
Health Inequities Report

Illawarra Shoalhaven Region

February 2026



Health Inequities Report

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More information

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Acknowledgement of Country

Illawarra Shoalhaven Local Health District acknowledges that our health district is located on the unceded lands of the Aboriginal people who are the Traditional Custodians of the NSW South Coast. We pay respect to the wisdom of Elders both past and present, and Aboriginal communities of today. ISLHD is committed to improving Aboriginal Health outcomes by eliminating racism and providing culturally safe health services for our Aboriginal communities.

ISLHD acknowledges the sacred interconnectedness, and intimate relationships that Aboriginal people have with this landscape, its waterways, winds and all living things, and that this connection to Country, is an innate part of identity, health, wellbeing and healing for all Aboriginal peoples.

ISLHD acknowledges its role in the historical effects of colonisation, and in subsequent colonial policies that have, and continue to have, effects on the health and wellbeing of Aboriginal people of this District, as it commits to a journey of learning, truth telling and healing.



Foreword

Health inequities are the unfair and avoidable differences in health status seen within and between communities.¹

Inequities in people's opportunities for health are reflected in disparities across the population in terms of measures related to health determinants, the health system and health outcomes. The relationship between these is portrayed in Figure 1, based on the Australian Health System's performance framework.²

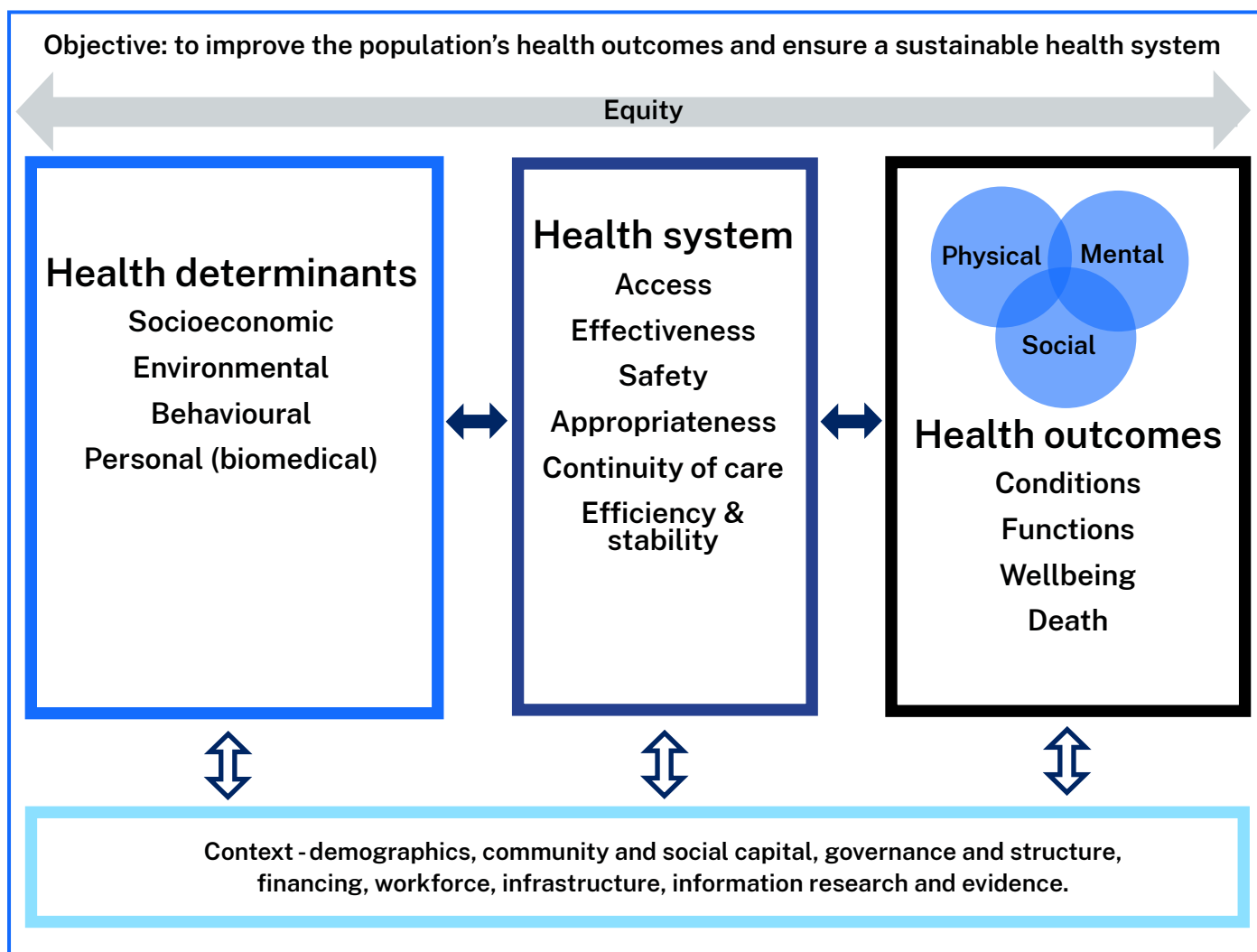
The focus of this Illawarra Shoalhaven Local Health District (ISLHD) Health Inequities Report is on highlighting variation across the region in terms of health determinants, particularly socioeconomic ([Section 4](#)), environmental ([Section 5](#)), and behavioural ([Section 6](#)). The focus is not on the more downstream health status and service use measures, although a few selected indicators have been included to provide a cursory sketch of equity across the Illawarra and Shoalhaven related to the health system ([Section 7](#)) and ultimately, health outcomes ([Section 3](#)), across the lifespan and spectrum of physical, mental and social wellbeing.

The focus of this report is also on geographical areas of need. We acknowledge that this is only a partial reflection of health and social disparities and subsequent need. Priority populations are spread throughout the District irrespective of geographic boundaries. It is therefore, suggested that this report is read alongside its companion document, the ISLHD Priority Populations Profile, which focuses on variation across population groups. We also acknowledge that unfortunately strength-based indicator data, e.g. related to social cohesion, are not as readily available as "deficit"-based data, e.g. developmental vulnerability.

Much of this report is based on the work carried out by the Torrens University Public Health information Development Unit (PHIDU), with data from various sources accessed via PHIDU's Social Health Atlases (Maps and Data Workbooks).³ Other primary and secondary sources of information have been accessed including:

- [Australian Urban Observatory \(AUO\)](#)
- [Australian Bureau of Statistics \(ABS\)](#)
- [Australian Early Development Census \(AEDC\)](#)
- [Australian Government of Health and Aged Care](#)
- [Australian Institute of Health and Welfare \(AIHW\)](#)
- [Jesuit Social Services](#)
- [National Diabetes Services Scheme \(NDSS\)](#)
- [NSW Bureau of Crime Statistics and Research \(BOCSAR\)](#)
- [NSW Health - HealthStats NSW](#)
- [NSW Liquor and Gaming](#)
- [NSW Registry of Births, Deaths, and Marriages \(RBDM\)](#)

Figure 1: Australian Health System Performance Framework



Source: Adapted from National Health Information and Performance Principal Committee, 2017 Australian Health Performance Framework.

This report builds on the work previously reported in the ISLHD Community Needs Assessment 2021.⁴ This updated version incorporates more recent data, with an increased focus on geographic variation. Throughout this report, information is often presented at a small area level, such as suburbs or postcodes or more commonly Population Health Areas (PHA). PHAs are geographical regions of similar population size, developed by PHIDU based on the ABS Statistical Area Level 2 (SA2). Presenting data at the level of the 23 PHAs within ISLHD provides a more granular overview of the region when compared to the more commonly used Local Government Areas (LGA). Much of the data displayed is represented by quintiles, with the areas falling into the bottom quintile identified as areas of high priority. (Quintiles are equal groups into which a population can be divided according to the distribution of values of a particular measure, e.g. unemployment rate).

Statement of commitment

We acknowledge those who have come before, and continue to be, the caretakers and custodians of this land.

Aboriginal people are the First Nations people of New South Wales and have lived in the Illawarra and Shoalhaven region for over 65,000 years; cultures, lores, ceremonies and connection to the land and waterways are strong and enduring.

Respect is extended to elders past and present; especially those affected so unjustly by local health policies. We apologise unreservedly for the profound effects of those stolen from their families, we are deeply sorrowed by the deep hurt, the physical, emotional, and spiritual damage, and the ongoing intergenerational trauma of Aboriginal peoples today.

We recognise that history has resulted in a lack of trust by many Aboriginal peoples and we highly value and will continue to work in true partnership with local Aboriginal community-controlled services. We remain committed to work in genuine partnerships with Aboriginal peoples, communities, services, and survivors of the Stolen Generations.

The gaps in Indigenous health are unacceptable. Quality data will be sourced and used for open and honest accountability, and to inform excellent and safe clinical practice.

Racism will not be tolerated in the Illawarra Shoalhaven Local Health District and will be challenged. We will find ways to overcome institutional racism created by history.

We are committed to providing a culturally safe and welcoming environment for patients and will support staff to feel culturally secure and safe within our services.

We commit to furthering professional development of all staff in acquiring a better understanding of culture and how to best support the cultural wellbeing of Aboriginal colleagues and patients.

We acknowledge the vital importance of Aboriginal language and its relationship to spiritual wellbeing and will seek to work with local peoples to incorporate language and naming throughout our services and the system.

The Illawarra Shoalhaven Local Health District acknowledges the principles of the Uluru Statement of the Heart. We share aspirations for a fair and truthful relationship and a better future for our children based on justice and determination through truth telling. We recognise that when Aboriginal people have power over their destiny, their children will flourish and will walk in two worlds and their culture will be a gift to this country.

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1. Our population



The Illawarra Shoalhaven Local Health District (ISLHD) is home to a rich and enduring Aboriginal history that stretches back tens of thousands of years. The District has been, and continues to be, home to a broad diversity of Aboriginal people and communities. There are a range of languages, customs, and stories, which are deeply linked to the landforms and waterways of the region.

The region's natural setting is the backdrop to a mix of coastal, urban and rural lifestyles, concentrating residential areas into a narrow strip along the coast extending from Helensburgh in the north to North Durras in the south.

The region has over 420,000 residents, living in the Local Government Areas (LGAs) of Wollongong, Kiama, Shellharbour and Shoalhaven. In addition, this report also refers to three distinct sub-regions:

- Northern Illawarra encompassing the Wollongong LGA
- Southern Illawarra encompassing the Shellharbour and Kiama LGAs
- Shoalhaven encompassing the Shoalhaven LGA

ISLHD, like many healthcare organisations across the world, faces a unique set of circumstances that require strategic approaches and innovative solutions. The increasing demands placed on the system by a growing and ageing population, with persistent and increasing health inequalities, presents a major challenge now and into the future.

The District's population is anticipated to grow from over 420,000 people in 2021, to over 570,000 people in 2041. The over 65 age group is projected to grow from 91,000 people in 2021, to 130,000 people in 2041. Proportionally, this group will go from 21% to 23% of the total population.

ISLHD must continue to strive to find ways to address the strain on resources, ensure timely access to prevention and care commensurate with need, and provide comprehensive services to our diverse community.



Figure 2: ISLHD hospital locations

2. Contributors to health



Equality means each individual or group of people is given the same resources or opportunities.

Equity recognises that each individual or group of people have different circumstances, so different resources and opportunities are needed to reach an equal outcome.

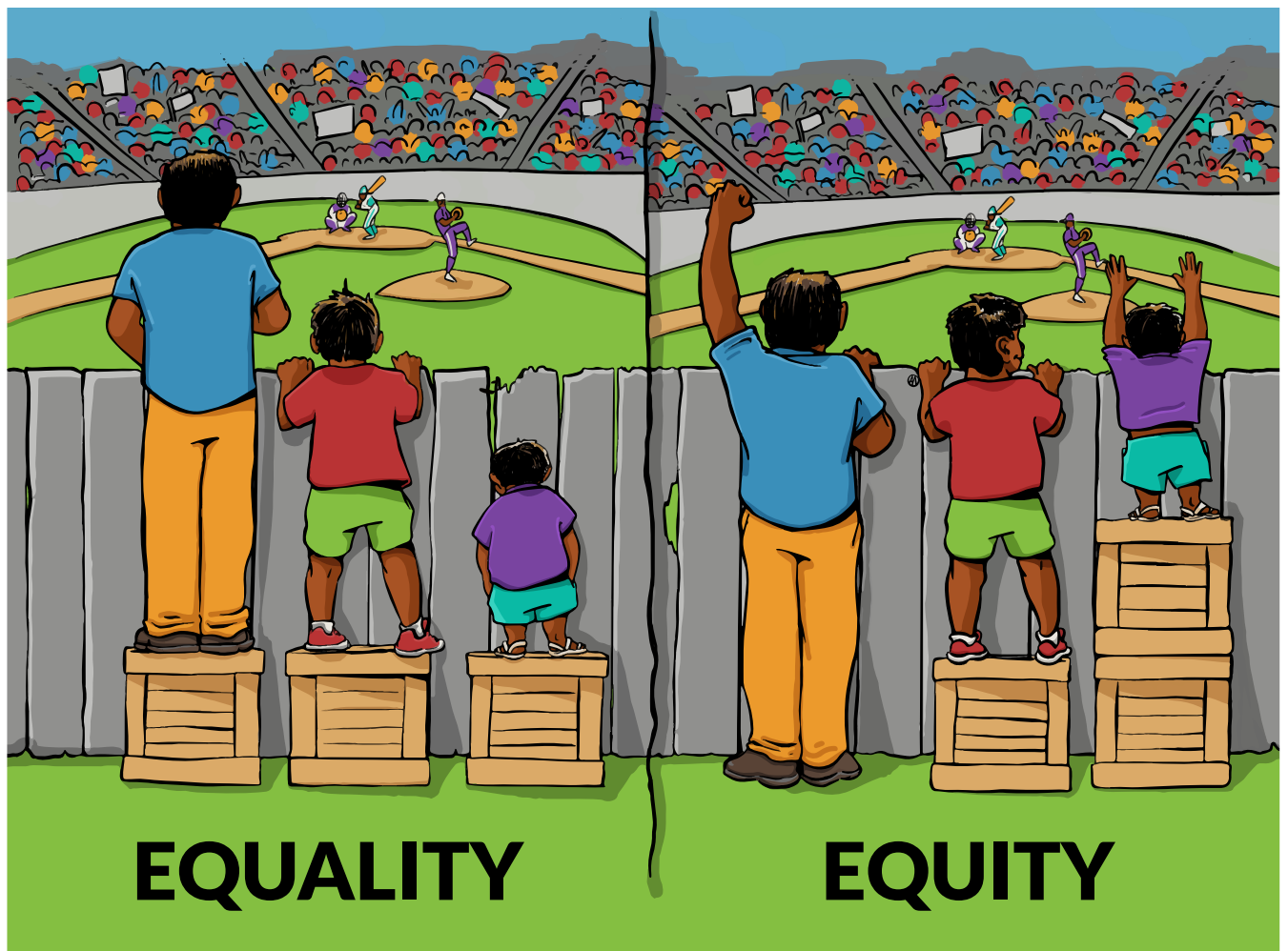
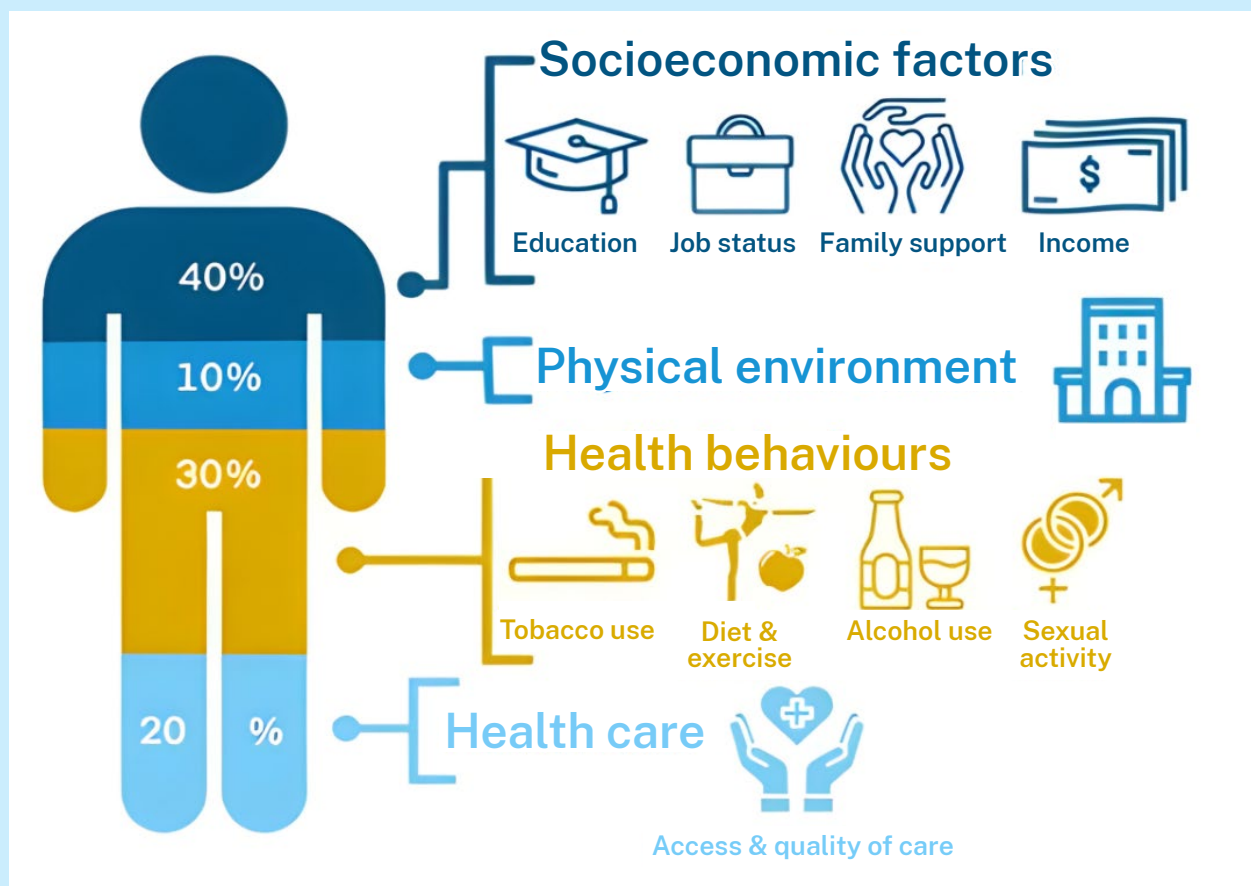


Image courtesy of Interaction Institute for Social Change | Artist: Angus Maguire

2.1 Social determinants of health

Figure 3: Social Determinants of Health



Source: Reproduced from UCLA⁵

The social determinants of health are the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, social norms, social policies and political systems. The social determinants have an important influence on health inequities - the unfair and avoidable differences in health status seen within and between communities.¹

Studies indicate that 40% of an individual's health is determined by socioeconomic factors such as education, occupation, or income (Figure 3). Thirty per cent is determined by health behaviours such as smoking, alcohol use, exercise and diet. Ten per cent is determined by one's physical environment, such as their community, house, or workplace. Finally, 20% is determined by access to healthcare and the quality of that care.⁵

2.2 Social gradient of health

The social gradient of health shows the association between an individual's socioeconomic status and their health outcomes - the lower an individual's social position, the worse their health tends to be.⁶ This phenomenon is observed across many mortality and morbidity indicators, and is intricately linked to the social determinants of health.

Socio-Economic Indexes for Areas (SEIFA) is a product developed by the Australian Bureau of Statistics (ABS) using Census data that ranks areas in Australia according to relative socioeconomic advantage and disadvantage. SEIFA combines Census data such as income, education, employment, occupation and housing to summarise the socioeconomic characteristics of an area.

Using the SEIFA Index of Relative Socioeconomic Disadvantage (IRSD), Figure 4 and Map 1 highlight disparities across ISLHD. In Map 1 IRSD scores are divided into quintiles and benchmarked against scores statewide. (1000 is the NSW average. Low IRSD scores indicate relatively greater disadvantage and high scores indicate a relative lack of disadvantage.)

Map 2 shows how premature mortality rates vary across the region. Comparing the two maps demonstrate the association between social disadvantage and health outcomes. Figures 5 and 6 also show the association between social disadvantage and utilisation of ISLHD hospital services.

As shown in Figure 6, based on the IRSD score data, the least disadvantaged areas are:

- Northern Illawarra: Helensburgh/ Thirroul-Austinmer-Coalcliff PHA (IRSD score 1092) and Horsley-Kembla Grange PHA (1048)
- Southern Illawarra: Kiama-Jamberoo-Gerringong PHA (1070), Shellharbour-Flinders PHA (1045)
- Shoalhaven: Berry-Kangaroo Valley PHA (1048), Huskisson/ Tomerong PHA (1046).

The most disadvantaged areas are:

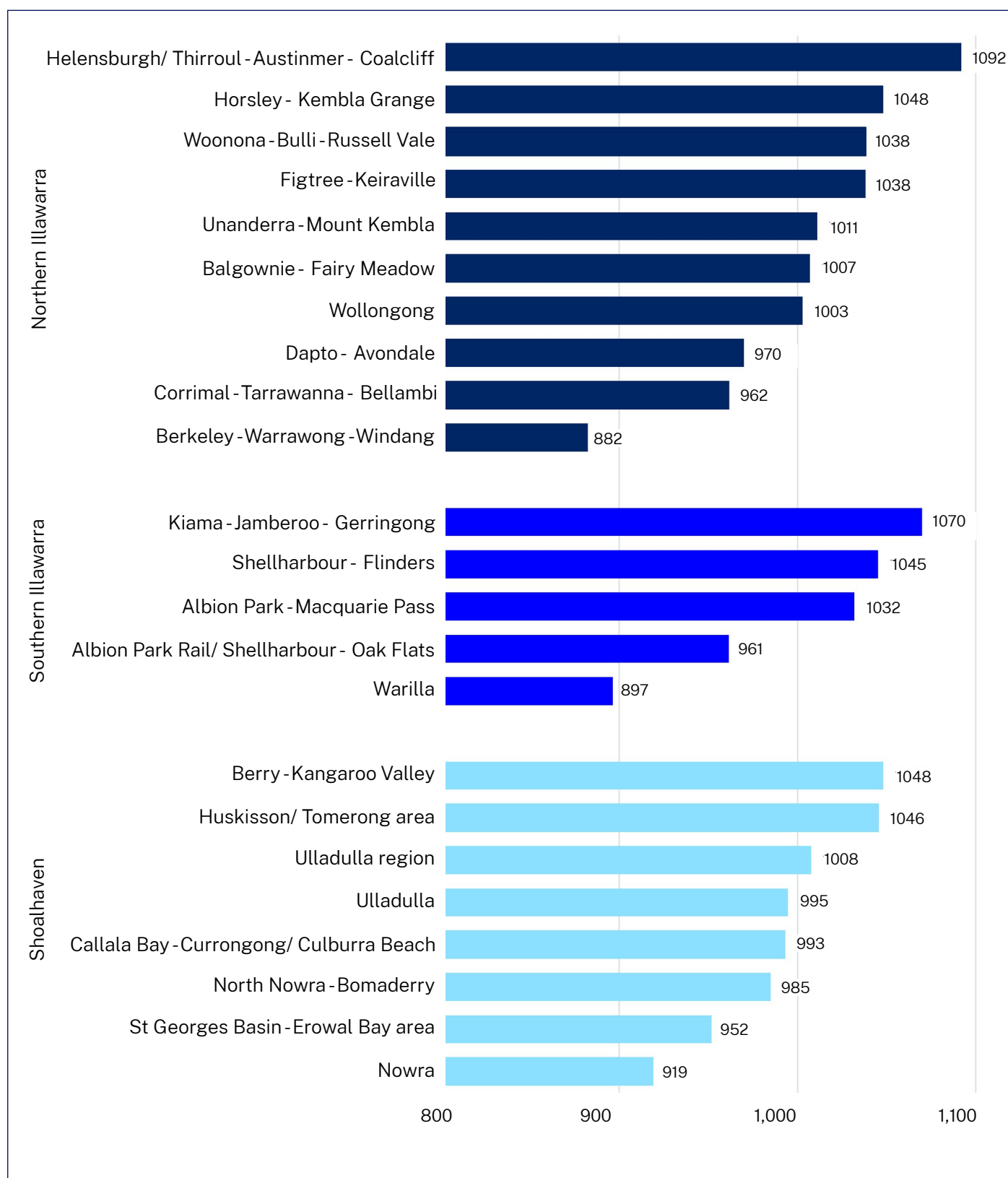
- Northern Illawarra: Berkeley-Warrawong-Windang PHA (882), Corrimal-Tarrawanna-Bellambi PHA (IRSD score 962)
- Southern Illawarra: Warilla PHA (897), Albion Park Rail/ Shellharbour-Oak Flats PHA (961)
- Shoalhaven: Nowra PHA (919), St Georges Basin-Erowal Bay PHA (952).

ISLHD hospital admission rates are 2-3 times higher, and Emergency Department (ED) presentation rates are 3-4 times higher, among people living in the most disadvantaged PHAs compared to the least disadvantaged PHA (Figures 6 and 7).

Closing the health gap between socially advantaged and disadvantaged people has enormous potential for reducing pressure on our hospital services.

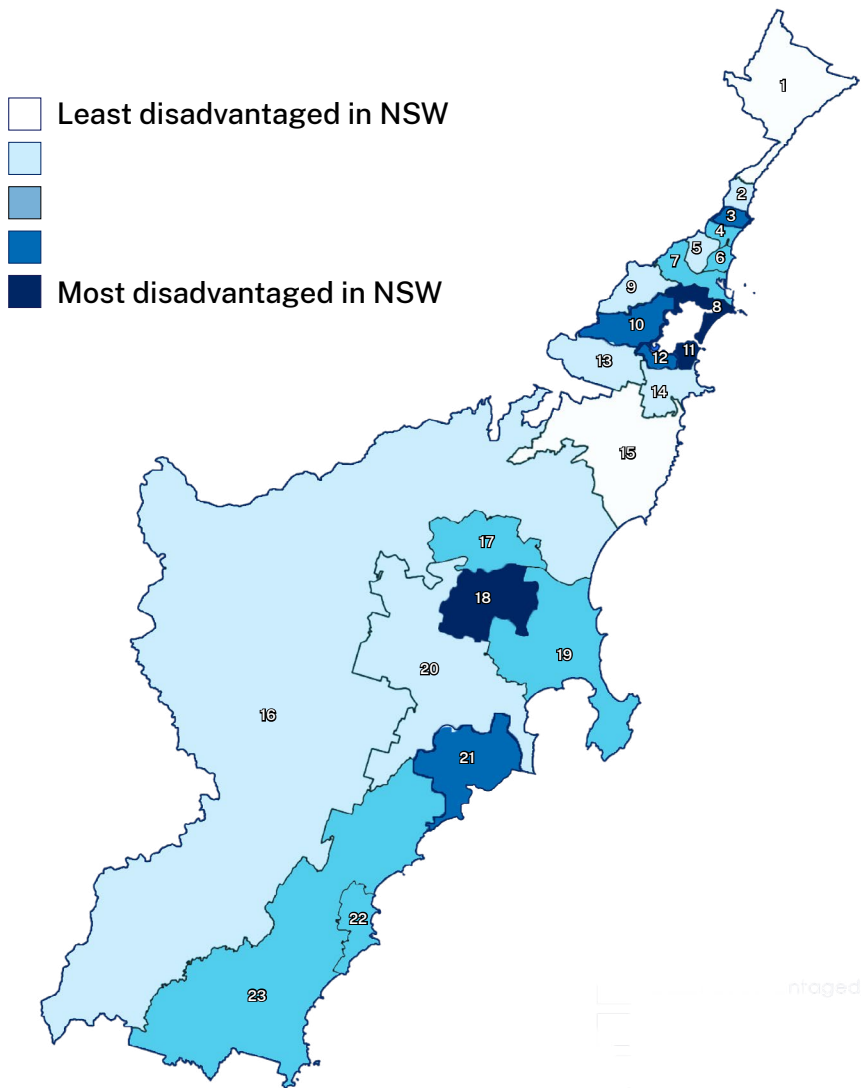
Modelling by the National Centre for Social and Economic Modelling estimated that more than 6% of hospital separations could be prevented by closing the health gap between people aged 25-64 years in the bottom and top household income quintiles.

Figure 4: Index of Relative Socioeconomic Disadvantage (IRSD) scores, by sub-region, Population Health Areas (PHA) and PHA scores.

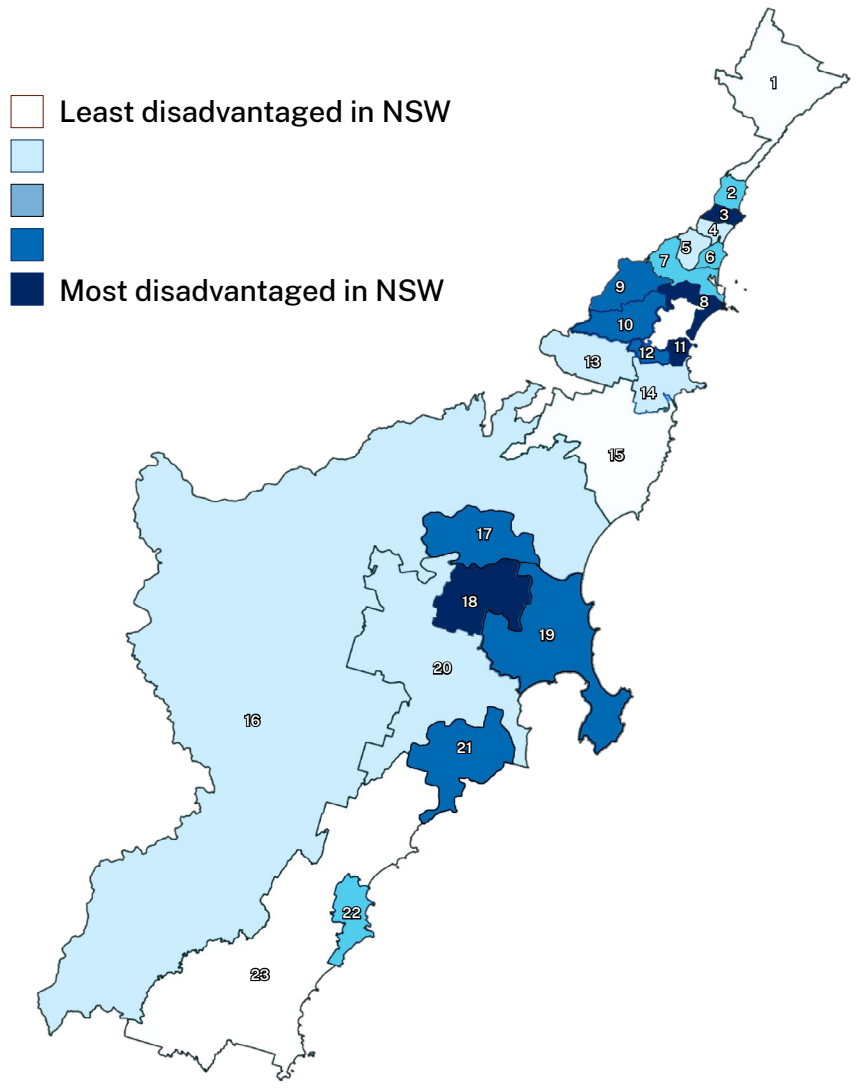


Source: PHIDU (ABS 2021)

Map 1: Index of Relative Socioeconomic Disadvantage



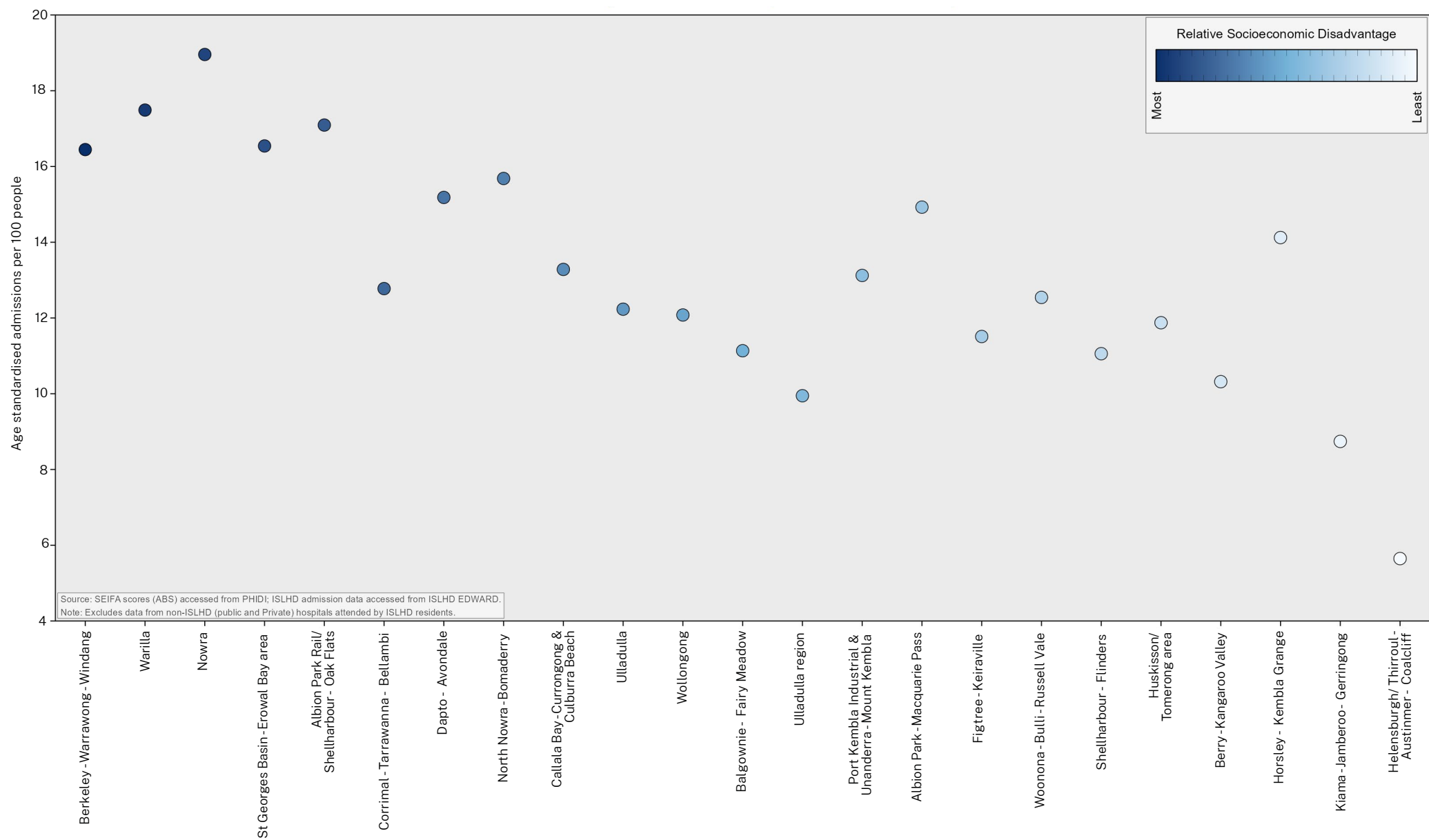
Map 2: Premature mortality (0-74 years)



PHA				
1. Helensburgh/ Thirroul-Austinmer-Coalcliff	6. Wollongong	11. Warilla	16. Berry -Kangaroo Valley	21. St Georges Basin -Erowal Bay
2. Woonona -Bulli -Russell Vale	7. Unanderra -Mount Kembla	12. Albion Park Rail/ Shellharbour -Oak Flats	17. North Nowra -Bomaderry	22. Ulladulla Region
3. Corrimal -Tarrawanna -Bellambi	8. Berkeley -Warrawong -Windang	13. Albion Park -Macquarie Pass	18. Nowra	23. Ulladulla
4. Balgownie -Fairy Meadow	9. Horsley -Kembla Grange	14. Shellharbour -Flinders	19. Callala Bay -Currarong, Culburra Beach	
5. Figtree -Keiraville	10. Dapto -Avondale	15. Kiama -Jamberoo -Gerringong	20. Huskisson -Tomerong	

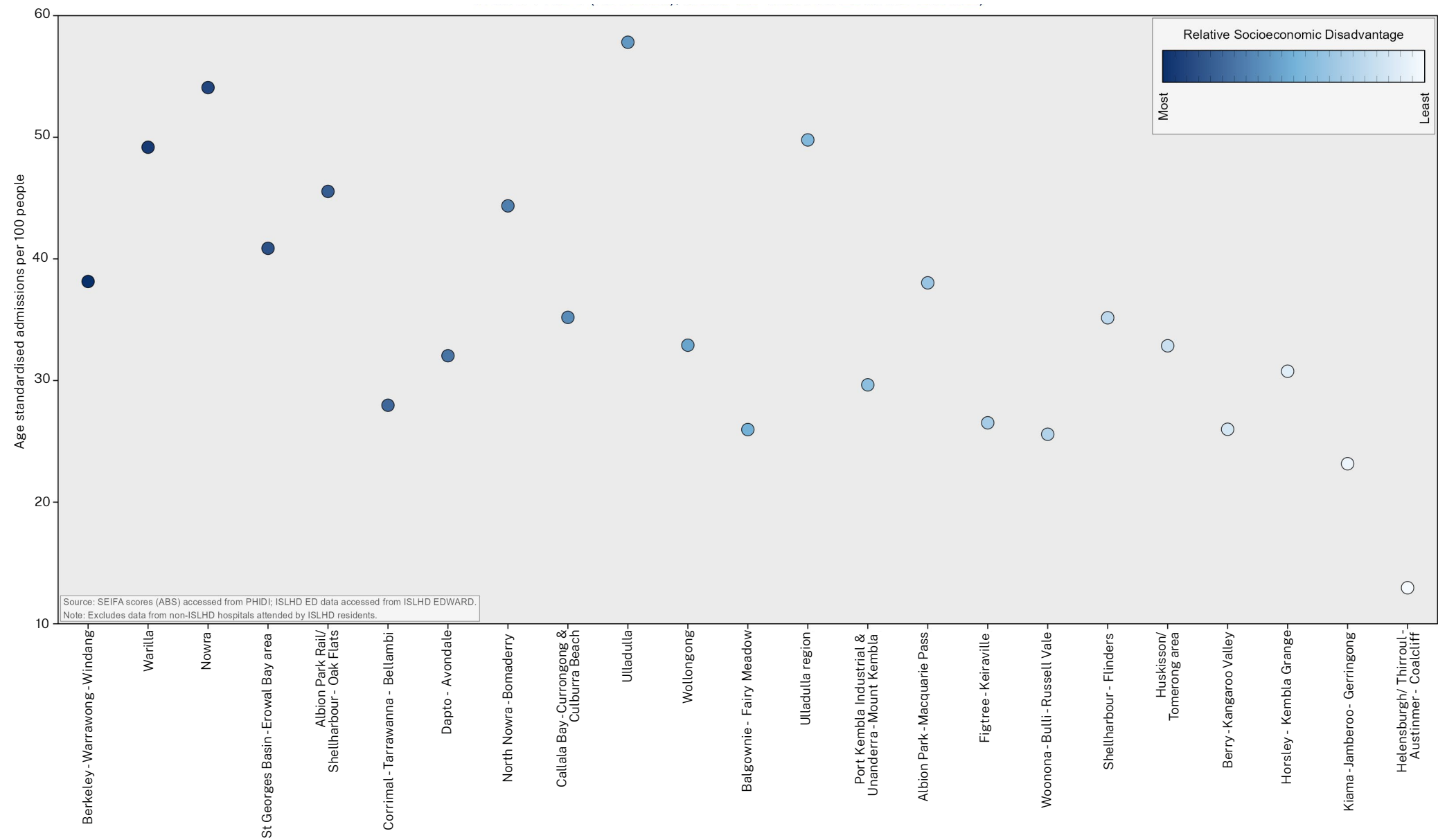
Source: PHIDU (ABS)

Figure 5: Relationship between relative socioeconomic disadvantage and hospitalisation rates for ISLHD Population Health Areas.



Source: PHIDU (ABS 2021), AIHW hospitalisations data 2021/22

Figure 6: Relationship between relative socioeconomic disadvantage and ED presentation rates for ISLHD Population Health Areas



Source: PHIDU (ABS 2021), ISLHD ED data from EDWARD 2021/22.

3. Our population's health

3.1 Mothers and babies

Low birthweight

Birthweight is widely accepted as a key indicator of a baby's current and future health, and is influenced by social, cultural, environmental and biological factors, including the age, health and nutritional status of the mother, pre-term birth, and smoking during pregnancy. Babies are more likely to be born at a healthy birthweight when pregnant women have a smoke-free pregnancy, receive early and regular antenatal care, eat a balanced diet, and engage in regular physical activity.

Low birthweight is generally associated with poorer health outcomes, including increased risk of respiratory distress, infections and death, longer hospitalisations after birth, developmental delays, and significant disabilities. Low birth weight infants are also at increased risk of developing diabetes, hypertension, and cardiovascular disease later in life.

How is it measured?

Babies of a low birthweight (less than 2,500 grams), as a proportion of all liveborn infants, recorded and reported in the NSW Perinatal Data Collection (2019-2021 data by PHIDU).

How does it vary?

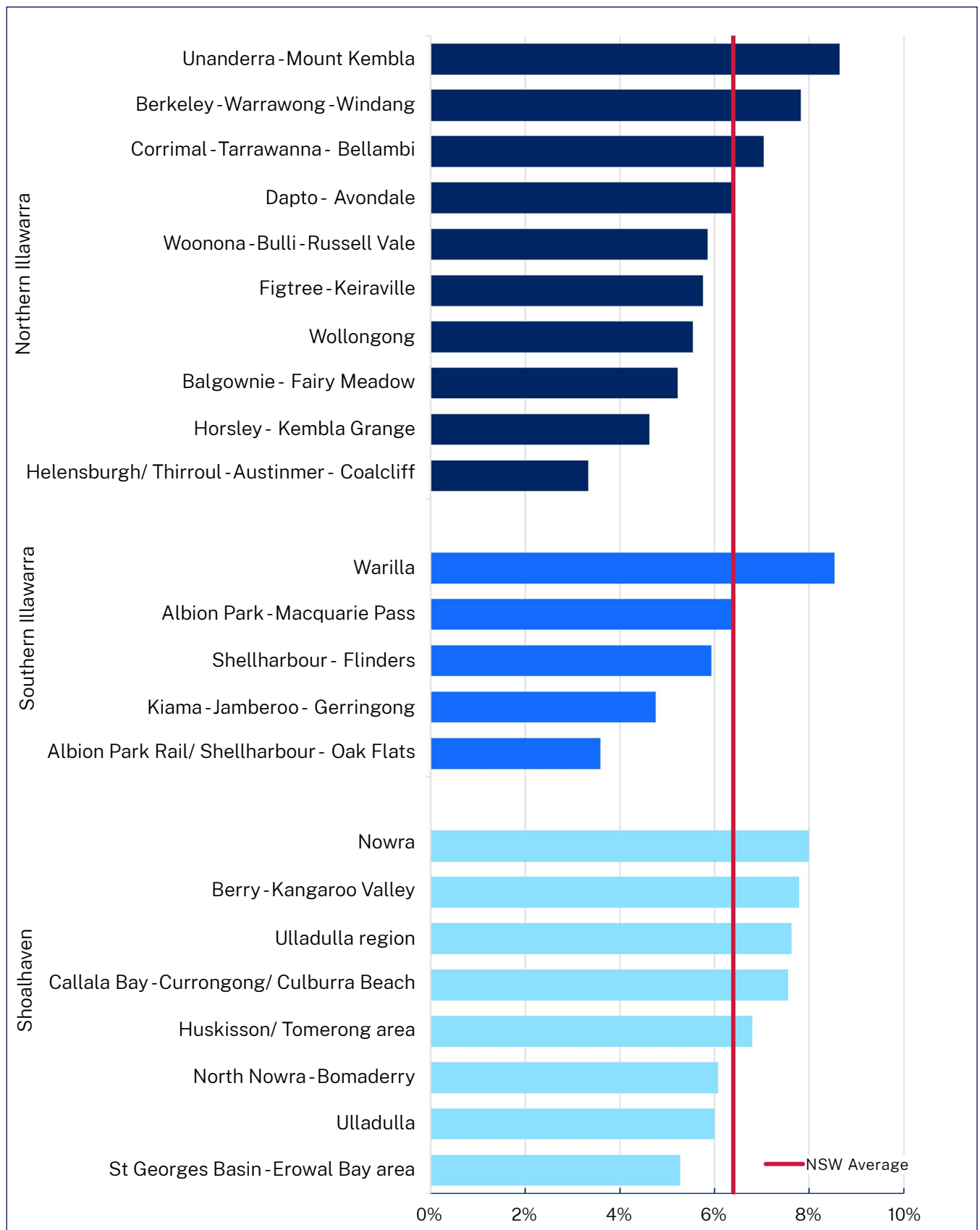
In 2022, 94% of ISLHD (and NSW) babies had a healthy birthweight, with this proportion being fairly stable over the last decade.

In 2019-21, all Local Government Areas (LGAs) across the Illawarra Shoalhaven reported lower birth weight babies than the NSW average of 6.2% -5.9% in Wollongong and Shoalhaven LGA, 5.7% in Shellharbour LGA and 4.7 in Kiama LGA.

The proportion of low birthweight babies varies between small areas within the District, with the highest proportions in each sub-region generally being in the PHAs which are most disadvantaged (Figure 7).

While many Shoalhaven PHAs have relatively high proportions of low birthweight babies, a number of PHAs in the Illawarra (e.g. Unanderra-Mount Kembla PHA, Berkeley-Warrawong-Windang PHA, Warilla PHA) also have relatively high proportions.

Figure 7: Proportion of low birth weight babies



Source: PHIDU (NSW Perinatal Data Collection 2019-21)



3.2 Early childhood development

The first 2000 days

The first 2000 days (from conception to age 5) is a critical time for physical, cognitive, social and emotional health. Childhood experiences in the first 2000 days shape how a child develops into later life including:⁷

- School performance and adolescent involvement with the criminal justice system
- Drug and alcohol misuse and antisocial and violent behaviour
- Obesity, elevated blood pressure and depression in 20-40 year olds
- Coronary heart disease and diabetes in 40-60 year olds
- Premature ageing and memory loss in older age groups.

How is it measured?

The Australian Early Development Census (AEDC) is a nationwide collection of data on early childhood development, gathered when children begin full-time school. It is produced and reported by the Department of Education, Skills and Employment, and is publicly available through the AEDC website.⁸ The instrument collects data across five key areas of early childhood development, known as domains:

- Physical health and wellbeing
- Social competence
- Emotional maturity

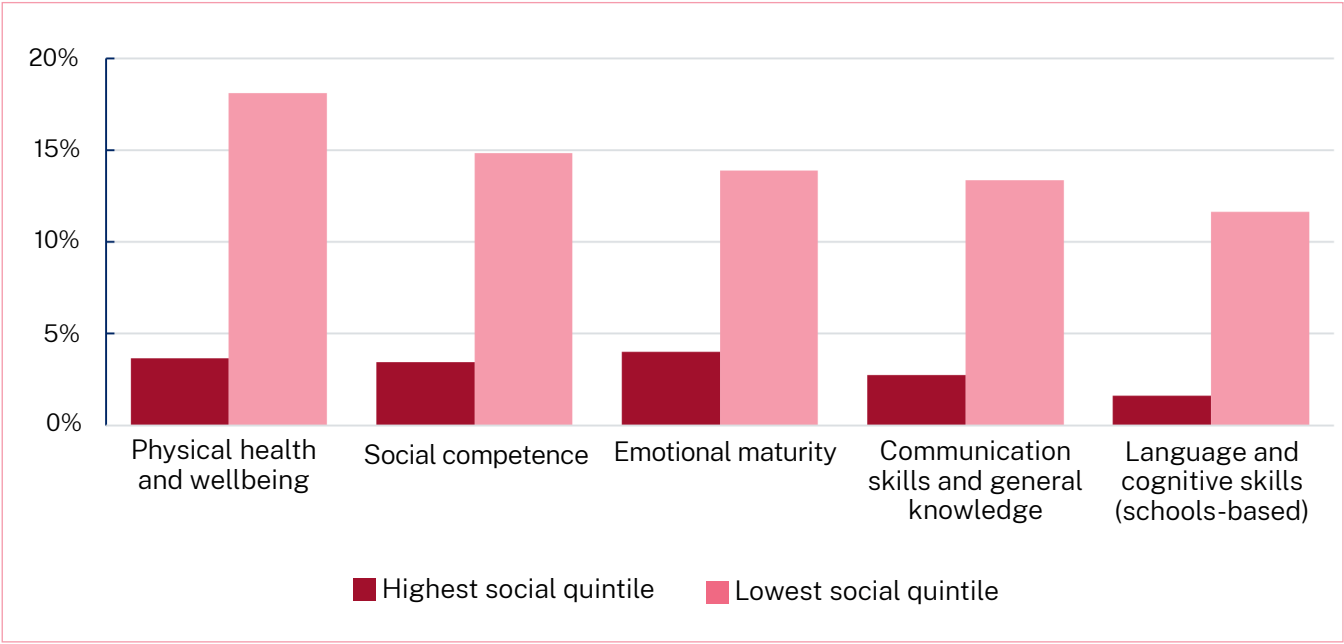
- Language and cognitive skills (school-based)
- Communication skills and general knowledge.

How does it vary?

Figure 8 highlights the association between socioeconomic status and developmental vulnerability. It does this by comparing selected domains in the most advantaged and disadvantaged areas within the ISLHD (based on Index of Relative Socio-economic Disadvantage score quintiles at PHA level). The greatest (absolute) disparities by socioeconomic status are for “Physical health and wellbeing” (14% higher prevalence of vulnerability in the most versus least disadvantaged PHAs), followed by “Social competence” (12% higher).

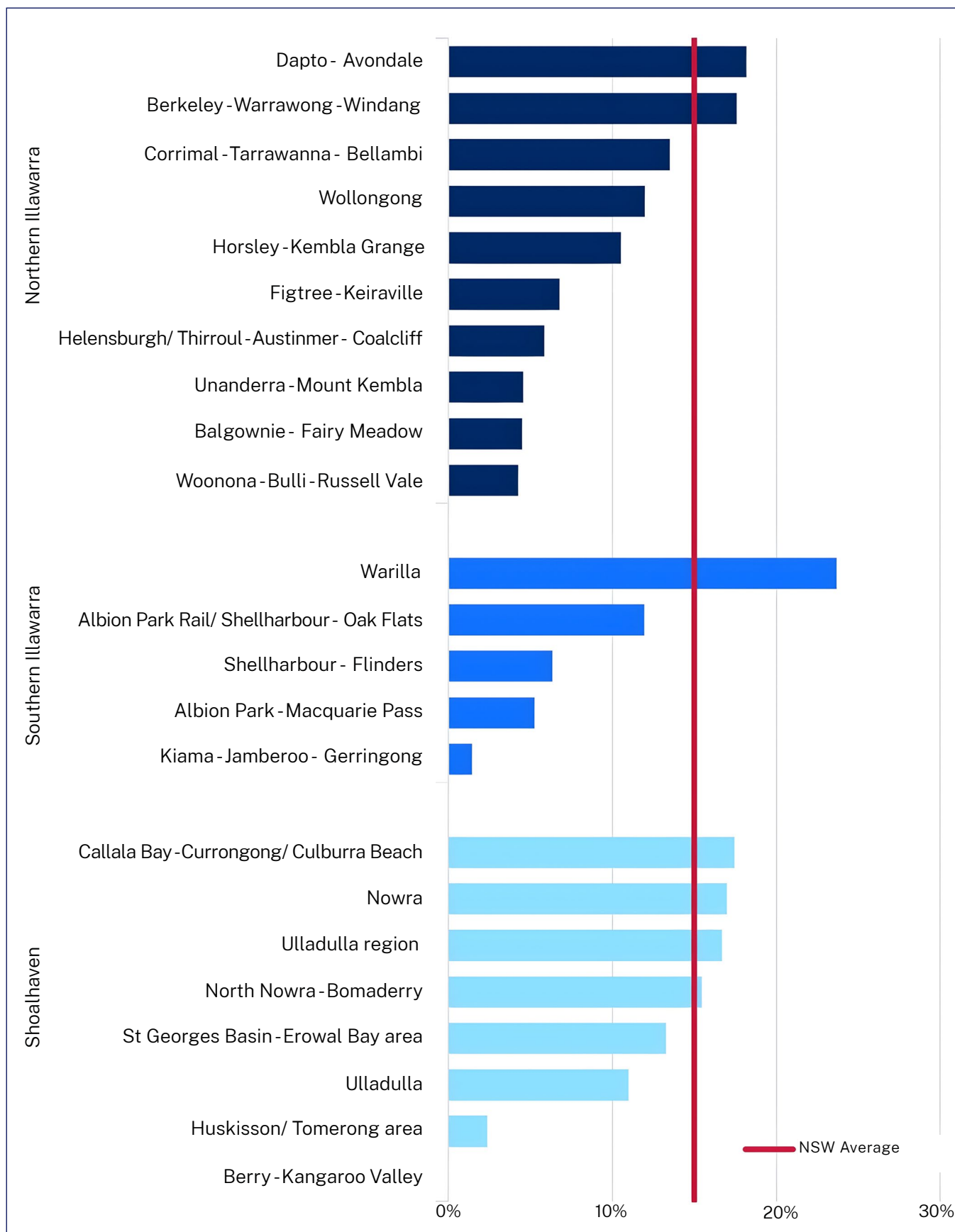


Figure 8: Proportion of children starting school who are developmentally vulnerable in selected domains, by Socioeconomic Quintile, Illawarra Shoalhaven residents (%)



Source: PHIDU (ADEC 2021)

Figure 9: Proportion of children starting school who are developmentally vulnerable in two or more domains (%)



Source: PHIDU (AEDC 2021)

3.3 Chronic conditions



Long term health conditions

Long term (or “chronic”) health conditions are the leading causes of illness, disability, and death in Australia, comprising almost two-thirds of the burden of disease.⁹ As the population ages, long-term health conditions become more common. As a result, areas with an older age profile tend to have a higher proportion of residents living with these conditions.

How is it measured?

The ABS 2021 Census asks a single question on long-term health conditions, asking about diagnosed conditions that have lasted, or are expected to last, at least six months (but may recur, be controlled by medication, or in remission.) Conditions include: arthritis, asthma, cancer, dementia, diabetes, cardiovascular disease (including heart attack, angina, stroke), kidney disease, lung conditions (including chronic obstructive pulmonary disease [COPD], emphysema), mental health conditions (including depression, anxiety). While the ABS Census data cannot provide accurate condition-specific prevalence estimates, the published rates are able to highlight variations across small areas and population groups. Age standardising the data allows disparities faced by different communities to be highlighted, irrespective of differences in their age profiles.

How does it vary?

Figure 10 compares selected conditions in the most and least socially disadvantaged areas (based on IRSD score quintiles at the PHA level) showing there is a higher prevalence of chronic health conditions among those with lower socioeconomic status. The greatest disparities are for lung conditions and diabetes, followed by mental illness. Figure 11 shows the prevalence of three or more long term conditions was more than twice as high in the most disadvantaged PHAs compared to the least disadvantaged.

Comparing LGAs, the highest prevalence is among Shoalhaven LGA residents. In 2021, the prevalence of one or more long-term health conditions was:

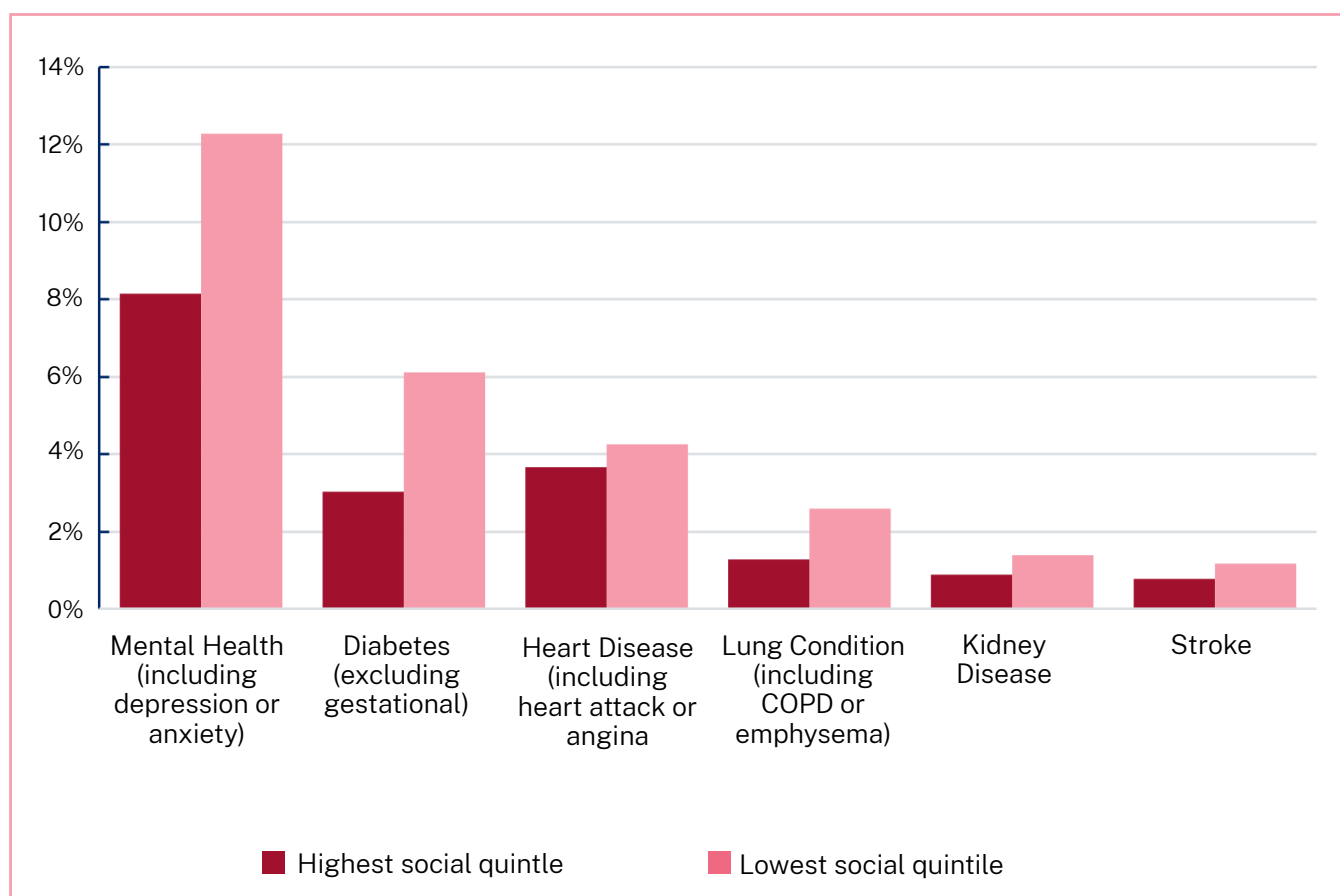
- Northern Illawarra: 31% (66,126 residents)
- Southern Illawarra: 32% (31,877)
- Shoalhaven: 37% (39,827)

In 2021 the prevalence of three or more long-term health conditions was:

- Northern Illawarra: 4% (7,869 residents)
- Southern Illawarra: 4% (3,769)
- Shoalhaven: 5% (5,933)

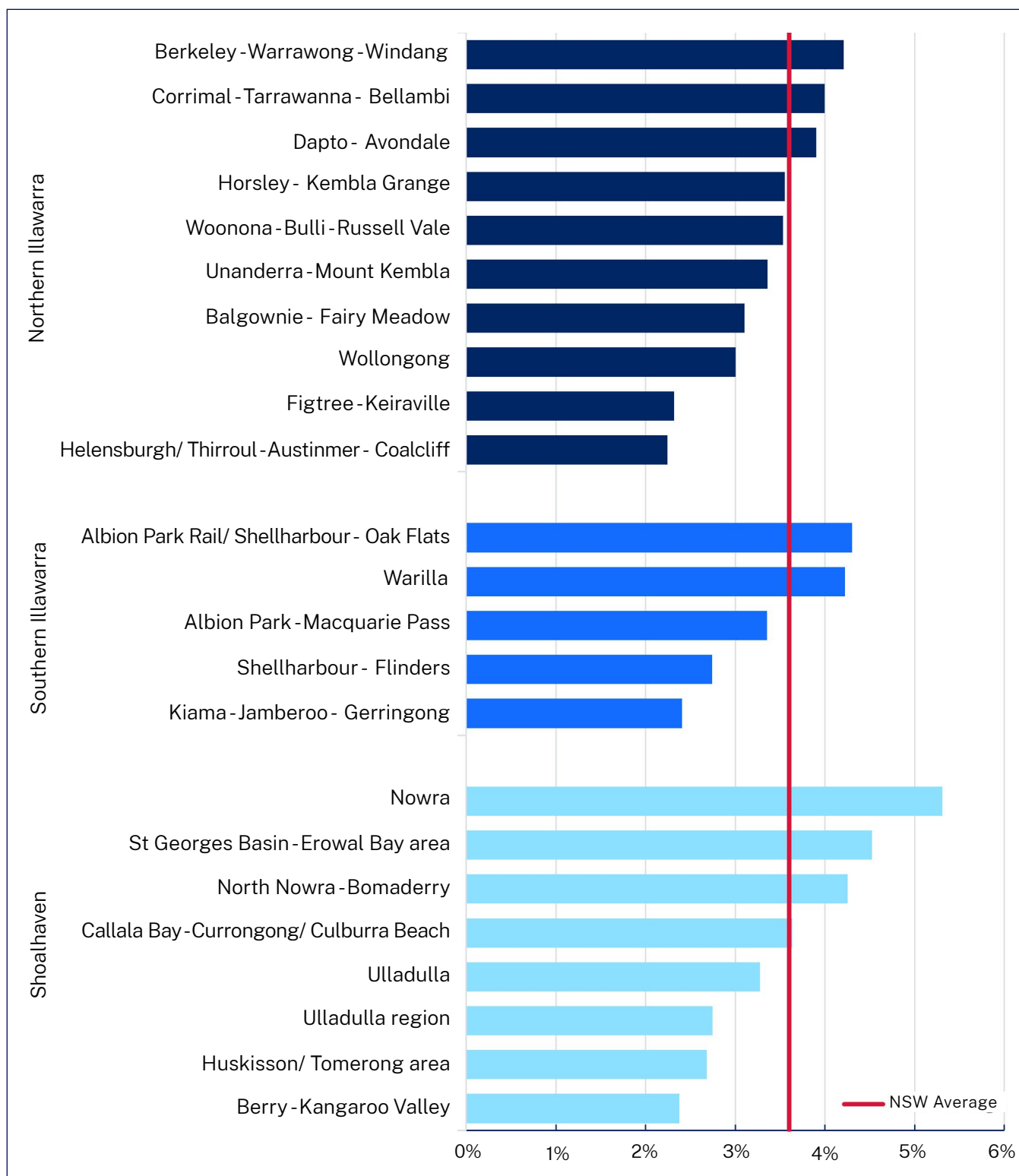


Figure 10: Prevalence of selected long term health conditions by socioeconomic quintile, Illawarra Shoalhaven residents.



Source: PHIDU (ABS Census 2021)

Figure 11: Prevalence of three or more long-term health conditions (%)



Source: PHIDU (ABS Census 2021)



Diabetes

Diabetes is a chronic metabolic disease, which if poorly controlled can cause serious damage to the heart, blood vessels, eyes, kidneys, and nerves and may lead to more severe health complications. Sustained control is focussed on diet, exercise, medication (including insulin) and regular blood glucose monitoring. The main types of diabetes are type 1 (10-15%), type 2 (85-90%) and gestational.¹⁰ Modifiable factors that increase the risk of developing diabetes, particularly type 2 diabetes, include low levels of physical activity, poor diet, and being overweight or obese. These factors also contribute to other health issues, such as cardiovascular disease and certain cancers. Therefore, a high prevalence of diabetes often reflects widespread unhealthy behaviours and social environments.¹¹

How is it measured?

The Australian Diabetes Map uses data from the National Diabetes Services Scheme (NDSS) Registrant database and ABS Census data to estimate the prevalence of people (by age) diagnosed with diabetes (by type) who are registered on the NDSS, down to LGA and postcode levels.¹² Therefore, these prevalence estimates exclude people living with diabetes who are not diagnosed or registered with NDSS.

Lower limb amputation rates (age standardised hospitalisation rates) are considered an

indicator of the quality and outcomes of diabetes care. Amputation rates due to diabetes among Illawarra Shoalhaven residents are about 25% higher than the NSW average.¹³

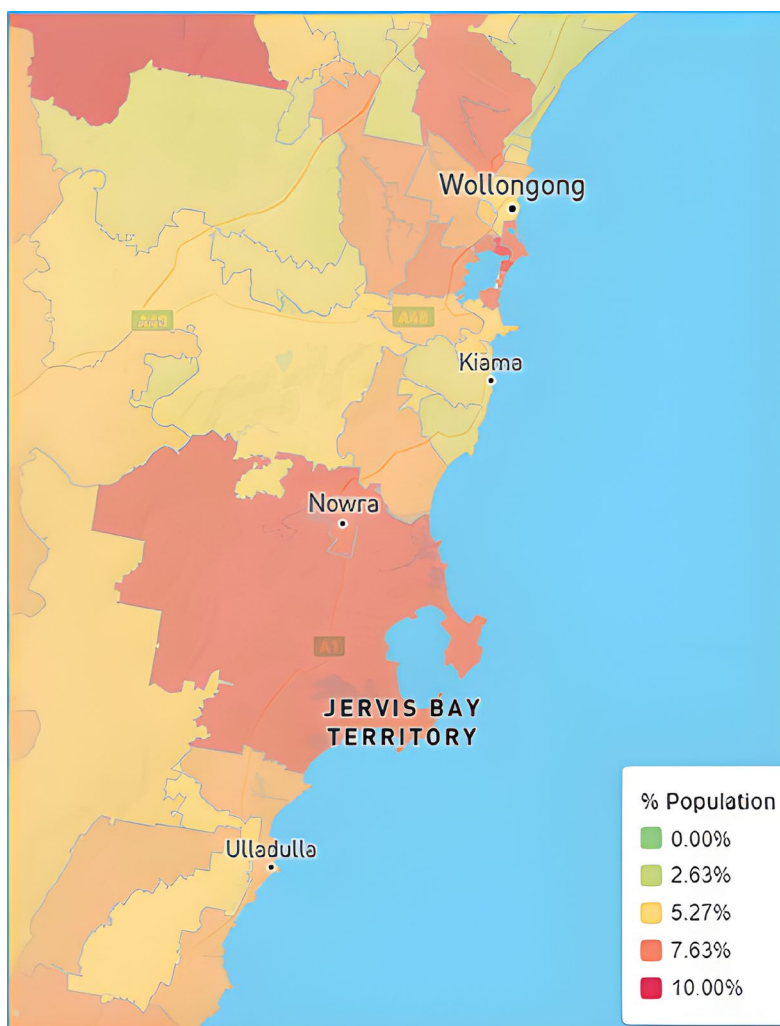
How does it vary?

Comparing LGAs, diabetes prevalence is highest in the Shoalhaven LGA (males: 7.8%, females: 6.8%), followed by Shellharbour LGA (6.3%, 6.0%) and Wollongong LGA (5.9%, 5.7%), and lowest in Kiama LGA (4.6%, 3.8%).

However, variation in diabetes prevalence is even more apparent when comparing smaller areas, closely following variation by socioeconomic status (Map 3). The highest prevalence is among people living to the north and east of Lake Illawarra in the Wollongong LGA (up to 9.3% for males and 8.9% for females in postcode 2502), followed by the northern/central Shoalhaven LGA (up to 8.3% for males and 7.4% for females in postcode 2540).



Map 3: Diabetes prevalence



Source: NDSS Australian Diabetes Map



Mental health conditions

Mental health conditions, refer to a wide range of mental, emotional, and behavioural disorders that affect a person's thinking, mood, and ability to function in daily life. These conditions can be temporary or chronic and vary in severity. Common conditions include depression, anxiety disorders, schizophrenia, bipolar disorder, and post-traumatic stress disorder.¹⁴ These conditions can significantly affect an individual's overall wellbeing including their physical health, emotional wellbeing, cognitive function, social relationships, work and productivity, and quality of life.

How is it measured?

The 2021 ABS Census included questions about long-term health conditions for the first time, including mental health conditions. The Census collects broad characteristic information, enabling analysis across a range of socioeconomic and demographic dimensions, at the small area level.

Alternative measures of mental health conditions are reported from the NSW Population Health Survey and ABS National Study of Mental Health and Wellbeing. However, unlike the ABS Census data, these surveys do not provide estimates at small area levels.

How does it vary?

In 2022, NSW Health estimated that 80.6% of ISLHD residents had excellent, very good and good self-rated mental health. This was similar to the 81% NSW average. Both ISLHD and NSW saw reductions from 2018, from 81.9% and 84.1% respectively.^{13,14}

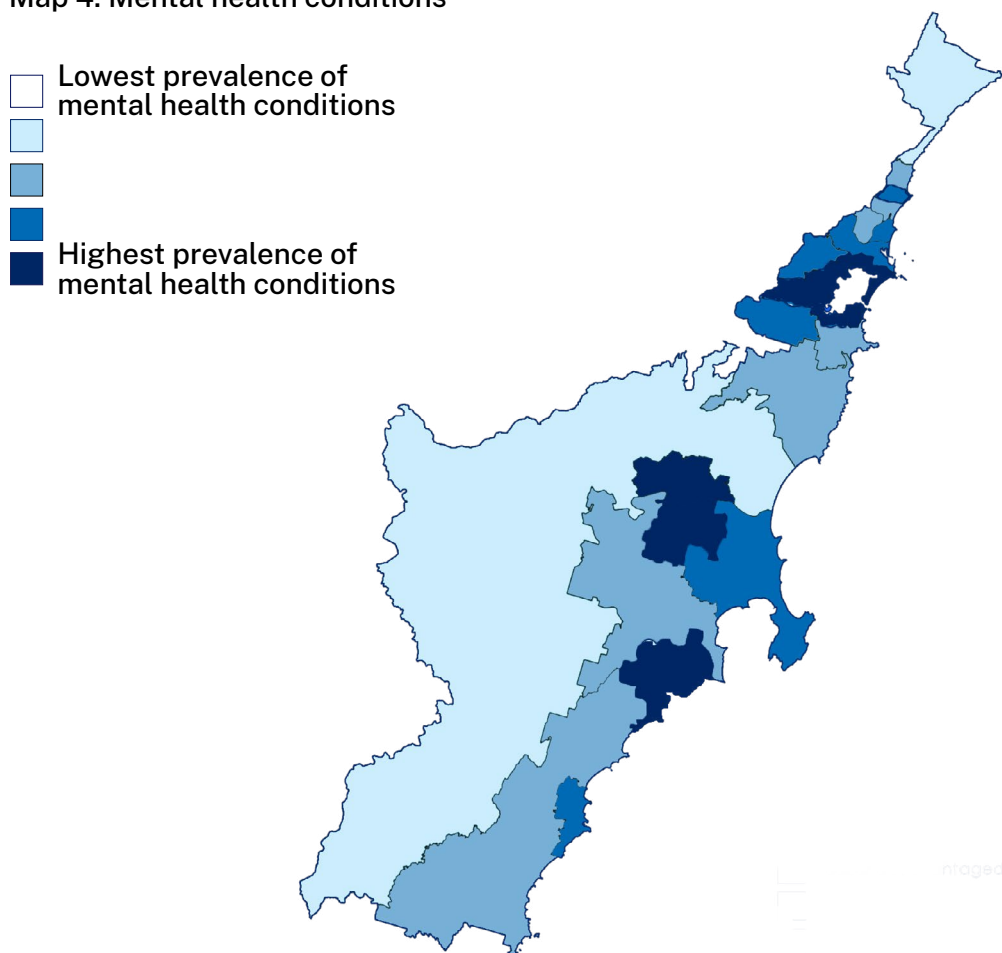
Comparing LGAs, in 2021 the prevalence of mental health conditions was highest in the Shoalhaven LGA (11.3%), followed by Shellharbour LGA (10.7%) and Wollongong LGA (10.1%), and lowest in Kiama LGA (8%).

Variation at the PHA level is even more pronounced, and closely follows variation in socioeconomic disadvantage (Map 4).

The highest prevalence was in Nowra PHA (13.8%), Albion Park Rail/ Shellharbour - Oak Flats PHA (12%), and Warilla PHA (11.6%). The lowest prevalence was in Helensburgh/ Thirroul - Austinmer - Coalcliff PHA (7.7%), Berry - Kangaroo Valley PHA (7.8%), and Kiama-Jamberoo-Gerrington PHA (8.1%).



Map 4: Mental health conditions



Source: PHIDU (ABS Census 2021)

3.4 Avoidable deaths



In Australia in 2023, nearly half (48%) of premature deaths (age less than 75 years) were considered potentially avoidable.¹⁵

Potentially avoidable deaths are defined as deaths among people aged under 75 years that arise from specific conditions that can be avoided through individualised care or treated through primary care or hospitalisation. These conditions include diseases (e.g. specific cancer types, ischaemic heart disease, diabetes, infectious diseases) and injuries (e.g. accidents, suicides).

How is it measured?

The PHIDU definition of “potentially avoidable deaths” uses the definition for the National Healthcare Agreement (NHA) performance indicator, with the addition of suicide and self-inflicted injuries. Deaths data are sourced from the Cause of Death Unit Record Files supplied by the Australian Coordinating Registry.

The reported indicator is annual indirectly age-standardised rates (ASR) per 100,000 population aged 0 to 74 years.

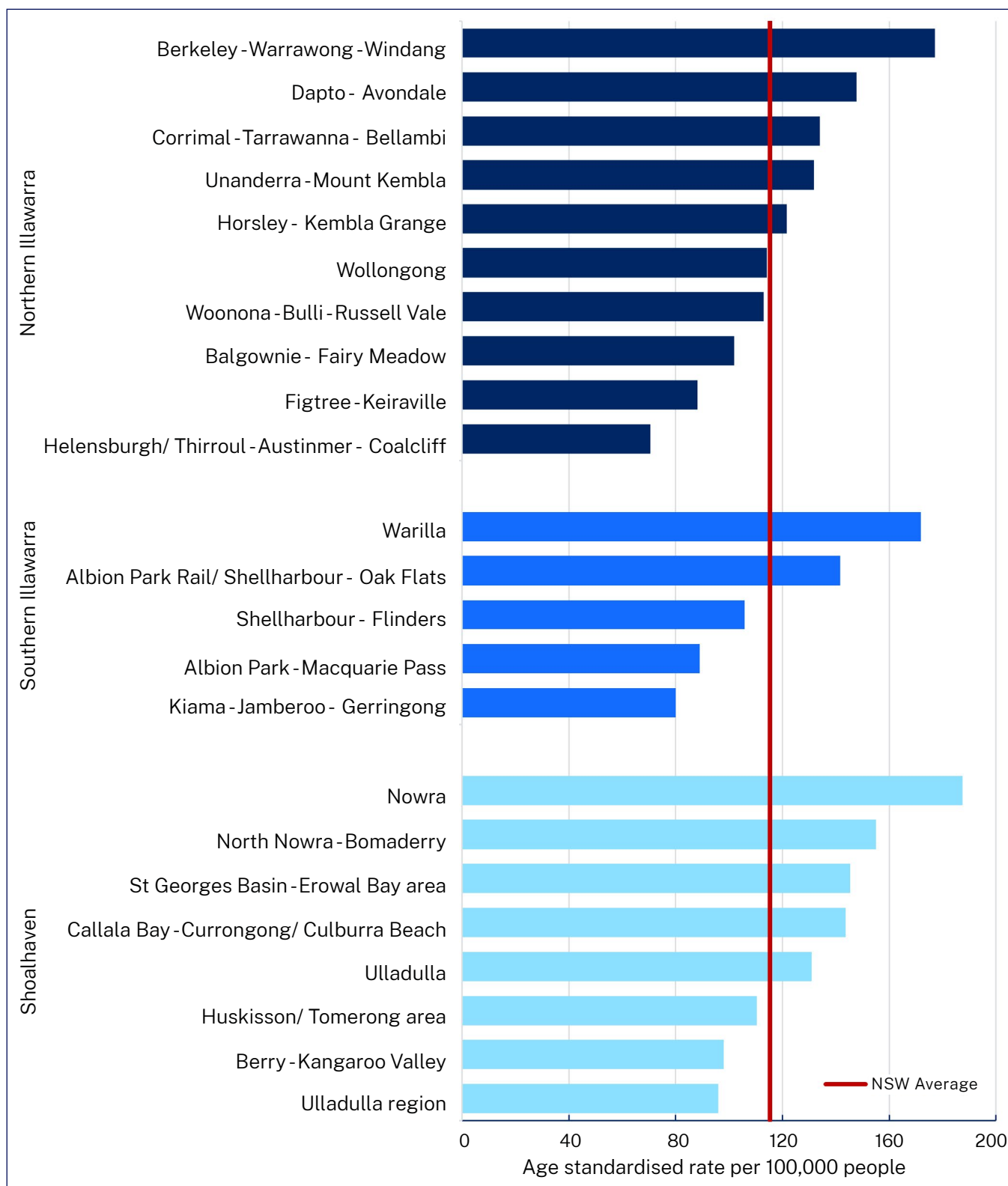
How does it vary?

Potentially avoidable mortality rates vary considerably between LGAs within ISLHD, and even more so within PHAs, closely following variation by socioeconomic disadvantage.

In 2018-22 the rate of “potentially avoidable” death was more than double in the Shoalhaven LGA compared to the Kiama LGA. Rates were highest in the Shoalhaven LGA (140 per 100,000, 19% higher than NSW average), followed by Shellharbour and Wollongong LGAs (123 and 122 per 100,000), and lowest in Kiama LGA (66 per 100,000, 44% lower than NSW average).

In terms of smaller areas, rates are more than 2.5 times higher in PHAs with the highest rates (188 and 177 per 100,000 in Nowra PHA and Berkeley-Warrawong-Windang PHA respectively) compared to the PHAs with the lowest rates (70 and 80 per 100,000 in Helensburgh-Thirroul PHA and Kiama-Jamberoo-Gerringong PHA respectively) (Figure 12).

Figure 12: Potentially Avoidable Death Rates



Source: PHIDU (Cause of Death Unit Files 2018-22 supplied by Australian Coordinating Registry)

4. Socioeconomic determinants

4.1 Income

Income has a profound effect on access to healthcare, living conditions, and overall well-being. Individuals with higher incomes tend to have greater access to nutritious food, safe housing, and quality healthcare services, which directly influence their physical and mental health. They are more likely to engage in preventive care, have private health insurance, and afford treatments for chronic conditions, reducing the likelihood of severe health outcomes. Conversely, low-income individuals often face barriers to healthcare, including cost, transportation, and a lack of health literacy, contributing to disparities in health outcomes such as higher rates of chronic disease, mental health issues, and lower life expectancy.¹⁶

Income inequality also impacts social and environmental conditions that influence health. Poorer neighbourhoods often have less access to green spaces, higher levels of pollution, and fewer opportunities for physical activity, all of which contribute to poor health outcomes. These communities are more likely to experience stressors like crime, overcrowding, and substandard housing, exacerbating health risks.¹⁷

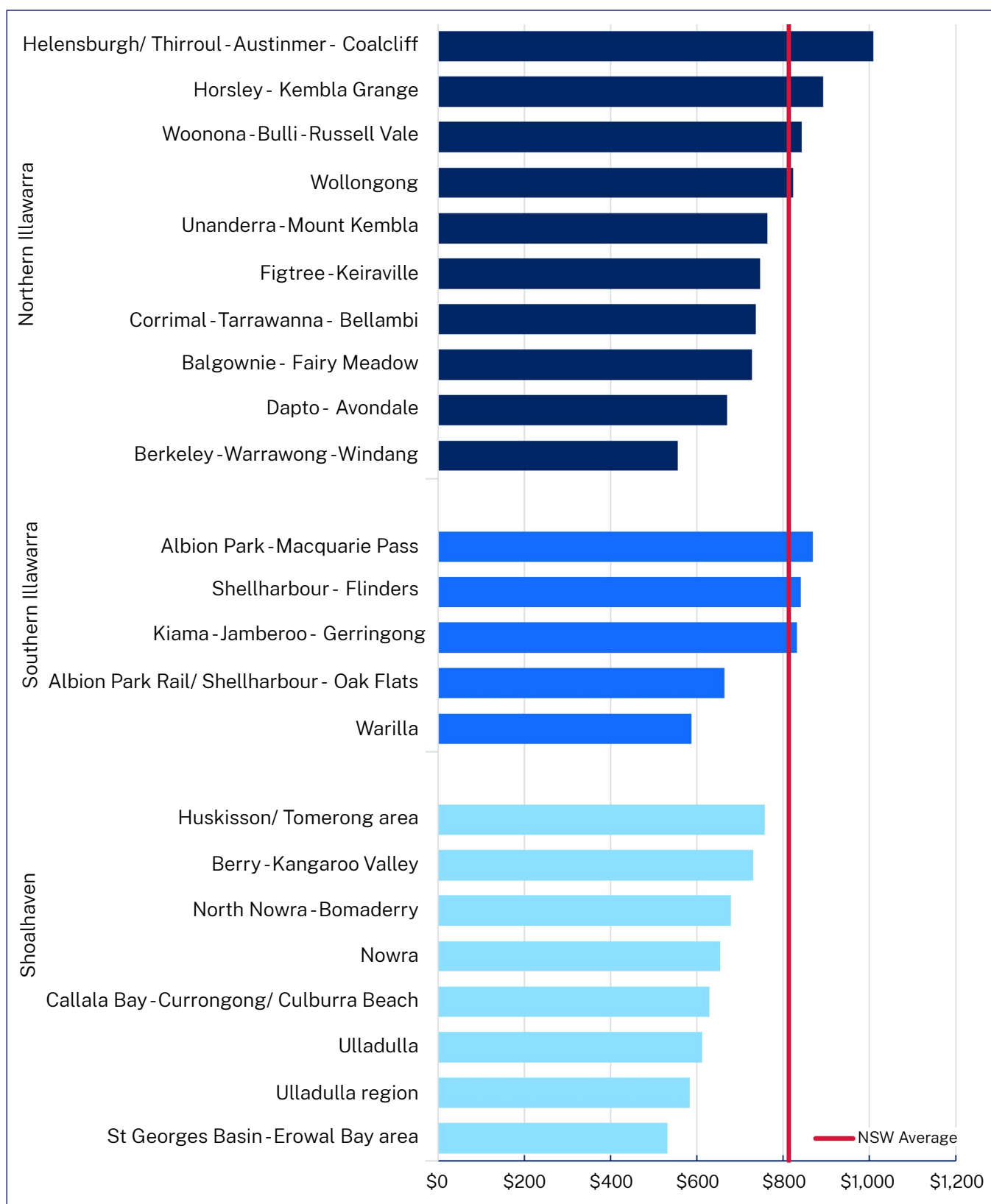
How is it measured?

The 2021 ABS Census expresses income distribution by taking a median personal weekly income at an SA2 level. PHIDU subsequently represents this at a PHA level.

How does it vary?

Median personal weekly incomes across ISLHD are consistently below the NSW average of \$813 (Figure 13). This is particularly the case in the Shoalhaven LGA. This would be partly explained by the Shoalhaven's ageing population, with a relatively high proportion retired or transitioning to retirement. Only seven PHAs across the District have a median personal weekly income above the NSW average, with Helensburgh/Thirroul – Austinmer – Coalcliff the only PHA with a median personal weekly income above \$1,000.

Figure 13: Median weekly personal income



Source: PHIDU (ABS 2021)



4.2 Employment

Stable employment provides individuals with financial security, and the ability to afford necessities such as housing, food, and medical care. Those with steady jobs often experience lower levels of stress and improved mental health, as they can more easily maintain a balanced lifestyle. Conversely, unemployment or precarious work can lead to financial instability, limiting access to these resources, which contributes to negative health outcomes, including higher rates of chronic disease, anxiety, and depression.¹⁸

The quality of employment also plays a significant role in health. Jobs that provide safe working conditions, fair wages, and benefits contribute to better health outcomes by reducing exposure to physical risks and stressors. On the other hand, jobs with poor conditions—such as high stress, low pay, or lack of benefits—can exacerbate health disparities, particularly for marginalised populations.¹⁹

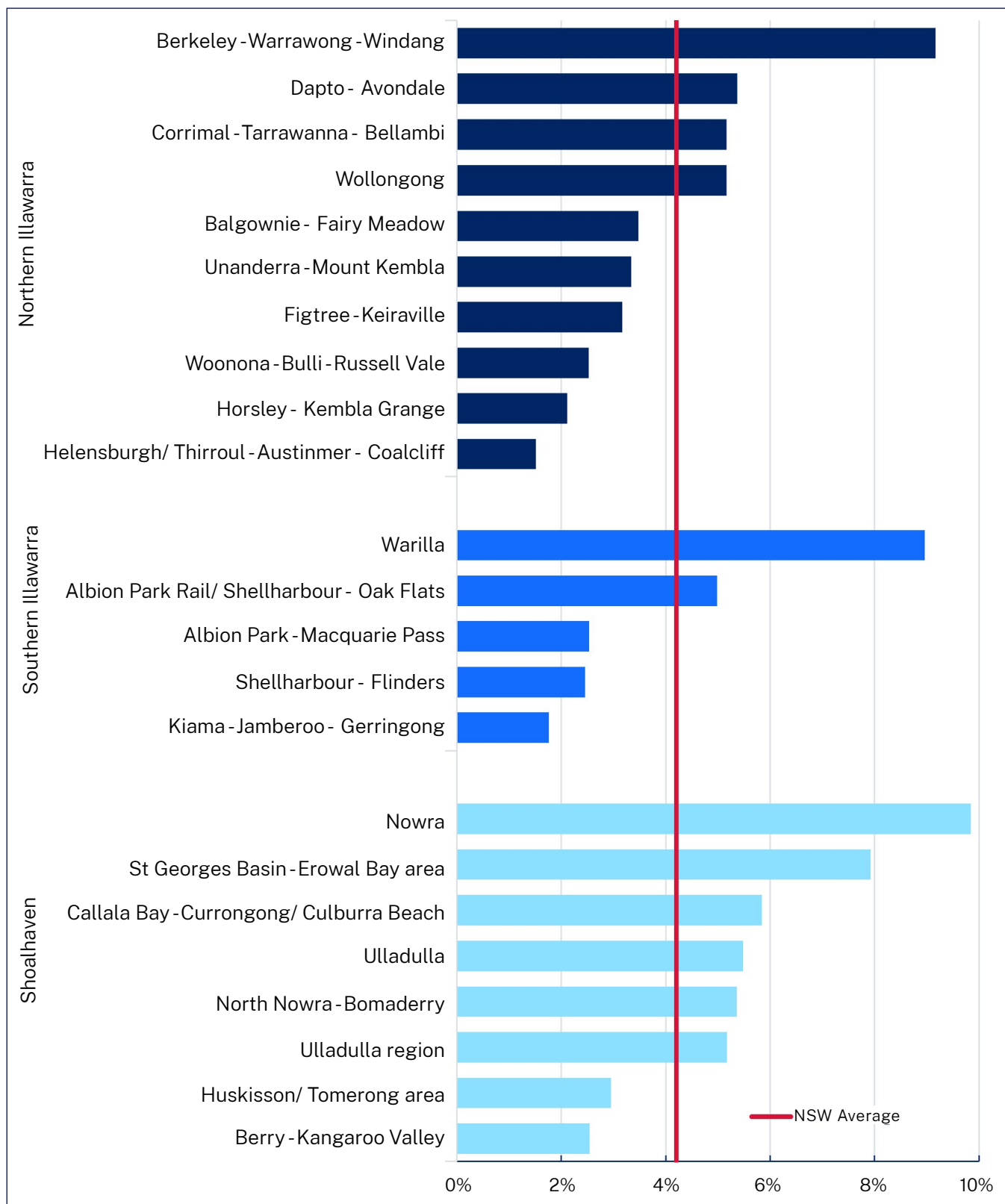
How is it measured?

PHIDU unemployment estimates are taken from the ABS Labour Force Survey, with data averaged over four quarters to minimise variability within smaller areas. The rate of unemployment is defined as the number of unemployed people aged over 15 years divided by total number of people in the labour force aged over 15 years.

How does it vary?

Unemployment rates for ISLHD follow a similar trend to the income measures. Unemployment rates within the Shoalhaven LGA are well above the NSW average, with only two PHAs with rates lower (Figure 14). In contrast, the Northern Illawarra performs relatively well. While there are four PHAs with unemployment rates above the NSW average, only the Berkeley–Warrawong–Windang PHA is significantly higher. In the Southern Illawarra, the Warilla PHA stands out as an area of concern, with all other PHAs are either below, or similar to the NSW average.

Figure 14: Unemployment rate



Source: PHIDU (ABS Labour Force Survey 2022)



4.3 Education

A strong and equitable educational foundation imparts knowledge, fosters essential life skills, critical thinking, and problem-solving abilities. This, in turn, empowers individuals to make informed decisions about their health and lifestyle choices. Access to quality education can break the cycle of poverty by increasing employment opportunities and income potential, reducing the stress associated with financial instability, and enhancing access to healthcare. Moreover, education is often linked to improved health literacy, which enables individuals to better understand health information, adhere to medical advice, and engage in preventive health behaviours. As a result, those with higher levels of education tend to lead healthier lives, with lower rates of chronic diseases, better mental health, and longer life expectancy.²⁰

How is it measured?

There are a number of ways to measure educational outcomes as people pass through the educational journey from schooling to tertiary education, and even post-graduate education. This report has chosen to highlight the proportion of people who left school at year 10 or below, or did not go to school. This is

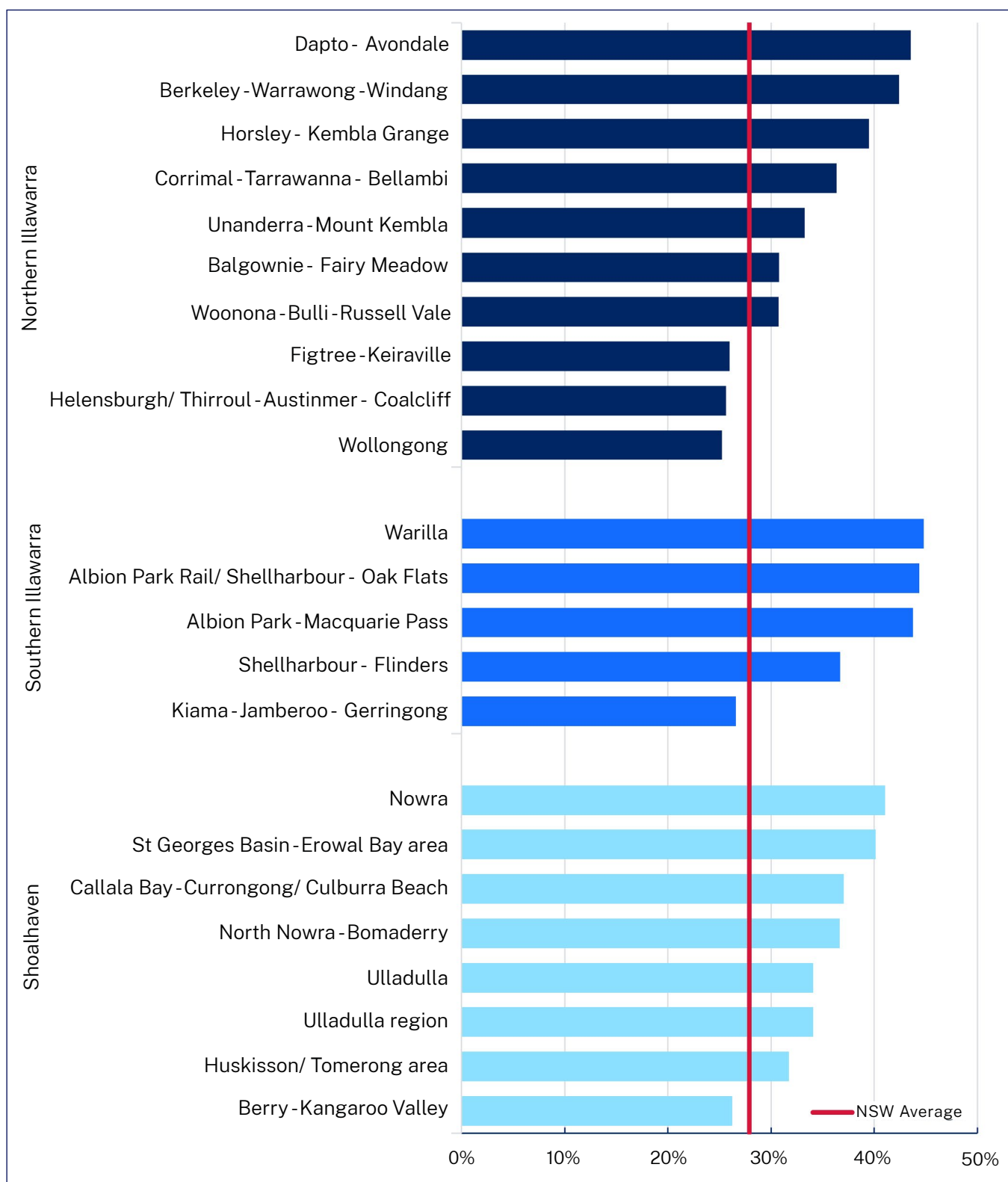
due to the strong correlation between finishing school and long-term social, economic, and health outcomes.

PHIDU has utilised data from the 2021 ABS Census, taking the number of people who left school at year 10 or below, or did not go to school, as a proportion of the total population aged over 15.

How does it vary?

Educational attainment also follows a similar trend to income and unemployment levels (Figure 15). Five PHAs in the District had over 40% of the population who had left school at year 10 or below or did not go to school: Dapto – Avondale PHA, Berkeley – Warrawong – Windang PHA, Warilla PHA, Albion Park/ Shellharbour - Oak Flats PHA, and Nowra PHA. Only five PHAs had a lower proportion than the NSW average of people who left school at year 10 or below or did not go to school.

Figure 15: People who left school Year 10 or below, or did not go to school (%)



Source: PHIDU (ABS Census 2021)

4.4 Housing



The affordability, stability and quality of housing directly impact physical and mental health. Overcrowding, poor sanitation, and structural deficiencies, can lead to a myriad of health problems, including respiratory illnesses, infections, and mental stress.²¹ Stable housing provides a sense of security and belonging, fostering social connections and community cohesion. It enables children to attend school regularly and perform better academically, setting the stage for lifelong health and economic success. In common with the rest of Australia, housing affordability has declined markedly over the last two to three decades in this region. This has impacted mortgage and rental households, those looking to purchase a dwelling, and those relying on social housing.

How is it measured?

A family or individual is deemed to be in housing stress if they are in a low-income bracket (bottom 40% of incomes) and pay more than 30% of their income on mortgage repayments or rent. (This standard measure of 'housing stress' is defined under the NSW Planning and Environment Act 1979.) Rental stress and mortgage stress are also measured separately. Housing affordability measures are derived from 2021 ABS Census data. (Given that housing affordability has declined markedly since the 2021 Census, housing stress is likely to be underrepresented in this report.)

The ability to purchase housing is measured as the proportion of housing sales affordable to first home buyers with a 20% deposit, on very low, low and moderate incomes.

Data is compiled by .id (informed decisions) using information from PropTrack.²² These data are available for the 12 months to June 2024 and provide an accurate representation of current trends.

As enshrined in Section 13 State Environmental Planning Policy (Housing) 2021, household income levels are defined as:

- Very low income: <50% median household income (Sydney or rest of NSW as applicable)
- Low income: 50-80%
- Moderate: 80-120%

How does it vary?

Housing stress in the region is dominated by those in 'rental stress' – i.e. affordable housing need is greatest among very low and low income renters.

On average, 34% of households are under rental stress, while only 8% are under mortgage stress (Figures 17 and 18). Rental stress across the Illawarra and Shoalhaven is broadly in line with other social determinants, highlighted by Berkeley – Warrawong – Windang PHA in the Northern Illawarra, and Warilla PHA in the Southern Illawarra.

Rental stress is most acute in the Shoalhaven, with all PHAs being above the NSW average.

The Ulladulla PHA and St Georges Basin - Erawal Bay PHA are of particular concern with over 40% of rental households facing stress.

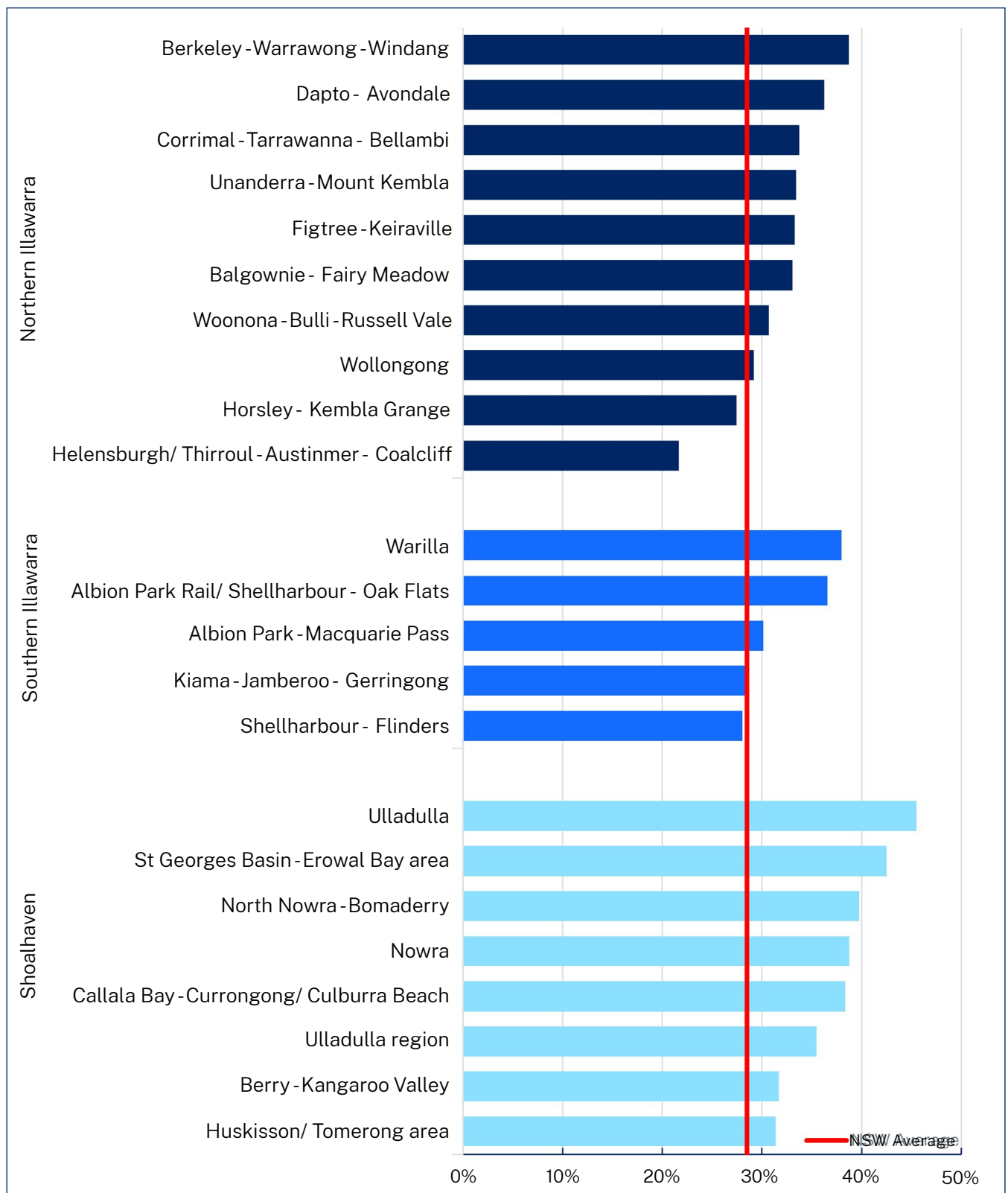
The ability to purchase housing within the region is also a significant challenge. There are few opportunities for those on a moderate household income to purchase two-bedroom dwellings, however when looking at three-plus bedroom dwelling this opportunity reduces drastically (Figure 16). In the year to June 2024 less than 3% of all three-plus bedroom dwellings were deemed affordable for those on a moderate income. For households on very low, or low incomes the opportunity to enter the property market is close to impossible.

Figure 16: Proportion of 3+ bedroom dwellings available to purchase by income group



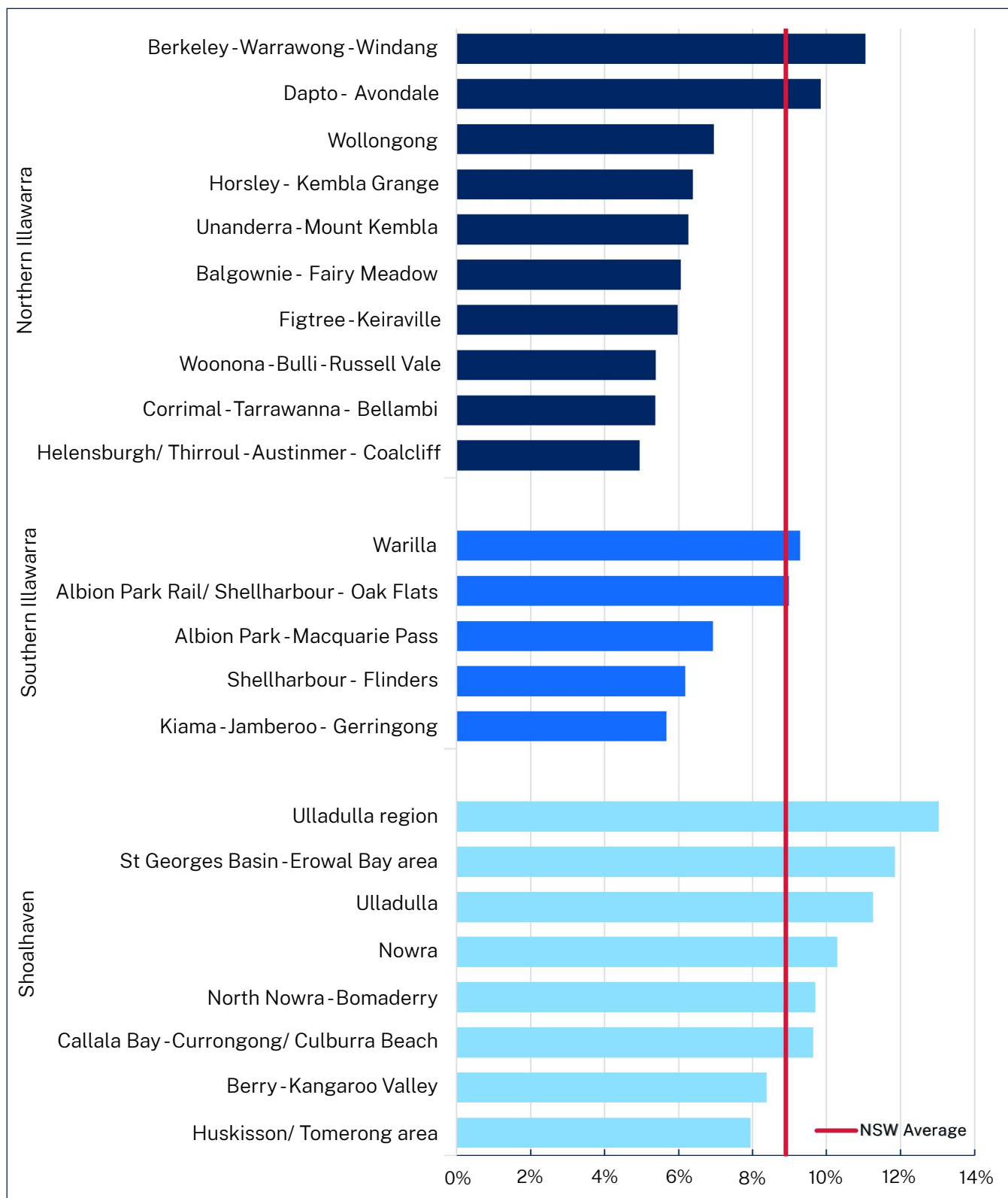
Source: .id via PropTrack

Figure 17: Proportion of households experiencing rental stress



Source: PHIDU (ABS Census 2021)

Figure 18: Proportion of households experiencing mortgage stress



Source: PHIDU (ABS Census 2021)

5. Physical and social environment

5.1 Liveability

A liveable place is:

- safe, attractive, inclusive, and environmentally sustainable;
- with affordable and diverse types of housing, public open space, local shops, health and community services, leisure and cultural opportunities;
- with opportunities for employment and education all accessible by convenient public transport, walking and cycling.

Urban liveability has economic, social, environmental and health co-benefits. People who live in more liveable communities are more likely to walk, cycle and use public transport and less likely to drive.

How is it measured?

The Australian Urban Observatory (AUO) is a digital planning platform that transforms complex urban data into liveability maps across Australia's 21 largest cities. This platform and maps are produced by AUO, RMIT University Melbourne. These cities include "Wollongong" comprising urban areas in the Illawarra, including Wollongong, Shellharbour and Kiama LGAs (but does not extend into the Shoalhaven).

The AUO definition of place-based liveability is based on an extensive review of evidence about ingredients within the urban environment which

influence health.²³ The AUO's Liveability Index was developed to inform policies and practices to create healthy and liveable communities.

The AUO maps have been reproduced in this report to provide a picture of variation across small areas, but readers are referred to the interactive maps produced by AUO for more detailed data, including suburb labels.

How does it vary?

In common with other urban areas, liveability varies widely within the Illawarra, but tends to be higher in the inner urban areas and lower in outer areas, particularly the most northern, southern and western parts of the region (Map 5).

Table 1 summarises and compares the Liveability Index and component domains, by LGA. The AUO maps highlight suburb-level variation, clearly not obvious by just comparing the summary measures at LGA level.

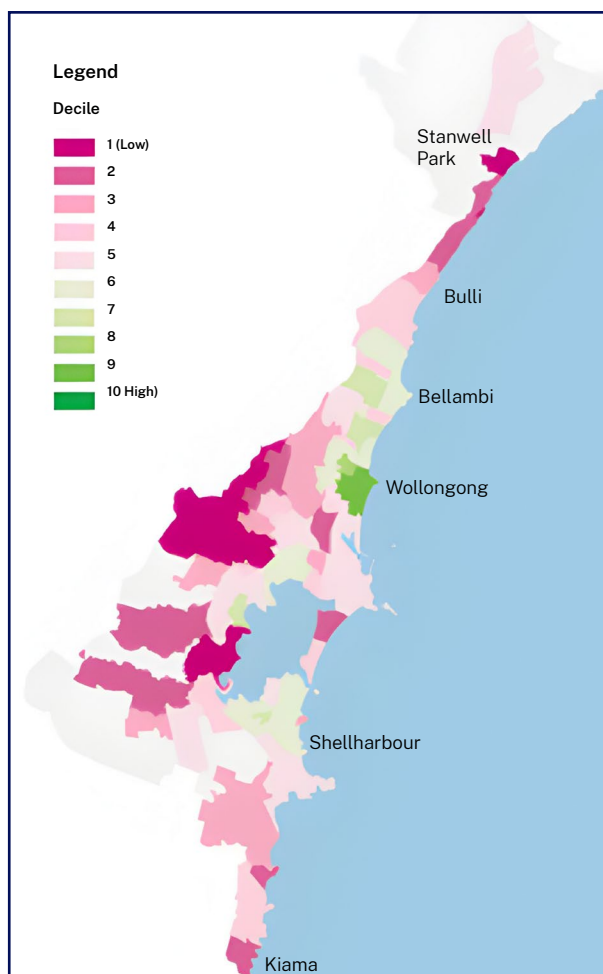
The Liveability Index combines six domains associated with health and wellbeing outcomes: walkability; affordable housing; public transport; large public open spaces; local employment; and access to social infrastructure (including sport and recreation facilities, health services, childcare services, schools, fresh food).

Table 1: Liveability Index and domains, by LGA within the Illawarra urban area²⁴

		Wollongong LGA	Shellharbour LGA	Kiama LGA
Liveability index	Composite	99.8	98.4	96.1
Walkability	Average = 0	-1.2	-1.2	-2.2
Social infrastructure^	Score/ 16	4.8	4.3	3.5
Public transport	% dwellings < 400m of stop	58.9%	53.8%	19.6%
Food environment	Distance to closest supermarket or greengrocer	1,519m	1,482m	1,847m
Alcohol environment	Average # off licence take-away outlets within 800m	1	0.5	0.8
Public open space	% dwellings <= 400m of large park	48.0%	40.2%	23.5%
Local employment	% employed persons who live & work in same local area	50.5%	42.1%	52.2%

Source: Australian Urban Observatory (AUO)

Map 5: Liveability index. Where do people have better access to ingredients within the urban environment which influence health?



Source: Australian Urban Observatory (AUO)



Walkability

Walkable suburbs enable people to be more active, improving levels of physical activity and chronic disease outcomes, including diabetes, COPD, ischaemic heart disease and stroke, cancer (colon, breast) and mental illness (depression, anxiety). Walkable suburbs discourage driving and encourage walking, cycling and active transport. Co-health benefits include those flowing from reductions in air pollution and road trauma.

How is it measured?

The AUO's composite Walkability Index includes measures related to:

- population needed to supply services and destinations: dwelling density
- places to walk to: access to daily living destinations
- a way to get there: street connectivity within a reasonable walking distance of home.

The Index uses data sourced from ABS Census 2021 and Transport for NSW.

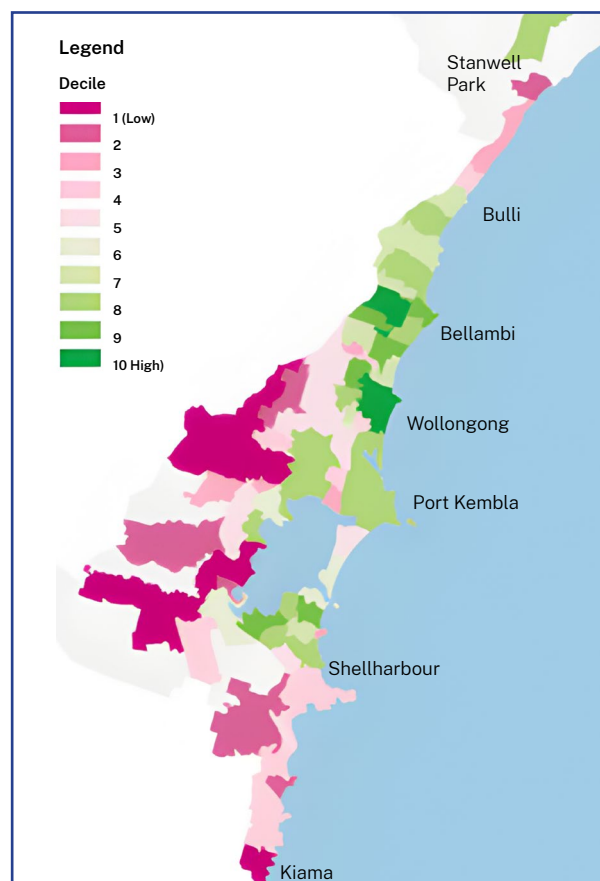
How does it vary?

Walkability in the Illawarra is lower, on average, than other Australian cities, and lower in the Kiama LGA than Wollongong and Shellharbour LGAs (Walkability indices -2.2, -1.2, and -1.2 respectively).

Walkability varies widely across suburbs within Illawarra LGAs, but is generally lower in the most northern, southern and western parts of the area (Map 6).

Map 6: Walkability index.

Where are the most walkable areas?



Source: AUO (ABS Census 2021, Transport for NSW)

Social infrastructure

Access to social infrastructure enables access to essential community services and resources (health, education, sport etc). It is linked to increased physical activity and wellbeing, improved social interactions and mental health outcomes.

How is it measured?

The AUO Social Infrastructure Index includes measures of access to 16 types of social infrastructure (at various recommended distances from dwellings):

- Childcare and education: childcare facilities, out of school hours childcare, primary and secondary schools
- Health and aged care: pharmacies, family and community healthcare, dentists and general practitioners, aged care facilities
- Community and sport: community centres, sporting facilities, swimming pools
- Culture and leisure: libraries, museums and galleries, cinemas and theatres.

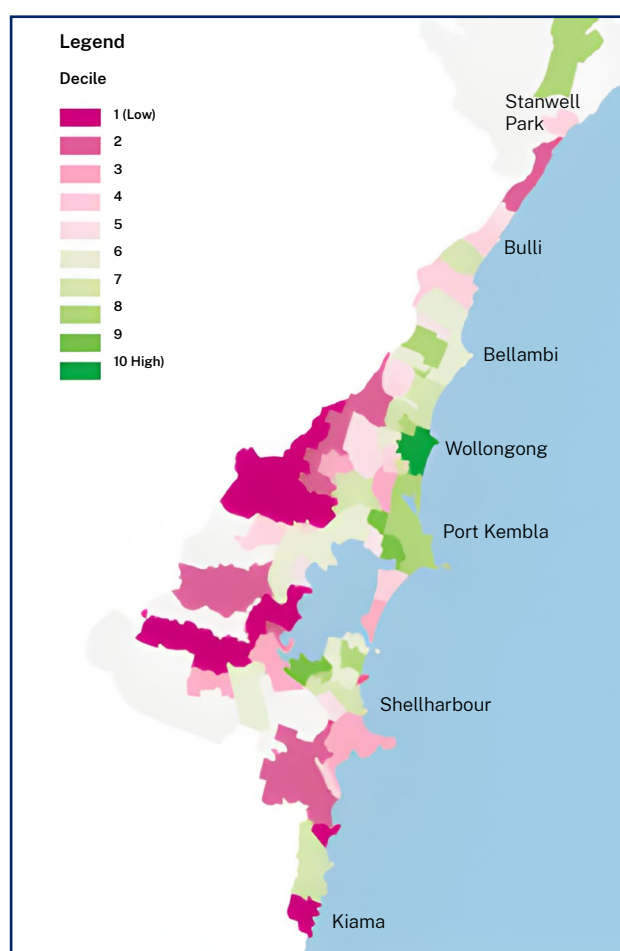
The Index uses data sourced from: ABS Census 2021; Australian Children's Education and Care Quality Authority 2021; Australian Curriculum, Assessment and Reporting Authority 2021; and HealthDirect Australia National Services Directory 2021 via AURIN Portal 2021.

How does it vary?

The average number of social infrastructure destinations accessible within recommended distances from dwellings across Illawarra urban areas is 5 out of a total of 16. This score is highest in Wollongong LGA (4.8) followed by Shellharbour LHA (4.3), and lowest in Kiama LGA (3.5).

Social infrastructure access varies widely across the Illawarra and even more so among the types of infrastructure (e.g. community and sport versus culture and leisure). Overall access is higher in inner urban areas and lower in outer areas, particularly the most northern (excluding Helensburgh), southern and western parts of the Illawarra (Map 7).

Map 7: Social infrastructure index. Where is social infrastructure most accessible in the Illawarra?



Source: AUO (ABS Census 2021; Australian Children's Education and Care Quality Authority 2021; Australian Curriculum, Assessment and Reporting Authority 2021; HealthDirect Australia National Services Directory 2021 via AURIN Portal 2021).



Public transport

Living close to regular public transport encourages walking, which provides a range of physical and mental health benefits. Proximity to public transport also promotes access to employment, education and services, including for people who might otherwise have restricted mobility - such as young people, older adults, people with disabilities, and people without private cars.

How is it measured?

The AUO measure is the percentage of dwellings within 400m of public transport stops (equates to 5-minute walk) with an average service interval of ≤ 30 minutes on weekdays 7am-7pm.

The Index uses data sourced from ABS Census 2021 and Transport for NSW.

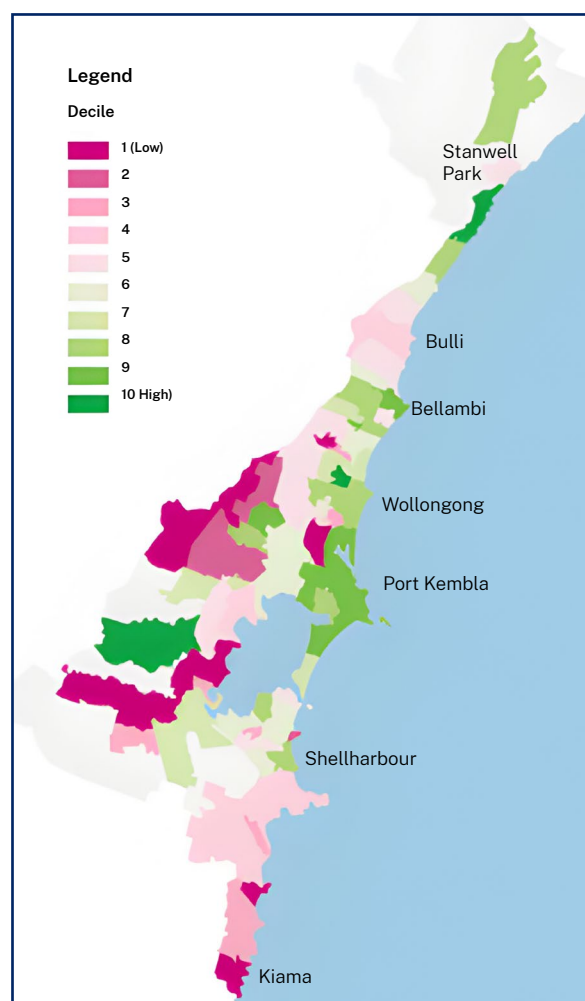
How does it vary?

Overall, 56% of residences in Illawarra urban areas are close to regular public transport, with this proportion being much higher in the Wollongong LGA (59%) and Shellharbour LGA (54%) than Kiama LGA (20%).

But this varies considerably across suburbs. Residents in the most southern and some western parts of the Illawarra have much lower access to regular public transport (Map 8).

Map 8: Public transport access.

Where is public transport the most accessible in the Illawarra?



Source: AUO (ABS Census 2021, Transport for NSW)



Food environment

Easy access to affordable fruit, vegetables, and healthy food within a walkable or cyclable distance means people eat healthier and are more active. Active transport reduces the risk of chronic disease and congestion.

How is it measured?

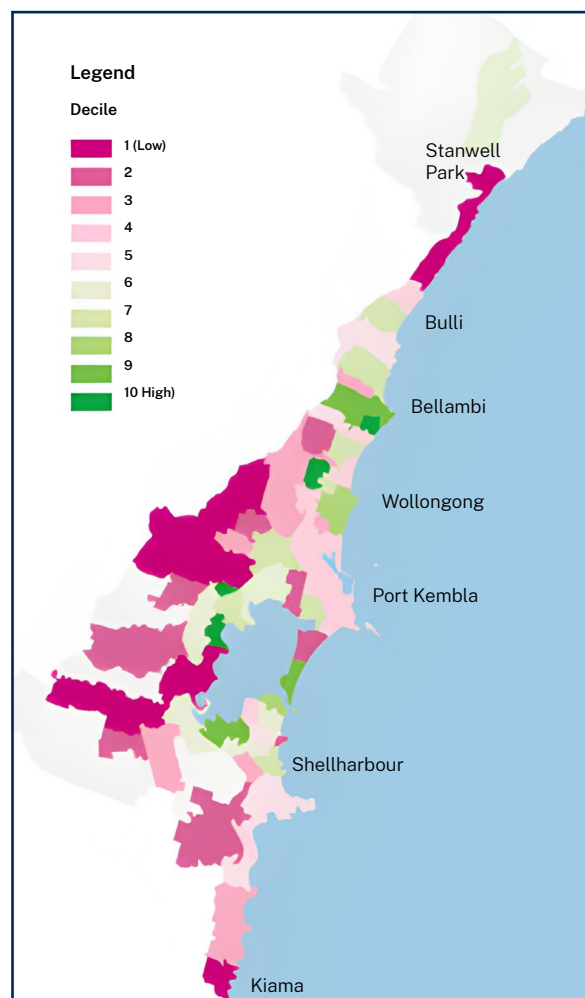
The AUO measures fresh food access as the average distance to any type of supermarket by pedestrian accessible road network. The data are sourced from ABS Census 2021.

How does it vary?

The average distance to a supermarket in the Illawarra is 1526m. Households in the Kiama LGA, on average, live further from supermarkets (1,847m) than those in Wollongong LGA (1,519m) and Shellharbour LGA (1,482m).

However, this varies widely between suburbs, with people living further from supermarkets in the most northern, southern and western parts of the Illawarra (and, not surprisingly, in areas further from major shopping areas) (Map 9).

Map 9: Food environment. How far away is a shop selling fresh food?



Source: AUO (ABS Census 2021, OpenStreetMap 2018)



Public open space

Parks and greenspaces support health, biodiversity and cooling. Public parks attract people for active and passive recreation, so promote the physical, social and mental health of local people while nurturing local ecology and biodiversity.

How is it measured?

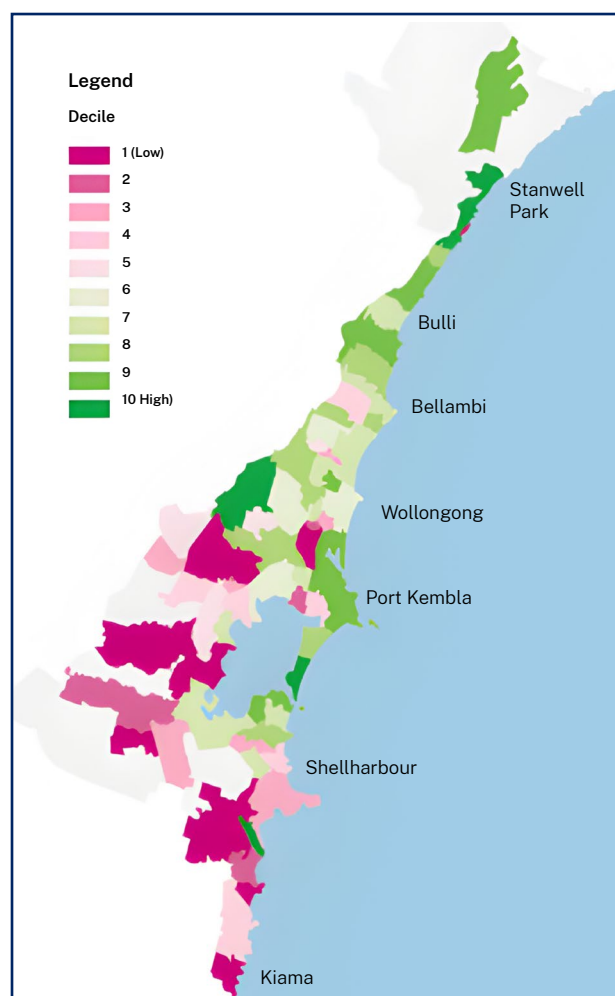
The AUO measures access to public open space as the percentage of dwellings within 400m (5-minute walk for most people), of urban parks ≥ 1.5 hectares, by a pedestrian accessible road network. The data are sourced from ABS Census 2021 and OpenStreetMap 2018.

How does it vary?

Overall, 45% of residences are within 400m of public open space in Illawarra urban areas. This proportion is much higher, on average, in Wollongong LGA (48%) and Shellharbour LGA (40%) than Kiama LGA (24%).

However, this varies widely between suburbs, being much lower in most of the western and southern suburbs (Map 10).

Map 10: Public open space. How far do people live from green spaces?



Source: AUO (ABS Census 2021, OpenStreetMap 2018)



Local employment

Accessible employment provides financial resources for individuals and families. Accessible local employment reduces car use and traffic congestion, and increases active transport (walking, cycling, and public transport) and work-life balance. Accessible local employment has been associated with improved self-reported health.

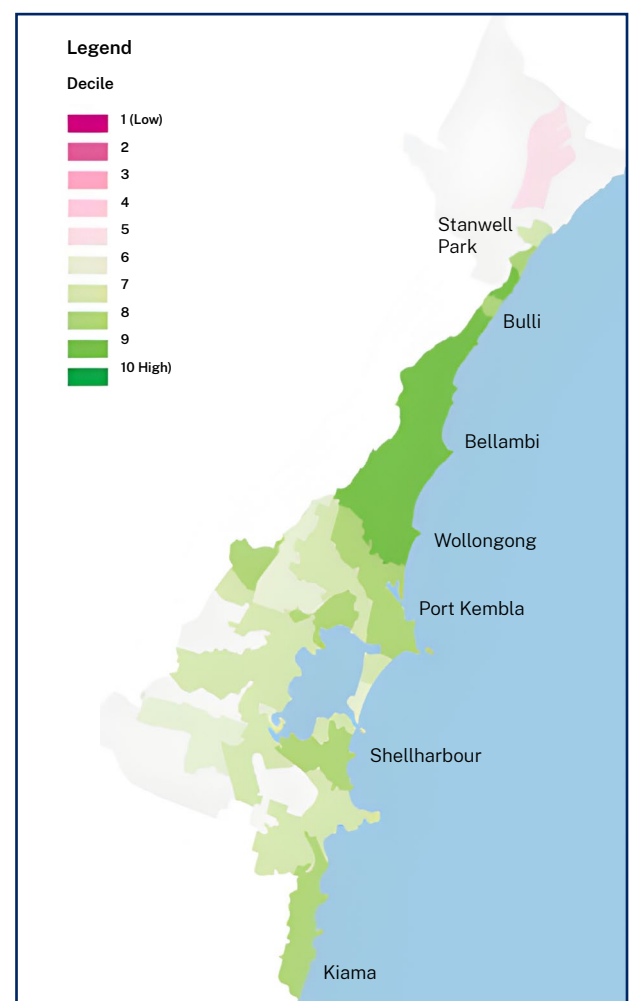
How is it measured?

The AUO measures access to local employment as the percentage of residents living in ABS Statistical Area 1s (approximately 400 people), working within the local Statistical Area 3 (approximately 30,000-130,000 people). The data are sourced from ABS Census 2021.

How does it vary?

Overall, in Illawarra urban areas, 49% of employed people work locally. This is highest in Kiama LGA (52%), followed by Wollongong LGA (51%), and lowest in Shellharbour LGA (42%). There is considerable variation between suburbs, with the lowest proportion in Helensburgh (not surprisingly given proximity to Sydney, and highest proportion in other northern suburbs (Map 11).

Map 11: Local employment. How many people work locally (i.e. in the same SA3)?



Source: AUO (ABS Census 2021)



5.2 Social connectedness and isolation

Social connectedness is good for physical and mental health and wellbeing, while social isolation and exclusion adversely affect health and wellbeing. Social isolation means having few social relationships or roles and infrequent social contact. It has been linked to mental illness, emotional distress, suicide, dementia, premature death and poor health behaviours (smoking, physical inactivity and poor sleep) –as well as biological effects, including high blood pressure and impaired immune function. Conversely, more frequent social contact is associated with better overall health and wellbeing.

Loneliness is a subjective negative feeling of lack of connection and a desire for more positive social relationships and overlaps with but is distinct from “social isolation”. Loneliness has also been linked to premature death, poor physical and mental health and general life dissatisfaction.²⁵

Lone person households

Living alone does not necessarily equate to social isolation or loneliness. For example, men living alone report more loneliness than men living with others, although this is not the case of women.²⁵

However, this measure is important given the different social and healthcare needs that may be required by people living alone.

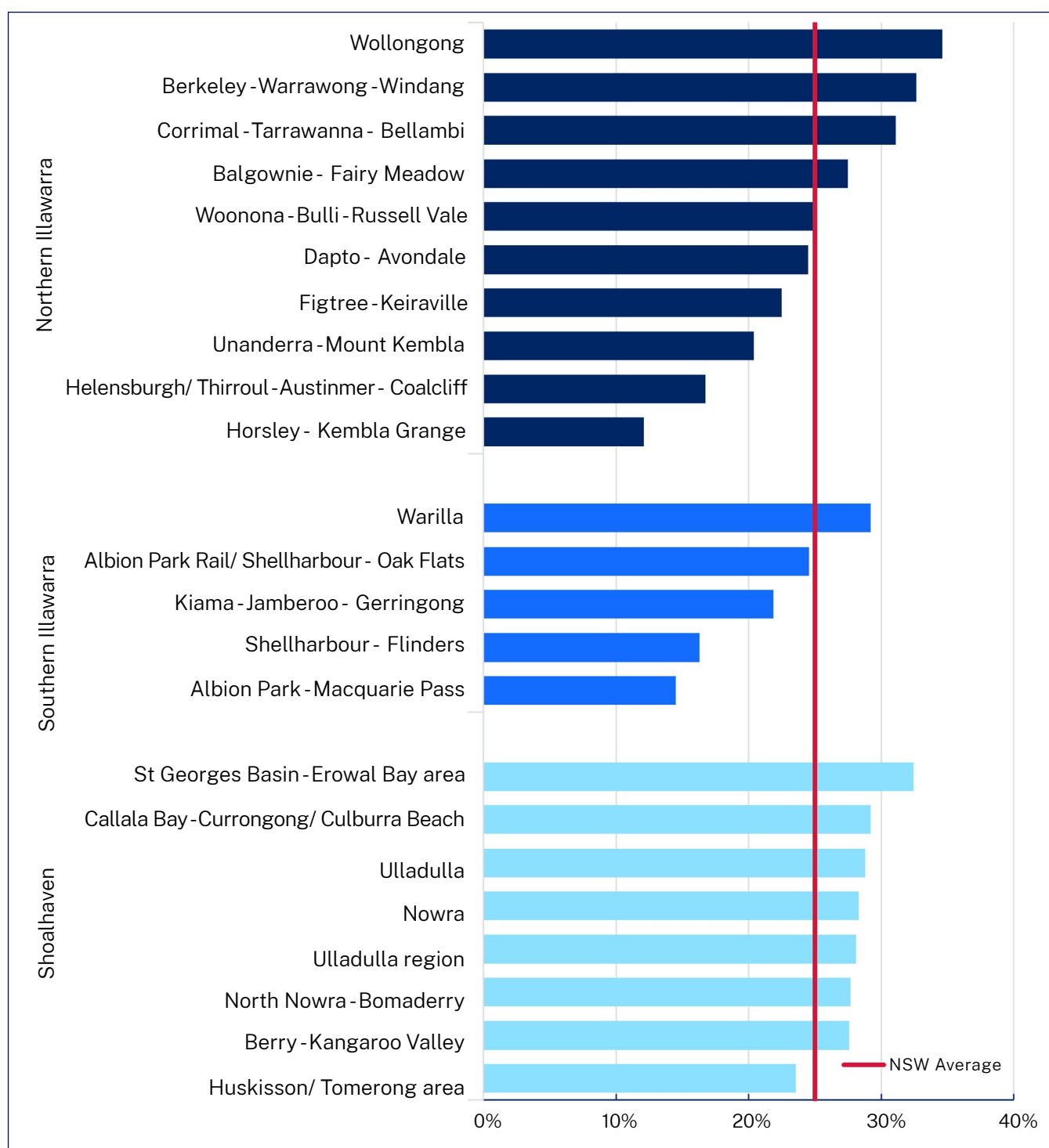
How is it measured?

The ABS defines a lone person household as a private dwelling with only one person aged 15 years and over. Data for this report is sourced from the 2021 ABS census and accessed via PHIDU.

How does it vary?

There is significant disparity of lone person households within the Illawarra, although the majority of Illawarra PHAs have proportions of lone person households below the NSW average, reflecting areas of family housing (Figure 19). The Wollongong PHA has the highest proportion across the District predominantly due to high density housing catering for more one and two bedroom dwellings. The proportion of people living alone across the Shoalhaven is relatively consistent and above the NSW average. This may be at least partly explained by the Shoalhaven’s ageing population.

Figure 19: Proportion of lone person households



Source: PHIDU (ABS Census 2021)



Volunteering

The Australian Institute of Health and Welfare considers determinants of community and social engagement to include adults who volunteer, as it facilitates being involved in the community and developing meaningful connections.²⁶

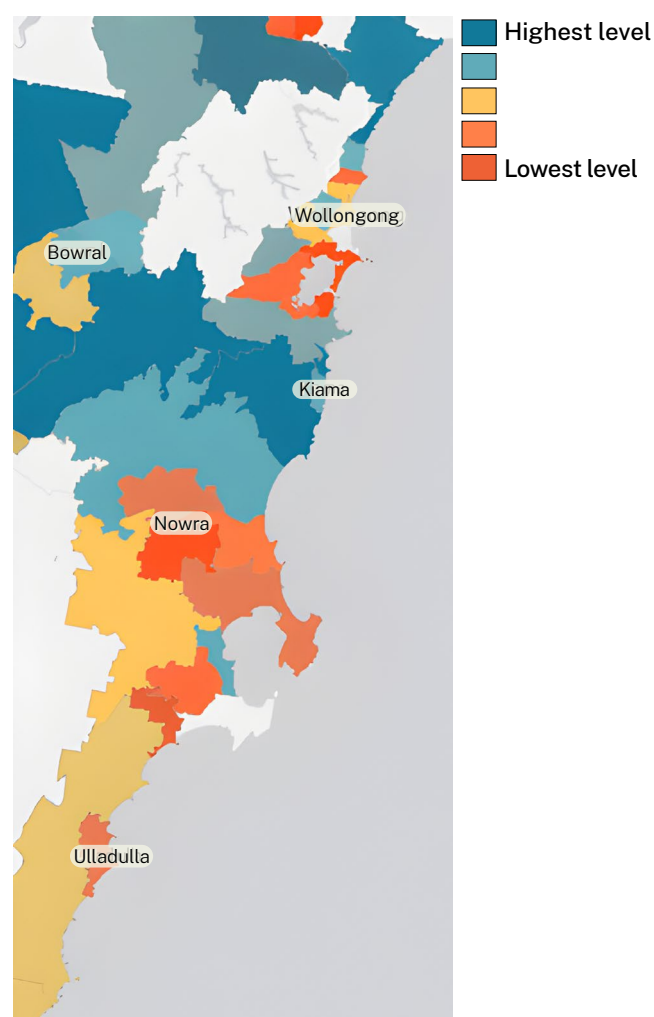
How is it measured?

In the Jesuit Social Services' Dropping off the Edge (DOTE) report, using ABS Census data, volunteering is measured as the proportion of people aged 15 years and over who spend time doing unpaid voluntary work through an organisation or group in the previous 12 months. This measure is reported and mapped by SA2, as an indicator of social connection and distress.²⁷

How does it vary?

There is significant disparity in volunteering levels across the region. As shown in Map 12, the highest levels of volunteering (blue shading) are generally in the least socioeconomically disadvantaged areas and lowest levels (orange) in the more disadvantaged areas.

Map 12: Proportion of adults who volunteer.
How many people spent time volunteering?



Source: Jesuit Social Services' Dropping off the Edge Report (ABS Census)



5.3 Alcohol and gambling access

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Alcohol

Access to alcohol is linked to an increase in harmful consumption and alcohol-related violence. Alcohol-related health conditions include: mental health: dependence, depression, anxiety; brain: cognitive impairment; cardiovascular: high blood pressure, arrhythmia, cardiomyopathy; liver: cirrhosis, hepatitis, and a range of cancers: mouth, throat, oesophagus, liver, colorectal and breast.

Fewer alcohol outlets located within disadvantaged areas has been associated with enhanced self-reported health status.

How is it measured?

The AUO measures alcohol access as the distance of dwellings, via a pedestrian accessible road network, to takeaway alcohol outlets (off-licence bottle shops and supermarkets). Indicators include the average number of outlets within 800m of dwellings. The data are sourced from ABS Census 2021, OpenStreetMap 2018 and State liquor licensing authorities 2021.

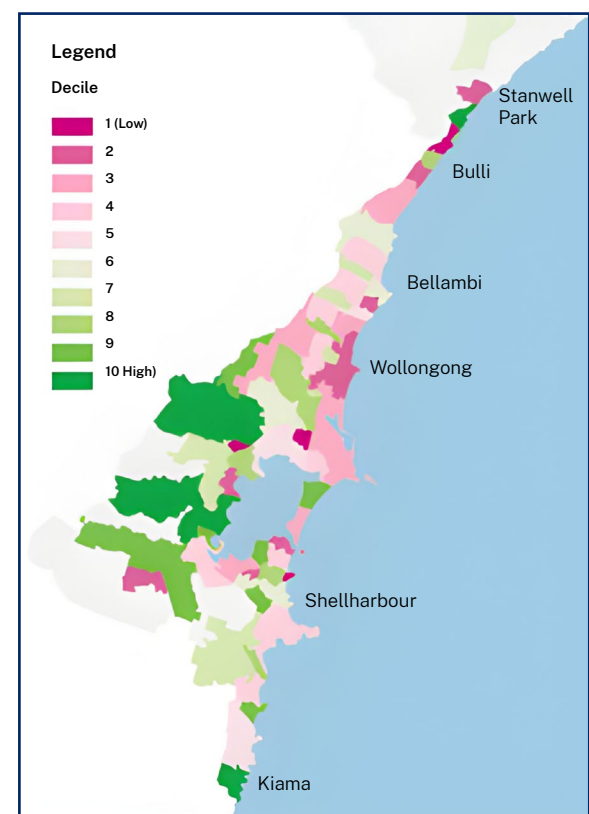
How does it vary?

In the Illawarra region, the average distance to a takeaway alcohol outlet (off-licence) is 1,051 metres. (Notably, this is closer than the average distance to fresh food at a supermarket, i.e. 1526m). Based on the number of take away outlets within 800m of dwellings, the highest alcohol access is in Wollongong LGA (1 outlet), followed by

Kiama LGA (0.8) and Shellharbour (0.5). However, there is wide variation by suburb, with the highest access along most coastal suburbs north of Lake Illawarra, especially in and near the Wollongong CBD and major shopping areas (Map 13).

Map 13: Alcohol access within 800m.

How close people live to bottle shops (off-licence) outlets?



Source: AUO (ABS Census 2021, OpenStreetMap 2018 and State liquor licensing authorities 2021).



Gambling

Gambling is increasingly acknowledged as a significant public health issue, given its far-reaching impacts on individuals, families, and the community. It can lead to significant harm, extending beyond financial losses to include mental, emotional, and social impacts.²⁸ While gambling takes many forms, this report will specifically focus on access to Electronic Gaming Machines (EGMs), commonly referred to as poker machines. The design and widespread availability of EGMs make them a major contributor to gambling-related harms. They are particularly addictive due to their fast-paced gameplay and reward mechanisms, such as flashing lights, sound effects, and near-miss scenarios. These features are designed to keep players engaged, often leading to compulsive gambling behaviours. The normalisation of gambling through the widespread availability of EGMs, particularly in lower-income areas, exacerbates the problem. Vulnerable populations are disproportionately affected, as these communities are more likely to have limited financial resources and less access to support services.

How is it measured?

Liquor and Gaming NSW provide monthly licensed premises data and bi-annual gaming machine reports.²⁹ This report has utilised

population data from the 2021 ABS census and the NSW Department of Planning's Population Projections to examine the availability of EGMs on a per capita basis at the SA2 level.

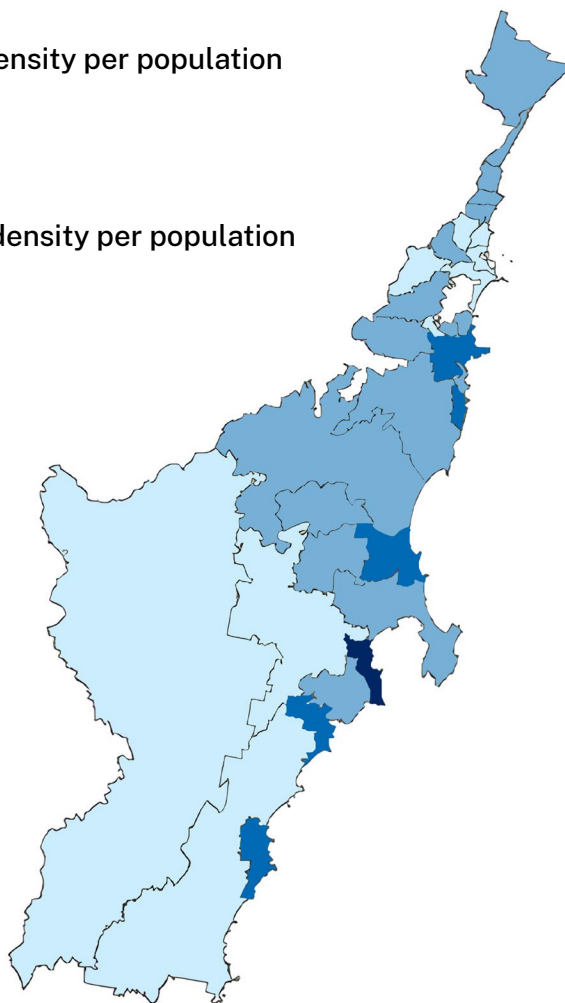
How does it vary?

As of May 2024, ISLHD had 13.2 EGMs per 1,000 people, this is higher than the 10.9 across NSW. This excess is most pronounced in the Shoalhaven where there are 15.1 EGMs per 1,000 people, followed by the Northern Illawarra (12.8) and the Southern Illawarra (11.8). In the six months from 1 June 2023 to 30 November 2023, clubs and hotels across the District made a net profit from EGMs of \$186.4 million. Map 14 illustrates the per capita availability of EGMs across SA2 regions. However, the close proximity of many SA2s within the District may not necessarily tell the complete story when it comes to EGM accessibility.



Map 14: EGM population density

-  Lowest EGM density per population
- 
- 
-  Highest EGM density per population





5.4 Community safety and violence

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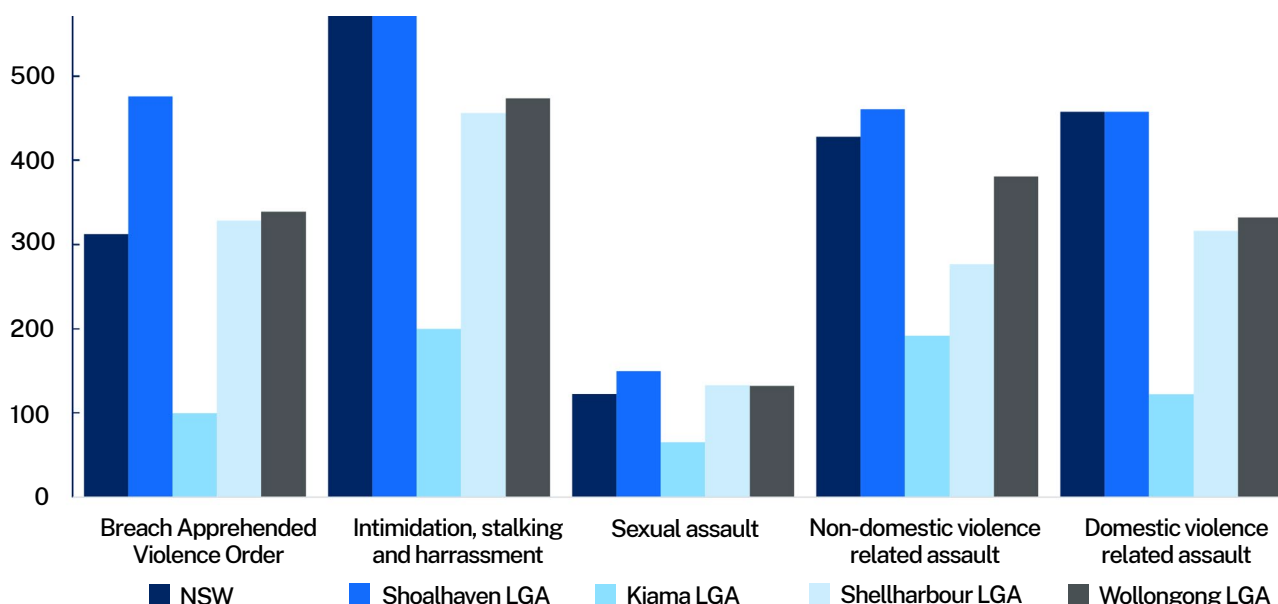
Community safety is higher and crime levels lower, on average, in areas of socioeconomic advantage. These associations are complex, with the most common drivers of crime-prone neighbourhoods being poverty, income inequality and unemployment.³⁰

Domestic and sexual violence is a major health and welfare issue. In April 2024 the Prime Minister labelled the increases in homicides of women and children as a national crisis.³¹ Findings from the Australian Longitudinal Study on Women's Health reveal that women who have experienced domestic violence consistently report significantly poorer health outcomes across their lifespan and in all age groups.

These impacts span multiple domains, including general health, physical functioning, bodily pain, and mental health.³² Victims suffer immediate and long-term health effects. For women aged 25–44 years, intimate partner violence contributes more to their burden of disease (impact of illness and premature death) than any other risk factor.

While domestic and sexual violence occurs across all ages, socioeconomic and demographic groups, women and children are mainly affected and men are the vast majority of perpetrators. Some women are at particularly high risk – young, pregnant, Indigenous women, and women with a disability.

Figure 20: Crime incidents per 100,000 persons



Source: BOCSAR (2022-23)



How is it measured?

The NSW Bureau of Crime Statistics and Research (BOCSAR) provides data on violent crime reported to, or detected by, NSW Police. Information is provided on 13 major offence categories, including the most serious violent offences, plus a more detailed list of 62 specific offence types.

Selected crime indicators related to safety and violence in the Illawarra and Shoalhaven are shown in Figure 20 and Table 2:

- Violence related assault –domestic and non-domestic
- Intimidation, stalking and harassment
- Sexual assault
- Breach Apprehended Violence Order

How does it vary?

Within the Illawarra Shoalhaven region, Shoalhaven LGA records the highest rates for selected crimes, with Breach of Apprehended

Violence Orders occurring at rates over 50% higher than the NSW average. In contrast, Kiama LGA reports the lowest rates, with domestic violence-related assaults more than 70% below the state average.

Consistent with trends in NSW as a whole, recorded rates of sexual assault, breach of an apprehended violence order, and intimidation, stalking and harassment increased significantly over the last decade in all ISLHD LGAs, excluding Kiama LGA.

The highest annual average increases were for sexual assault (+9.2% p.a., Wollongong LGA) and breach of an apprehended violence order (+8.1% p.a., Shoalhaven LGA). In addition, Domestic violence related assault rates increased significantly in the Shoalhaven LGA (+2.8% p.a.).

Non-domestic violence related assault rates did not change significantly, in any ISLHD LGA or NSW as a whole.

Table 2: Recorded crime incidents July 2014. June 2024 (annual average % change in rate per 100,000).

Offence	NSW	Wollongong	Shellharbour	Kiama	Shoalhaven
Domestic violence related assault	2.8%	⇒	⇒	⇒	2.8%
Non-domestic violence related assault	⇒	⇒	⇒	⇒	⇒
Sexual assault	8.4%	9.2%	8.2%	nc	6.4%
Intimidation, stalking and harassment	5.2%	3.0%	3.3%		5.0%
Breach Apprehended Violence Order	7.1%	6.6%	5.8%	nc	8.1%

⇒Trend is not significant at 0.05 level. Red shaded cells indicate the increasing trend is significant.

NC Trend is not calculated (nc) due to small numbers (at least one 12-month period had less than 20 incidents).

Source: NSW Bureau of Crime Statistics and Research (2024). Statistics and Dashboards. Retrieved from bocsar.nsw.gov.au

5.5 Green canopy

Green canopy helps to modulate temperatures, reduce flooding risk, reduce pollution (carbon, particulate matter and noise) and promote biological diversity. Increased green canopy reduces urban heat island effects. These environmental benefits have been shown to have social and public health benefits. Communities with lower levels of green canopy are more vulnerable to the health impacts of climate change, with children and older people at highest risk. Increasing green canopy is an important climate change adaptation strategy.

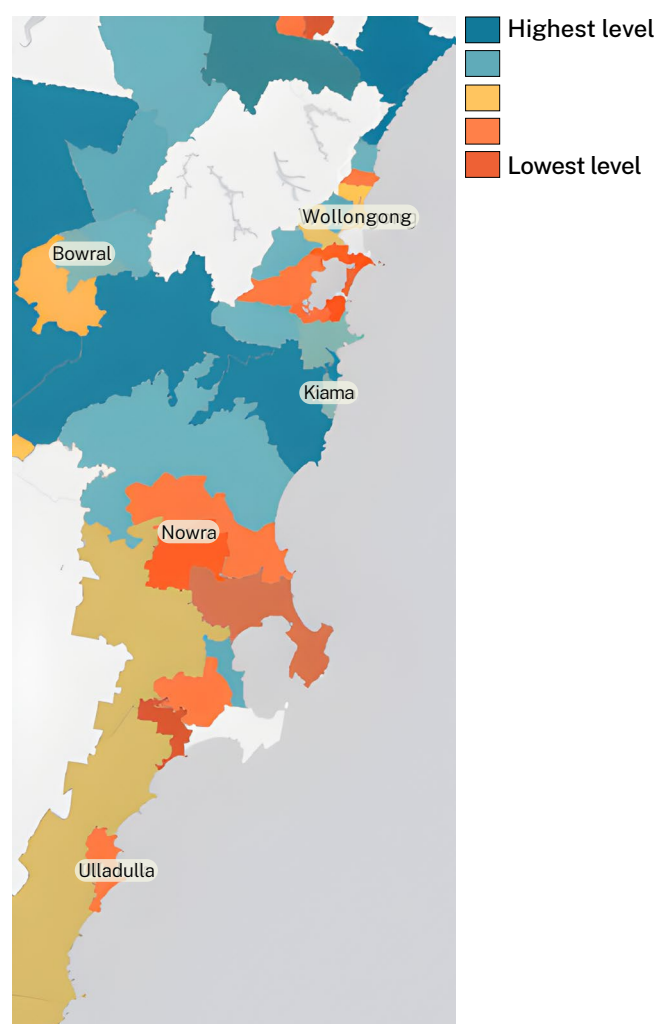
How is it measured?

In the Jesuit Social Services' Dropping off the Edge (DOTE) report, using NCI National Research Data Collection 2017 data, green cover is measured as the proportion of SA2 with considerable wood vegetation (on a 200m grid).

How does it vary?

Green canopy varies considerably across the region, but is generally lower (orange shading) in the more socioeconomically disadvantaged areas, in both the Illawarra and Shoalhaven. Notably, suburbs just west of Lake Illawarra lack both green cover (Map 15) and public open space (Map 10).

Map 15: Green cover. What proportion of the area has considerable wood vegetation?



Source: Jesuit Social Services' Dropping off the Edge Report (NCI National Research Data Collection 2017)



5.6 Climate risks

Climate change impacts can worsen symptoms of many health conditions, e.g. heart disease, mental health, asthma and other lung conditions. Vulnerable groups at very high risk include socioeconomically disadvantaged; rural and geographically isolated communities; people with disabilities; children and older people; pregnant women and unborn children; Aboriginal people.

Climate change is already having consequences on health and wellbeing. In the Illawarra Shoalhaven region, increased impacts are expected particularly through increased temperatures, with heat stress and fire risks. Sea-level rise is expected to impact ecosystems, infrastructure and assets, land-use and productivity, especially in low lying coastal areas (e.g. near Lake Illawarra and Shoalhaven River).

The 2019–2020 bushfires had huge impacts on communities, infrastructure and natural ecosystems. Poor air quality from the bushfires caused at least 23 premature deaths, as well as 30 cardiovascular disease hospitalisation and 107 respiratory hospitalisations. Over 320,000 hectares of the region were burnt and 10,880 buildings impacted, including 286 homes destroyed. Severe fire danger days, which create the underlying conditions for large-scale bushfires, are expected to become more common in the future.³⁴

Climate change impacts on health include those related to:³³

- **Heat:** Increasing temperatures, and more frequent and intense heatwaves, can result in more heat-related illnesses and deaths, particularly among vulnerable people. Warmer temperatures can worsen heart and lung disease symptoms. Increasing temperatures and changing rainfall can also change distribution of vector-borne diseases (e.g. by mosquitoes).
- **Extreme weather:** These events affect service delivery, with potential increases in ED presentations and hospitalisations, which may coincide with power outages, and difficulties with communications and transport. Blackouts can affect people's ability to stay safe and comfortable (e.g. stay cool during a heatwave). Mental health can be impacted directly, e.g. following floods.
- **Rainfall:** Heavy rainfall and floods can lead to sewage overflows, contaminated drinking water, and disease outbreaks. Reduced rainfall and droughts can increase some water-borne pathogens and make water quality control more difficult. "Extreme weather events such as storms, shifting rainfall patterns, and rising temperatures, can negatively impact local food production and quality, leading to higher prices and reduced access to nutritious food. In regional communities, prolonged drought and declining incomes further heighten vulnerability, contributing to increased risks of depression and suicide.

- **Air quality:** Climate change can cause poor air quality, with negative health outcomes. More frequent and intense bushfires produce more smoke and poor air quality days. People with asthma and other lung conditions, diabetes and heart conditions are most at risk. Climate change can also affect pollen production, which can worsen asthma and hay fever.

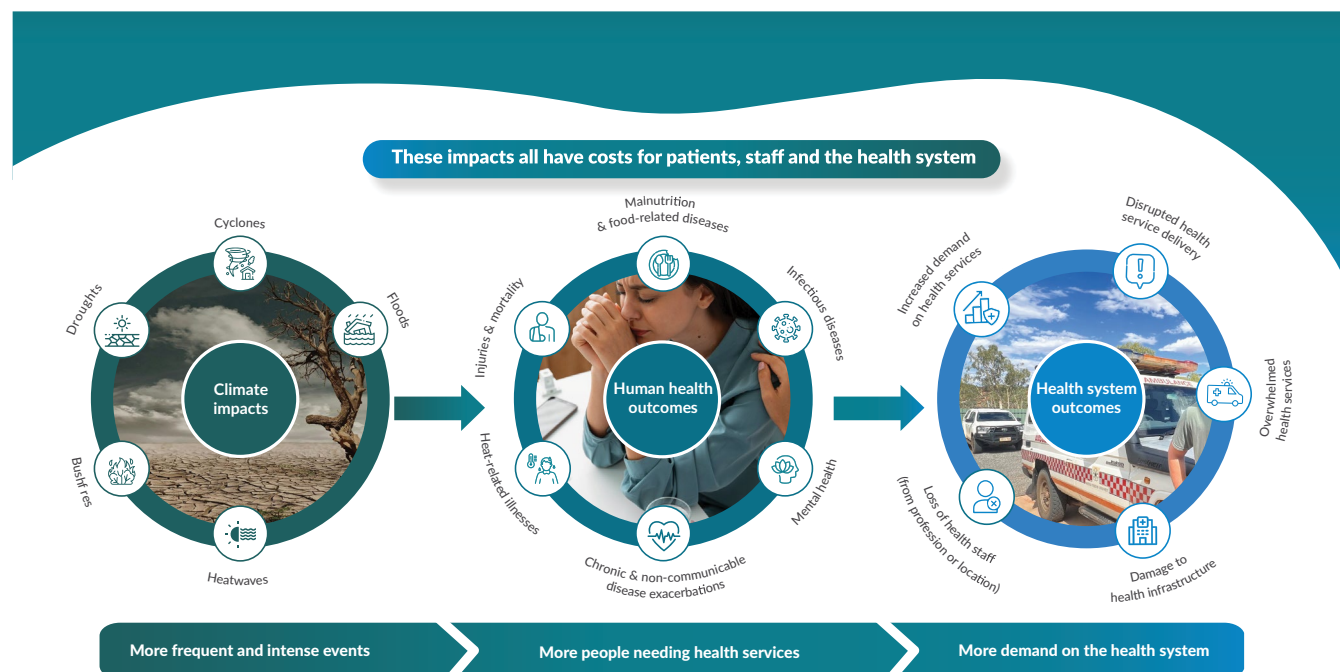
How is it measured?

- **NARCLiM climate change projections:** AdaptNSW's Interactive climate change maps present data from the NSW and Australian Regional Climate Modelling (NARCLiM) project for projected changes in heat (average temperature, hot days 35°C and above, cold nights under 2°C), rainfall, and severe fire weather days (Forest Fire Danger Index > 50) to 2100 (relative to baseline averages in 1990-2009). In this report, we focus on increases in heat (hot days) and severe fire danger days, which

represent the greatest climate health risks in our region. Map 16 reproduces AdaptNSW maps with projections under low and high emissions scenarios to 2090.³⁵

- **Climate Council (property) hazard projections:** The Climate Council's Climate Risk Map of Australia is an interactive map of climate vulnerable places, with projections of hazards to property, under low, medium and high risk scenarios, related to bushfire, flooding, coastal inundation and extreme wind, in 2030, 2050 and 2100.³⁴ In this report we focus on bushfire (and total) hazards, given that the lion's share of climate property risk across our region stems from bushfire. Map 17 reproduces the Climate Council maps of estimated proportion of properties at "medium risk" in the near future (2030) under the medium emissions scenario. (Medium risk homes are defined as having annual damage costs equivalent to 0.2-1% of the property replacement cost and are at risk of being underinsured).

Figure 21: Impacts of climate change on human health and the health system



Reproduced from NT Government's NT Health Sustainability and Climate Adaptation Strategy 2024 – 2030. Accessed from <https://health.nt.gov.au>.

How does it vary?

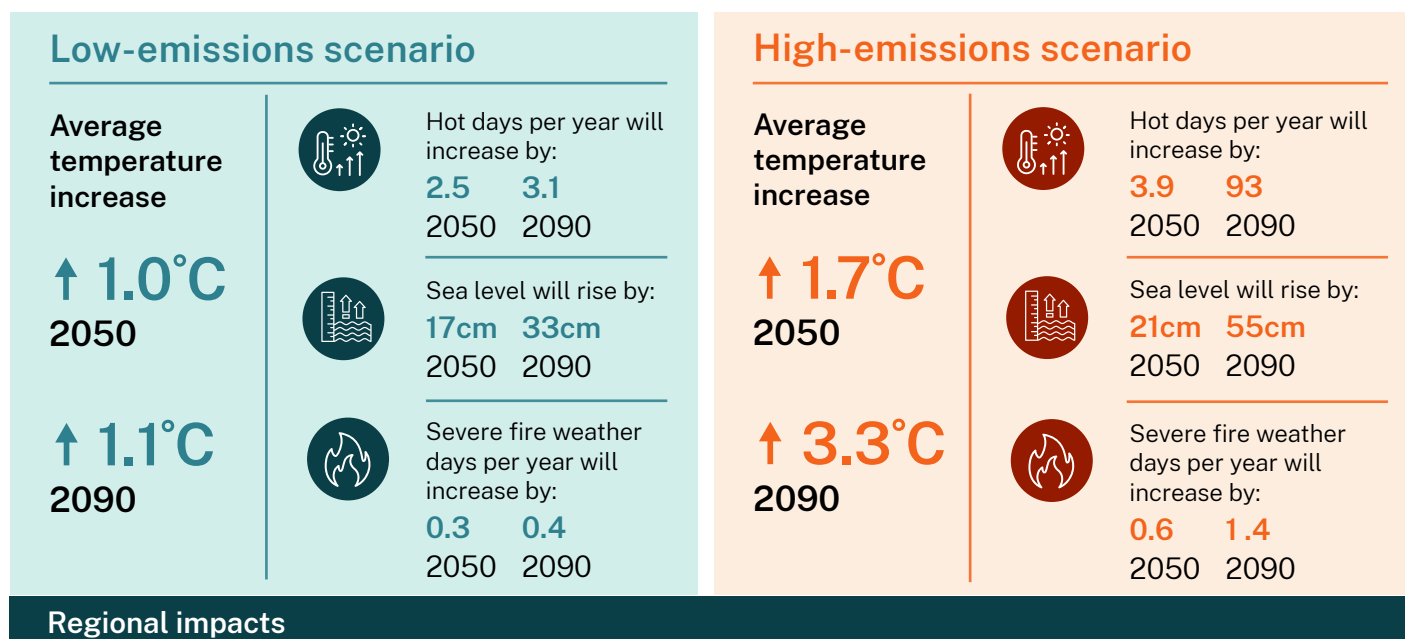
The infographic below by AdaptNSW summarises projected changes in climate, based on the NARClIM projections, averaged across the Illawarra Shoalhaven region (Figure 22). Average temperature increases are expected to be fairly uniform across the region, due to the moderating influence of the ocean. However, as shown in Map 16 increases in hot days and severe fire weather days will vary considerably, being much higher in some inland areas:

- **Hot days:** are less common along the coast (e.g. Kiama, baseline average 1 hot day per year) than further inland (e.g. Nowra and Morton National Park, 3 hot days). The greatest increases are projected inland –

by 2090 under a high emissions scenario an additional 9.5 hot days per year are projected in inland areas (Nowra) and 4.1 days in coastal areas (Ulladulla).

- **Severe fire weather days:** are lower in coastal areas, and more common in inland bushland areas. While the regional baseline average was 0.3 days per year, the peak average of 3.1 days was recorded in 2013 and 2.4 days in 2019 (and 11 days at Nowra). The greatest increases are projected for Nowra and inland (e.g. Morton National Park), with only small increases along the coast (e.g. Huskisson, Ulladulla). By 2090, under a high-emissions scenario, severe fire days are projected to increase in Huskisson from 0.6 to 1.4 days, and Nowra from 1.9 to 3.8 days.

Figure 22: NARClIM climate change projections for the Illawarra Shoalhaven region



Regional impacts



Isolated coastal towns

Increased severe fire weather



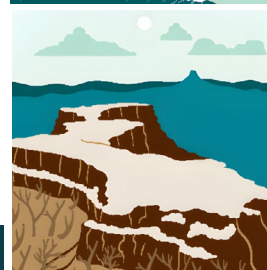
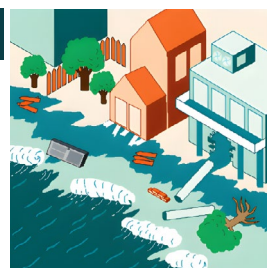
Inundated by rising sea levels

Low-lying flood plains



Coastal settlements

Inundated by rising sea levels



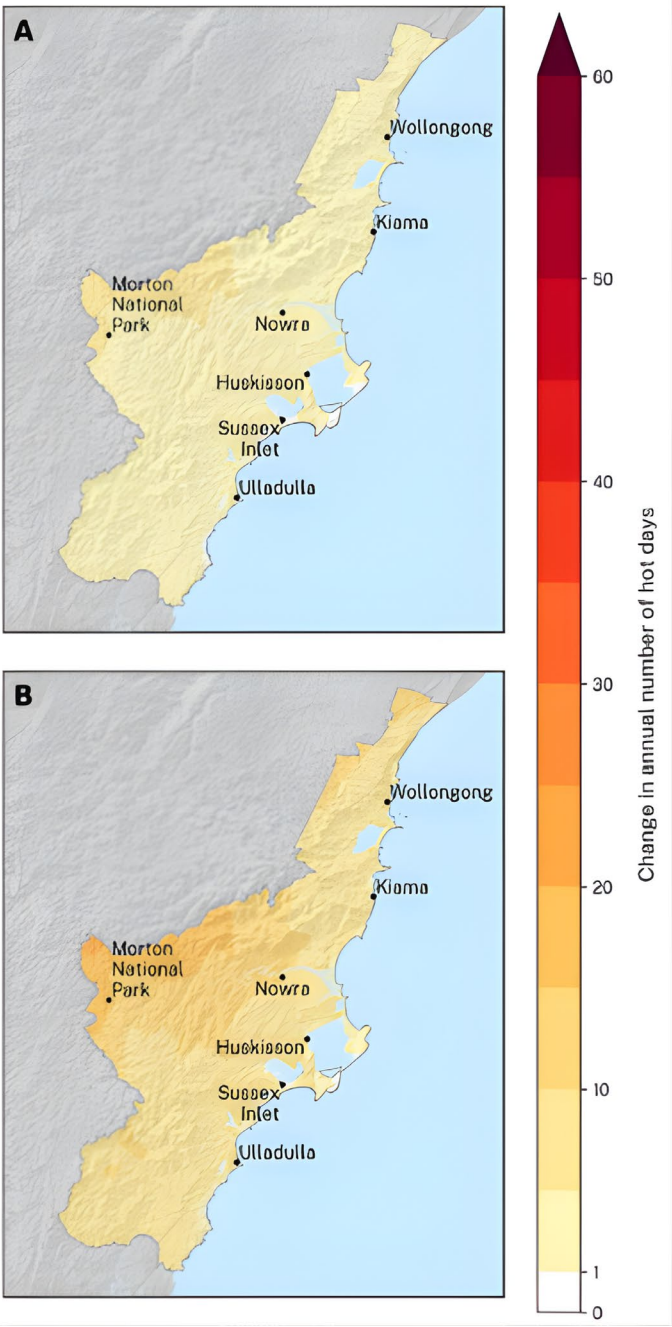
Increased severe fire weather

National parks

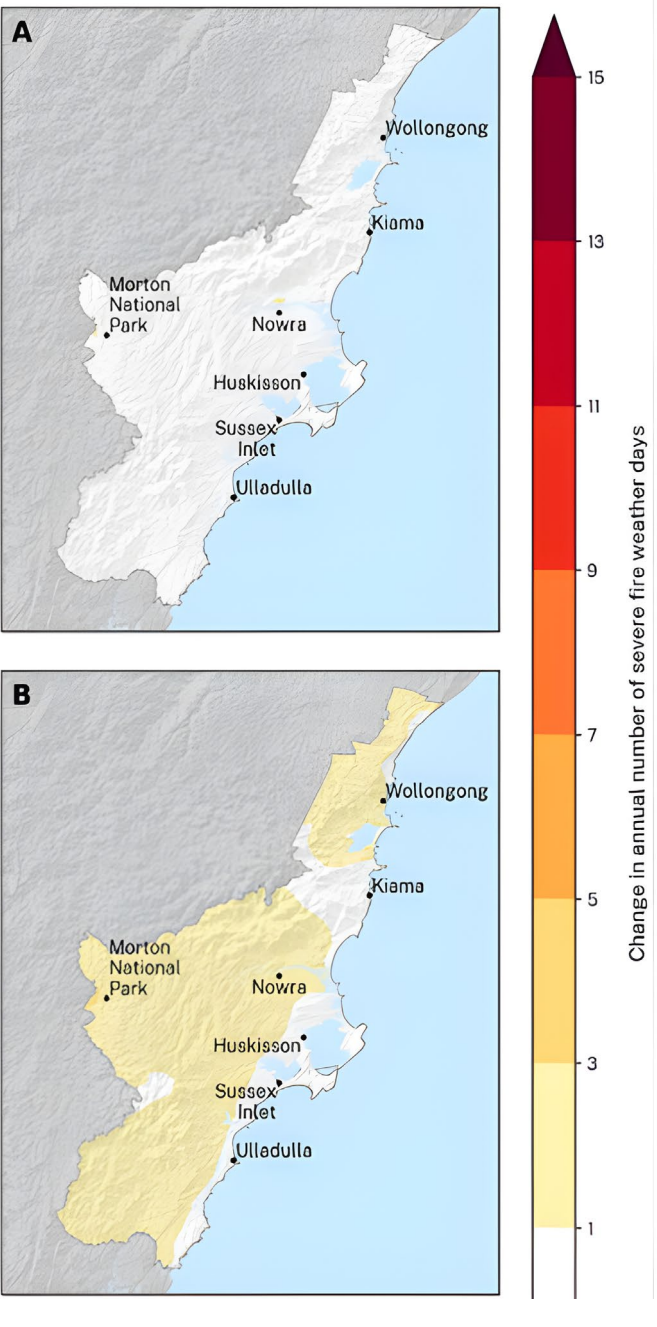
Data is based on NARClIM2.0 (2024) projections for SSP1-2.6 (low-emissions) and SSP3-7.0 (high-emissions) and is presented relative to the historical climate baseline of 199–2009. The projections for 2050 represent averaged data for 2040–2059 and projections for 2090 represent averaged data for 2080–2099. Values presented are averages across the NARClIM2.0 model ensemble, and do not represent the full range of plausible climate futures. Regional climate change impacts are used to highlight how the region is likely to be affected by climate change, and impacts are not limited to the examples provided. Sea-level rise data is from the IPCC's Sixth Assessment Report is presented relative to a baseline of 1995–2014.

Map 16: Projected changes in annual number of hot and severe fire weather days by 2090 under A) low, and B) high-emissions scenarios.

Change in hot days

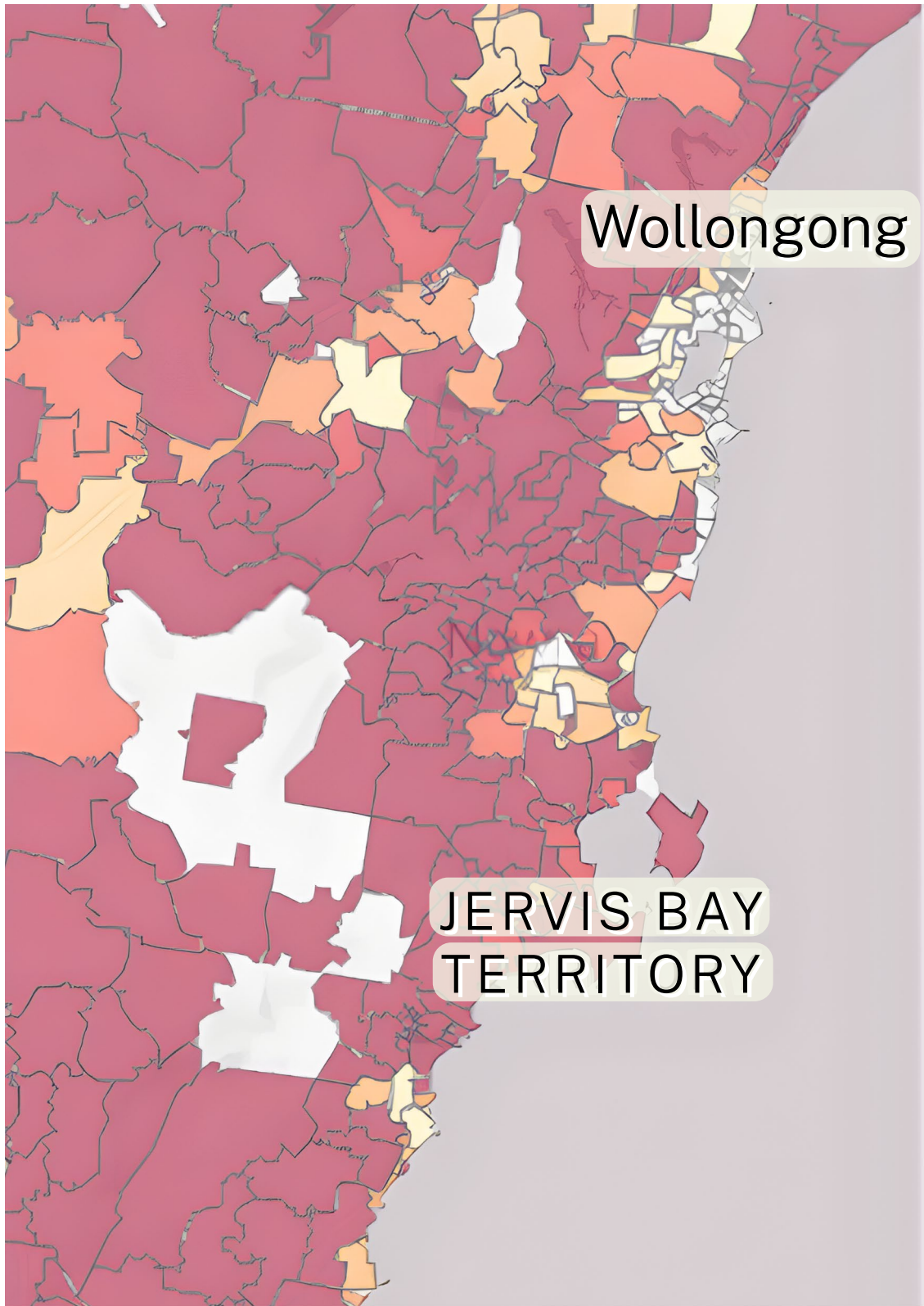


Change in severe fire weather days



Source: NSW and Australian Regional Climate

Map 17: Bushfire Hazards (to property) by 2030, medium emissions scenario (suburb level).



Source: Climate Risk Map of Australia (Climate Council)

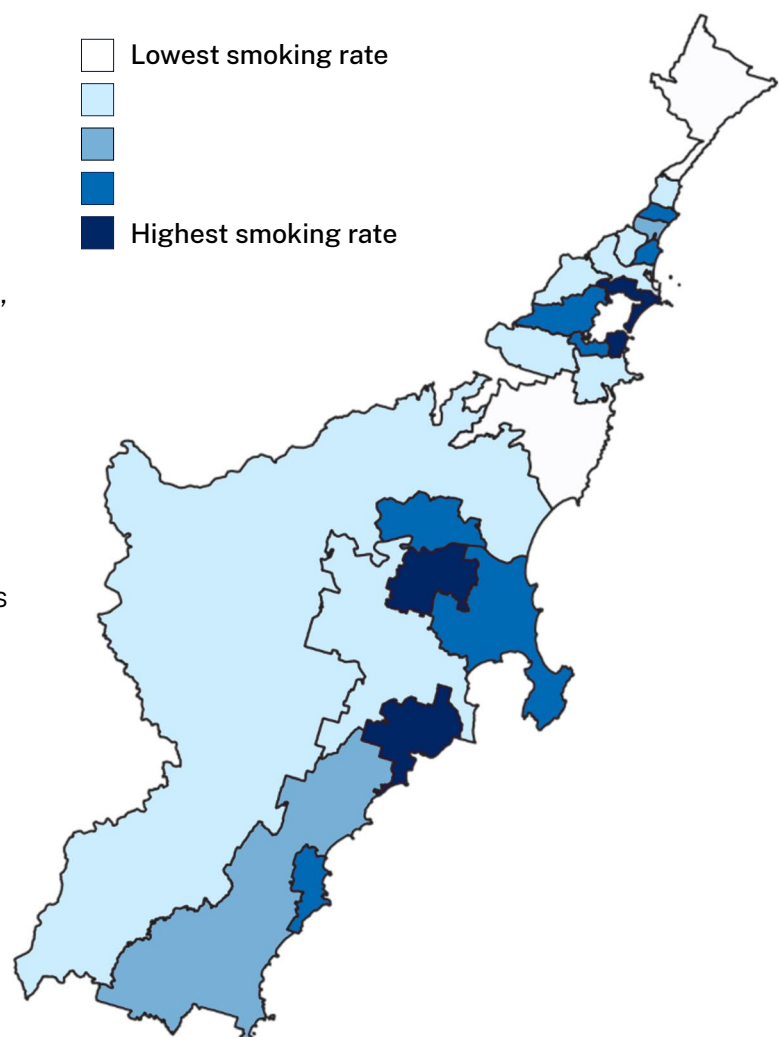
6. Health behaviours



Cultural, social, and environmental factors help shape health behaviours among different groups. People from backgrounds with a greater disadvantage are often exposed to environments where risky health behaviours are more normalised or accessible. This includes smoking, unhealthy diets, being inactive, and substance misuse. Moreover, lower levels of education can limit access to, or make it harder to critically evaluate health-related information. This combination of stress, reduced access to health services, and an environment conducive to risky behaviours perpetuates cycles that disproportionately affect lower socioeconomic populations.³⁷

A recent systematic review of the burden of preventable disease in Australia concluded that approximately one-third of the burden (measured in disability-adjusted life years) was attributable to modifiable risk factors: dietary (range of estimates 7.2-9.7%); tobacco (7.9-9.0%); alcohol (5.1-12.2%); high body mass (5.5-8.3%); and physical inactivity (1.2-5.5%).³⁸

Map 18: Smoking prevalence



Source: Climate Risk Map of Australia (Climate Council).

6.1 Smoking and vaping

Smoking is the leading cause of disease and premature death in Australia.³⁹ Smoking increases the risk of cardiovascular disease (including heart disease and stroke), respiratory disease (COPD and asthma), kidney and eye disease, and various cancers. Smoking can also harm others, either through second hand smoke (heart disease, asthma, some cancers, Sudden Infant Death Syndrome (SIDS), or effects on unborn babies (low birth weight babies - see Section 2.1).

Evidence of harms associated with vaping e-cigarettes is increasing. Health harms include throat irritation, coughing, dizziness, headaches, nausea, seizures, and serious lung injury.

How is it measured?

NSW Population Health Survey 2023 (accessed via HealthStats NSW): Proportion of people aged 16 years and over who are current (daily or occasional) smokers or vapers).¹³

National Health Survey (NHS): Proportion of people aged 18 years and over who are current smokers (at least once per week). Note that these are modelled (not direct) estimates using data from the ABS NHS 2022, compiled at the PHA level by, and accessed from, PHIDU.

How does it vary?

In 2023, an estimated 11.2% of Illawarra Shoalhaven residents aged 16 years and over were current smokers, which represents a large decrease over the last two decades (23.1% in 2002). Smoking rates are higher among people living in the most disadvantaged areas of NSW (18%, vs 7.3% in the least disadvantaged areas). This variation across ISLHD is clearly shown in Map 18 on the previous page.

In 2022-2023, 7.9% of Illawarra Shoalhaven residents aged 16 years were current vapers, slightly higher than in NSW as a whole (7.4%). The highest rates are among those aged 16-24 years (19%), in whom rates have more than quadrupled since 2019-2020 (4.5%).¹³

Smoking during pregnancy

Smoking poses significant risks to both the mother and the developing fetus. The harmful chemicals contained within tobacco smoke, can cross the placenta, impairing oxygen delivery and nutrient supply. This increases the risk of low birth weight, preterm birth, and stillbirth.⁴⁰ Quitting smoking before or during pregnancy significantly reduces these risks, supporting better health outcomes for both mother and child.⁴¹

How is it measured?

Mothers who report smoking at any time during pregnancy, as a proportion of pregnancies recorded in the NSW Perinatal Data Collection up to 2022 reported in HealthStats NSW and 2019-2021 by PHIDU.

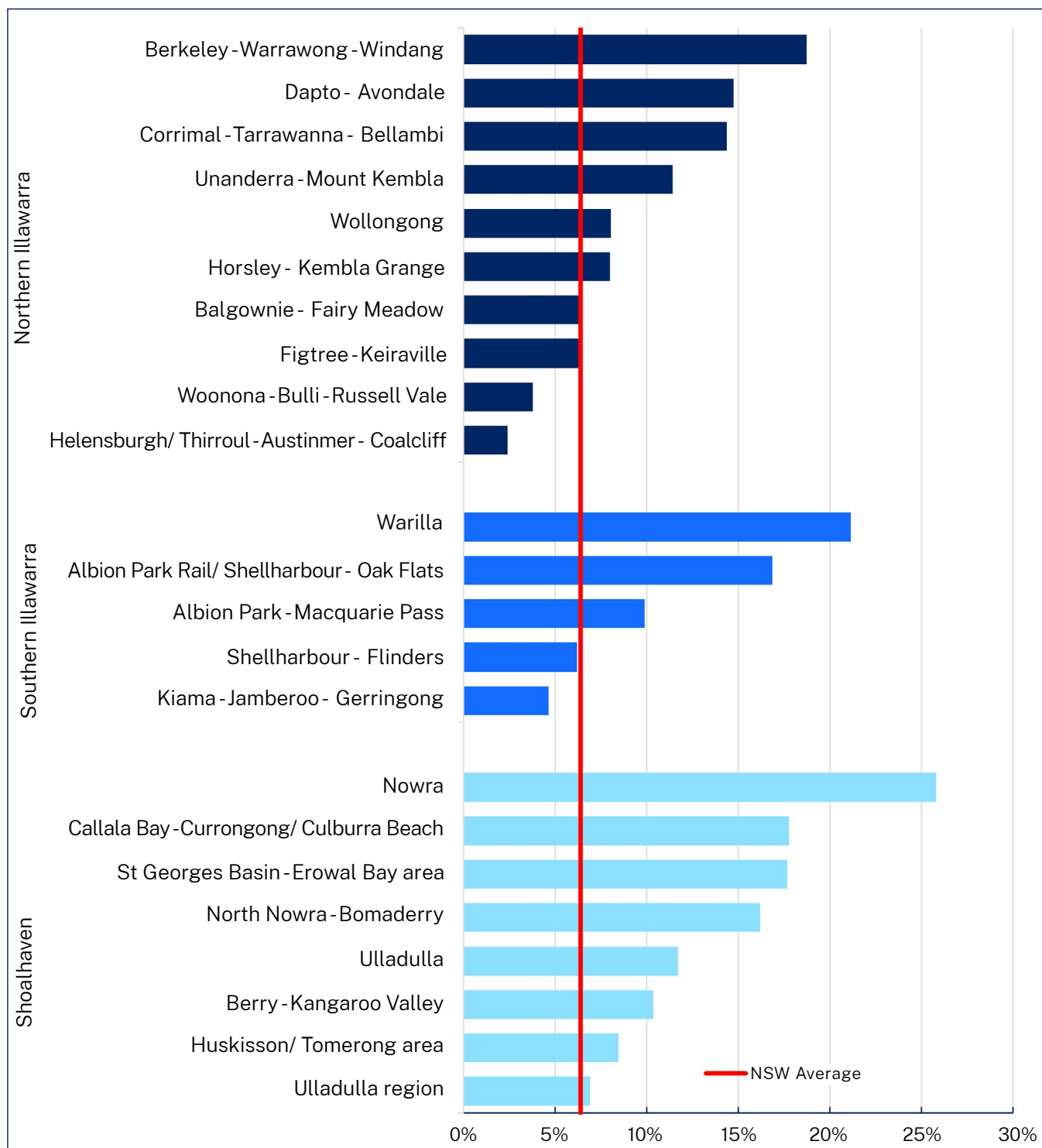
How does it vary?

In 2022, 9.5% of ISLHD women smoked during pregnancy, representing a marked decrease from 22%, over the last two decades. A similar trend occurred across NSW over the same period, with smoking in pregnancy rates declining from 17.1% to 7.9%.

In terms of LGAs, smoking in pregnancy is most common in the Shoalhaven (16.4% in 2019-21) followed by Shellharbour (14.3%), then Wollongong (9.7%), and lowest in Kiama (4%).

Rates of smoking during pregnancy are higher than the NSW average in many PHAs across the District. Smoking prevalence in the Shoalhaven is high, with the Nowra Population Health Area (PHA) standing out, reporting rates nearly three times the New South Wales average (26% compared to 8.6%), as shown in Figure 23.

Figure 23: Proportion of women smoking during pregnancy



Source: PHIDU (NSW Perinatal Data Collection 2019-21)

6.2 Excessive alcohol

Excessive alcohol consumption is a major contributor to the burden of illness and death in Australia – alcohol is the top contributor for people aged up to 44 years, and 5th contributor across all ages.⁴² In 2020, the National Health and Medical Research Council (NHMRC) updated the Australian alcohol guidelines. While recognising that the risk of harm from alcohol-related disease or injury is reduced the less a person drinks, these guidelines now state that to reduce the risk of harm, healthy men and women should drink no more than 10 standard drinks a week AND no more than 4 standard drinks on any one day.

How is it measured?

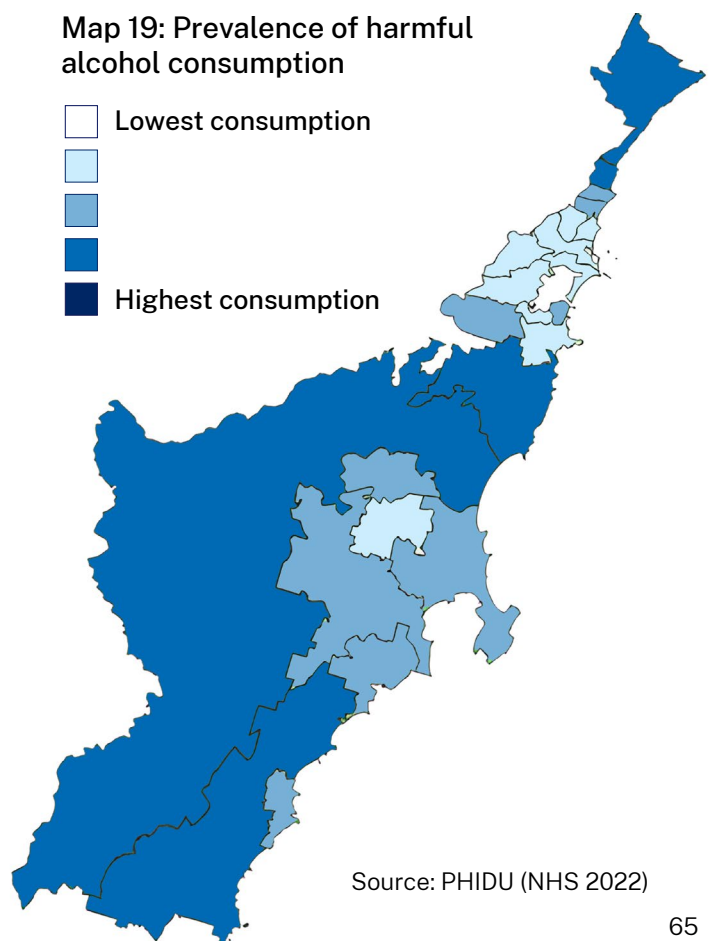
NSW Population Health Survey 2023 (accessed via HealthStats NSW): Proportion of people aged 16 years and over who drink alcohol at levels that exceed the 2020 NHMRC guideline for alcohol-related risk of harm (at least 10 standard drinks a week or 4 standard drinks on any one day).¹³

National Health Survey: Proportion of people aged 18 years and over who drink alcohol at levels that exceed the 2009 NHMRC guideline for “long-term risk of harm (more than 2 standard drinks on a day when usually drinking). Note that these are modelled (not direct) estimates for PHA using data from the ABS NHS 2022, compiled by, and accessed from, PHIDU.

How does it vary?

In 2023, 32.4% of ISLHD residents exceeded the 2020 NHMRC guideline for alcohol-related risk of harm (as compared to 27.1% for NSW as a whole). As shown in Map 19, in contrast to most other health and social indicators, harmful alcohol consumption is more common in the more advantaged areas.

Map 19: Prevalence of harmful alcohol consumption



Source: PHIDU (NHS 2022)



6.3 Physical inactivity

Regular physical activity has numerous health benefits, including reductions in risk of heart disease, type 2 diabetes, certain forms of cancer, depression and some injuries. Engaging in regular physical activity supports the achievement and maintenance of a healthy weight, which is a key factor in preventing chronic diseases.

Australia's Physical Activity and Sedentary Behaviour Guidelines (2014)⁴³ recommend different levels of physical activity for different age groups, including: a) ages 18 to 64 years: combination of moderate and vigorous activities on most or all days of the week, as well as strength training on at least 2 days and minimising sedentary behaviour especially prolonged sitting b) ages 65 years and over: 30 minutes of moderate physical activity on most, or preferably all days.

How is it measured?

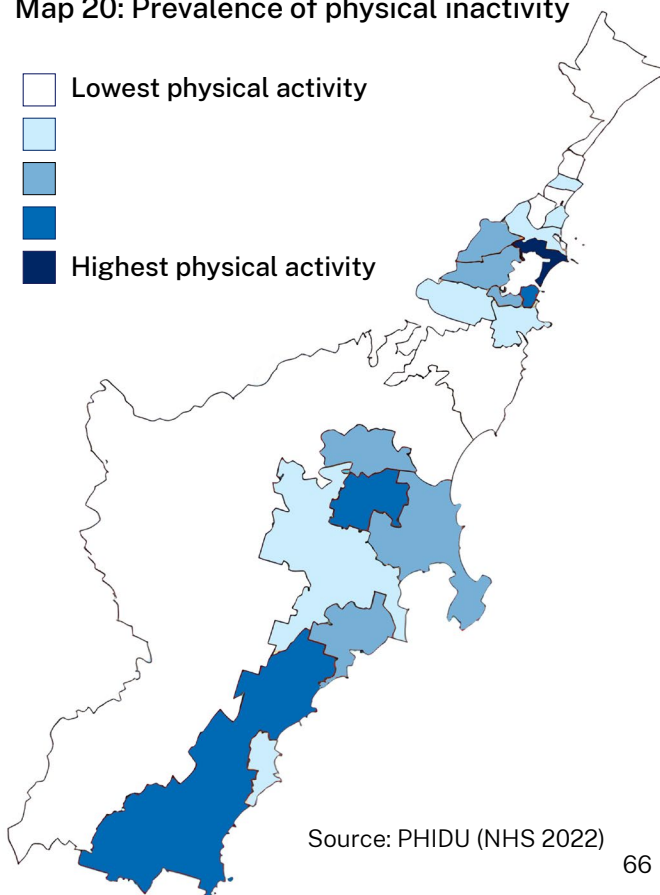
NSW Population Health Survey 2023 (accessed via HealthStats NSW): Proportion of people aged 16 years and over who do "insufficient physical activity", defined as moderate (or high) intensity physical activity a) for less than 150 minutes per week or b) on fewer than five separate occasions.¹³

National Health Survey 2022: Proportion of people aged 18 years and over who did low, very low or no level of exercise for fitness, recreation or sport in the last week. Note that these are modelled (not direct) estimates using data from the ABS NHS for PHA, compiled by, and accessed from, PHIDU.

How does it vary?

In 2023, the NSW Population Health Survey estimated that 33.3% of ISLHD residents were doing "insufficient physical activity", which represents a large decrease since 2002 (52.6%). Similar trends have been observed in NSW as a whole (35.5% in 2023, down from 52.5% in 2002). As shown in Map 20, people living in the most socially disadvantaged areas tend to have lower levels of physical activity.

Map 20: Prevalence of physical inactivity



Source: PHIDU (NHS 2022)



6.4 Nutrition

The risk of developing many chronic conditions, including diabetes and heart disease, is reduced by eating a balanced diet, including sufficient fruit and vegetables. The National Health and Medical Research Council (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, to ensure good nutrition and health. The recommended daily consumption of fruit is 2 or more serves a day. The recommended daily consumption of vegetables varies between 5 and 7.5 serves depending on gender and age group.⁴⁴

How is it measured?

NSW Population Health Survey 2023 (accessed via HealthStats NSW): Proportion of people aged 16 years and over who meet the NHMRC guidelines for recommended daily serves of fruit and vegetables.¹³

National Health Survey: Proportion of people aged 18 years and over who meet the NHMRC guidelines for recommended daily serves of fruit. Note that these are modelled (not direct) estimates for PHA using data from the ABS NHS 2022, compiled by, and accessed from, PHIDU.

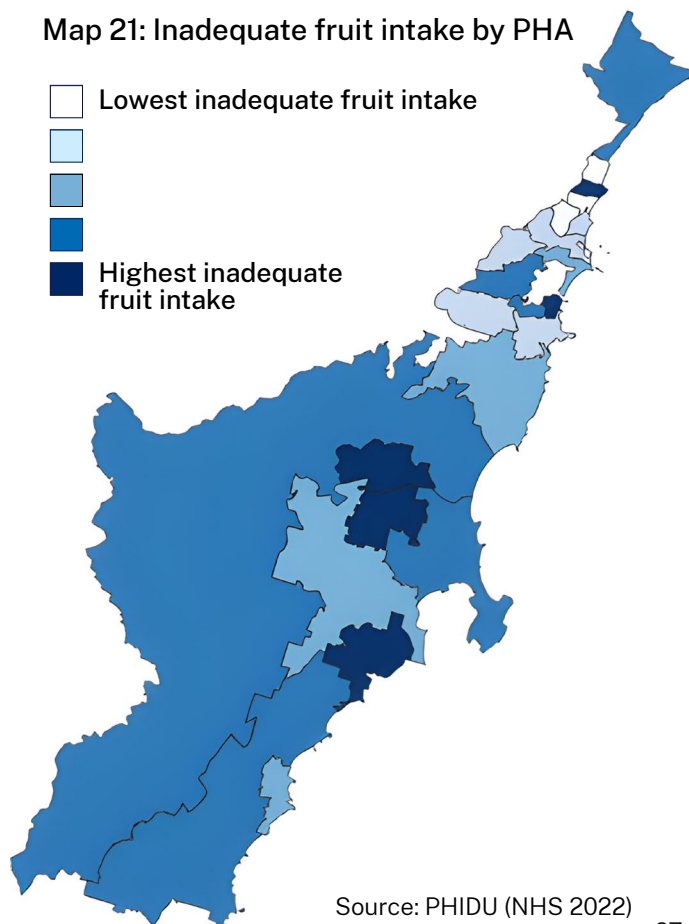
How does it vary?

In 2023, an estimated 36.4% of ISLHD residents aged 16 years and over consumed the recommended 2 or more serves of fruit daily (as compared to 37.8% in NSW) and 7.1% consumed the recommended number of serves

of vegetables daily (as compared to 5.3% in NSW). Consumption of the recommended daily intake of fruit and vegetables has decreased in NSW over the last decade (from 53.9% and 7.4% respectively in 2014).

As shown in Map 21, people living in the more disadvantaged areas tend to consume less fruit than their more advantaged counterparts.

Map 21: Inadequate fruit intake by PHA



Source: PHIDU (NHS 2022)



7. Service access

7.1 Primary care

General Practitioners (GPs) are often the first point of contact in the healthcare system. Timely access to GPs can lead to early diagnosis and management of conditions, reducing complications and improving long-term health outcomes.⁴⁵

Barriers to accessing GPs include long wait times, financial constraints, and travel considerations. These may lead to conditions being left undiagnosed, or individuals accessing emergency services for non-urgent issues.

Alongside GPs, access to dental practitioners plays a crucial role in shaping broader health outcomes, as oral health is intricately connected to overall wellbeing. Communities with limited access to dental services often experience higher rates of dental problems, contributing to cycles of poverty and poor health.

How is it measured?

The NSW Council of Social Service (NCOSS) draws on data from the 2023 patient experience survey component of the ABS

Multipurpose Household Survey (MPHS). Statistical modelling then estimates proportions of people with financial barriers to accessing care at an SA2 level.⁴⁶

Healthdirect Australia aligns data from the National Health Services Directory (NHSD) with other databases such as Australian Health Practitioner Regulation Agency's (AHPRA) register of practitioners.⁴⁷ For the purposes of this report, GP and dental practitioner availability is measured as the number of clinics per 10,000 persons.

How does it vary?

NCOSS data indicate that the Illawarra Shoalhaven region has some of the greatest cost barriers in the state. In 2023, approximately one third of Illawarra Shoalhaven residents delayed or avoided seeing a GP due to cost (Table 3). This was lower for dental practitioner visits, with almost half of residents delaying or avoiding seeing a dentist due to cost.

Table 3: Cost barriers to seeking healthcare.

Proportion of residents reporting delay or not seeing GPs or Dentists due to cost.

	Delayed or did not see GP	Delayed or did not see dental practitioner
Northern Illawarra	35%	46%
Southern Illawarra	35%	47%
Shoalhaven	25%	40%

Source: NCOSS (ABS Multipurpose Household Survey 2023)

Table 4 summarises information related to the geographic access of GP and dental practitioner clinics. ISLHD has one of the lowest availabilities of GP clinics in NSW, 2.7 per 10,000 population, while the NSW average is 3.0 per 10,000.

GP clinic availability is generally better in PHAs with major shopping areas, and lower in the Northern Illawarra (8 of 10 PHAs have GP clinics per 10,000 population lower than the NSW average) and Southern Illawarra (3 of 5 PHAs), than in the Shoalhaven (3 of 8 PHAs).

The limited availability of bulk billing practices, combined with socioeconomic disadvantage in certain areas of the District can heavily restrict access to primary care. Notably, a higher proportion of GP clinics in the Shoalhaven are bulk billing. This higher availability may help explain why Shoalhaven residents are less likely to delay or avoiding seeing a GP due to cost (Table 3). It should be noted that the availability of GP clinics and particularly those with bulk billing, can change quickly and may not be truly represented in the latest data available.

Table 4: GP and Dental Practitioner clinics

Population Health Area	GP clinics		Bulk billing GP clinics	Dental practitioner clinics	
	Number	Per 10,000 persons	Number	Number	Per 10,000 persons
Northern Illawarra					
Wollongong	16	4.9	3	17	5.2
Corrimal - Tarrawanna - Bellambi	6	3.7	0	5	3.1
Helensburgh/ Thirroul - Austinmer - Coalcliff	6	2.9	0	4	1.9
Berkeley - Warrawong - Windang	8	2.8	2	4	1.4
Dapto - Avondale	6	2.5	2	4	1.6
Balgownie - Fairy Meadow	5	2.3	1	5	2.3
Unanderra - Mt Kembla	3	2.0	0	1	0.7
Woonona - Bulli - Russell Vale	4	1.9	0	1	0.5
Figtree - Keiraville	3	1.3	1	2	0.9
Horsley - Kembla Grange	1	0.8	0	0	0.0
Southern Illawarra					
Kiama - Jamberoo - Gerringong	10	4.4	2	6	2.6
Albion Park Rail/ Shellharbour - Oak Flats	7	4.0	2	6	3.4
Warilla	6	2.9	1	3	1.5
Albion Park - Macquarie Pass	4	2.1	0	1	0.5
Shellharbour - Flinders	2	1.0	0	2	1.0
Shoalhaven					
Berry - Kangaroo Valley	5	5.3	0	1	1.1
Ulladulla	8	4.7	0	5	2.9
Nowra	9	3.9	2	7	3.1
Huskisson/ Tomerong area	3	3.5	2	1	1.2
Callala Bay - Currarong/ Culburra Beach	3	3.4	2	0	0.0
St Georges Basin - Erowal Bay area	4	2.0	2	1	0.5
North Nowra - Bomaderry	3	1.9	0	3	1.9
Ulladulla region	0	0.0	0	0	0.0

Source: HealthDirect Australia (Australian Health Practitioner Regulation Agency register 2023)



7.2 Residential aged care

Adequate access to aged care services allows elderly individuals to receive consistent monitoring and support in managing chronic health condition.⁴⁸ Specialised care services, such as dementia and palliative care, enhance quality of life for vulnerable populations, and help prevent unnecessary hospitalisations.⁴⁹ Insufficient capacity often leads to hospital overcrowding as elderly patients remain in hospitals longer than necessary. This strains hospital resources and contributes to worse health outcomes for elderly patients who miss out on timely specialised care.

How is it measured?

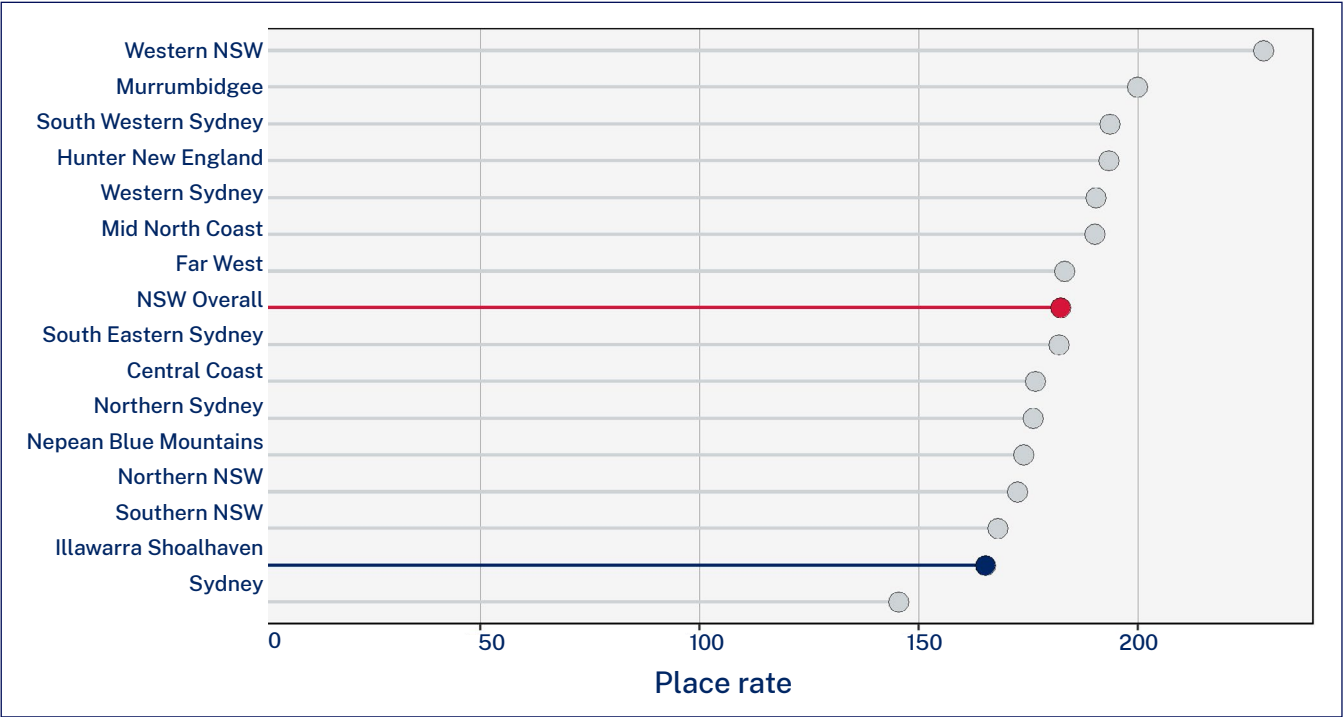
Analysis for this report examines the number of RACF places per 1,000 population aged 80 years and over, as reported in the NSW Aged Care Data Snapshot 2023 (NSW Department of Planning, Housing and Infrastructure).^{50,51} (Approximately 80% of permanent RACF residents are in this age group).

How does it vary?

ISLHD has the 2nd fewest RACF places of any LHD in the state, relative to population aged over 80 (Figure 24). The availability of Residential Aged Care Facility (RACF) places per 1,000 residents aged 80 years and over varies across the District, with the highest concentration in Wollongong LGA and the lowest in Shellharbour LGA:

- Wollongong LGA - 196
- Shellharbour LGA - 159
- Kiama LGA - 165
- Shoalhaven LGA - 173

Figure 24: RACF Residential Places per 1,000 Population over 80 (2022/23)



Source: NSW Aged Care Data Snapshot –2023 (Third Release), NSW DPHI Population Projections: HealthDirect Australia (Australian Health Practitioner Regulation Agency register 2023).

8. Appendices

8.1 Abbreviations and acronyms

Term/abbreviation	Definition
ABS	Australian Bureau of Statistics
AEDC	Australian Early Development Census
AIHW	Australian Institute of Health and Welfare
ASR	Age Standardised Rate
AUO	Australian Urban Observatory
BOCSAR	NSW Bureau of Crime Statistics and Research
COPD	Chronic Obstructive Pulmonary Disease
ED	Emergency Department
EGM	Electronic Gaming Machine
IRSD	Index of Relative Socioeconomic Disadvantage
ISLHD	Illawarra Shoalhaven Local Health District
LBW	Low birth weight
LGA	Local Government Area
NARCLiM	NSW and Australian Regional Climate Modelling
NBCSP	National Bowel Cancer Screening Program
NCOSS	NSW Council of Social Services
NDSS	National Diabetes Services Scheme
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NHSD	National Health Services Directory
PHA	Population Health Area
PHIDU	Public Health Information Development Unit
PTSD	Post Traumatic Stress Disorder
RCAF	Residential Aged Care Facilit
SA2 or 3	Statistical Area 2 or 3 (used by ABS)
SEIFA	Socio-Economic Indexes for Areas
SIDS	Sudden Infant Death Syndrome

8.2 Population Health Areas

ISLHD catchment	LGA	PHA (PHIDU)	SA2 (ABS)
Northern Illawarra	Wollongong	Balgownie - Fairy Meadow	Balgownie - Fairy Meadow
		Berkeley - Warrawong - Windang	Berkeley - Lake Heights - Cringila
			Port Kembla - Warrawong
			Windang - Primbee
		Corrimal - Tarrawanna - Bellambi	Corrimal - Tarrawanna - Bellambi
		Horsley - Kembla Grange	Horsley - Kembla Grange
		Figtree - Keiraville	Figtree - Keiraville
		Helensburgh/ Thirrourl - Austinmer - Coalcliff	Helensburgh
			Thirrourl - Austinmer - Coalcliff
		Unanderra - Mount Kembla	Unanderra - Mount Kembla
		Wollongong	Wollongong - East
			Wollongong - West
		Woonona - Bulli - Russell Vale	Woonona - Bulli - Russell Vale
Southern Illawarra	Shellharbour	Albion Park - Macquarie Pass	Albion Park - Macquarie Pass
		Albion Park Rail/ Shellharbour - Oak Flats	Albion Park Rail
			Shellharbour - Oak Flats
		Shellharbour - Flinders	Shellharbour - Flinders
		Warilla	Warilla
	Kiama	Kiama - Jamberoo - Gerringong	Kiama
			Kiama Downs - Minnamurra
			Kiama Hinterland - Gerringong
Shoalhaven	Shoalhaven	Berry - Kangaroo Valley	Berry - Kangaroo Valley
		Callala Bay - Currarong/ Culburra Beach	Callala Bay - Currarong
			Culburra Beach
		Huskisson/ Tomerong area	Huskisson - Vincentia
			Tomerong - Wandandian - Woollamia
		North Nowra - Bomaderry	North Nowra - Bomaderry
		Nowra	Nowra
		St Georges Basin - Erowal Bay area	St Georges Basin - Erowal Bay
			Sussex Inlet - Berrara
		Ulladulla	Ulladulla
		Ulladulla surrounds	Ulladulla surrounds

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