

3.2.4.2 Alcohol consumption (adults)

The National Health and Medical Research Council 2009 Australian Guidelines to Reduce Health Risks from Drinking Alcohol define risky lifetime drinking as having more than two standard drinks per day (National Health and Medical Research Council, 2009). Risky drinking levels can increase a person's risk of adverse health outcomes over their lifetime, including stroke, dementia, heart attack, chronic liver conditions and certain types of cancer. Alcohol can also have short term detrimental effects on health including increased risks of accidents, alcohol poisoning and deliberate self-harm, and can lead to dependence and addiction (Roerecke & Rehn, 2012).

In 2018/19, residents of the SCHHS had higher rates of lifetime risky drinking (28 per cent) compared to Queensland (22 per cent). Buderim (33 per cent), Caloundra (30 per cent) and Maroochy (31 per cent) had the highest rates of all SA3s in the region, while Gympie-Cooloola (22 per cent) and Noosa (23 per cent) had the lowest (see Table 30).

Table 30: SCHHS, lifetime risky drinking by SA3 (adults), 2018/19

SA3	Abstainer	Low risk lifetime	Risky lifetime
Buderim	13%	54%	33%
Caloundra	9%	61%	30%
Gympie - Cooloola	22%	55%	22%
Maroochy	12%	57%	31%
Nambour	24%	49%	28%
Noosa	7%	71%	23%
Noosa Hinterland	13%	58%	28%
Sunshine Coast Hinterland	14%	59%	27%
SCHHS Total	**16%**	**58%**	**28%**
QLD	17%	61%	22%

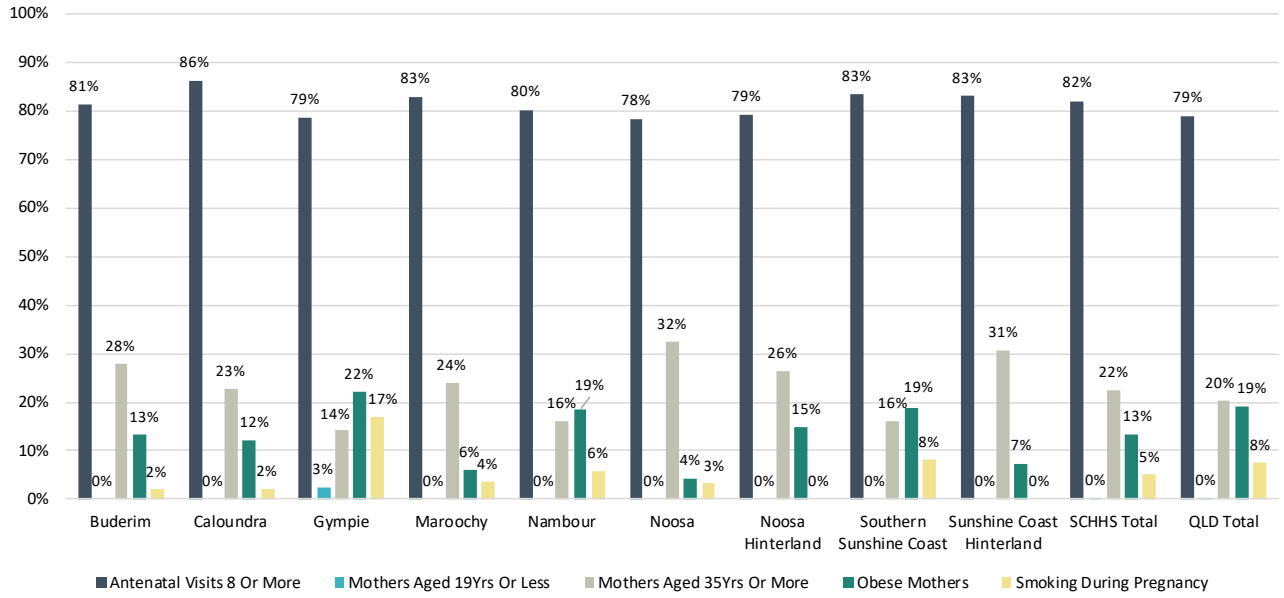
Source: Queensland Health Planning Portal, derived from the Queensland Preventive Health Survey 2018-2019

3.2.5 Perinatal Health

Several risk factors can influence perinatal health and outcomes, including maternal age, smoking, obesity and other chronic health conditions (Gordon, Raynes-Greenow, McGeechan, Morris, & Jeffery, 2013), and access to comprehensive perinatal health services (Goldenberg, 2006).

In 2019, residents of the SCHHS generally had lower levels of perinatal risk compared to Queensland on the factors of adequate antenatal visits, mother's age, obese mothers and smoking during pregnancy, except for the proportion of mothers aged 35 years and over (22 per cent for the SCHHS compared to 20 per cent for Queensland). However, there were some areas where rates of perinatal risk factors were relatively high at a local level. For example, the Gympie, Noosa and Noosa Hinterland regions had lower adequate (8 or more) perinatal visits. At the same time, a higher proportion of mothers in the Buderim, Noosa and Sunshine Coast Hinterland were aged over 35. In addition, Gympie, Nambour, and Southern Sunshine Coast had a higher proportion of obese mothers than other regions in the SCHHS. The Gympie region, in particular, had a high rate of smoking during pregnancy, at 17 per cent of all mothers, some 12 per cent higher than the average SCHHS rate and 9 per cent higher than the state rate (see Figure 19).

Figure 19: SCHHS perinatal health by planning region (% total births), 2019



Source: Queensland Health Planning Portal, derived from the Queensland Perinatal Data Collection

3.2.6 Cancer screening

Three federally funded population-based screening programs are available to all eligible Australians – the National Breast Screening Program, the National Bowel Cancer Screening Program and the National Cervical Cancer Screening Program. Research demonstrates the effectiveness of these programs in preventing deaths from cancer, improving survival time, and highlighting cost-effectiveness in terms of reduced utilisation of health care resources due to high screening rates (Lew, et al., 2019).

In 2018/19, bowel screening and cervical screening rates were higher for the SCHHS population than Queensland, while breast screen participation was equal to the Queensland rate. The Gympie-Cooloola, Noosa and Noosa Hinterland SA3s demonstrated slightly lower bowel screening rates than the whole of the HHS. In contrast, the Maroochy, Nambour and Sunshine Coast Hinterland SA3s showed lower breast screening rates. In addition, cervical screening rates were lowest for residents of the Gympie-Cooloola, Noosa and Noosa Hinterland SA3s (see Table 31). Lower screening rates may indicate access to services, particularly for breast and cervical screening programs requiring residents to attend a specific location to undertake to screen.

Table 31: SCHHS, Cancer Screening Program participation rates (% eligible population) by SA3, 2018-19

SA3 name	National Bowel Screening Program (persons aged 50-74)	National BreastScreen Program (females aged 50-74)	National Cervical Screening Program (females aged 25-74)
Buderim	47%	55%	52%
Caloundra	48%	57%	51%
Gympie - Cooloola	45%	54%	45%
Maroochy	46%	53%	50%
Nambour - Pomona	47%	52%	54%
Noosa	45%	53%	49%
Noosa Hinterland	45%	58%	49%
Sunshine Coast Hinterland	47%	51%	51%
Total SCHHS	**46%**	**55%**	**50%**
QLD	42%	55%	46%

Source: Queensland Health Planning Portal, derived from AIHW National Cancer Screening Register

3.2.1 Immunisation rates

3.2.1.1 Childhood immunisation

Immunisation provides many benefits to both the individual, community, and economy. It protects immunised individuals against infectious diseases and associated long-term complications, and communities are provided with herd immunity in cases where immunisation rates are high enough. By eradicating disease or preventing outbreaks, immunisation provides significant cost-benefits in terms of savings to the health care system, avoiding preventable hospitalisations and reducing the economic and social impacts of disease and disability. In addition, children, along with the older population and immunocompromised, are particularly vulnerable to the effects of infectious diseases resulting from maturing immune systems. Therefore, childhood immunisation is critical to minimise risks during this vital development phase (Australian Academy of Science, N.D.).

In 2018, the SCHHS had lower childhood immunisation coverage compared to the Queensland population, at 90 per cent of children aged one year, 89 per cent of children aged two years and 92 per cent of children aged five years, compared to 94, 92 and 95 per cent respectively for Queensland (see Table 32). These rates are below the national target of 95 per cent (Australian Government Department of Health, 2021). On the other hand, immunisation coverage was higher amongst the Indigenous population, at 91 per cent, 92 per cent and 95 per cent, respectively, for children aged one, two and five years (see Table 33).

The Sunshine Coast Hinterland and Noosa Hinterland SA3s have the lowest childhood immunisation coverage rates for the general population, below 90 per cent for all age groups. In contrast, immunisation coverage for Indigenous children was lowest for children aged one year in the Cooloola-Gympie Indigenous area, children aged two years in the Maroochy Indigenous area, and children aged five years Nanango-Kilkivan and Noosa Indigenous Areas.

Table 32: SCHHS, children fully immunised at 1, 2 and 5 years by SA3, 2018

SA3	1 Year	2 Years	5 Years
Buderim	92%	92%	94%
Caloundra	93%	92%	95%
Gympie - Cooloola	92%	91%	94%
Maroochy	88%	87%	90%
Nambour	90%	90%	93%
Noosa	88%	86%	91%
Noosa Hinterland	88%	85%	87%
Sunshine Coast Hinterland	87%	86%	88%
SCHHS Total	**90%**	**89%**	**92%**
QLD	94%	92%	95%

Source: Queensland Health Planning Portal, derived from Public Health Information Development Unit Social Health Atlas

Table 33: SCHHS, Indigenous children fully immunised at 1, 2 and 5 years by SA3, 2018

Indigenous Area	1 Year	2 Years	5 Years
Caloundra	93%	91%	100%
Cooloola - Gympie	87%	96%	98%
Maroochy	91%	90%	92%
Nanango - Kilkivan	95%	92%	87%
Noosa	96%	94%	86%
SCHHS Total	**91%**	**92%**	**95%**
QLD	92%	89%	97%

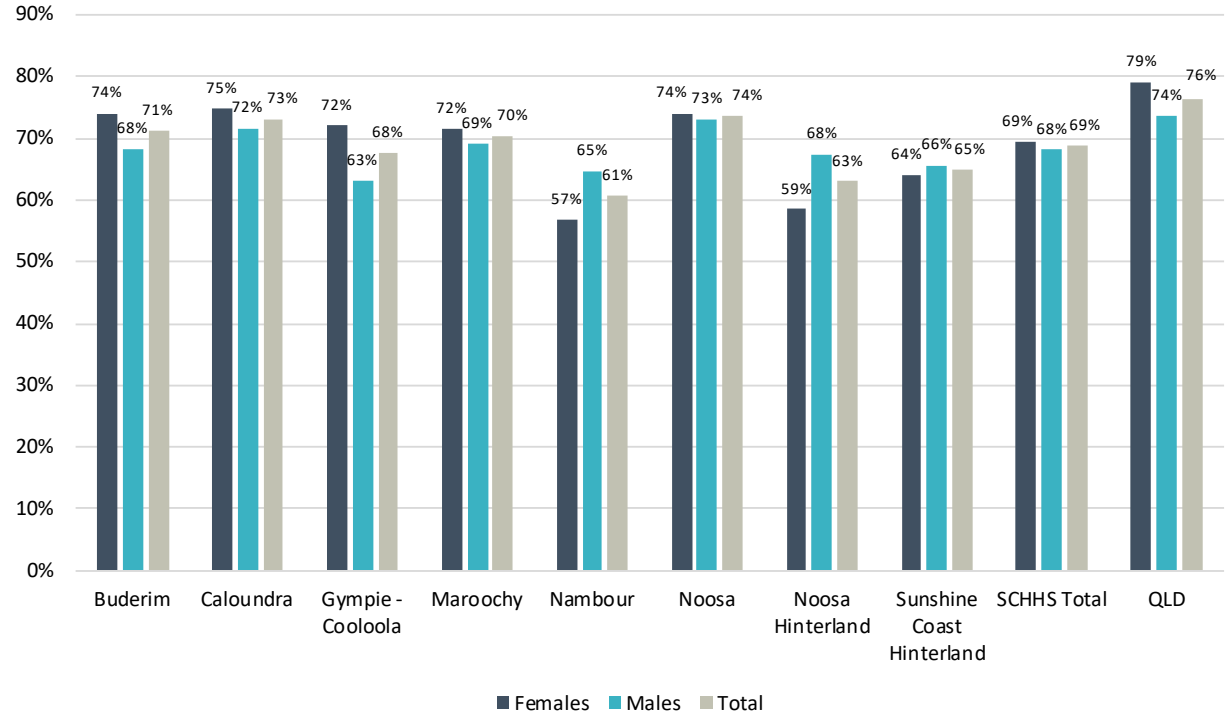
Source: Queensland Health Planning Portal, derived from Public Health Information Development Unit Social Health Atlas

3.2.1.2 HPV immunisation

Human papillomavirus (HPV) is the most common cause of cervical cancer, and is also known to contribute to some of the incidence of other anogenital cancers in both females and males, hence the development of the HPV vaccine in the 1990s (Castellsague, 2008). Modelling developed by the Cancer Council in 2017 estimates that the impact of HPV vaccination in combination with the cervical screening program will reduce cervical cancer incidence by some 34-35 per cent by 2035, saving almost 600 lives (Hall, et al., 2018). It is anticipated that the HPV vaccination program will also prevent a range of other cancers, including anal, penile, vaginal and oral cancers, in addition to the impact on cervical cancer, to the tune of almost 1,500 prevented cancer cases annually for males and females (Patel, et al., 2018). This will have a significant impact on health care utilisation and costs.

The Australian school-based National HPV vaccination program offers free HPV vaccination to all students aged 12-13 years. Despite this, HPV coverage rates for children aged 15 years remain around 80 per cent Australia-wide (Cancer Australia, 2020). Unfortunately, HPV immunisation rates for children aged 15 years residing in the SCHHS catchment are much lower at 69 per cent (69 per cent of females and 68 per cent of males). HPV coverage rates are even lower in some areas of the SCHHS, particularly Nambour, the Noosa Hinterland and Sunshine Coast Hinterland SA3s (see Figure 20).

Figure 20: SCHHS, HPV 3 immunisation rates at 15 years by SA3, 2017



Source: Queensland Health Planning Portal, derived from Public Health Information Development Unit Social Health Atlas

4 Health status

4.1 Morbidity

4.1.1 Perinatal outcomes

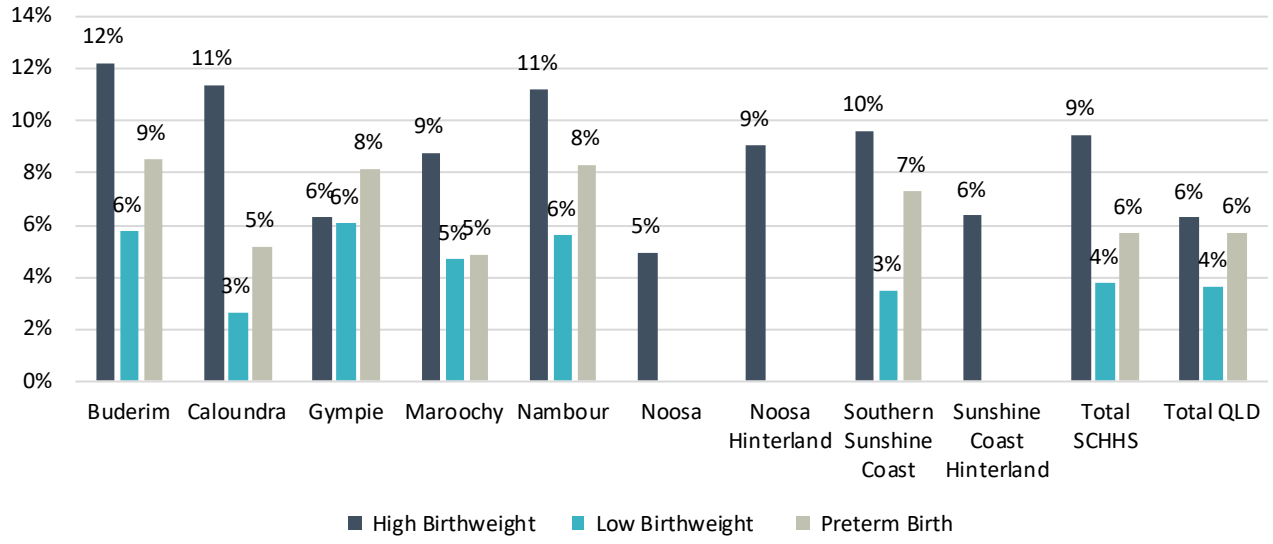
Perinatal outcomes, specifically gestational age at birth and birth weight, are important indicators of an infant's health and have been associated with health outcomes and mortality in infancy and later life (Australian Institute of Health and Welfare, 2021). Special Care or Intensive Care Units often admit low birth weight and premature babies at birth (Parry & Davies, 2013; University of Rochester, N.D.). Preterm birth and low birth weight are associated with infant mortality and morbidity (Mohsin, Wong, Bauman, & Bai, 2003) and increased risk of chronic disease in later life (de Mendonca, de Lima Macena, de Oliveira, & Mello, 2020). In addition, high birth weight is associated with an increased risk of adverse health outcomes, including childhood cancer, mental health disorders, hypertension and diabetes (Magnusson, et al., 2021). Preterm and low birth weight infants are also more likely to require ongoing post-birth follow-up care to ensure optimal growth and development (Casey, 2008).

Overall, infants born to residents of the SCHHS have similar rates of low birth weight and preterm birth compared to Queensland, at 4 per cent and 6 per cent of all births respectively, but a higher rate of high birth weight (9 per cent compared to 6 per cent for Queensland). Preterm birth rates and low birth weight are highest in the Buderim, Gympie and Nambour planning regions (see Figure 21). This may be the result of a higher prevalence of risk factors in these regions, including:

- the proportion of mothers aged 35 years in the Buderim region
- higher levels of socioeconomic disadvantage in the Nambour and Gympie region
- higher rates of smoking during pregnancy in the Gympie region.

All of these are known risk factors for premature birth and low birth weight (Mohsin, Wong, Bauman, & Bai, 2003).

Figure 21: SCHHS perinatal outcomes by planning region (% total births), 2019



Source: Queensland Health Planning Portal, derived from Queensland Perinatal Data Collection

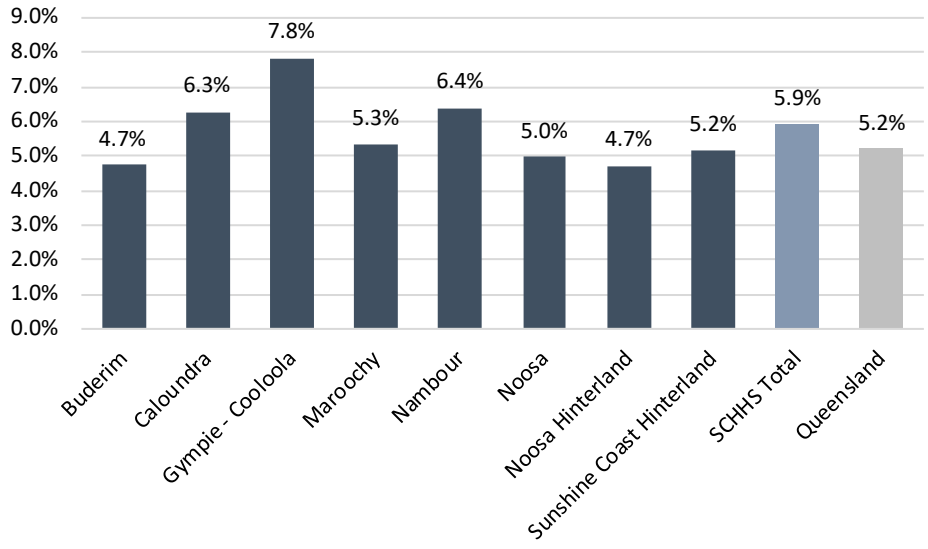
4.1.2 Disability

4.1.2.1 Population living in need of assistance with profound or severe disability

People with disabilities generally have poorer health status, experience higher levels of psychological distress and often partake in risky health behaviours at higher rates. This relationship is multidirectional, in that poor health status and health behaviours can result in disability, and disability itself can lead to these poorer health outcomes. Consequently, people with disabilities access health care services at higher rates than those living without disabilities, including hospitals, general practice and medical specialists. In addition, they have much higher rates of repeat hospitalisations (Australian Institute of Health and Welfare, 2020).

People with profound or severe disabilities are particularly vulnerable and can experience difficulties accessing health care; the most common form of assistance required by this group is assistance with accessing health care (Australian Institute of Health and Welfare, 2020). In 2016, 5.9 per cent of the SCHHS population were living in need of assistance with profound or severe disability, higher than the Queensland rate of 5.2 per cent. This proportion varies across the region, with the Gympie-Cooloola SA3 having the highest proportion of people living in need of assistance with profound or severe disability at 7.8 per cent of the total population, followed by Caloundra (6.4 per cent) and Nambour (6.4 per cent) (see Figure 22).

Figure 22: SCHHS, population living in need of assistance with profound or severe disability by SA3, 2016



Source: Queensland Government Statistician's Office, Regional Profiles

4.1.3 Incidence/prevalence of selected diseases and conditions

Chronic diseases (those lasting for five years or more) contribute to the majority of the disease burden in Australia, accounting for 1 in 2 hospitalisations and almost 9 in 10 deaths (Australian Institute of Health and Welfare, 2021). In addition, chronic disease accounts for a large proportion of preventable hospitalisations, costing the health system up to $2 billion per year (Swerissen, Duckett, & Wright, 2016), and has contributed to a rise in demand for palliative care services (Australian Institute of Health and Welfare, 2018).

Table 34 below provides age-standardised prevalence rates of selected chronic diseases across the SA3s of the SCHHS. Except for osteoporosis, rates of all selected chronic diseases are highest in the Gympie-Cooloola SA3. Rates of osteoporosis are highest in the Buderim, Sunshine Coast Hinterland and Noosa Hinterland SA3s (see Table 34).

Other high rates observed within the region include mental and behavioural problems in the Maroochy and Nambour SA3s, asthma and chronic obstructive pulmonary disease (COPD) in the Nambour SA3 and arthritis in the Buderim and Caloundra SA3s.

Table 34: SCHHS, age standardised rates (per 100 people) of selected chronic diseases by SA3, 2017/18

SA3	Diabetes mellitus	Mental and behavioural problems	Heart, stroke and vascular disease	Asthma	Chronic-obstructive pulmonary disease	Arthritis	Osteoporosis
Buderim	3.2	20.2	4.5	11.9	3.0	14.2	4.4
Caloundra	3.6	20.3	4.6	12.1	3.2	14.6	3.8
Gympie - Cooloola	5.0	25.9	4.8	14.6	3.9	14.9	4.3
Maroochy	3.7	23.0	4.0	12.0	3.3	13.1	4.1
Noosa	3.2	20.0	3.9	11.8	2.9	12.6	3.9
Sunshine Coast Hinterland	3.4	20.4	3.9	11.8	3.2	13.5	4.5
Nambour	3.4	23.3	4.3	13.8	3.8	13.7	4.3
Noosa Hinterland	3.3	21.9	4.2	11.5	3.5	12.5	4.6
Queensland	4.7	22.7	4.7	11.8	3.5	13.9	3.8

Source: Public Health Information Development Unit – Social Health Atlases of Australia, derived from ABS National Health Survey 2017-18

4.1.4 Cancer incidence and mortality

In 2018, the ASR cancer incidence rate for residents of the SCHHS was 546.2 new cases per 100,000 population, equal to the Queensland rate. Prostate cancer (180.2 cases per 100,000) accounted for the highest number of new cases, followed by melanoma (75.2 cases per 100,000)) and breast cancer (69.0 cases per 100,000 population) (see Table 35). In addition, breast, urological, CNS and brain cancer rates, and melanoma, and mesothelioma rates were higher for residents of the SCHHS compared to Queensland.

Despite having the same cancer incidence rate as Queensland, the cancer mortality rate for residents of the SCHHS was lower than Queensland in 2018 (155.0 compared to 160.3 people per 100,000), with lung and prostate cancer accounting for the highest number of deaths from cancer. Mortality rates from colorectal, breast, CNS and brain cancer were higher for residents of the SCHHS compared to Queensland (Table 36).

Cancer incidence and mortality rates do vary across the different regions of the SCHHS. For example, the Caloundra SA3 has the highest overall cancer incidence rate (589 cases per 100,000) but one of the region's lowest mortality rates (152 cases per 100,000). In comparison, the Gympie-Cooloola SA3 has the third-lowest incidence rate (527 cases per 100,000 population). However, there is a significantly higher mortality rate from cancer (184 deaths per 100,000 population) than the other SA3s (see Figure 23).

Table 35: SCHHS Cancer incidence rates (ASR per 100,000) by cancer type, 2018

Cancer Type	SCHHS	Queensland
Prostate	180.2	162.3
Melanoma	75.4	73.5
Breast	69.0	67.5
Haematological	61.5	61.5
Colorectal	55.1	58.0
Lung	46.8	49.4
Gynaecological	41.8	42.6
Urological	33.9	30.5
Hepatobiliary	21.4	23.0
Head and neck	18.0	19.4
Upper GI	16.2	16.8
Other invasive cancers	14.0	15.8
CNS and Brain	9.6	7.7
Endocrine	8.9	13.9
Bone and soft tissue	4.4	4.8
Mesothelioma	2.6	2.4
Ophthalmic	1.5	1.5
Total	**546.2**	**546.2**

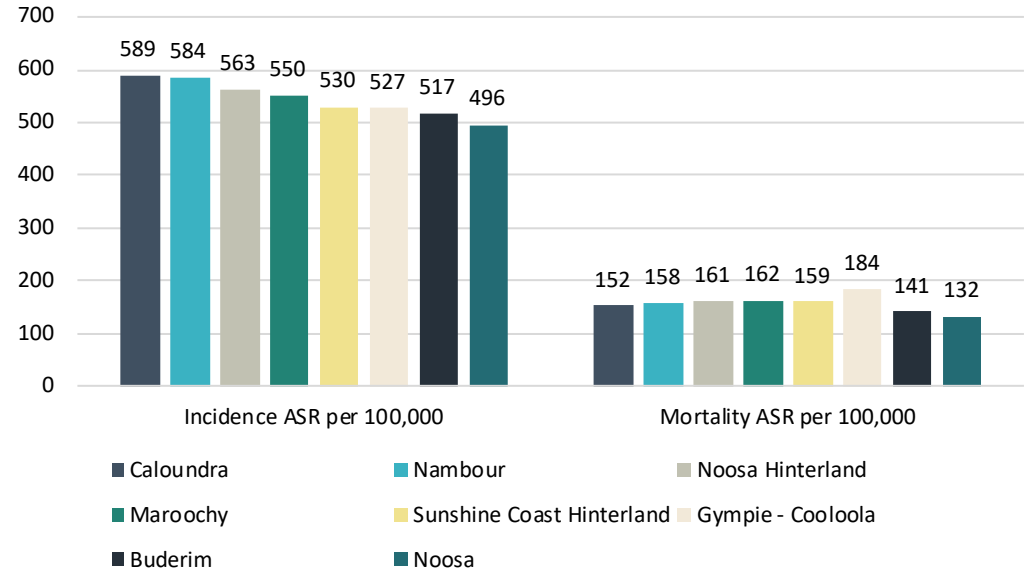
Source: Queensland Cancer Alliance, OASys

Table 36: SCHHS Cancer mortality rates (ASR per 100,000) by cancer type, 2018

Cancer Type	SCHHS	QLD
Lung	27.9	32.2
Prostate	25.4	25.7
Colorectal	19.9	18.7
Hepatobiliary	17.2	17.5
Haematological	16.8	16.9
Breast	11.0	10.2
Gynaecological	10.7	13.3
Upper GI	9.1	9.3
Other invasive cancers	7.6	8.6
Urological	7.6	7.9
CNS and Brain	6.1	5.5
Melanoma	5.7	5.7
Head and neck	3.7	4.6
Mesothelioma	2.0	2.4
Bone and soft tissue	1.2	1.6
Endocrine	0.6	0.5
Ophthalmic	0.1	0.3
Total	**155.0**	**160.3**

Source: Queensland Cancer Alliance, OASys

Figure 23: SCHHS Cancer incidence and mortality (ASR per 100,000) by SA3, 2018



Source: Queensland Cancer Alliance, OASys

4.1.5 Potentially preventable hospitalisations

4.1.5.1 Acute, chronic and vaccine preventable

Provision of community and primary health care in some conditions can result in avoidance of hospital admissions. We can use these potentially preventable hospitalisations (PPH) to indicate the effectiveness of primary health care, preventative health and community care within a region (Australian Institute of Health and Welfare, 2019). In 2017/18, there were 16,884 PPHs for residents of the SCHHS. The ASR per 100,000 people ranged from 2,676 in Noosa Hinterland to 4,526 in Nambour. The Caloundra and Sunshine Coast Hinterland SA3s also had high rates of PPH (ASR 3,622 per 100,000 and 3,469 per 100,000, respectively) (see Table 37). Across the SCHHS, congestive heart failure, vaccine-preventable pneumonia and influenza and COPD accounted for the highest number of PPHs. In contrast, congestive heart failure vaccine-preventable pneumonia and influenza and bronchiectasis accounted for the highest number of beddays generated by potentially preventable admissions (see Figure 24).

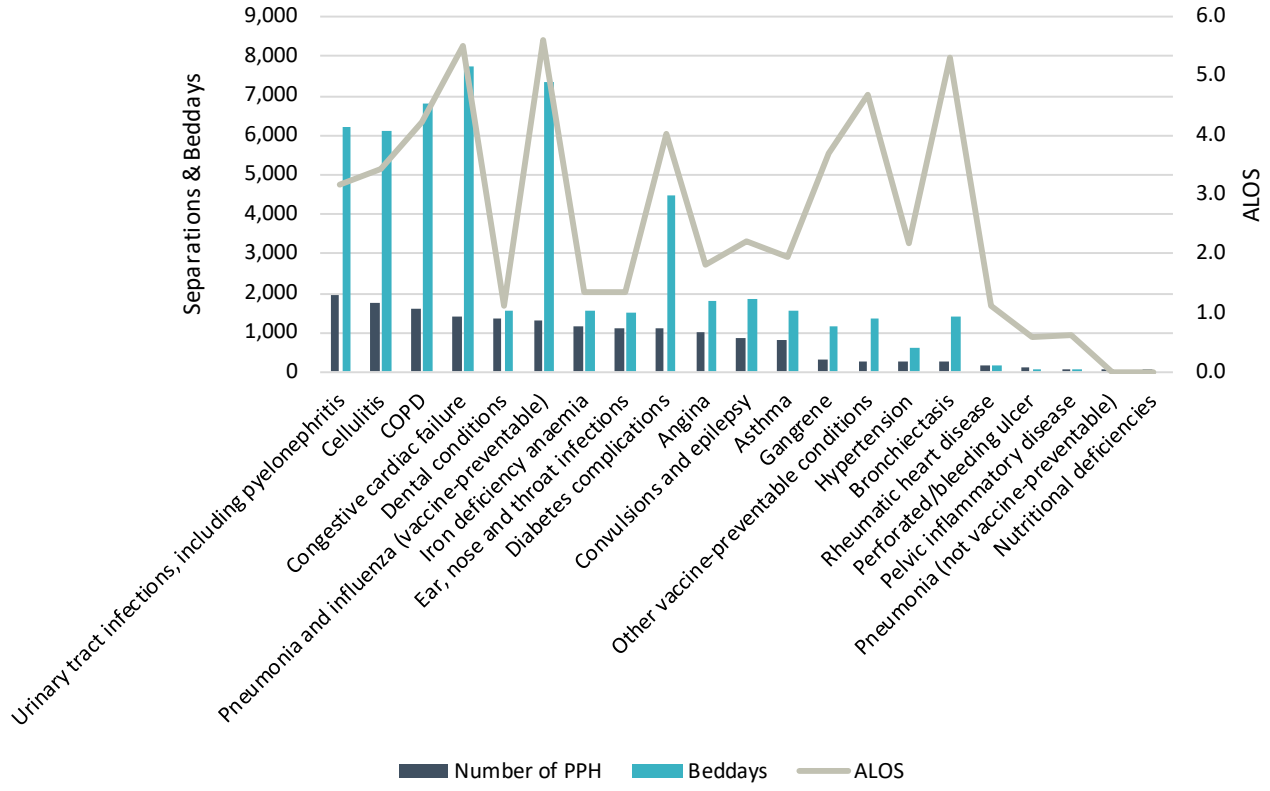
The rate of PPHs for acute conditions was higher in the Caloundra, Maroochy, and Nambour regions than in Queensland. In comparison, the rate of PPHs associated with chronic diseases was higher than the Queensland rate only in the Nambour SA3. Caloundra and Nambour had higher vaccine-preventable conditions rates than Queensland, which may be associated with influenza vaccination rates in these regions (see Figure 25).

Table 37: SCHHS, potentially preventable hospitalisations by SA3, 2017/18

SA3	Number of PPH	ASR per 100,000
Buderim	1,993	2,947
Caloundra	3,925	3,622
Gympie - Cooloola	1,988	3,237
Maroochy	2,362	3,223
Nambour	2,293	4,526
Noosa	1,599	2,810
Noosa Hinterland	692	2,676
Sunshine Coast Hinterland	2,032	3,469
SCHHS Total	**16,884**	**Not available**
Queensland	179,082	3,409

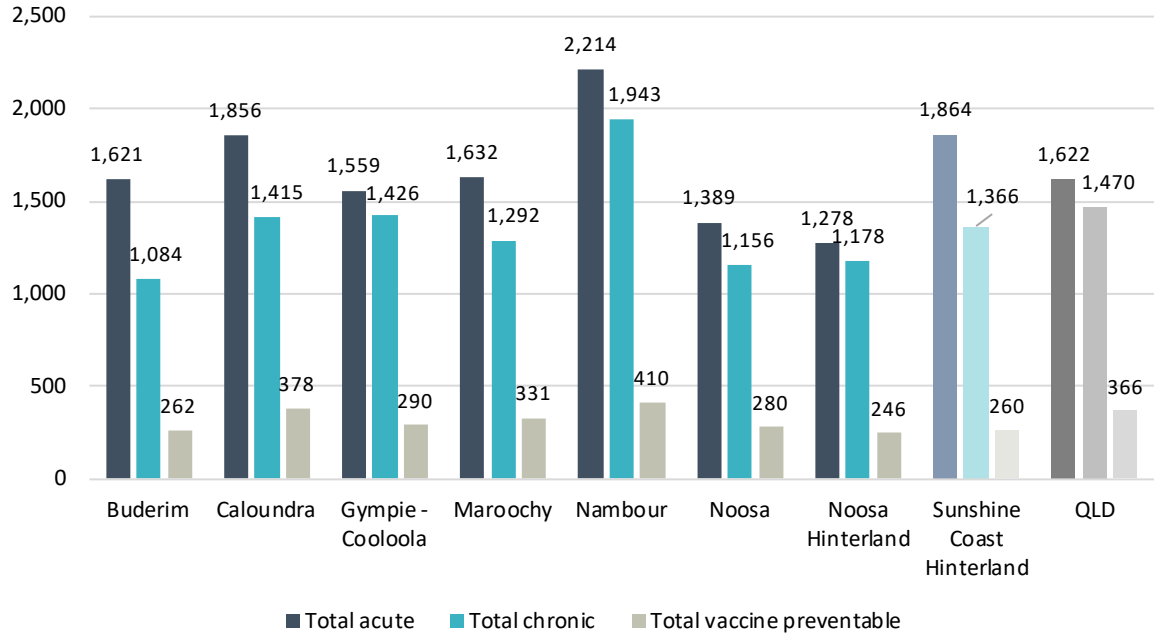
Source: Australian Institute of Health and Welfare, Potentially Preventable Hospitalisations

Figure 24: SCHHS Potentially Preventable Hospitalisations by condition, 2017/18



Source: Australian Institute of Health and Welfare, Potentially Preventable Hospitalisations

Figure 25: Potentially Preventable Hospitalisations by SA3 and condition type, 2017/18



Source: Australian Institute of Health and Welfare, Potentially Preventable Hospitalisations

4.1.5.2 Total admitted separations for PPH dental-related conditions

Like PPHs for other conditions, high rates of PPHs for dental needs are an indicator of the failure of community-based oral health services to provide adequate dental care. In 2017/18, PPHs for dental conditions were higher than Queensland for all SA3s in the SCHHS. Age-standardised rates were highest in Nambour (406 PPHs per 100,000 population), Sunshine Coast Hinterland (378 PPHs per 100,000 population), and the Buderim and Maroochy SA3s (around 355 PPHs per 100,000 population) (see Table 38).

Table 38: SCHHS, PPH for Dental Conditions by SA3, ASR per 100,000, 2017/18

SA3	ASR
Buderim	356
Caloundra	317
Gympie - Cooloola	325
Maroochy	355
Nambour	406
Noosa	322
Noosa Hinterland	313
Sunshine Coast Hinterland	378
QLD Total	**301**

4.2 Mortality

Mortality related statistics are often used as indicators of the health status of a population and can provide insight into the conditions that contribute to overall and premature mortality and morbidity (Australian Institute of Health and Welfare, 2021). Mortality related indicators include life expectancy, mortality rates, causes of death and premature mortality, plus indicators that provide insight into specific health issues such as infant mortality rates.

4.2.1 Life expectancy and median age at death

Life expectancy is defined as the expected number of years a newly born infant would live, given current age-specific mortality rates (Luy, Di Guilio, Di Lego, Lazaveric, & Sauerberg, 2020). A higher life expectancy is typically reflective of the better overall health of the population due to lower levels of health-related risk and better access to effective health care.

The Australian Bureau of Statistics estimates life expectancy at birth by SA4. The SCHHS crosses two SA4s – the Sunshine Coast, which consists of the Sunshine Coast and Noosa Local Government Areas (LGA), and Wide Bay, which incorporates the Gympie LGA and covers areas outside the SCHHS catchment in the Wide Bay region. Life expectancy in 2017/18 was lower in the Wide Bay SA4 (80.6 years) compared to Queensland (82.5 years), while life expectancy in the Sunshine Coast SA4 was higher at 83.8 years, indicating inequalities in health status between these two regions (see Table 39).

Median age at death is another mortality indicator that can provide information about the population's overall health status. Between 2014 and 2018, the median age at death was higher for the SCHHS population (82 years) than Queensland (80 years). However, the median age at death was lower in the SA3s of Gympie-Cooloola, Sunshine Coast Hinterland and Noosa Hinterland, again pointing towards inequalities in overall health status and potentially access to health care in these regions (see Figure 26).

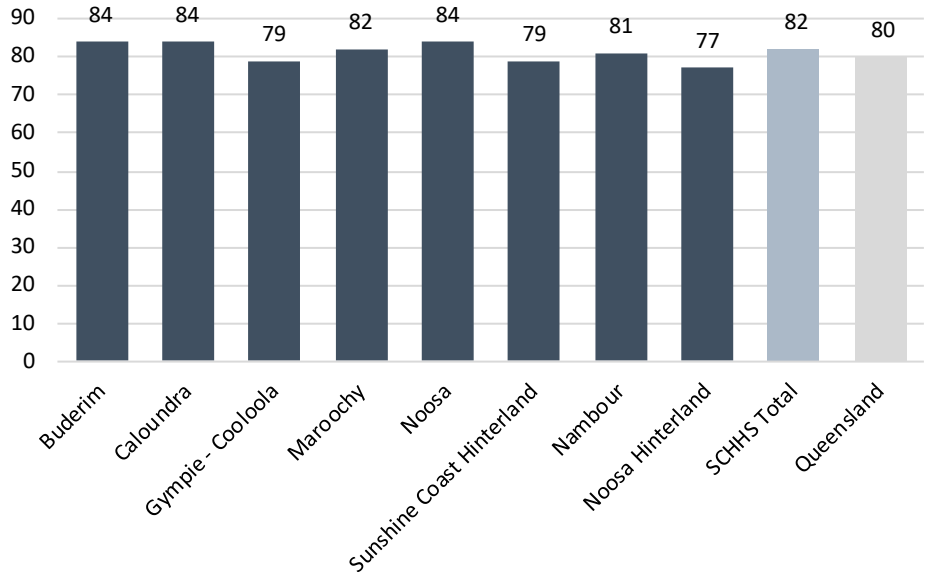
Table 39: SCHHS, life expectancy at birth by SA4, 2017-2019

Region	Females	Males	Persons
Wide Bay (includes Gympie)*	83.1	78.2	80.6
Sunshine Coast	86.2	81.5	83.8
QLD	84.8	80.3	82.5

*Wide Bay SA4 covers the Gympie-Cooloola SA3 as well as areas outside the SCHHS catchment in the Wide Bay region

Source: Queensland Health Planning Portal, derived from ABS Life Tables

Figure 26: SCHHS residents, median age at death by SA3, 2014-2018

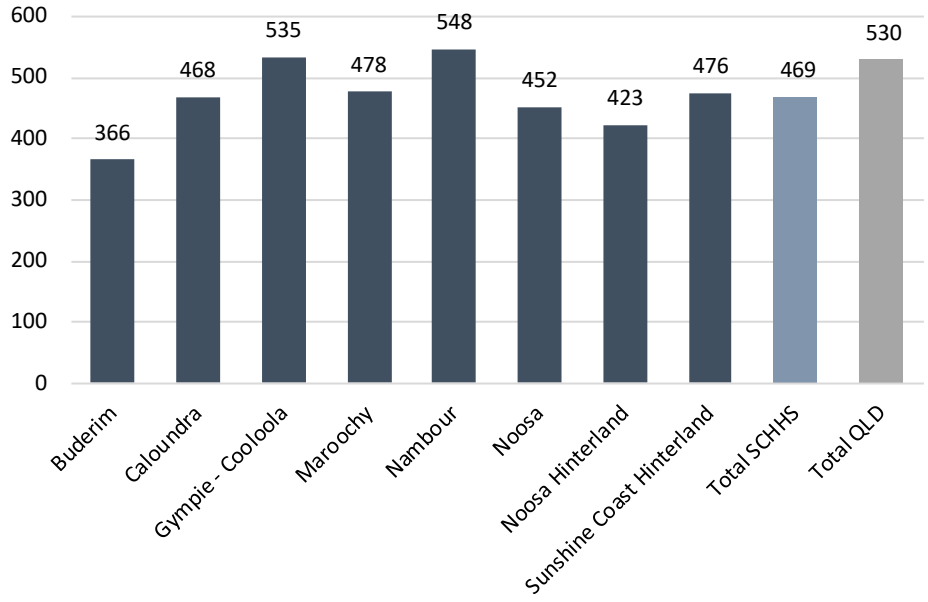


Source: Public Health Information Development Unit, Social Health Atlas of Australia

4.2.2 Age-standardised mortality rates

The age profile of a population directly influences the number of deaths per population. For example, groups with a higher number of older persons will experience higher rates of mortality. Age-standardised mortality rates allow for easier comparisons over time and between regions, as they are unaffected by differences in age distributions (World Health Organisation, 2021). From 2015 to 2019, the age-standardised mortality rate for the SCHHS (469 persons per 100,000 population) was lower than that of Queensland (530 deaths per 100,000 population). Within the SCHHS, the Gympie-Cooloola (535 deaths per 100,000 population) and Nambour (548 deaths per 100,000 population) SA3s have the highest age standardised mortality rates (Figure 27).

Figure 27: SCHHS, age-standardised mortality rates per 100,000 population by SA3, 2015 to 2019



Source: Queensland Health Planning Portal, derived from Cause of Death Unit Record File, Australian Coordinating Registry

4.2.3 Leading causes of death

Leading causes of death differ across regions and demographic cohorts, provide insight into the overall mortality patterns in a population and help to describe the relative public health importance of cause-specific mortality (Becker, Silvi, Fat, Hours, & Laurenti, 2006). For example, from 2014 to 2018, the top 2 leading causes of death (in terms of the number of deaths) were coronary heart disease and dementia in all SA3s aside from Gympie-Cooloola, Noosa Hinterland, and the Sunshine Coast Hinterland. In these areas the top 2 causes were coronary heart disease and lung cancer (see Table 40). Other causes of death that ranked highly across most SA3s include cerebrovascular disease, COPD, and colorectal cancer.

Table 40: SCHHS, leading causes of death by rank (top 20), by SA3, 2014 to 2018

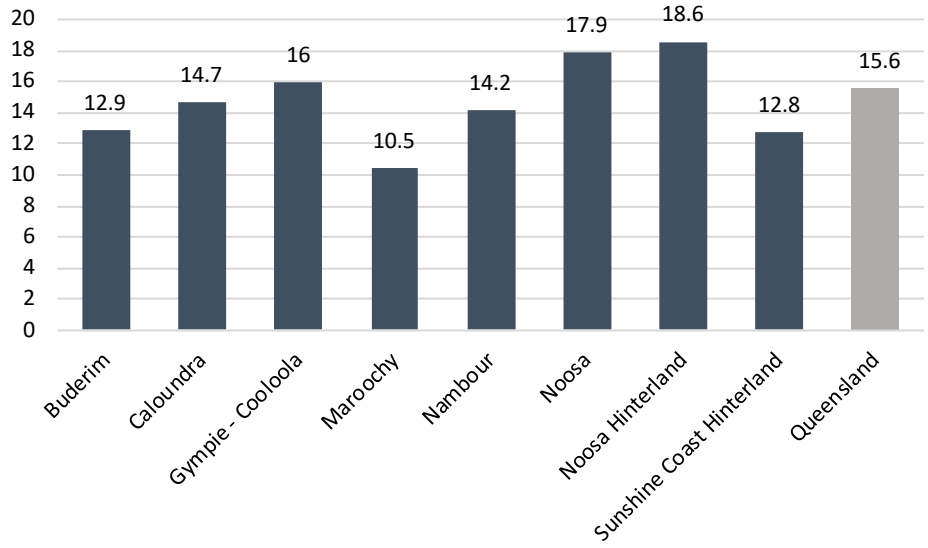
Cause of Death	Buderim	Caloundra	Gympie - Cooloola	Maroochy	Nambour	Noosa	Noosa Hinterland	Sunshine Coast Hinterland
Accidental falls	13	8		12	8		11	18
Accidental poisoning					20			
Brain cancer							12	
Breast cancer	7	18	15	11	10	10	15	8
Cancer of unknown or ill-defined primary site	11	15	10	10	11	14		12
Cardiac arrhythmias	10	9		13	13	13	16	13
Cerebrovascular disease	3	3	4	3	3	3	3	4
Chronic obstructive pulmonary disease (COPD)	6	5	5	5	5	6	5	6
Colorectal cancer	5	6	6	6	6	4	7	5
Coronary heart disease	1	1	1	1	2	1	1	1
Dementia including Alzheimer disease	2	2	3	2	1	2	4	3
Diabetes	20	10	7	8	7	11	10	11
Heart failure and complications and ill-defined heart disease	17	11	11			15		19
Hypertensive disease			18		16		18	
Influenza and pneumonia	14	17		17	15	20		
Kidney failure			20					
Land transport accidents			13				17	
Leukaemia	16	14	17	14	18	12	19	17
Liver cancer		19	12	16	19		14	
Liver disease			14	18				
Lung cancer	4	4	2	4	4	5	2	2
Lymphomas	19	16				19		20
Malignant neoplasms of mesothelial and soft tissue				20				
Melanoma of the skin	18					17		16
Non-rheumatic valve disorders	9	13		19	14	8	13	14
Pancreatic cancer	15	20	16	15	17	16	9	9
Parkinson disease			19			18	20	15
Prostate cancer	8	7	8	7	9	7	6	7
Suicide	12	12	9	9	12	9	8	10
Diseases of the musculoskeletal system and connective tissue						18		

Source: AIHW, Leading Causes of Death (MORT Series), 2014 to 2018

4.2.4 Suicide rates

Suicide rates are defined as deaths deliberately initiated and performed by a person in the full knowledge or expectation of a fatal outcome (OECD.org). From 2015 to 2019 the Noosa Hinterland had the highest suicide rate at 18.6 per 100,000 population, followed by Noosa at 17.9 per 100,000 population. These SA3s were above the Queensland rate of 15.6 per 100,000 population (see Figure 28).

Figure 28: SCHHS, suicide rates (ASR per 100,000) by SA3, 2015 to 2019



Source: AIHW, Suicide and Self-harm Monitoring, National Mortality Database

4.2.5 Premature mortality

Premature mortality is deaths that occur before a certain specified age – the Australian Institute of Health and Welfare currently use 75 years as the cut-off age for this statistic. Any deaths before this are considered premature (Australian Institute of Health and Welfare, 2016).

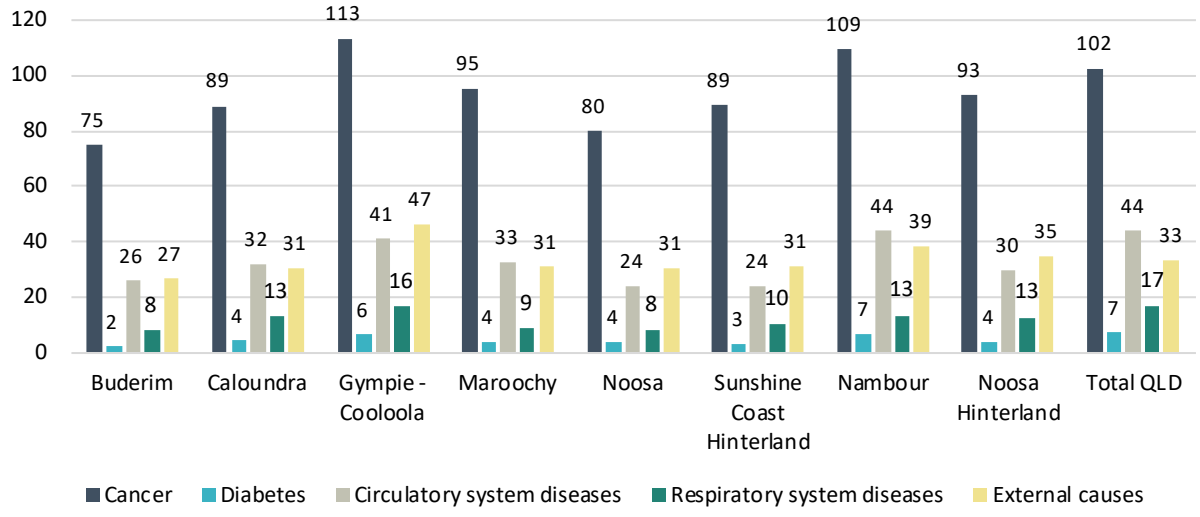
In 2018, there were 1,009 premature deaths in the SCHHS region, accounting for 32 per cent of total deaths. The proportion of premature deaths in the region was substantially lower than that of Queensland, where 44 per cent of deaths were considered premature. The ASR per 100,000 population was highest in the Gympie-Cooloola SA3 at 291 premature deaths per 100,000 population, followed by the Nambour region at 230 premature deaths per 100,000 population (see Table 41). Cancer was by far the leading cause of premature death in all SA3s, accounting for between 75 premature deaths per 100,000 population per annum in the Buderim SA3 to 113 per 100,00 population in the Gympie-Cooloola SA3 (see Figure 29).

Table 41: SCHHS, premature deaths by SA3, 2018

SA3	Premature deaths	Premature deaths (% of total deaths)	Premature deaths ASR (per 100,000)
Buderim	105	28%	161
Caloundra	193	26%	169
Gympie - Cooloola	193	43%	291
Maroochy	121	27%	156
Nambour	119	34%	230
Noosa	89	27%	156
Noosa Hinterland	66	43%	192
Sunshine Coast Hinterland	123	36%	170
Total SCHHS	**1,009**	**32%**	**n.c**
Total QLD	**7,255**	**44%**	**270**

Source: Australian Institute of Health and Welfare, Leading Causes of Death (MORT Series), 2014 to 2018

Figure 29: SCHHS premature deaths (deaths under 75 years), average annual ASR per 100,000, by SA3 and cause of death, 2014 to 2018



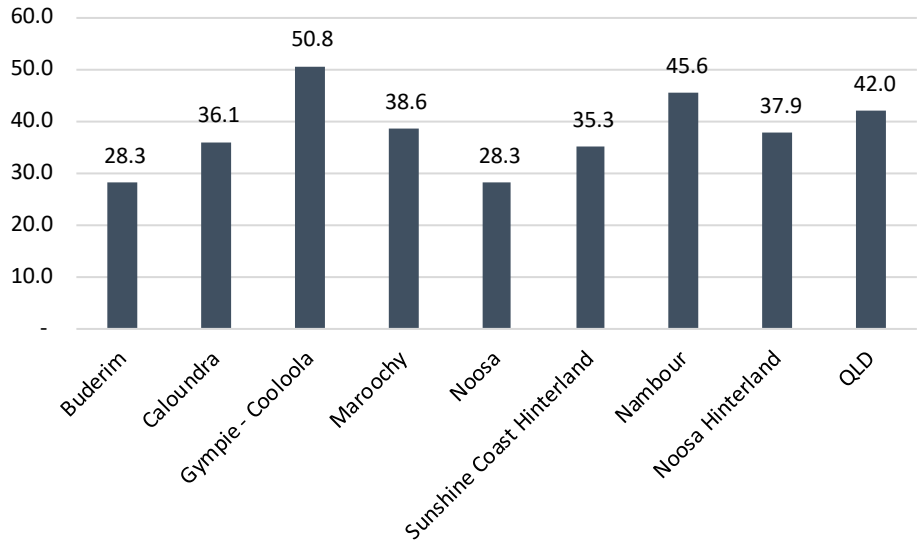
Source: Australian Institute of Health and Welfare, Leading Causes of Death (MORT Series), 2014 to 2018

4.2.6 Years of life lost

Years of life lost is a measure of the potential years of life lost (YLL) resulting from premature death. YLL takes into account not only the number of deaths that occur but the age at which they occurred and, as such, is considered to be a superior mortality indicator for determining the need for public intervention, compared to total death rates or number of deaths (World Health Organisation, 2021).

From 2014 to 2018, the Gympie-Cooloola SA3 had the highest rate of potential YLL at 50.8 years per 1,000 population, followed by Nambour at 45.6 YLL per 1,000 population (see Figure 30). Cancer accounted for the highest rate of YLL in all SA3s except for Caloundra and Gympie-Cooloola SA3s, where external causes were the leading cause (see Table 42).

Figure 30: SCHHS Potential Years of Life Lost (deaths before 75 years) (ASR per 1,000 population) by sex and SA3, 2014 to 2018



Source: Public Health Information Development Unit, Social Health Atlases of Australia, derived from Australian Coordinating Registry Cause of Death Unit Record Files

Table 42: SCHHS Potential Years of Life Lost (deaths before 75 years), ASR per 1,000, by cause and SA3, 2014 to 2018

SA3	Cancer	Diabetes	Circulatory system diseases	Respiratory system diseases	External causes
Buderim	9.6	0.2	3.1	0.8	8.4
Caloundra	11.5	0.4	3.8	0.9	11.7
Gympie - Cooloola	15.5	1.0	5.5	2.6	16.7
Maroochy	13.7	0.4	4.1	0.8	11.6
Noosa	11.3	0.5	2.9	0.8	8.7
Sunshine Coast Hinterland	12.5	0.4	3.5	1.0	11.0
Nambour	14.8	0.9	6.3	1.4	12.4
Noosa Hinterland	12.2	0.4	4.8	1.7	12.5
QLD	12.9	0.9	5.8	1.8	10.9

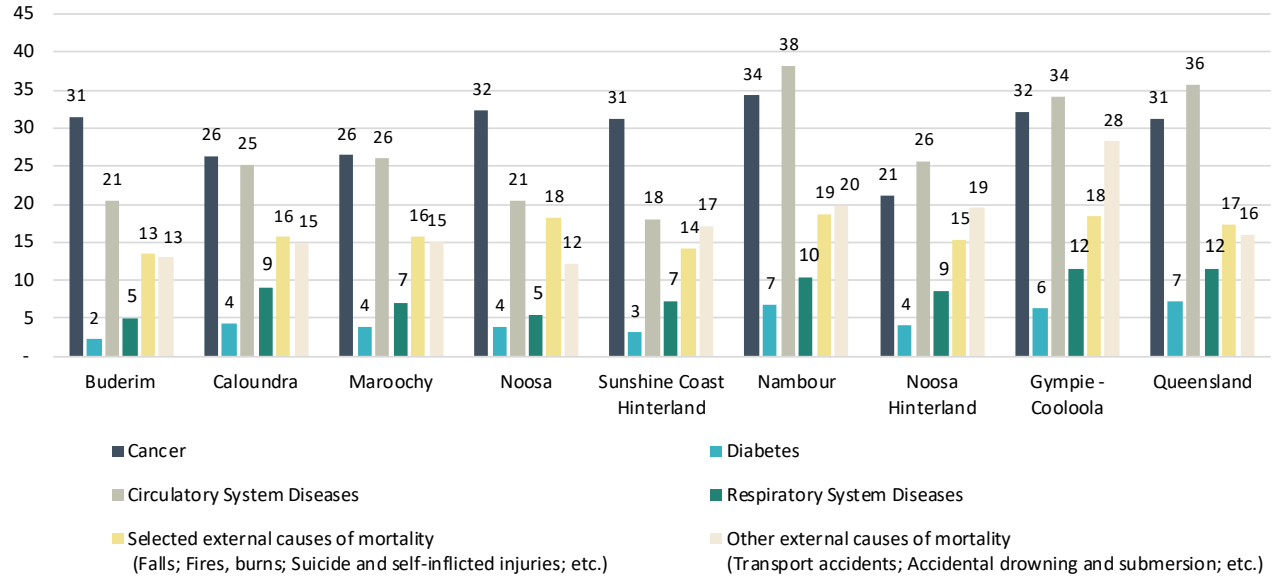
Source: Public Health Information Development Unit, Social Health Atlases of Australia, derived from Australian Coordinating Registry Cause of Death Unit Record Files

4.2.7 Avoidable deaths

Avoidable deaths are deaths that occur under age 75 from causes that were potentially preventable through hospital or primary health care – that is, deaths that are from conditions that are potentially preventable through screening or prevention, and deaths that are potentially preventable through medical intervention (Falster & Jorm, 2017).

From 2014 to 2018, the ASR of potentially avoidable deaths per 100,000 population was highest for cancer in all SA3s aside from Nambour, Noosa Hinterland and Gympie-Cooloola, where circulatory system diseases were the leading cause of avoidable deaths (see Figure 31).

Figure 31: SCHHS Avoidable Deaths (in persons aged under 75 years), ASR per 100,000, by cause of death and SA3, 2014 to 2018



Source: Public Health Information Development Unit, Social Health Atlases of Australia, derived from Australian Coordinating Registry Cause of Death Unit Record Files

4.2.8 Infant mortality

Infant mortality is deaths that occur in infants under one year of age and can indicate how well the maternal and perinatal health system is performing (Australian Institute of Health and Welfare, 2020). From 2014 to 2018, infant mortality rates in the SCHHS catchment ranged from 4.2 deaths per 1,000 live births in the Caloundra SA3 to 7.5 deaths per 1,000 live births in the Sunshine Coast Hinterland SA3 (see Table 43). Noosa, Noosa Hinterland and Buderim were the only SA3s that had a lower infant mortality rate than Queensland.

Table 43: SCHHS, Infant Mortality Rate by SA3, 2014 to 2018

SA3	Infant Mortality Rate
Buderim	#
Caloundra	4.2
Gympie - Cooloola	5.5
Maroochy	4.8
Nambour	4.5
Noosa	#
Noosa Hinterland	#
Sunshine Coast Hinterland	7.5
Queensland	**4.1**

Source: Queensland Health Planning Portal, Health Need Dashboard - Infant Mortality
data not reported due to low numbers of infant deaths

5 Service availability

5.1 Workforce

5.1.1 GP Workforce

5.1.1.1 GPs per 1,000 population

The number of GPs per 1,000 population was slightly higher in the SCHHS catchment (1.17 per 1,000 population) in 2019 compared to Queensland (1.07 per 1,000 population), however this number varied significantly across the SA3s. Noosa Hinterland had the lowest GP to population ratio, at 0.50 GPs per 1,000 population, followed by Sunshine Coast Hinterland (0.79 per 1,000 population) and Gympie-Cooloola (0.84 per 1,000 population) (see Table 44). Access to GPs is central to a well-functioning and sustainable health care system, as primary health care not only provides important preventive health services and but also provides important long term management of existing chronic disease (Guildford, 2017). As a result, areas with lower levels of GP supply often experience higher rates of hospitalisation and utilisation of emergency departments (van Loenen, van den Berg, Westert, & Faber, 2014).

Table 44: SCHHS, number of GPs per 1,000 population by SA3, 2019

SA3 Name	Total GPs	GPs per 1,000 ERP
Buderim	69	1.15
Caloundra	123	1.35
Gympie - Cooloola	44	0.84
Maroochy	84	1.36
Nambour	51	1.08
Noosa	84	1.83
Noosa Hinterland	12	0.50
Sunshine Coast Hinterland	43	0.79
SCHHS Total	**510**	**1.17**
QLD	5,452	1.07

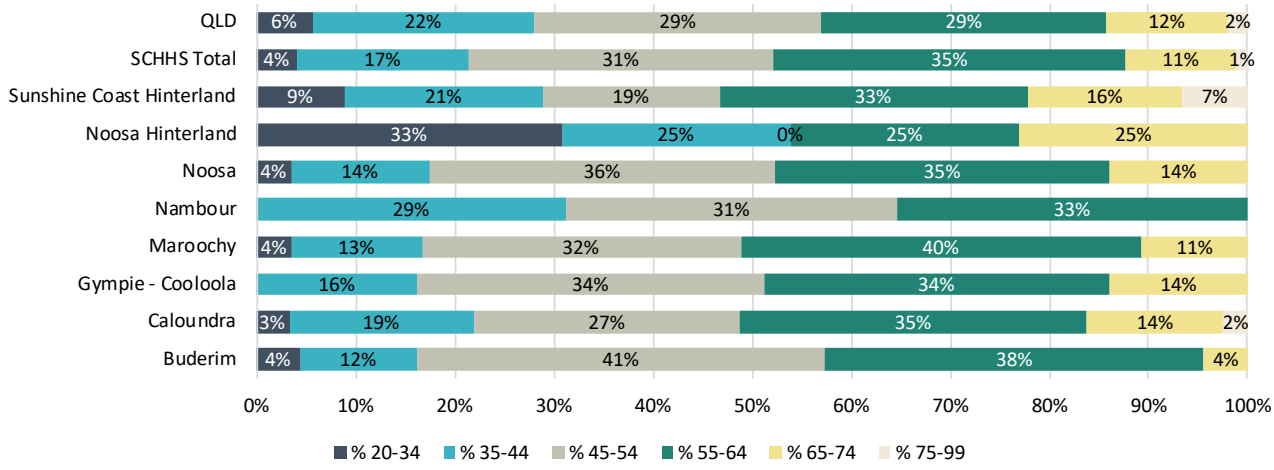
Source: Queensland Health Planning Portal, derived from Commonwealth Department of Health National Workforce Dataset

5.1.1.2 Age of the GP workforce

In addition to the number of practising GPs in area, the age profile of the GP workforce is a good indication of future supply. An ageing GP workforce that is not being adequately replaced by new registrars will result in a slowing of growth in supply. In addition, older GPs tend to work more hours and thus contribute more to the supply of clinical hours compared to their younger counterparts, therefore contributing further to a gap in supply when they retire (Deloitte Access Economics, 2019).

In 2019, compared to Queensland, a higher proportion of the GP workforce in the SCHHS catchment was aged over 55 years (47 per cent compared to 43 per cent). Across the SCHHS, the Sunshine Coast Hinterland had the highest proportion of GPs aged 55 years and over, at 55 per cent of the workforce, followed by the Maroochy and Caloundra SA3s at 51 per cent (see Figure 32).

Figure 32: SCHHS, GP workforce by age group and SA3, 2019

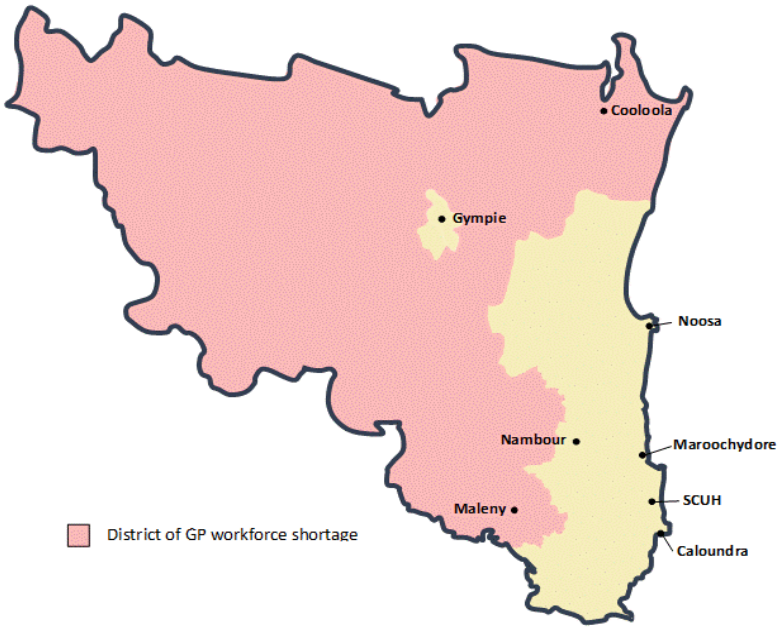


Source: Queensland Health Planning Portal, derived from Commonwealth Department of Health National Workforce Dataset

5.1.1.3 District of workforce shortage – GPs

A district of workforce shortage is an area in which people have poor access to health workers, relative to the national ratio of health workers to the population. Within the SCHHS catchment, the Sunshine Coast Hinterland region and outer Gympie region (Kilkivan and Cooloola) are considered to have a shortage of GPs (see Figure 33).

Figure 33: SCHHS, districts of GP workforce shortage, 2019



Source: Australian Government Department of Health, District of Workforce Shortage Health Workforce Locator

5.1.2 Registered health workforce by population

Aside from GPs, the number of other practising health professionals within an area can impact residents' access to health services and health outcomes. Across the SCHHS, the Noosa Hinterland and Sunshine Coast
Hinterland SA3s have the lowest rates of health workers per 1,00 population across most professions, while the Gympie-Cooloola SA3 also has lower rates of physiotherapists and psychologists (see Table 45).

Table 45: SCHHS, health workforce by profession and SA3, number of workers per 1,000 population

SA3	Buderim	Caloundra	Gympie - Cooloola	Maroochy	Nambour	Noosa	Noosa Hinterland	Sunshine Coast Hinterland	SCHHS Total	QLD
ATSI Health Practitioners	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Chinese Medicine Practitioners	0.1	0.2	0.1	0.5	0.2	0.4	0.3	0.2	0.2	0.2
Chiropractors	0.3	0.3	0.1	0.7	0.2	0.5	0.1	0.2	0.3	0.2
Dental Practitioners	0.8	1.4	0.8	1.5	0.8	1.3	0.8	0.3	1.0	0.9
Medical Practitioners	3.5	9.6	2.2	3.1	3.3	3.3	1.2	1.4	4.1	4.1
Medical Radiation Practitioners	0.6	1.8	0.4	0.7	0.8	0.5	0.1	0.1	0.8	0.6
Nurses and Midwives	12.1	29.8	8.8	9.8	18.8	9.1	4.4	3.7	14.0	14.1
Occupational Therapists	1.0	1.3	0.6	1.6	1.0	0.5	0.4	0.2	0.9	0.8
Optometrists	0.1	0.3	0.1	0.5	0.1	0.3	0.1	0.1	0.2	0.2
Osteopaths	0.2	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.1	0.0
Paramedicine Practitioners	1.0	1.0	0.8	1.3	1.1	0.9	1.0	0.5	1.0	0.8
Pharmacists	0.7	1.4	0.6	1.0	0.8	1.0	0.4	0.5	0.9	1.0
Physiotherapists	1.1	1.9	0.5	1.7	1.4	1.4	0.8	0.4	1.2	1.1
Podiatrists	0.2	0.2	0.1	0.3	0.2	0.3	0.0	0.1	0.2	0.2
Psychologists	0.9	1.1	0.4	2.2	0.8	0.9	0.5	0.5	1.0	1.0

Source: Queensland Health Planning Portal, derived from Commonwealth Department of Health National Workforce Dataset

5.1.3 Wait times

5.1.3.1 Elective surgery wait times

Elective surgery wait times are a policy priority in many health care systems, with long wait times for surgery associated with adverse outcomes, including higher risk of death and complications for patients (Rathnayake, Clarke, & Jayasinghe, 2021).

In July 2021, the SCHHS had a total of 3,885 patients on the elective surgery waitlist, with 4 per cent being long waits who had been waiting for longer than the clinically recommended time according to their triage category. This proportion is slightly higher than Queensland, whose long waits comprised 1 per cent of the total elective surgery waitlist (see Table 46). The proportion of long waits is highest for orthopaedic surgery (10 per cent), followed by vascular surgery (8 per cent) and plastic and reconstructive surgery (7 per cent).

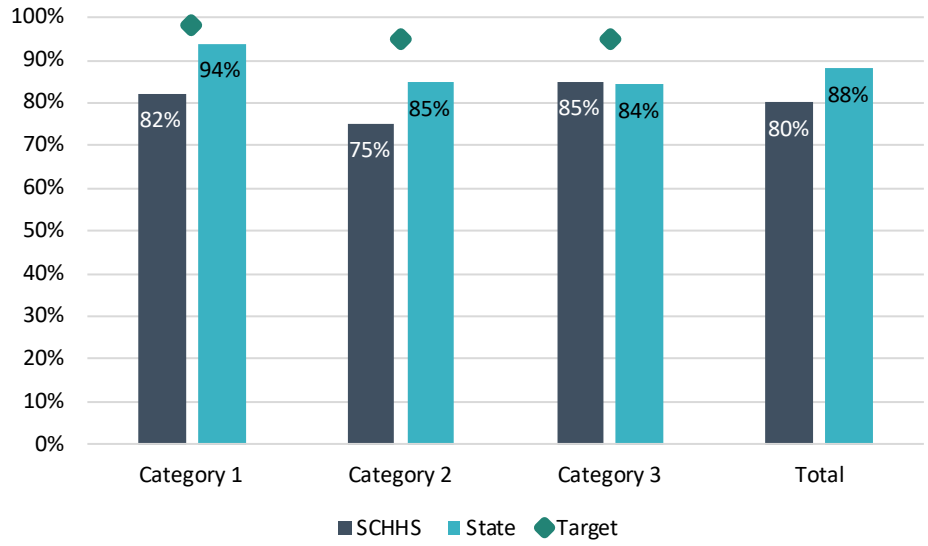
In the 2021 financial year, the proportion of patients treated in time was below the statewide target for all triage categories, with 82 per cent of triage category 1 patients, 75 per cent of category 2 patients and 85 per cent of category 3 patients treated in time (see Figure 34). The proportion of patients treated in time was lower within the SCHHS compared to Queensland for Category 1 and 2 patients (see Figure 34.

Table 46: SCHHS and QLD, elective surgery waitlists and long waits by clinical specialty, July 2021

Clinical Specialty	SCHHS			QLD		
	Total RFC waiting	Total RFC long waits	%Waiting in time	Total RFC waiting	Total RFC long waits	%Waiting in time
Ear, Nose & Throat	846	22	97%	7,056	34	100%
General Surgery	1,231	8	99%	9,904	106	99%
Gynaecology	362	17	95%	6,376	44	99%
Ophthalmology	363	6	98%	6,041	63	99%
Orthopaedic Surgery	594	57	90%	12,793	115	99%
Plastic & Reconstructive Surgery	229	15	93%	3,614	129	96%
Urology	131	7	95%	3,186	56	98%
Vascular Surgery	129	10	92%	887	26	97%
Total	**3,885**	**142**	**96%**	**49,857**	**573**	**99%**

Source: Queensland Health System Performance Reportings

Figure 34: SCHHS and QLD, % of elective surgery patients treated in time by triage category, 2020/21



Source: Queensland Health System Performance Reporting

5.1.3.2 Elective procedure wait times

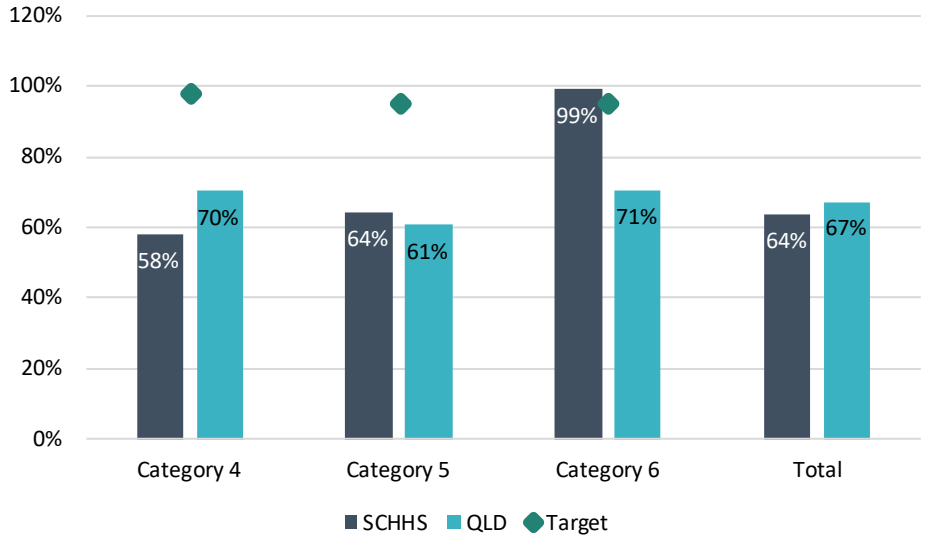
In July 2021, there were no long waits on the gastrointestinal endoscopy waitlist (see Table 47). In the 2020/21 financial year, the proportion of people treated in time was below target for Category 4 and 5 patients, at 58 per cent and 64 per cent respectively (see Figure 35).

Table 47: SCHHS and QLD, gastrointestinal endoscopy waitlists and long waits by clinical specialty, July 2021

Procedure	SCHHS			QLD		
	Total RFC waiting	Total RFC long waits	%waiting in time	Total RFC waiting	Total RFC long waits	%waiting in time
Colonoscopy	604	-	100%	14,193	2,409	83%
Endoscopic Ultrasound	3	-	100%	245	13	95%
ERCP	3	-	100%	626	151	76%
Gastroscopy	3	-	100%	991	257	74%
Panendoscopy	272	-	100%	5,524	842	85%
Total	**885**	**-**	**100%**	**21,579**	**3,672**	**83%**

Source: Queensland Health System Performance Reporting

Figure 35: SCHHS and QLD, % of gastrointestinal endoscopy patients treated in time by triage category, 2020/21



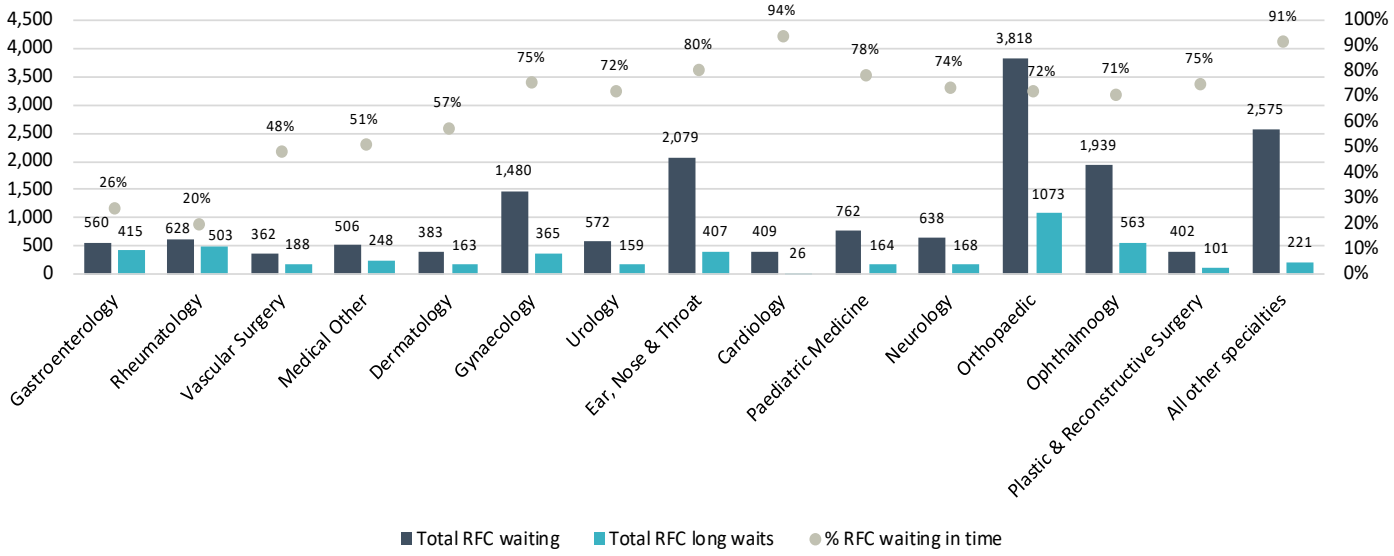
Source: Queensland Health System Performance Reporting

5.1.3.3 Outpatient wait times

As of July 2021, there were a total of 17,113 patients on the SCHHS outpatients waitlist, 28 per cent of whom had been waiting longer than the clinically recommended time for their triage category. Orthopaedics had the highest number of patients on the waitlist (3,818), followed by ear, nose and throat (3,079) and gynaecology (1,480). The specialties with the lowest proportion of patients waiting in time were rheumatology (only 20 per cent waiting less than the clinically recommended time), gastroenterology (28 per cent) and vascular surgery (48 per cent) (see Figure 36).

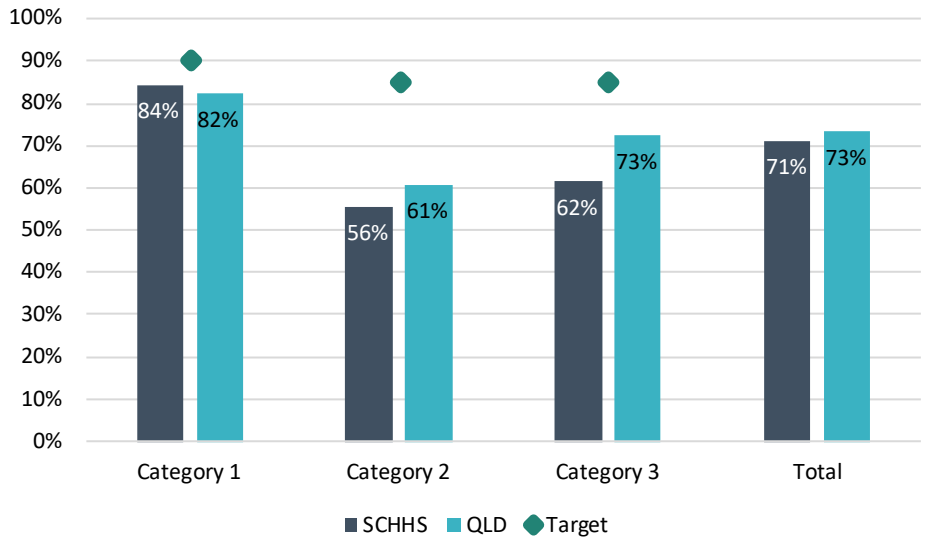
In 2020/21, the proportion of outpatients treated in time was below target for all triage categories, with 84 per cent of Category 1, 56 per cent of Category 2 and 62 per cent of Category 3 patients treated within clinically recommended timeframes (see Figure 37).

Figure 36: SCHHS, SOPD waitlist, top 14 specialties by highest proportion of long waits, 1 Jul 2021



Source: Queensland Health System Performance Reporting

Figure 37: SCHHS, % of specialist outpatient patients treated in time by triage category, 2020/21



Source: Queensland Health System Performance Reporting

5.2 Aboriginal and Torres Strait Islander health services

Accessibility to culturally appropriate health services for Aboriginal and Torres Strait Islander peoples is paramount to achieving improved health outcomes, as the cultural appropriateness of services significantly impacts whether they will access a service for prevention or diagnosis and whether they will continue treatment as recommended (Taylor, et al., 2020). Aboriginal Community Controlled Health Organisations, training and supply of Indigenous Health Workers, and Indigenous representation within the mainstream health workforce may improve access to and trust in the health care system for Aboriginal and Torres Strait Islander peoples.

5.2.1 Number of Aboriginal Community Controlled Health Organisations

There is one Aboriginal Community Controlled Health Organisations (ACCHO) on the Sunshine Coast, the North Coast Aboriginal Corporation for Community Health located at Birtinya.

5.2.2 Percentage of workforce identifying as Aboriginal and Torres Strait Islander

In 2019, only a small percentage of the health workforce across the SCHHS identified as Aboriginal and Torres Strait Islander. Across the region, Aboriginal and Torres Strait Islanders were most consistently represented in the nursing and midwifery workforce, with all SA3s except for Noosa Hinterland and Sunshine Coast Hinterland having Indigenous representation on their nursing workforce. Three SA3s (Gympie-Cooloola, Caloundra and Maroochy) had Indigenous representation in their medical practitioner workforce (see Table 48).

Table 48: SCHHS, % of workforce identifying as Aboriginal and / or Torres Strait Islander by SA3, 2019

Profession	Buderim	Caloundra	Gympie - Cooloola	Maroochy	Nambour	Noosa	Noosa Hinterland	Sunshine Coast Hinterland
ATSI Health Practitioners	N/A	N/A	N/A	N/A	N/A	100.0%	N/A	N/A
Chinese Medicine Practitioners	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chiropractors	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Dental Practitioners	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Medical Practitioners	0.0%	0.8%	2.6%	1.5%	0.0%	0.0%	0.0%	0.0%
Medical Radiation Practitioners	0.0%	0.0%	15.8%	6.7%	0.0%	0.0%	0.0%	0.0%
Nurses and Midwives	1.2%	1.3%	1.3%	1.2%	1.7%	1.2%	0.0%	0.0%
Occupational Therapists	0.0%	0.0%	0.0%	3.0%	6.1%	0.0%	0.0%	0.0%
Optometrists	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Osteopaths	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Paramedicine Practitioners	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.5%
Pharmacists	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Physiotherapists	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Podiatrists	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	N/A	0.0%
Psychologists	5.7%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	0.0%

Source: Queensland Health Planning Portal, derived from Commonwealth Department of Health National Workforce Dataset

5.2.3 Registered Indigenous health workers by population

In 2019, there were only 3 registered Aboriginal and Torres Strait Islander Health Practitioners in the SCHHS catchment, all located in the Noosa SA3.

6 Service utilisation

6.1 Primary care attendance

Primary health care is the front line of Australia's health care system. It is often the first point of contact a person has with the health system. Effective primary health care can help avoid unnecessary hospitalisations and improve health outcomes (Australian Institute of Health and Welfare, 2020).

In 2018/19, General Practitioner (GP) attendances across the SCHHS totalled 2,900,361 services (680 services per 100 people, ranging from 621 services per 100 people or 89 per cent of people who had the service in Buderim to 752 services per 100 population in Caloundra or 93 percent of people who had the service. The over 65 years age group had the highest rate of GP attendances, 1,270.28 per 100 people. (see Table 49, Figure 38 and Figure 39).

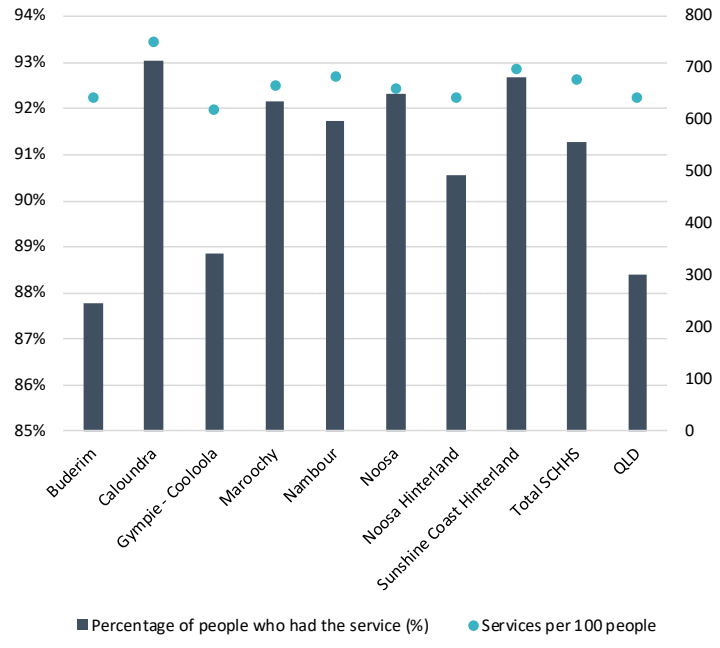
Table 49 demonstrates that Gympie-Cooloola has lower rates of GP attendances (6.98 services per person) in 2018/19. This may be due to other factors such as limited access to GPs in the area, the cost might be too high or there might be a long waiting list to see a GP. These barriers can delay a patient receiving appropriate care, and lead to poorer health outcomes. (Australian Institute of Health and Welfare, 2020).

Table 49: SCHHS, GP attendances by SA3, 2018/19

SA3 name	Services per 100 people	Percentage of people who had the service (%)	No. of patients	No. of services	Average attedances per person that visited a GP	Estimated resident population
Buderim	643	88%	51,919	380,059	7.29	59,147
Caloundra	752	93%	82,008	662,823	8.22	88,133
Gympie - Cooloola	621	89%	45,766	319,950	6.98	51,509
Maroochy	667	92%	55,906	404,865	7.25	60,655
Nambour	685	92%	42,252	315,677	7.53	46,056
Noosa	660	92%	41,594	297,203	7.19	45,059
Noosa Hinterland	644	91%	21,154	150,380	7.25	23,364
Sunshine Coast Hinterland	699	93%	48,986	369,404	7.53	52,855
Total SCHHS	**680**	**91%**	**389,585**	**2,900,361**	**7.44**	**426,779**
QLD	643	88%	4,427,845	32,206,976	7.27	5,009,424

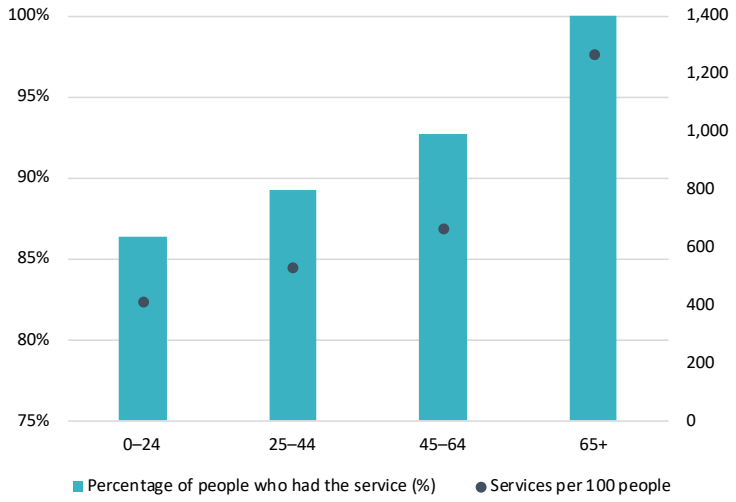
Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2018-19

Figure 38: SCHHS, GP attendances per 100 people and percentage of people who had the service by SA3, 2018/19



Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2018-19

Figure 39: SCHHS, Percentage of people who had the GP service by age group, 2018/19



Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2018-19

6.1.1 Average number of GP attendances per person

Many Sunshine Coast residents are fortunate to experience good health and see GPs on average 7.44 times per year, compared with the Queensland state average of 7.27 in 2018/19 (See Table 49). However, many other Sunshine Coast residents need to see a GP more often than this, in particular the older population or those requiring treatment and management of chronic conditions. The over 65 years age group accessed GPs at a higher rate, on average 12.6 attendances per person in 2018/19. It is widely reported that it is more cost effective to manage patients in the primary care setting to avoid multiple inpatient and outpatient hospital attendances where possible. (See Table 50).

Table 50: SCHHS, Average GP attendances by age group, 2018/19

Age Group	Services per 100 people	Percentage of people who had the service (%)	No. of patients	No. of services	Average attedances per person that visited a GP
0–24	410.91	86%	105,922	494,533	4.7
25–44	529.00	89%	84,817	501,578	5.9
45–64	664.12	93%	108,387	765,707	7.1
65+	1,270.28	100%	90,456	1,138,544	12.6

Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2018-19

6.1.2 Bulk-billing rates

The proportion of people reporting cost as a barrier for seeking GP care may vary by the availability of bulk-billing services. Fortunately, on the Sunshine Coast we have reasonably good access to GPs who bulk bill for their services. In 2018/19, the average bulk billing rate across the Sunshine Coast was 87 per cent, 2 percent higher than the Queensland average rate of 85 per cent (see Table 51).

Table 51: GP Bulk Billing rates by federal electorate, 2018/19

Electorate	Bulk billing rate
Fairfax (northern Sunshine Coast Council Area)	85%
Fisher (Southern Sunshine Coast Council Area)	88%
Wide Bay (Includes Noosa nad Gympie Council Areas + Wide Bay)	86%
Average Sunshine Coast	**87%**
Average QLD	85%

Source: RACGP, GP Bulk Billing Rates by Federal Electorate (https://www1.racgp.org.au/RACGP/media/AJGP/documents/Appendices/GP-bulk-billing-rates-by-electorate.pdf)

6.1.3 GP attendances

For many Australians, complex health needs, geographical, cultural and socioeconomic factors may influence their ability to access primary health care. For instance, people living in rural and remote areas tend to have poorer access to health care, due to the uneven distribution of many health professionals in Australia (Australian Institute of Health and Welfare, 2020). In 2018/19, Buderim had the highest percentage of people who did not see a GP (12 per cent) followed by Gympie-Cooloola (11 per cent). Both these SA3's also had the lowest rates of people who had the service. (see Table 52).

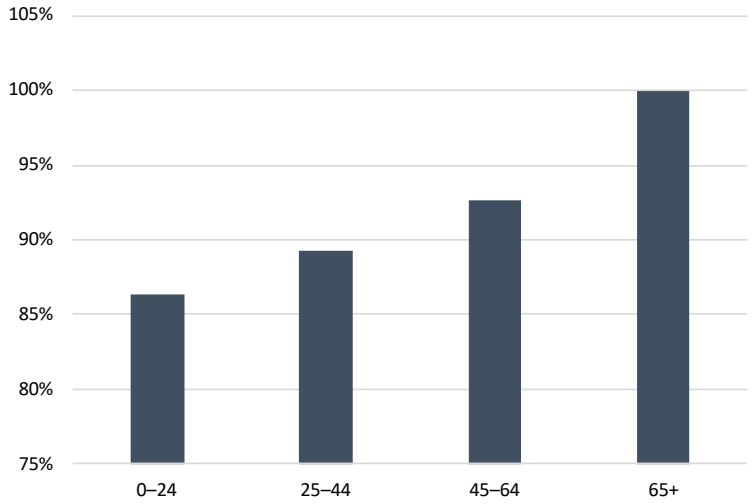
Of the percentage of people who had the service, the 65 years and over age group accounted for the largest portion (100 per cent), whilst the 0 to 24 years age group accounted for the smallest portion (86 per cent). This indicates that we are servicing the older people well in the Sunshine Coast region. GPs are an essential part of the medical workforce providing care to older people (those over 65 years of age). GPs are core in keeping people well in their home, providing health risk assessments, primary and secondary disease prevention, population health programs such as cancer screening and immunisation, and tracking and management of chronic disease (The Royal Australian College of General Practitioners, 2021). See Figure 40.

Table 52: Proportion of people that did not see a GP by SA3, 2018/19

SA3 name	Percentage of people who had the service (%)	Percentage of people who did not see a GP
Buderim	88%	12%
Caloundra	93%	7%
Gympie - Cooloola	89%	11%
Maroochy	92%	8%
Nambour	92%	8%
Noosa	92%	8%
Noosa Hinterland	91%	9%
Sunshine Coast Hinterland	93%	7%
Total SCHHS	**91%**	**9%**
QLD	88%	12%

Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2017-18

Figure 40: Proportion of people who had the service by age group, 2018/19



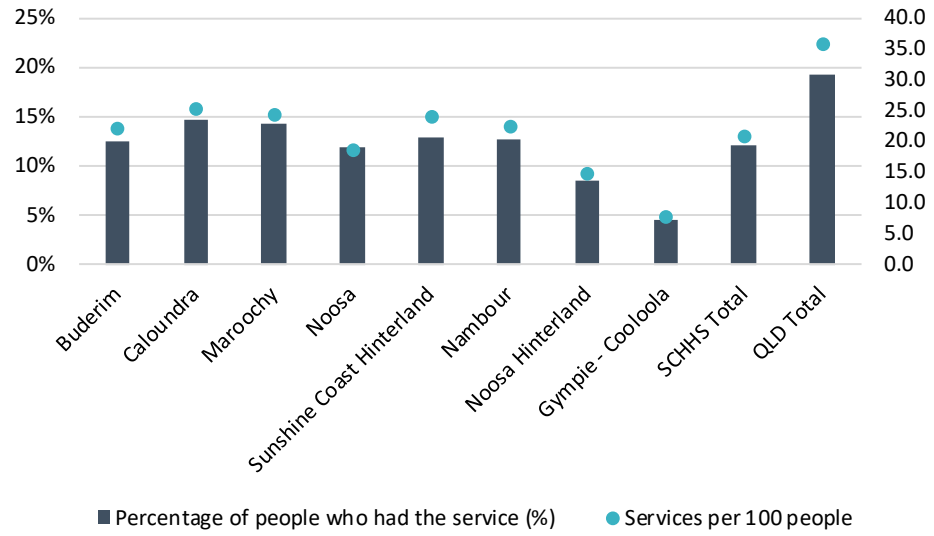
Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2017-18

6.1.4 After-hours GP usage rates

Non-urgent after-hours GP usage rates ranged from 7.8 services per 100 people in Gympie-Cooloola to 25.3 services per 100 people in Caloundra in 2017/18. During this period, Sunshine Coast residents' accessed non-urgent GPs after-hours at a lower rate than Queensland with Sunshine Coast servicing 20.9 per 100 people and Queensland servicing 35.9 per 100 people. This may be due to limited access to after-hours GP services in the region (see Figure 41).

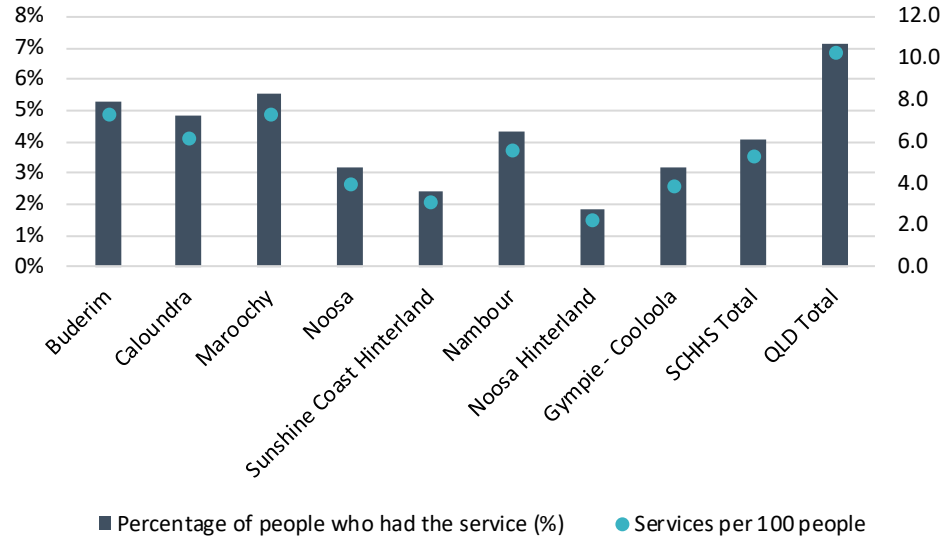
Noosa Hinterland had the lowest rate of urgent after-hours GP attendances in 2017/18 (2.2 per 100 people), while Buderim and Maroochy SA3s had the highest rate of after-hours GP attendances for the same period (7.3 per 100 people). The Sunshine Coast rate was significantly lower in 2017/18, with 5.3 services per 100 people compared with Queensland who had 10.3 services per 100 people (see Figure 42). Again, this is potentially due to a shortage of after-hour GP options available in the local community.

Figure 41: SCHHS, after hours GP attendances (non-urgent) by SA3, 2017/18



Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2017-18

Figure 42: SCHHS, after hours GP attendances (urgent) by SA3, 2017/18



Source: *AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2017-18*

6.1.5 Chronic Disease Management Plans

People living with complex health conditions, including chronic or terminal medical conditions may receive Medicare-subsidised chronic disease management services from their GP for the diagnosis, treatment, planning, review and coordination of their care.

In 2018/19, 91,390 patients across the SCHHS accessed GP chronic disease management plans, with a total of 230,345 services. This accounted for 21 per cent of the population who had the service, compared with Queensland where 15 per cent of people had the service for the same period. Noosa Hinterland SA3 had the highest number of services (61 services per 100 people) followed by Nambour (57 services per 100 people) and Noosa (56 services per 100 people). See Table 53.

Table 53: SCHHS, GP Chronic Disease Management Plan Services, by SA3, 2018/19

SA3	No. of patients	No. of services	Percentage of people who had the service (%)	Services per 100 people
Buderim	10,966	27,921	19%	47
Caloundra	18,796	49,105	21%	56
Gympie - Cooloola	11,275	26,929	22%	52
Maroochy	12,481	30,592	21%	50
Nambour	10,865	26,477	24%	57
Noosa	9,552	25,213	21%	56
Noosa Hinterland	5,651	14,255	24%	61
Sunshine Coast Hinterland	11,804	29,853	22%	56
SCHHS Total	**91,390**	**230,345**	**21%**	**53**
QLD	**761,919**	**1,958,870**	**15%**	**38**

Source: AIHW, Medicare Subsidised GP, allied health and specialist health care across local areas: 2013-14 to 2017-18

6.1.6 Medicare-Subsidised Mental Health Services

Mental health services in Australia (MHSA) provides a picture of the national response of the health and welfare service system to the mental health care needs of Australians. (Australian Institute of Health and Welfare, 2020). In 2019/20, The SCHHS had a total of 60 Medicare-subsidised mental health-specific services per 100 people (20 per cent of the population) compared with Queensland who had a total of 52 services per 100 people (11 percent of the population).

Of the SCHHS population, 19 services per 100 people were provided by General Practitioners, 17 by Other Psychologists, 13 by Clinical Psychologists, 9 by Psychiatrists and 3 by Other Allied Health Providers. Sunshine Coast Hinterland and Nambour had the largest portion of the population receiving services (68 services per 100 people) followed by Maroochy (65 services per 100 people).

Access to Medicare-subsidised mental health services in the Sunshine Coast region was fairly consistent across all SA3s in 2019/20, however Gympie-Cooloola and Noosa Hinterland had lower rates of services for clinical psychologists and psychiatrists, indicating a service supply shortage in these areas. Sunshine Coast Hinterland and Nambour had the highest proportion of the population receiving services (22 per cent), closely followed by Maroochy (21 per cent). Gympie-Cooloola had the lowest proportion of the population receiving services (17 per cent). See

Table 54, Figure 43 and

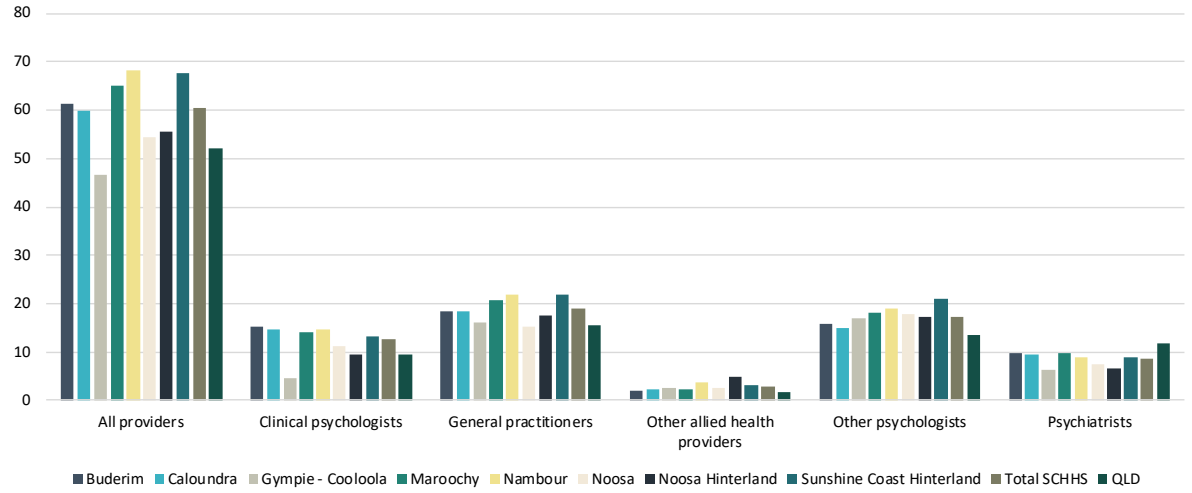
Figure 44.

Table 54: SCHHS, MBS Subsidised Mental Health Services per 100 by provider type and SA3, 2019/20

SA3	Services per 100 people					
	All providers	Clinical psychologists	General practitioners	Other allied health providers	Other psychologists	Psychiatrists
Buderim	61	15	18	2	16	10
Caloundra	60	15	19	2	15	10
Gympie - Cooloola	46	4	16	3	17	6
Maroochy	65	14	21	2	18	10
Nambour	68	15	22	4	19	9
Noosa	54	11	15	3	18	8
Noosa Hinterland	56	10	17	5	17	7
Sunshine Coast Hinterland	68	13	22	3	21	9
Total SCHHS	**60**	**13**	**19**	**3**	**17**	**9**
QLD	52	10	16	2	13	12

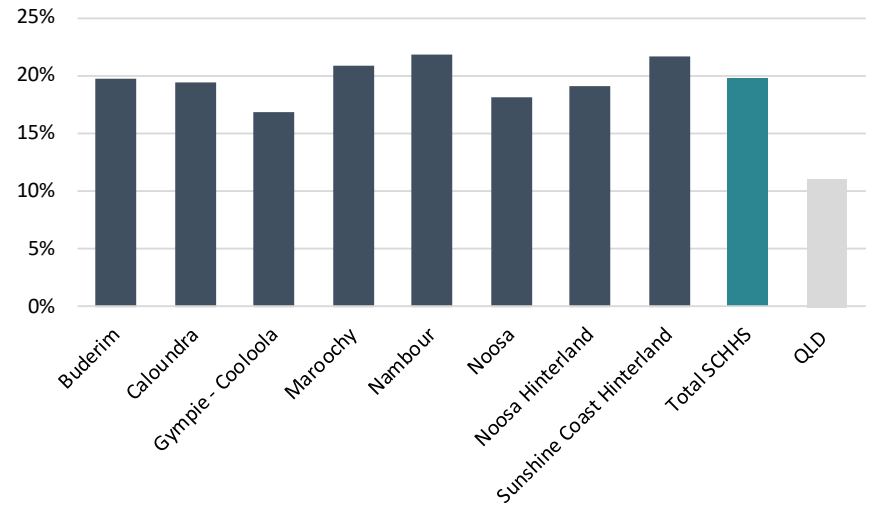
Source: AIHW, Mental Health Services in Australia: Medicare-subsidised mental health-specific services

Figure 43: SCHHS, MBS Subsidised Mental Health Services per 100 by provider type and SA3, 2019/20



Source: *AIHW, Mental Health Services in Australia: Medicare-subsidised mental health-specific services*

Figure 44: SCHHS, MBS Subsidised Mental Health Services percentage of people using service by SA3, 2019/20



Source: AIHW, Mental Health Services in Australia: Medicare-subsidised mental health-specific services

6.2 National Disability Insurance Scheme (NDIS) participation

The NDIS provides reasonable and necessary supports to eligible Australians who enter the scheme under the age of 65 years, with a permanent (or likely to be permanent) and significant disability (intellectual, physical, sensory, cognitive and psychosocial disability). NDIS participants choose and pay for their supports and services out of an individually allocated budget based on their goals. Available supports fall into 15 categories, and include things like assistance with daily life, transport, assistance with social and community participation, and home modifications (Australian Institute of Health and Welfare, 2020).

As at March 2021, 7,703 SCHHS people (1.7 per cent of the population) were active participants in the NDIS and were in receipt of an individual support package. This figure is consistent with the state total of 1.7 per cent of the population accessing NDIS services. Of the active NDIS participants, Gympie – Cooloola accounted for the highest proportion (1,358 participants or 2.6 per cent of population), whilst Noosa had the lowest proportion (532 participants or 1.1 per cent of the population). See Table 55.

Table 55: SCHHS, NDIS participants by SA3, as of March 2021

SA3	No. of participants	Population	% of population
Buderim	897	60,845	1.5%
Caloundra	1,550	94,253	1.6%
Gympie - Cooloola	1,358	52,840	2.6%
Maroochy	902	62,424	1.4%
Nambour	1,090	48,439	2.3%
Noosa	532	46,736	1.1%
Noosa Hinterland	319	24,287	1.3%
Sunshine Coast Hinterland	1,055	56,065	1.9%
SCHHS Total	**7,703**	**445,889**	**1.7%**
QLD Total	88,519	5,176,186	1.7%

Source: Queensland Health Planning Portal, Service Utilisation modules

6.3 Hospitalisations

6.3.1 Average length of stay

The average length of stay (ALOS) for SCHHS residents in 2020/21 was 2.2 days, slighter lower than the Queensland ALOS of 2.5 days. Residents from the Buderim planning region had the highest ALOS (2.7 days), followed by Noosa (2.3 days). This could be due to the ageing demographic in these regions, requiring longer hospital stays. (See Table 56).

In 2020/21, the service related groups (SRGs) with the longest ALOS within the SCHHS were Rehabilitation (non-acute) 13.3 days, Mental Health 13.2 days and Upper GTI Surgery 4.3 days. The SCHHS ALOS for these SRGs were slightly higher than the Queensland ALOS. (See Table 57).

Table 56: SCHHS residents, ALOS by Planning Region of Residence, 2020/21

Planning Region of Residence	ALOS
Buderim	2.7
Caloundra	2.2
Gympie	2.1
Maroochy	2.3
Nambour	2.1
Noosa	2.3
Noosa Hinterland	2.1
Southern Sunshine Coast	2.1
Sunshine Coast Hinterland	2.0
Grand Total	**2.2**
QLD Total	2.5

Source: Queensland Health Decision Support System

Table 57: SCHHS residents, ALOS by SRG, 2020/21

SRG	Sunshine Coast	QLD
Cardiology	2.0	2.0
Chemotherapy	1.0	1.0
Dermatology	2.2	1.9
Diagnostic GI Endoscopy	1.2	1.4
Drug & Alcohol	2.3	2.3
Endocrinology	2.1	2.4
Gastroenterology	1.8	2.0
Haematology	1.6	1.8
Immunology & Infections	3.6	3.5
Interventional Cardiology	3.3	3.2
Medical Oncology	2.4	3.1
Neurology	2.1	2.5
Non Subspecialty Medicine	1.6	1.9
Renal Dialysis	1.0	1.0
Renal Medicine	1.9	2.4
Respiratory Medicine	3.0	3.0
Rheumatology	2.1	2.0
Breast Surgery	1.7	1.7
Cardiac Surgery	N/A	11.1
Colorectal Surgery	5.0	5.3
Maxillo-Facial Surgery	1.9	2.1
Dentistry	1.3	1.2
Ear, Nose & Throat	1.3	1.2
Extensive Burns	1.7	3.2
Gynaecology	1.2	1.3
Haematological Surgery	3.3	8.2
Head & Neck Surgery	1.9	2.1
Neurosurgery	1.8	3.4
Non Subspecialty Surgery	2.0	1.9
Ophthalmology	1.1	1.2
Orthopaedics	2.6	2.8
Plastic & Reconstructive Surgery	1.7	2.3
Thoracic Surgery	2.4	4.2
Prolonged Ventilation (+/- Tracheostomy)	19.6	25.1
Transplantation	N/A	12.0
Upper GIT Surgery	4.3	3.8
Urology	1.9	1.8
Vascular Surgery	4.7	5.0
Obstetrics	1.7	1.7
Qualified Neonate	3.8	6.1
Mental Health	13.2	12.8
Rehabilitation	7.4	11.6
Other Non-Acute	8.4	18.2
Rehabilitation (non-acute)	13.3	11.2
Palliative (non-acute)	6.1	6.9
Grand Total	**2.2**	**2.5**

Source: Queensland Health Decision Support System

6.3.2 Total admitted patient hospital episodes

Admitted patients are patients who undergo a public or private hospital's formal admission process to receive treatment and/or care. The types of care provided include surgical care, medical care, intensive care, newborn care, rehabilitation care, palliative care, and mental health care (Australian Institute of Health and Welfare, 2020).

In 2019/20 there were 255,317 hospitalisations in SCHHS hospitals, with Diagnostic GI Endoscopy accounting for the largest number of hospitalisations (24,022 separations), followed by Renal Dialysis (21,566 separations) and Chemotherapy (20,181 separations). Hospitalisations from the Caloundra and Maroochy regions accounted for the greatest proportion of separations across multiple service-related groups (SRGs), in particular the top three listed above (See Table 58).

Of the total 2019/20 SCHHS hospitalisations, separations ranged from the lowest rate in the Buderim planning region of 49,894 per 100,000 people to the highest rate in Nambour of 64,054 per 100,000 people. The SCHHS had a higher rate of separations overall compared with Queensland. (See Table 59).

The First Nations population had a rate of 71,789 hospitalisations per 100,000 people in 2019/20, with Renal Dialysis accounting for the largest number of hospitalisations (24,789 per 100,000 people) for this group. See Table 60.

Table 58: SCHHS, total separations (public and private) by SRG and Planning Region, 2019/20

SRG	Buderim	Caloundra	Gympie	Maroochy	Nambour	Noosa	Noosa Hinterland	Southern Sunshine Coast	Sunshine Coast Hinterland	Grand Total
Breast Surgery	191	321	128	183	122	142	70	70	73	1,300
Cardiac Surgery	71	134	75	81	58	70	34	34	40	597
Cardiology	1,100	2,260	1,149	1,242	1,123	1,102	524	569	639	9,708
Chemotherapy	2,292	3,628	2,653	3,100	2,171	2,308	1,261	1,236	1,532	20,181
Colorectal Surgery	154	312	219	202	136	166	83	97	76	1,445
Dentistry	333	518	170	279	242	190	87	164	150	2,133
Dermatology	94	193	91	108	78	89	47	71	67	838
Diagnostic GI Endoscopy	3,048	5,201	2,952	3,492	2,374	2,725	1,311	1,279	1,640	24,022
Drug & Alcohol	248	395	188	297	336	189	72	93	122	1,940
Ear, Nose & Throat	739	1,137	449	587	637	490	182	314	305	4,840
Endocrinology	273	607	316	462	279	255	97	117	153	2,559
Extensive Burns	11	20	22	23	26	7	11	20	17	157
Gastroenterology	1,016	2,119	1,181	1,308	1,243	875	441	691	544	9,418
Geriatric Management (non-acute)	97	208	140	126	63	51	22	43	49	799
Gynaecology	987	1,507	660	998	839	695	320	534	394	6,934
Haematological Surgery	53	84	54	49	24	34	19	30	41	388
Haematology	890	1,460	711	1,078	799	1,024	486	462	437	7,347
Head & Neck Surgery	70	123	84	72	75	69	40	51	38	622
Immunology & Infections	360	771	594	444	512	368	159	192	267	3,667
Interventional Cardiology	491	929	511	559	422	534	263	239	297	4,245
Maxillo-Facial Surgery	34	45	17	31	15	19	12	10	10	193
Medical Oncology	261	501	332	370	275	281	123	134	172	2,449
Mental Health	1,162	1,712	690	1,504	982	656	316	436	485	7,943
Neurology	1,041	1,991	827	1,212	1,022	824	391	549	488	8,345
Neurosurgery	370	683	284	432	321	268	153	170	195	2,876
Non Subspecialty Medicine	1,219	2,353	1,142	1,319	1,405	992	496	588	817	10,331
Non Subspecialty Surgery	1,221	2,118	1,196	1,373	1,354	1,029	612	623	709	10,235
Obstetrics	1,078	2,061	910	1,109	1,273	637	333	813	394	8,608
Ophthalmology	1,915	2,959	1,316	1,941	1,325	1,654	643	603	830	13,186
Orthopaedics	1,765	3,342	1,812	2,005	1,606	1,577	753	837	983	14,680
Other Non-Acute	61	120	29	94	48	32	14	21	33	452
Palliative (non-acute)	146	341	195	171	93	70	21	72	73	1,182
Plastic & Reconstructive Surgery	704	1,560	547	822	579	624	261	243	378	5,718
Prolonged Ventilation (+/- Tracheostomy)	14	34	28	32	15	20	12	7	7	169
Qualified Neonate	187	284	194	183	202	138	65	132	58	1,443
Rehabilitation (non-acute)	1,684	1,821	1,578	1,555	1,765	3,876	2,213	325	817	15,634
Renal Dialysis	1,498	5,705	4,113	2,485	3,218	1,758	568	474	1,747	21,566
Renal Medicine	251	458	312	389	265	198	142	124	157	2,296
Respiratory Medicine	897	1,857	1,183	1,093	1,045	813	379	458	511	8,236
Rheumatology	316	524	291	303	331	344	105	208	155	2,577
Thoracic Surgery	88	135	84	79	62	51	23	39	29	590
Transplantation	6	6	6	5	3	2				28
Unqualified Neonate	388	697	446	378	403	269	139	255	159	3,134
Upper GIT Surgery	210	398	292	202	194	175	104	132	103	1,810
Urology	715	1,478	875	1,041	716	686	357	369	447	6,684
Vascular Surgery	243	415	249	213	187	178	84	91	152	1,812
Grand Total	**29,992**	**55,525**	**31,295**	**35,031**	**30,263**	**28,554**	**13,848**	**14,019**	**16,790**	**255,317**

Source: Queensland Health Planning Portal

Table 59: SCHHS Separation rates by planning region, 2019/20

Planning Region	Separation Rate
Buderim	49,894
Caloundra	61,036
Gympie	59,689
Maroochy	56,757
Nambour	64,054
Noosa	62,102
Noosa Hinterland	58,112
Southern Sunshine Coast	50,869
Sunshine Coast Hinterland	62,502
SCHHS Total	**58,464**
QLD	51,795

Source: Queensland Health Planning Portal

Table 60: SCHHS Separation rates per 100,000 people by Indigenous Status and SRG 2019/20

SRG	First Nations rate per 100,000 people	Total SCHHS rate per 100,000 people
Breast Surgery	170	277
Cardiac Surgery	86	100
Cardiology	2,617	2,055
Chemotherapy	1,665	3,982
Colorectal Surgery	192	319
Dentistry	668	530
Dermatology	223	191
Diagnostic GI Endoscopy	1,476	4,131
Drug & Alcohol	1,487	611
Ear, Nose & Throat	1,695	1,246
Endocrinology	939	649
Extensive Burns	109	45
Gastroenterology	2,533	1,925
Geriatric Management (non-acute)	55	117
Gynaecology	1,588	1,759
Haematological Surgery	45	72
Haematology	850	1,646
Head & Neck Surgery	113	155
Immunology & Infections	1,581	804
Interventional Cardiology	467	664
Maxillo-Facial Surgery	73	49
Medical Oncology	319	472
Mental Health	2,741	2,381
Neurology	1,726	1,786
Neurosurgery	637	546
Non Subspecialty Medicine	2,320	2,142
Non Sunspecialty Surgery	2,809	2,214
Obstetrics	4,591	2,549
Ophthalmology	837	2,033
Orthopaedics	2,612	3,243
Other Non-Acute	197	188
Palliative (non-acute)	181	268
Plastic & Reconstructive Surgery	465	1,105
Prolonged Ventilation (+/- Tracheostomy)	68	42
Qualified Neonate	999	422
Rehabilitation (non-acute)	483	1,627
Renal Dialysis	24,789	6,025
Renal Medicine	397	393
Respiratory Medicine	2,988	1,983
Rheumatology	522	430
Thoracic Surgery	144	117
Transplantation	5	6
Upper GIT Surgery	497	491
Urology	875	1,370
Vascular Surgery	350	324
Total	**71,789**	**58,464**

Source: Queensland Health Planning Portal

6.3.2.1 Relative utilisation of public and private hospital services

The relative utilisation reflects the variation in admission rate relative to the state admission rate. Relative utilisation is impacted by many local factors such as Models of care or treatment method, Public and private service availability and accessibility, Local disease rates, Socio-economic status of residents and Local admission policies (Health Service Research, Analysis and Modelling). There are a number of limitations of the relative utilisation indicator and it should never be considered in isolation - a low relative utilisation may be appropriate.

In 2018/19 the SCHHS had a relative utilisation rate of 98.9 for adults and 107.9 for children. Nambour, Noosa and Noosa Hinterland SA3s had the highest relative utilisation rates for adults in 2018/19, whilst Southern Sunshine Coast, Sunshine Coast Hinterland and Caloundra had the largest relative utilisation rates for children during the same period. Adult rates were lower in the Buderim region and Children's rates were lower in the Noosa region. (See Table 61, Table 62, Table 63 and Table 64).

Table 61: SCHHS Relative Utilisation by SRG, Adults, public and private facilities, 2018/19

SRG	SCHHS
Breast Surgery	102.4
Cardiac Surgery	104.5
Cardiology	98.6
Chemotherapy	92.0
Colorectal Surgery	100.4
Dentistry	102.7
Dermatology	88.1
Diagnostic GI Endoscopy	125.0
Drug & Alcohol	74.9
Ear, Nose & Throat	74.4
Endocrinology	80.4
Extensive Burns	86.0
Gastroenterology	106.3
Geriatric Management (non-acute)	128.9
Gynaecology	97.7
Haematological Surgery	108.0
Haematology	84.3
Head & Neck Surgery	71.2
Immunology & Infections	91.9
Interventional Cardiology	122.2
Maxillo-Facial Surgery	93.8
Medical Oncology	106.5
Mental Health	88.1
Neurology	94.2
Neurosurgery	113.8
Non Subspecialty Medicine	101.2
Non Subspecialty Surgery	96.8
Obstetrics	96.1
Ophthalmology	113.2
Orthopaedics	99.4
Other Non-Acute	47.8
Palliative (non-acute)	87.8
Plastic & Reconstructive Surgery	102.4
Prolonged Ventilation (+/- Tracheostomy)	93.3
Rehabilitation (non-acute)	183.9
Renal Dialysis	68.0
Renal Medicine	110.2
Respiratory Medicine	83.9
Rheumatology	128.3
Thoracic Surgery	103.7
Transplantation	117.8
Unallocated	-
Upper GIT Surgery	84.5
Urology	96.2
Vascular Surgery	97.5
Total	**98.9**

Source: QUEENSLAND Health Acute Care Estimates, 2018/19 Base Year

Table 62:SCHHS Relative Utilisation by planning region, Adults, public and private facilities, 2018/19

Planning Region	Relative Utilisation
Buderim	87.6
Caloundra	102.0
Gympie	93.7
Maroochy	95.0
Nambour	118.7
Noosa	102.6
Noosa Hinterland	102.2
Southern Sunshine Coast	92.8
Sunshine Coast Hinterland	95.4

Source: QUEENSLAND Health Acute Care Estimates, 2018/19 Base Year

Table 63:SCHHS Relative Utilisation by SRG, Children, public and private facilities, 2018/19

SRG	Total
Breast Surgery	59.5
Cardiac Surgery	74.3
Cardiology	90.7
Chemotherapy	70.5
Colorectal Surgery	86.0
Dentistry	109.7
Dermatology	96.6
Diagnostic GI Endoscopy	109.9
Drug & Alcohol	116.2
Ear, Nose & Throat	115.7
Endocrinology	89.4
Extensive Burns	91.3
Gastroenterology	149.0
Gynaecology	99.2
Haematological Surgery	47.3
Haematology	66.5
Head & Neck Surgery	98.4
Immunology & Infections	104.2
Interventional Cardiology	127.0
Maxillo-Facial Surgery	169.6
Medical Oncology	39.0
Mental Health	75.4
Neurology	119.2
Neurosurgery	161.8
Non Subspecialty Medicine	105.3
Non Subspecialty Surgery	127.5
Obstetrics	-
Ophthalmology	92.8
Orthopaedics	104.8
Other Non-Acute	42.7
Palliative (non-acute)	80.5
Plastic & Reconstructive Surgery	108.5
Prolonged Ventilation (+/- Tracheostomy)	99.2
Qualified Neonate	89.3
Rehabilitation (non-acute)	28.4
Renal Dialysis	-
Renal Medicine	42.2
Respiratory Medicine	119.6
Rheumatology	112.0
Thoracic Surgery	120.1
Transplantation	82.1
Unqualified Neonate	102.2
Upper GIT Surgery	41.5
Urology	98.7
Vascular Surgery	90.8
Total	**107.9**

Source: QUEENSLAND Health Acute Care Estimates, 2018/19 Base Year

Table 64:SCHHS Relative Utilisation by planning region, Children, public and private facilities, 2018/19

Planning Region	Total
Buderim	105.9
Caloundra	111.2
Gympie	105.5
Maroochy	101.1
Nambour	130.1
Noosa	88.6
Noosa Hinterland	93.1
Southern Sunshine Coast	113.7
Sunshine Coast Hinterland	111.3

Source: QUEENSLAND Health Acute Care Estimates, 2018/19 Base Year

6.3.2.2 Mental health hospitalisations

Mental health services activity is an indicator of our response to the health and welfare service system to the mental health care needs for Sunshine Coast residents. 133,393 people presented to ED for mental health-related services within the SCHHS in 201/19. Of these ED presentations, a further 4 per cent or 4,340 people were admitted overnight, equating to 52,882 patient days. The SCHHS seperation rate (102 per 10,000 population) was comparable to the Queensland seperation rate (109 per 10,000 population). The patient days in Queensland (1,418 patient days per 10,000 population) were slightly higher than that of SCHHS (1,238 patient days per 10,000 population). The SA3, Caloundra had the greatest proportion of mental health activity (941 separations and 11,116 patient days), followed by Maroochy (743 separations and 9,023 patient days). See

Table 65 and Table 66.

Table 65: SCHHS, overnight admitted mental health-related population rates of separations and bed days, with and without specialised psychiatric care, by SA3, 2018/19

SA3	Separations	Patient days	Separations per 10,000 population	Patient days per 10,000 population
Buderim	507	6,103	86	1,032
Caloundra	941	11,116	107	1,261
Maroochy	743	9,023	122	1,488
Noosa	414	4,866	92	1,080
Sunshine Coast Hinterland	509	6,816	96	1,290
Nambour	544	6,720	118	1,459
Noosa Hinterland	195	2,255	83	965
Gympie - Cooloola	487	5,923	95	1,150
SCHHS Total	**4,340**	**52,822**	**102**	**1,238**
QLD	54,580	710,444	109	1,418

Source: AIHW, Mental Health overnight admitted mental health related care 2018-19

Table 66:SCHHS, Emergency department presentations in public hospitals, by SA3, 2018/19

SA3	Number of mental health presentations	Rate (per 10,000 population)	Population	% of Total ED Presentations	Total ED presentations
Buderim	525	89	59,134	3%	15,461
Caloundra	1,038	118	88,105	4%	29,403
Maroochy	767	127	60,637	5%	16,672
Noosa	354	79	45,044	6%	5,461
Sunshine Coast Hinterland	496	94	52,847	3%	15,068
Nambour	760	165	46,047	4%	18,825
Noosa Hinterland	145	62	23,358	4%	3,410
Gympie - Cooloola	732	142	51,504	3%	29,093
SCHHS Total	**4,817**	**113**	**426,676**	**4%**	**133,393**
QLD	56,740	113	5,009,424	4%	1,550,899

Source: AIHW, Mental Health overnight admitted mental health related care 2018-19

6.3.3 Local hospital self-sufficiency rates

Self-sufficiency (the proportion of our resident demand for public inpatient services that is met by our facilities) is the indicator used to indicate how well we currently service our population. In 2020/21, self-sufficiency for the SCHHS was 94% for adults and 84% for children, with many service-related groups (SRGs) demonstrating self-sufficiency rates of over 90%. Approximately 6% of inpatient activity for SCHHS residents is provided outside the SCHHS catchment in Brisbane facilities, including Metro North, Metro South and Children's Health Queensland facilities.

Service-related groups with lower self-sufficiency rates in 2020/21 included tertiary surgical services such as cardiac surgery, neurosurgery and maxillo-facial surgery, and children's surgery, as well as services that are currently increasing in capability, such as head and neck, plastic and reconstructive and vascular surgery.

We aim to reach a self-sufficiency rate of 95% post commencement of new and enhanced complex tertiary services. It is important to note that we are unlikely to ever exceed this rate due to State-wide service provision, people travelling and patients self-selecting where they choose to receive their care.

Self-sufficiency rates will remain slightly lower for children at 86% whilst complex paediatric surgery and some specialist medical services continue to be provided outside our HHS at Children's Health Queensland (See Table 67 and Table 68).

Table 67: SCHHS Total Self-sufficiency by SRG, adults, 2020/21

SRG	Other HHS	SCHHS	Total Separations	Self-sufficiency
Cardiology	406	7,283	7,689	95%
Chemotherapy	640	11,125	11,765	95%
Dermatology	35	521	556	94%
Diagnostic GI Endoscopy	296	10,829	11,125	97%
Drug & Alcohol	240	1,617	1,857	87%
Endocrinology	134	1,844	1,978	93%
Gastroenterology	303	7,014	7,317	96%
Haematology	252	3,808	4,060	94%
Immunology & Infections	120	2,631	2,751	96%
Interventional Cardiology	119	1,600	1,719	93%
Medical Oncology	132	1,721	1,853	93%
Neurology	411	6,750	7,161	94%
Non Subspecialty Medicine	487	7,023	7,510	94%
Renal Dialysis	132	15,244	15,376	99%
Renal Medicine	73	1,847	1,920	96%
Respiratory Medicine	187	3,994	4,181	96%
Rheumatology	116	1,451	1,567	93%
Breast Surgery	35	389	424	92%
Cardiac Surgery	232	-	232	0%
Colorectal Surgery	57	791	848	93%
Maxillo-Facial Surgery	81	5	86	6%
Dentistry	81	301	382	79%
Ear, Nose & Throat	376	1,482	1,858	80%
Extensive Burns	64	48	112	43%
Gynaecology	263	3,677	3,940	93%
Haematological Surgery	36	184	220	84%
Head & Neck Surgery	68	263	331	79%
Neurosurgery	496	855	1,351	63%
Non Subspecialty Surgery	474	6,825	7,299	94%
Ophthalmology	335	4,673	5,008	93%
Orthopaedics	582	6,695	7,277	92%
Plastic & Reconstructive Surgery	161	2,043	2,204	93%
Thoracic Surgery	87	178	265	67%
Prolonged Ventilation (+/- Tracheostomy)	47	100	147	68%
Transplantation	25	-	25	0%
Upper GIT Surgery	84	916	1,000	92%
Urology	338	4,009	4,347	92%
Vascular Surgery	104	955	1,059	90%
Obstetrics	292	8,794	9,086	97%
Mental Health	188	2,061	2,249	92%
Geriatric Evaluation and Management	15	1,039	1,054	99%
Other Non-Acute	38	458	496	92%
Rehabilitation (non-acute)	224	1,194	1,418	84%
Palliative (non-acute)	24	1,103	1,127	98%
Grand Total	**8,890**	**135,340**	**144,230**	**94%**

Source: Queensland Health Decision Support System

Table 68: SCHHS Total Self-sufficiency by SRG, children (0-14 years), 2020/21

SRG	Other HHS	SCHHS	Total Separations	Self-sufficiency
Cardiology	13	32	45	71%
Chemotherapy	188	30	218	14%
Dermatology	5	80	85	94%
Diagnostic GI Endoscopy	80	11	91	12%
Drug & Alcohol	5	157	162	97%
Endocrinology	21	186	207	90%
Gastroenterology	78	705	783	90%
Haematology	85	106	191	55%
Immunology & Infections	10	225	235	96%
Interventional Cardiology	8	-	8	0%
Medical Oncology	47	3	50	6%
Neurology	91	277	368	75%
Non Subspecialty Medicine	90	544	634	86%
Renal Medicine	2	22	24	92%
Respiratory Medicine	167	958	1,125	85%
Rheumatology	57	99	156	63%
Breast Surgery	-	2	2	100%
Cardiac Surgery	16	-	16	0%
Colorectal Surgery	5	9	14	64%
Maxillo-Facial Surgery	9	1	10	10%
Dentistry	44	165	209	79%
Ear, Nose & Throat	75	895	970	92%
Extensive Burns	36	20	56	36%
Gynaecology	4	28	32	88%
Haematological Surgery	8	1	9	11%
Head & Neck Surgery	12	10	22	45%
Neurosurgery	53	443	496	89%
Non Subspecialty Surgery	81	874	955	92%
Ophthalmology	26	68	94	72%
Orthopaedics	135	622	757	82%
Plastic & Reconstructive Surgery	32	34	66	52%
Thoracic Surgery	25	214	239	90%
Prolonged Ventilation (+/- Tracheostomy)	2	2	4	50%
Upper GIT Surgery	4	5	9	56%
Urology	35	141	176	80%
Vascular Surgery	9	-	9	0%
Obstetrics	-	8	8	100%
Qualified Neonate	136	2,332	2,468	94%
Mental Health	21	107	128	84%
Other Non-Acute	1	-	1	0%
Rehabilitation (non-acute)	65	-	65	0%
Palliative (non-acute)	3	-	3	0%
Grand Total	**1,784**	**9,416**	**11,200**	**84%**

Source: Queensland Health Decision Support System

6.3.4 Emergency department presentations

6.3.4.1 ED presentations

In 2020/21, there were a total of 144,568 presentations (rate of 324 per 1,000 population) to emergency departments (ED) across the SCHHS, excluding the Minor Injury and Illness Clinic (MIIC) located at Caloundra Health Service. This was significantly lower than the Queensland rate (464 per 1,000 population). Gympie – Coololla SA3 had the highest rate of ED presentations (551 per 1,000 population). This is likely the result of a shortage of primary health care and community services in this region. Nambour and Caloundra also had higher rates of ED presentations (Nambour 399 per 1,000 population) and (Caloundra 359 per 1,000 population). Admission rates were highest in Noosa (45 per cent), Noosa Hinterland (37 per cent) and Maroochy (36 per cent). See Table 69

The majority of the ED presentations were triage category 3 (45 per cent) and 4 (33 per cent) across the SCHHS in 2020/21, which is proportinately similar to the Queensland activity perecentages for these same categories. The Caloundra SA3 accounted for the largest amount of ED presentations (33,837 presentations) followed by Gympie – Cooloola (29,124 presentations). Both these SA3s also had a greater proportion of category 1,2 and 3 ED presentations. (See Table 71 and Figure 47: SCHHS, ED presentations triage categories by SA3, 2020/21Figure 47).

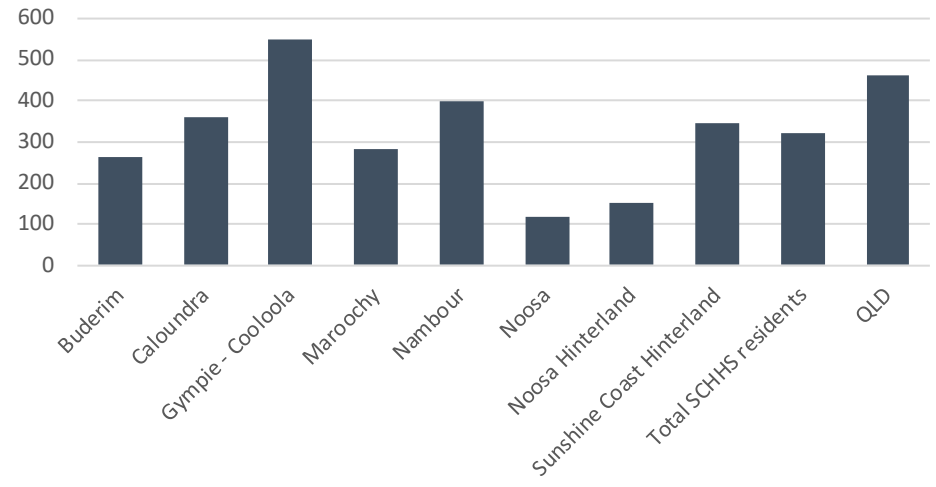
Of the total SCHHS ED presentations, 35 per cent of the population arrived by ambulance. The Noosa and Noosa Hinterland SA3s accessed EDs via ambulance at higher rates than the other SA3s (Noosa 60 per cent and Noosa Hinterland 52 per cent). This may be due to the greater travel proximity to SCHHS facilities and the ageing population in these areas. (See Table 72).

Table 69: SCHHS, ED presentations to SCHHS facilities by SA3, 2020/21

SA3	Presentations	%Total Presentations	Rate per 1,000 population	Population 2020
Buderim	16,029	11%	263	60,845
Caloundra	33,837	23%	359	94,253
Gympie - Cooloola	29,124	20%	551	52,840
Maroochy	17,534	12%	281	62,424
Nambour	19,317	13%	399	48,439
Noosa	5,611	4%	120	46,736
Noosa Hinterland	3,720	3%	153	24,287
Sunshine Coast Hinterland	19,396	13%	346	56,065
Total SCHHS residents	**144,568**	**100%**	**324**	**445,889**
QLD	2,399,405	-	464	5,176,186

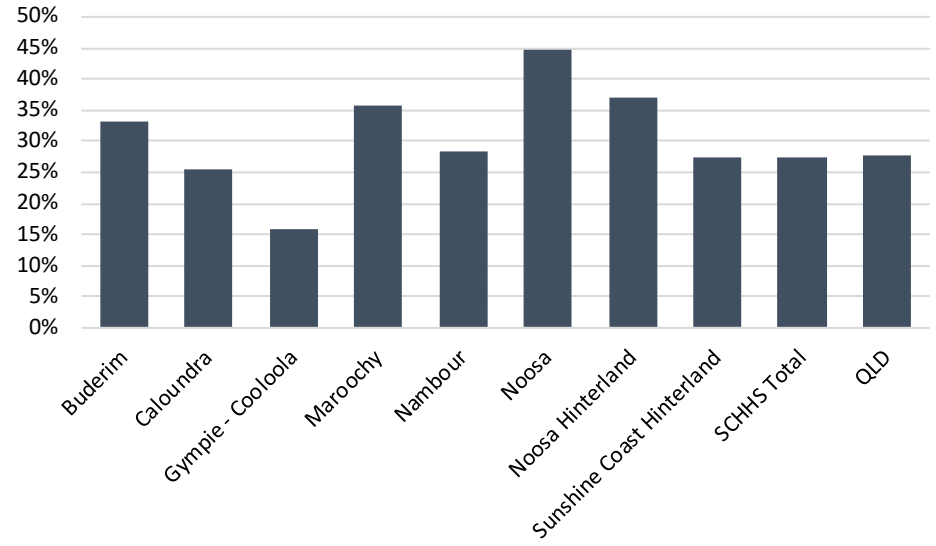
Source: Queensland Health Decision Support System

Figure 45: SCHHS, ED presentations rate per 1,000 population by SA3, 2020/21



Source: Queensland Health Decision Support System

Figure 46: SCHHS, ED presentations admission rates by SA3, 2020/21



Source: Queensland Health Decision Support System

Table 70:SCHHS, ED presentations to SCHHS facilities by SA3 and triage category, 2020/21

SA3	1	2	3	4	5	Grand Total
Buderim	91	3,079	7,440	4,925	494	16,029
Caloundra	155	6,222	15,923	10,287	1,250	33,837
Gympie - Cooloola	135	3,983	11,266	12,249	1,491	29,124
Maroochy	127	3,384	8,390	5,149	484	17,534
Nambour	150	3,308	8,762	6,682	415	19,317
Noosa	69	1,217	2,949	1,271	105	5,611
Noosa Hinterland	39	741	1,782	1,056	102	3,720
Sunshine Coast Hinterland	123	3,319	8,123	6,239	1,592	19,396
SCHHS Total	**889**	**25,253**	**64,635**	**47,858**	**5,933**	**144,568**
QLD	**16,669**	**338,695**	**884,196**	**802,706**	**357,139**	**2,399,405**

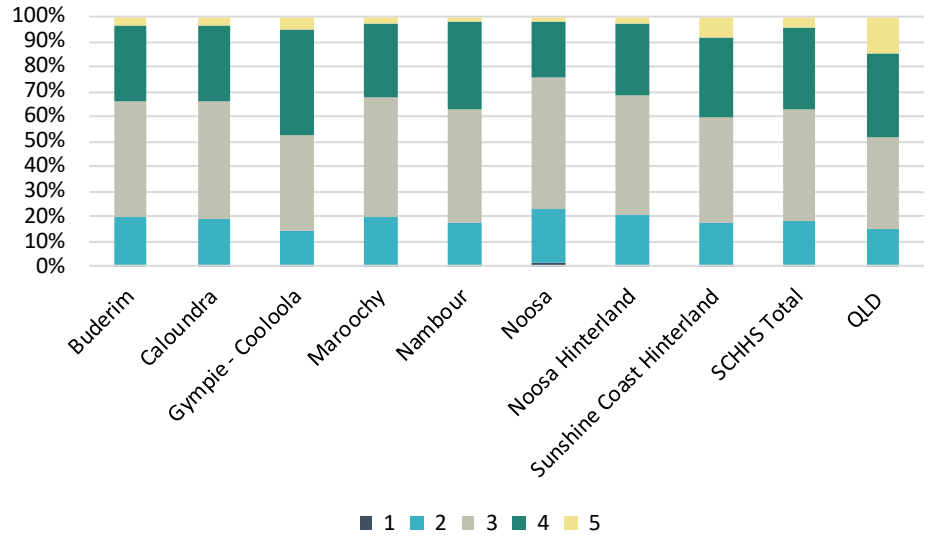
Source: Queensland Health Decision Support System

Table 71: SCHHS, ED presentations to SCHHS facilities by SA3 and triage category, 2020/21

SA3	1	2	3	4	5
Buderim	1%	19%	46%	31%	3%
Caloundra	0%	18%	47%	30%	4%
Gympie - Cooloola	0%	14%	39%	42%	5%
Maroochy	1%	19%	48%	29%	3%
Nambour	1%	17%	45%	35%	2%
Noosa	1%	22%	53%	23%	2%
Noosa Hinterland	1%	20%	48%	28%	3%
Sunshine Coast Hinterland	1%	17%	42%	32%	8%
SCHHS Total	**1%**	**17%**	**45%**	**33%**	**4%**
QLD	**1%**	**14%**	**37%**	**33%**	**15%**

Source: Queensland Health Decision Support System

Figure 47: SCHHS, ED presentations triage categories by SA3, 2020/21



Source: Queensland Health Decision Support System

Table 72: SCHHS, ED presentations to SCHHS facilities, arrivals by ambulance, 2020/21

SA3	Ambulance	Grand Total	% Arrived by ambulance
Buderim	5,993	16,029	37%
Caloundra	12,178	33,837	36%
Gympie - Cooloola	6,813	29,124	23%
Maroochy	7,904	17,534	45%
Nambour	6,298	19,317	33%
Noosa	3,377	5,611	60%
Noosa Hinterland	1,918	3,720	52%
Sunshine Coast Hinterland	5,929	19,396	31%
SCHHS Total	**50,410**	**144,568**	**35%**

Source: Queensland Health Decision Support System

6.3.4.2 Low urgency Emergency Department presentations

In 2020/21, 29 per cent of the SCHHS ED presentations were classified as low urgency (41,331 out of a total 144,568 presentations). Gympie SA3 had the largest percentage of low urgency presentations (41 per cent) followed by Nambour (29 per cent) , Buderim (25 per cent) and Caloundra (25 per cent). See Table 73 and Figure 48.

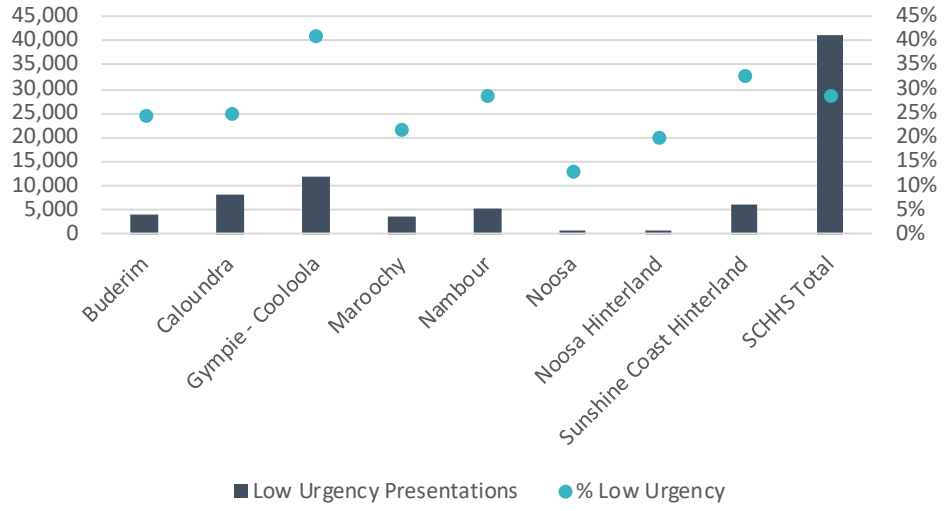
The top 10 diagnoses for people presenting to SCHHS EDs in 2020/21 are provided in Figure x. The most common reasons for a low urgency ED presentation included Injuries to the wrist and hand (5,088 presentations), Injuries to the ankle (3,630 presentations) and foot and Injuries to the head (2,658 presentations). See Figure 49.

Table 73: SCHHS, Low urgency ED presentations by SA3, 2020/21

SA3	Low Urgency Presentations	Total Presentations	%Low Urgency
Buderim	3,944	16,029	25%
Caloundra	8,398	33,837	25%
Gympie - Cooloola	11,932	29,124	41%
Maroochy	3,752	17,534	21%
Nambour	5,526	19,317	29%
Noosa	726	5,611	13%
Noosa Hinterland	735	3,720	20%
Sunshine Coast Hinterland	6,318	19,396	33%
SCHHS Total	**41,331**	**144,568**	**29%**

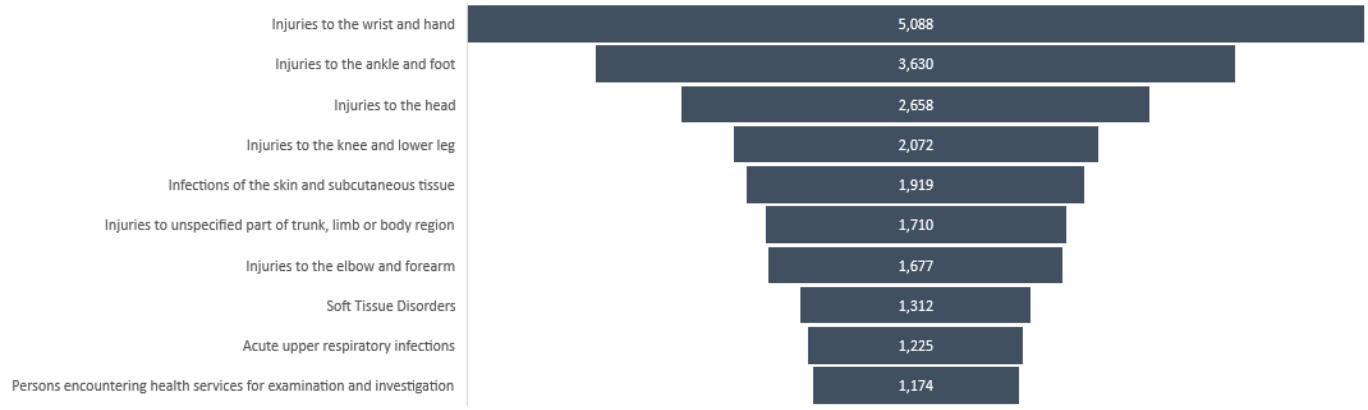
Source: Queensland Health Decision Support System

Figure 48: SCHHS, Low urgency ED presentations by SA3, 2020/21



Source: Queensland Health Decision Support System

Figure 49: SCHHS, low urgency ED presentations, top 10 diagnoses, 2020/21



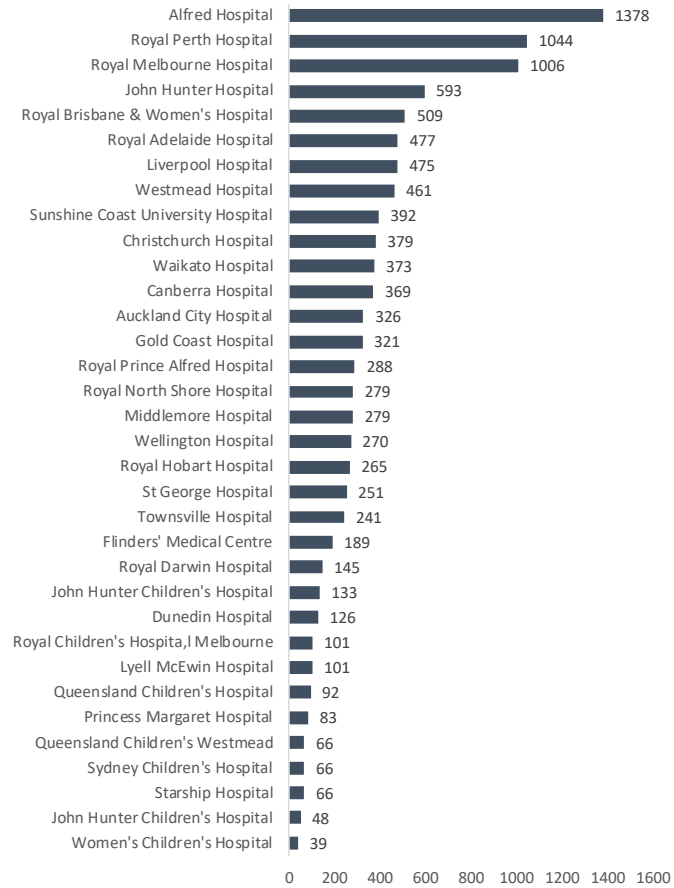
Source: Queensland Health Decision Support System

6.3.5 Trauma centre presentations

6.3.5.1 Trauma presentations

In 2020/21 the Sunshine Coast University Hospital ranked 9th out of 35 major trauma centres throughout Australia and New Zealand for the number of severely injured patients. See Figure 50. Bi-nationally, severe injury numbers increased compared to the previous year, with an overall increase of 12 per cent (Australia and New Zealand Trauma Registry Annual Report 1 July 2020 – 30 June 2021).

Figure 50: Number of severely injured 2020-21, by hospital



Source: Australia and New Zealand Trauma Registry Annual Report 1 July 2020 – 30 June 2021

6.3.6 Oral health

6.3.6.1 Occasions of service by residential catchment

Utilisation of public oral health services can be an indication of dental hygiene practices as well as access to private dental services and ability to pay. Not all of the population are eligible for public oral health services – eligibility criteria are based on whether a person holds a concession card (adults) or in the case of children, a child's age and / or whether they are the dependent of a concession card holder.

In 2019/20, 16 per cent of eligible children in the SCHHS catchment accessed public oral health services, with higher rates in the Gympie-Cooloola (20 per cent), Nambour (19 per cent) and Sunshine Coast Hinterland (18 per cent) SA3s (see Table 74). Only 12 per cent of eligible adults accessed the service, with a higher proportion of the eligible adult population in the Caloundra (14 per cent), Gympie-Cooloola (16 per cent) and Nambour (13 per cent) SA3s accessing public oral health services (see Table 75).

Table 74: SCHHS, oral health occasions of service by SA3, children under 18 years, 2019/20

SA3	Sum of Eligible Population	Sum of Number of Patients Accessing Care	% eligible population accessing care
Buderim	11,950	1,760	15%
Caloundra	16,680	2,312	14%
Gympie - Cooloola	10,029	2,019	20%
Maroochy	8,849	1,317	15%
Nambour	9,581	1,783	19%
Noosa	8,405	1,124	13%
Noosa Hinterland	4,704	648	14%
Sunshine Coast Hinterland	10,130	1,802	18%
Grand Total	**80,328**	**12,765**	**16%**

Source: Queensland Health Planning Portal, sourced from the Office of the Chief Dental Officer

Table 75: SCHHS, oral health occasions of service by SA3, adults 18+, 2019/20

SA3	Sum of Eligible Population	Sum of Number of Patients Accessing Care	% eligible population accessing care
Buderim	19,746	2,040	10%
Caloundra	35,939	4,908	14%
Gympie - Cooloola	24,544	3,980	16%
Maroochy	23,707	2,593	11%
Nambour	17,170	2,311	13%
Noosa	18,862	1,538	8%
Noosa Hinterland	9,254	858	9%
Sunshine Coast Hinterland	20,805	2,245	11%
Grand Total	**170,027**	**20,473**	**12%**

Source: Queensland Health Planning Portal, sourced from the Office of the Chief Dental Officer

6.3.6.2 Activity by clinic

The Caloundra Dental Clinic had the highest volume of activity in 2019/20, followed by Gympie and Kawana clinics. Mobile clinics delivered the majority of services provided under the child dental benefits scheme during this period (see Table 76).

Table 76: SCHHS, oral health occasions of service by clinic and child dental benefits scheme (CDBS) status, all ages, 2019/20

Clinic	Child Dental Benefits Scheme	Sum of Total WOOS
Caloundra Dental Clinic	388	80,028
Caloundra School Dental Clinic	999	4,134
Gympie Dental Clinic	133	53,196
Kawana Clinic	896	52,057
Maroochydore School Dental Clinic	1,338	3,505
Mobile clinic	18,663	50,842
Nambour Dental Clinic	73	38,504
Nambour School Dental Clinic	3,207	7,305
Noosa Dental Clinic	21	27,257
Sunshine Coast Uni Hospital Dental Clinic	33	12,418
Grand Total	**25,751**	**329,245**

Source: Queensland Health Planning Portal, sourced from the Office of the Chief Dental Officer

6.4 Residential aged care

6.4.1 Residential aged care places

Residential aged care places are a direct indication of the supply of aged care in a region. In June 2020, the SCHHS had a total of 4,925 residential aged care places, equating to 53 places per 1,000 population aged over 65 years, just below the Queensland rate of 55 per 1,000 population. The Noosa Hinterland, Southern Sunshine Coast and Sunshine Coast Hinterland planning regions had the lowest number of aged care places per 1,000 population (see Table 77).

Table 77: SCHHS, residential aged care places by planning region June 2020

Planning Region	Residential Care	Restorative Care	Total Places	Places per 1,000 population over 65
Buderim	505	0	505	45
Caloundra	1,247	0	1,247	61
Gympie	395	0	395	32
Maroochy	1,181	71	1,252	96
Nambour	574	71	645	74
Noosa	543	0	543	48
Noosa Hinterland	86	0	86	17
Southern Sunshine Coast	99	0	99	22
Sunshine Coast Hinterland	153	0	153	22
SCHHS Total	**4,783**	**142**	**4,925**	**53**
QLD	42,613	1,034	43,806	55

Source: Queensland Health Planning Portal, sourced from AIHW GEN Aged Care Data

6.4.2 GP attendances to residential aged care

GPs are an important aspect of health care for people residing in aged care facilities, providing holistic clinical care, medication prescription and monitoring, referral to specialist care and communication between health care providers (Australian institute of Health and Welfare, 2020).

Data regarding GP visits to aged care facilities is only available by Primary Health Network (PHN) catchment. In 2016/17, the rate of GP visits per residential aged care resident was 57.3 visits per person

in the Central Queensland, Wide Bay and Sunshine Coast Primary Health Network catchment, lower than the rate in Brisbane and the Gold Coast but higher than the rate in other Queensland PHN catchments (see Table 78).

Table 78: SCHHS, GP visits to residential aged care per aged care resident, 2016/17

PHN	Attendances per person (Crude)
Gold Coast	75.6
Brisbane South	67.8
Brisbane North	64.1
Central Queensland, Wide Bay, Sunshine Coast	**57.3**
Darling Downs and West Moreton	56.0
Western Queensland	56.0
Northern Queensland	54.3

Source: Queensland Health Planning Portal, derived from AIHW Medicare Subsidised GP attendances per person, 2016/17

6.5 Non-admitted activity

6.5.1 Number of outpatient service events

Of the total 445,889 SCHHS population, the SCHHS had a total of 259,502 specialist outpatients occasions of service (OOS) in 2020/21 (a rate of 582 OOS per 1,000 population). The Caloundra and Gympie-Cooloola SA3s accounted for the largest portion of OOS during this period, (Caloundra 57,491 OOS and Gympie-Cooloola 44,538 OOS). The top three specialties for specialist outpatinet services included Medical Other (35,598 OOS), Orthopaedics (28,862 OOS) and Oncology (25,407 OOS). Resdients from the Gympie-Cooloola SA3 accessed specialist outpatient services at higher rates than the rest of the region (843 OOS per 1,000 popultion). See Table 79 and Table 80.

Table 79: SCHHS residents, Specialist Outpatients OOS by specialty and SA3, 2020/21

Specialty	Buderim	Caloundra	Gympie - Cooloola	Maroochy	Nambour	Noosa	Noosa Hinterland	Sunshine Coast Hinterland	Grand Total
Cardiac Surgery	91	140	136	115	111	66	38	114	811
Cardiology	1,024	2,012	1,499	1,430	1,211	738	532	1,422	9,868
Dermatology	847	1,660	592	1,257	860	491	271	892	6,870
Diabetes	671	1,427	1,108	638	643	275	288	748	5,798
Ear Nose and Throat	1,094	1,980	1,101	1,199	1,272	675	417	1,351	9,089
Endocrinology	816	1,740	971	926	986	520	290	1,087	7,336
Gastroenterology	749	1,687	1,183	1,090	940	506	324	1,120	7,599
General Medicine	781	1,673	1,394	1,012	806	486	270	807	7,229
General Surgery	1,907	3,904	3,281	2,376	2,093	971	669	2,601	17,802
Geriatrics	204	427	337	286	156	88	64	167	1,729
Gynaecology	1,367	2,322	1,921	1,395	1,342	479	351	1,610	10,787
Medical Other	4,009	8,493	5,791	4,530	4,301	2,186	1,504	4,784	35,598
Nephrology	979	1,852	1,895	1,253	1,147	419	263	1,021	8,829
Neurology	855	1,540	918	839	774	449	292	914	6,581
Neurosurgery	196	384	266	185	205	161	108	237	1,742
Obstetrics	916	1,911	2,433	856	1,220	523	313	1,321	9,493
Oncology	2,630	5,560	4,082	3,468	2,534	2,231	1,365	3,537	25,407
Ophthalmology	1,128	2,409	1,374	1,227	1,242	780	586	1,330	10,076
Orthopaedic	3,404	6,194	4,522	3,537	3,562	2,222	1,432	3,989	28,862
Paediatric Medicine	478	892	1,275	357	434	162	101	443	4,142
Paediatric Surgery	121	148	97	68	117	64	42	104	761
Pain Management	36	77	59	47	37	22	14	54	346
Palliative Care	531	1,044	641	898	501	515	296	645	5,071
Plastic and Reconstructive Surgery	428	1,109	551	589	425	221	147	586	4,056
Respiratory	1,078	2,134	1,644	1,253	1,102	595	403	1,271	9,480
Rheumatology	206	513	401	238	311	103	90	327	2,189
Surgical Other	1,118	2,039	3,056	1,257	1,065	634	471	1,212	10,852
Urology	779	1,554	1,428	1,038	884	627	432	1,131	7,873
Vascular Surgery	310	666	582	411	388	249	148	472	3,226
Grand Total	**28,753**	**57,491**	**44,538**	**33,775**	**30,669**	**17,458**	**11,521**	**35,297**	**259,502**
Population	60845	94253	52840	62424	48439	46736	24287	56065	445889

Source: Queensland Health Decision Support System

Table 80: SCHHS residents, Specialist outpatients rate of OOS per 1,000 population, by specialty and SA3, 2020/21

Specialty	Buderim	Caloundra	Gympie - Cooloola	Maroochy	Nambour	Noosa	Noosa Hinterland	Sunshine Coast Hinterland	Grand Total
Cardiac Surgery	1	1	3	2	2	1	2	2	2
Cardiology	17	21	28	23	25	16	22	25	22
Dermatology	14	18	11	20	18	11	11	16	15
Diabetes	11	15	21	10	13	6	12	13	13
Ear Nose and Throat	18	21	21	19	26	14	17	24	20
Endocrinology	13	18	18	15	20	11	12	19	16
Gastroenterology	12	18	22	17	19	11	13	20	17
General Medicine	13	18	26	16	17	10	11	14	16
General Surgery	31	41	62	38	43	21	28	46	40
Geriatrics	3	5	6	5	3	2	3	3	4
Gynaecology	22	25	36	22	28	10	14	29	24
Medical Other	66	90	110	73	89	47	62	85	80
Nephrology	16	20	36	20	24	9	11	18	20
Neurology	14	16	17	13	16	10	12	16	15
Neurosurgery	3	4	5	3	4	3	4	4	4
Obstetrics	15	20	46	14	25	11	13	24	21
Oncology	43	59	77	56	52	48	56	63	57
Ophthalmology	19	26	26	20	26	17	24	24	23
Orthopaedic	56	66	86	57	74	48	59	71	65
Paediatric Medicine	8	9	24	6	9	3	4	8	9
Paediatric Surgery	2	2	2	1	2	1	2	2	2
Pain Management	1	1	1	1	1	0	1	1	1
Palliative Care	9	11	12	14	10	11	12	12	11
Plastic and Reconstructive Surgery	7	12	10	9	9	5	6	10	9
Respiratory	18	23	31	20	23	13	17	23	21
Rheumatology	3	5	8	4	6	2	4	6	5
Surgical Other	18	22	58	20	22	14	19	22	24
Urology	13	16	27	17	18	13	18	20	18
Vascular Surgery	5	7	11	7	8	5	6	8	7
Grand Total	**473**	**610**	**843**	**541**	**633**	**374**	**474**	**630**	**582**

Source: Queensland Health Decision Support System

6.5.2 Number of Tier 2 Clinic type service events

Tier 2 Non-specialist outpatient activity accounted for a total of 251,691 OOS in 2020/21 (a rate of 564 OOS per 1,000 population). OOS ranged from the lowest in the Noosa Hinterland SA3 (10.897 OOS) to the highest in the Caloundra SA3 (57,904 OOS). The top Tier 2 Clinics across the SCHHS included, 40.28 Midwifery and Maternity (34,693 OOS), 40.09 Physiotherapy (27,354 OOS) and 70.07 Breastscreen (24,987 OOS). Midwifery and Maternity clinics were accessed at higher rates from Nambour (100.9 OOS per 1,000 population) and Gympie- Cooloola (94.5 OOS per 1,000 population). The same SA3s also had the highest rates for Physiotherapy indicating that there is a need for access to these clinics in those areas. (See Table 81 and Table 82).

Table 81: SCHHS residents, Non-specialist outpatient OOS by Tier 2 Clinic and SA3, 2020/21

Tier 2 Clinic	Buderim	Caloundra	Gympie - Cooloola	Maroochy	Nambour	Noosa	Noosa Hinterland	Sunshine Coast Hinterland	Grand Total
40.28 Midwifery and Maternity	3,996	7,902	4,991	4,534	4,886	2,269	1,150	4,965	34,693
40.09 Physiotherapy	3,060	6,432	3,951	3,691	3,518	1,692	1,188	3,792	27,324
70.07 Breastsceen	3,035	5,658	2,895	3,470	2,434	2,700	1,478	3,317	24,987
40.07 Pre-Admission and Pre-Anaesthesia	1,844	3,801	3,629	2,176	2,213	1,233	783	2,458	18,137
10.12 Radiotherapy - Treatment	1,489	3,368	2,283	2,140	1,273	1,610	527	1,732	14,422
30.08 Clinical Measurement	1,602	3,266	1,923	1,975	1,706	886	655	2,163	14,176
40.16 Orthoptics	1,204	2,819	1,528	1,418	1,372	879	609	1,491	11,320
40.58 Hospital Avoidance Programs	983	2,103	2,761	1,783	1,203	595	354	1,162	10,944
40.06 Occupational Therapy	1,197	2,619	1,205	1,434	1,178	599	447	1,524	10,203
72.15 Community Health Services - Child & Youth Health	1,226	2,449	96	1,515	1,604	1,149	507	1,281	9,827
40.23 Nutrition/Dietetics	879	2,023	1,040	1,065	1,027	628	322	1,087	8,071
40.03 Aids and Appliances	862	1,555	706	858	840	557	318	967	6,663
40.21 Cardiac Rehabilitation	670	1,239	668	816	778	499	227	901	5,798
40.11 Social Work	557	1,297	675	722	644	581	303	730	5,509
40.25 Podiatry	425	997	1,132	682	744	351	255	611	5,197
40.29 Psychology	541	1,227	476	695	667	308	182	684	4,780
40.04 Clinical Pharmacy	538	1,107	648	679	447	291	183	668	4,561
10.18 Enteral Nutrition - Home Delivered	461	909	566	540	581	363	196	480	4,096
40.18 Speech Pathology	431	1,123	516	496	576	293	146	471	4,052
40.17 Audiology	450	845	531	436	542	276	170	510	3,760
40.42 Circulatory	293	538	1,217	345	345	208	156	364	3,466
40.33 General Counselling	330	674	503	442	524	267	178	400	3,318
40.59 Post-acute Care	318	1,060	111	572	313	77	59	445	2,955
10.13 Minor Medical Procedures	320	578	208	342	269	148	99	438	2,402
40.14 Neuropsychology	250	474	289	271	253	111	86	237	1,971
40.08 Primary Health Care	137	326	591	165	347	59	39	196	1,860
10.20 Radiation Oncology - Simulation and Planning	87	227	141	130	86	88	38	118	915
40.13 Wound Management	27	60	637	33	40	19	17	73	906
10.03 Minor Surgical	89	255	89	124	100	55	39	114	865
40.22 Stomal Therapy	49	180	58	111	90	103	50	93	734
40.60 Pulmonary Rehabilitation	82	99	26	110	77	31	27	95	547
40.15 Optometry	56	87	80	60	68	57	22	86	516
40.32 Continence	74	129	63	53	60	39	12	66	496
10.06 Endoscopy - Gastrointestinal	41	85	90	65	49	57	17	87	491
72.14 Community Health Services - Other	71	106	29	122	36	31	8	21	424
40.24 Orthotics	35	51	28	29	50	16	12	23	244
10.09 Endoscopy ? Respiratory/ear, nose and throat (ENT)	24	58	25	34	22	17	9	36	225
40.10 Sexual Health	21	44	36	21	17	15	8	31	193
20.05 General Medicine	23	32	25	19	19	16	8	22	164
10.19 Ventilation - Home Delivered	24	27	24	-	36	12	-	30	153
10.17 Total Parenteral Nutrition - Home Delivered	-	22	-	-	11	11	-	-	44
72.21 Maternal Health	2	6	2	1	6	-	1	26	44
10.05 Angioplasty/Angiography	5	7	7	6	2	1	2	9	39
10.02 Interventional Imaging	3	7	5	6	2	2	4	4	33
10.11 Chemotherapy - Treatment	2	11	1	1	-	-	-	13	28
10.07 Endoscopy - Urological/Gynaecological	-	8	4	2	1	-	1	8	24
10.01 Hyperbaric Medicine	-	-	23	-	-	-	-	-	23
72.23 Community Health Services ? Sexual Health	-	5	5	5	-	-	-	4	19
40.05 Hydrotherapy	-	6	1	-	-	9	-	2	18
72.17 Community Health Services - Communicable Diseases	4	-	3	5	-	-	-	1	13
72.13 Community Health Services - Rehabilitation	-	-	11	-	-	-	-	-	11
72.18 Community Health Services - Palliative Care	-	-	11	-	-	-	-	-	11
40.30 Alcohol and Other Drugs	1	-	-	-	2	1	-	-	4
40.57 Cognition and Memory	-	-	-	-	-	-	3	-	3
72.07 Women's and Men's Health	-	1	-	-	1	-	-	1	3
72.09 Community Health Services - Care Co-ordination	-	-	-	-	3	-	-	-	3
72.16 Community Health Services - Chronic Disease	-	1	1	-	-	-	1	-	3
30.05 Pathology (Microbiology, Haematology, Biochemistry)	-	-	1	-	-	-	1	-	2
40.02 Aged Care Assessment	-	1	-	-	-	-	-	-	1
Grand Total	**27,818**	**57,904**	**36,565**	**34,199**	**31,062**	**19,209**	**10,897**	**34,037**	**251,691**
Population	60845	94253	52840	62424	48439	46736	24287	56065	445889

Source: Queensland Health Decision Support System

Table 82: SCHHS residents, Non-specialist outpatients rate of OOS per 1,000 population, by specialty and SA3, 2020/21

Tier 2 Clinic	Buderim	Caloundra	Gympie - Cooloola	Maroochy	Nambour	Noosa	Noosa Hinterland	Sunshine Coast Hinterland	Grand Total
40.28 Midwifery and Maternity	65.7	83.8	94.5	72.6	100.9	48.5	47.4	88.6	77.8
40.09 Physiotherapy	50.3	68.2	74.8	59.1	72.6	36.2	48.9	67.6	61.3
70.07 Breastsceen	49.9	60.0	54.8	55.6	50.2	57.8	60.9	59.2	56.0
40.07 Pre-Admission and Pre-Anaesthesia	30.3	40.3	68.7	34.9	45.7	26.4	32.2	43.8	40.7
10.12 Radiotherapy - Treatment	24.5	35.7	43.2	34.3	26.3	34.4	21.7	30.9	32.3
30.08 Clinical Measurement	26.3	34.7	36.4	31.6	35.2	19.0	27.0	38.6	31.8
40.16 Orthoptics	19.8	29.9	28.9	22.7	28.3	18.8	25.1	26.6	25.4
40.58 Hospital Avoidance Programs	16.2	22.3	52.3	28.6	24.8	12.7	14.6	20.7	24.5
40.06 Occupational Therapy	19.7	27.8	22.8	23.0	24.3	12.8	18.4	27.2	22.9
72.15 Community Health Services - Child & Youth Health	20.1	26.0	1.8	24.3	33.1	24.6	20.9	22.8	22.0
40.23 Nutrition/Dietetics	14.4	21.5	19.7	17.1	21.2	13.4	13.3	19.4	18.1
40.03 Aids and Appliances	14.2	16.5	13.4	13.7	17.3	11.9	13.1	17.2	14.9
40.21 Cardiac Rehabilitation	11.0	13.1	12.6	13.1	16.1	10.7	9.3	16.1	13.0
40.11 Social Work	9.2	13.8	12.8	11.6	13.3	12.4	12.5	13.0	12.4
40.25 Podiatry	7.0	10.6	21.4	10.9	15.4	7.5	10.5	10.9	11.7
40.29 Psychology	8.9	13.0	9.0	11.1	13.8	6.6	7.5	12.2	10.7
40.04 Clinical Pharmacy	8.8	11.7	12.3	10.9	9.2	6.2	7.5	11.9	10.2
10.18 Enteral Nutrition - Home Delivered	7.6	9.6	10.7	8.7	12.0	7.8	8.1	8.6	9.2
40.18 Speech Pathology	7.1	11.9	9.8	7.9	11.9	6.3	6.0	8.4	9.1
40.17 Audiology	7.4	9.0	10.0	7.0	11.2	5.9	7.0	9.1	8.4
40.42 Circulatory	4.8	5.7	23.0	5.5	7.1	4.5	6.4	6.5	7.8
40.33 General Counselling	5.4	7.2	9.5	7.1	10.8	5.7	7.3	7.1	7.4
40.59 Post-acute Care	5.2	11.2	2.1	9.2	6.5	1.6	2.4	7.9	6.6
10.13 Minor Medical Procedures	5.3	6.1	3.9	5.5	5.6	3.2	4.1	7.8	5.4
40.14 Neuropsychology	4.1	5.0	5.5	4.3	5.2	2.4	3.5	4.2	4.4
40.08 Primary Health Care	2.3	3.5	11.2	2.6	7.2	1.3	1.6	3.5	4.2
10.20 Radiation Oncology - Simulation and Planning	1.4	2.4	2.7	2.1	1.8	1.9	1.6	2.1	2.1
40.13 Wound Management	0.4	0.6	12.1	0.5	0.8	0.4	0.7	1.3	2.0
10.03 Minor Surgical	1.5	2.7	1.7	2.0	2.1	1.2	1.6	2.0	1.9
40.22 Stomal Therapy	0.8	1.9	1.1	1.8	1.9	2.2	2.1	1.7	1.6
40.60 Pulmonary Rehabilitation	1.3	1.1	0.5	1.8	1.6	0.7	1.1	1.7	1.2
40.15 Optometry	0.9	0.9	1.5	1.0	1.4	1.2	0.9	1.5	1.2
40.32 Continence	1.2	1.4	1.2	0.8	1.2	0.8	0.5	1.2	1.1
10.06 Endoscopy - Gastrointestinal	0.7	0.9	1.7	1.0	1.0	1.2	0.7	1.6	1.1
72.14 Community Health Services - Other	1.2	1.1	0.5	2.0	0.7	0.7	0.3	0.4	1.0
40.24 Orthotics	0.6	0.5	0.5	0.5	1.0	0.3	0.5	0.4	0.5
10.09 Endoscopy ? Respiratory/ear, nose and throat (ENT)	0.4	0.6	0.5	0.5	0.5	0.4	0.4	0.6	0.5
40.10 Sexual Health	0.3	0.5	0.7	0.3	0.4	0.3	0.3	0.6	0.4
20.05 General Medicine	0.4	0.3	0.5	0.3	0.4	0.3	0.3	0.4	0.4
10.19 Ventilation - Home Delivered	0.4	0.3	0.5	0.0	0.7	0.3	0.0	0.5	0.3
10.17 Total Parenteral Nutrition - Home Delivered	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.1
72.21 Maternal Health	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.5	0.1
10.05 Angioplasty/Angiography	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1
10.02 Interventional Imaging	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1
10.11 Chemotherapy - Treatment	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1
10.07 Endoscopy - Urological/Gynaecological	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
10.01 Hyperbaric Medicine	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.1
72.23 Community Health Services ? Sexual Health	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0
40.05 Hydrotherapy	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0
72.17 Community Health Services - Communicable Diseases	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
72.13 Community Health Services - Rehabilitation	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
72.18 Community Health Services - Palliative Care	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
40.30 Alcohol and Other Drugs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.57 Cognition and Memory	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
72.07 Women's and Men's Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.09 Community Health Services - Care Co-ordination	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
72.16 Community Health Services - Chronic Disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.05 Pathology (Microbiology, Haematology, Biochemistry)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.02 Aged Care Assessment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grand Total	**457**	**614**	**692**	**548**	**641**	**411**	**449**	**607**	**564**

Source: Queensland Health Decision Support System

6.6 Health care planning

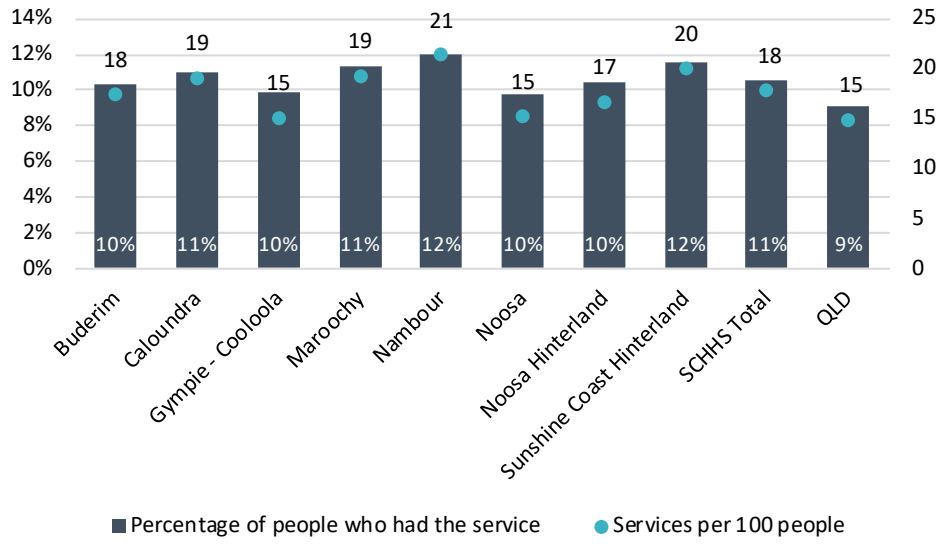
6.6.1 GP Mental health services

GPs are often involved in the diagnosis and treatment of mental health services, including the development of mental health treatment plans and referral to specialised mental health service providers. Any mental health related interaction with a GP, including the development of a mental health treatment plan, is billed to a specific mental health care consultation code under the Medical Benefits Scheme, and thus can be tracked separately to other GP consultations.

In 2018/19, 11 per cent of SCHHS residents visited a GP for mental health related diagnosis, treatment or planning, with 18 GP mental health services delivered per 100 population. These rates are slightly higher

when compared to Queensland, in which 9 per cent of residents received a GP mental health services, with a rate of 15 services per 100 people. The proportion of residents utilising GP mental health services and rate per 100 population was highest in the Nambour and Sunshine Coast Hinterland regions, while Gympie-Cooloola, which had the highest rate of reported mental health and behavioural disorders in the region, had one of the lowest rates of GP mental health service utilisation (see Figure 51). This may be a result of poorer access to GP services within the Gympie-Cooloola SA3.

Figure 51: SCHHS, GP Mental Health Services by SA3, 2018/19



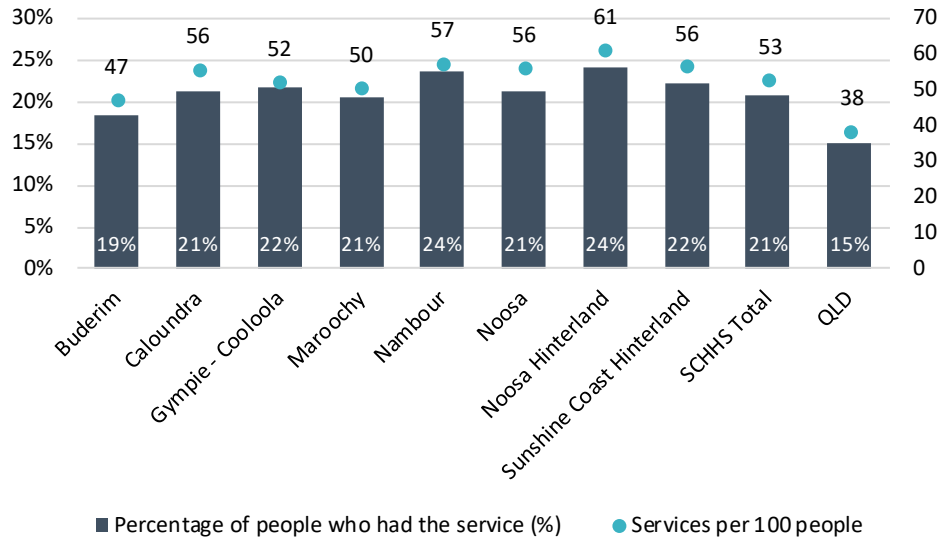
Source: AIHW Medicare Subsidised GP attendances per person, 2013-14 – 2018-19

6.6.2 Chronic disease management plans

Chronic disease management plans are developed by GPs for the coordination and management of patients with a chronic disease. These plans can include patients who require a multidisciplinary approach to their chronic disease management, and can provide access to Medicare rebates for certain allied health services that are required to manage their disease (Australian Government Department of Health, 2014).

In 2018/19, residents in the SCHHS region had higher rates of chronic disease management planning compared to the Queensland population. 21 per cent of SCHHS residents had a chronic disease management plan developed by their GP (compared to 15 per cent of Queenslanders), and the rate of chronic disease management plans per population was 53 per 100 population (compared to 38 for Queensland) (see Figure 52).. This may be indicative of several factors, including a higher rate of chronic disease, higher rates of service utilisation for those with chronic disease, or higher levels of access to services.

Figure 52: SCHHS GP Chronic Disease Management Plans by SA3, 2018/19



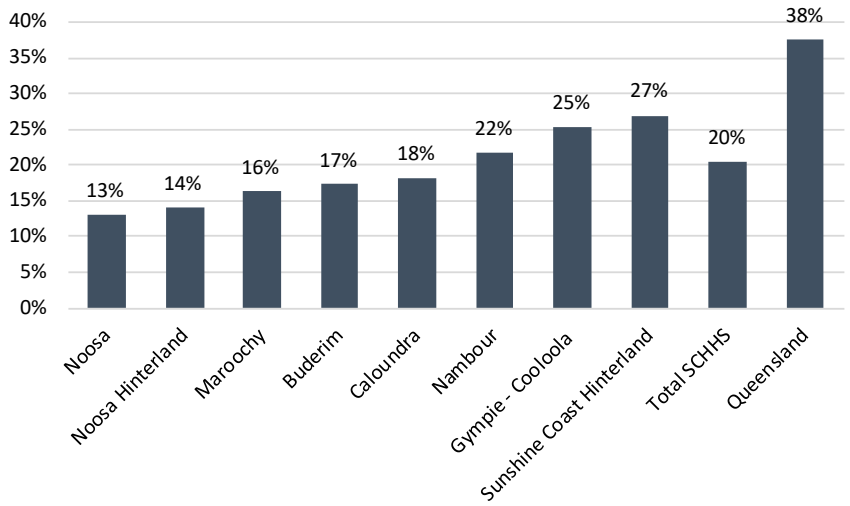
Source: AIHW Medicare Subsidised GP attendances per person, 2013-14 – 2018-19

6.6.3 Aboriginal and Torres Strait Islander health checks

Aboriginal and Torres Strait Islanders are eligible for a free annual health check up which includes biometric testing of blood pressure, blood sugar levels, height and weight, routine blood and urine tests and discussion of health priorities and goals (Australian Government Department of Health, 2021).

In 2017/18, 20 per cent of the Aboriginal and Torres Strait Islander population residing in the SCHHS catchment had an Aboriginal and Torres Strait Islander health check, compared to 38 per cent of the Queensland Aboriginal and Torres Strait Islander population. The Gympie-Cooloola and Sunshine Coast Hinterland SA3s had the highest proportion of their eligible population undertaking an Aboriginal and Torres Strait Islander health check at 27 per cent and 25 per cent respectively, while Noosa and the Noosa Hinterland had the lowest proportion at 13 per cent and 14 per cent of the eligible population respectively (see Figure 53).

Figure 53: SCHHS, percentage of Indigenous population who had an Aboriginal and Torres Strait Islander health check by SA3, 2017/18



Source: AIHW Medicare Subsidised GP attendances per person, 2013-14 – 2018-19

Appendices

Appendix A

National data sources

Australian Bureau of Statistics

ABS provide a wide range of data and other statistics on geographical regions. Data are available for Statistical Area Level 2 (ASGS) and higher, and Local Government Areas. ABS data includes Census-derived data and the Socio Economic Indices for Areas (SEIFA), and profiles from the National Health Survey. Available from the ABS website: https://www.abs.gov.au/

Commonwealth Government, Department of Health

The Commonwealth Government also produces data as collected from the the Medicare Benefits Schedule (MBS), Pharmaceutical Benefits Scheme (PBS), Australian Childhood Immunisation Register, health workforce data, aged care data and from a range of datasets with reports published by the Australian Institute of Health and Welfare (AIHW) and National Health Performance Authority (NHPA).

Population Health Information Development Unit (PHIDU) Social Health Atlases

PHIDU provides information and data on a broad range of health and other determinants across the lifespan, with an emphasis on publication of small areas statistics for monitoring inequality in health and wellbeing; and for supporting opportunities to improve population health outcomes. Data is available through its Social Health Atlases, as raw data, tables, maps and graphs, at: https://phidu.torrens.edu.au/.

State data sources

Queensland Health-*Planning Portal*

The Queensland Health Planning Portal[1] was launched in August 2020 to provide a centralised repository for internal and external data and comprehensive analysis of health need. The data portal is maintained by System Planning Branch (SPB) with access for HHSs, Department of Health units and others involved with health services planning. The portal functions through dashboards and reports of current and historical health needs and service utilisation data. Data is presented through visualisations that are interactive, accessible and available for users to download and analyse further.

Data available in the portal has been contributed from multiple sources and government agencies, covering both health and other areas related to social determinants of health including education and housing.

Queensland Government Statistician's Office (QGSO)

QGSO provide statistical services to support stakeholders' evidence base for policy evaluation and performance, and data, information and analysis for population dynamics and forecasts. Regional Profiles are informative statistical reports on a range of Queensland community types (e.g. local government areas), compiled with the most recent demographic, social and economic data available.

[1] Queensland Health, System Planning Branch. *Planning Portal*. State of Queensland. Brisbane, accessed 15 April 2020.

Community regions can be selected individually, or easily combined to create customised regions or catchments for profiling. The Queensland regional database (formerly known as QRSIS) provides access to a wide range of time–series regional data. Access at: https://www.qgso.qld.gov.au/.

Queensland Health, Chief Health Officer

The Chief Health Officer publishes two biannual reports to inform Queenslanders about the health status of the population. These have both been updated and are available for 2020. Data is available in multiple formats, including data tables, visualisations and text:

- The Health of Queenslanders. This report has 3 objectives:
    - provide a public assessment of the health status of the population;
    - serve as a reference document for health practitioners in Queensland;
    - inform strategic policy and planning within Queensland Health.
- Hospital and Health Services profiles. This data is presented to provide evidence for setting priorities to achieve better health of HHS populations.

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