Australian Government
Department of Health

phn
An Australian Government Initiative

Primary Health Networks Program

Needs Assessment

Name of Primary Health Network

MURRAY PRIMARY HEALTH NETWORK (Murray PHN)

Section 1 – Narrative

Murray PHN acknowledges that its catchment crosses over many First Nations countries following the Dhelkunya Yaluk. We pay our respects and give thanks to the Ancestors, Elders and young people of these countries for their continuous care and love of Country, who give us strength, nourishment and protection.
Murray PHN commits to addressing injustices of colonisation across our catchment and to listening to the wisdom of our First Nations communities who hold the knowledge to enable healing.
We walk forward gently on Country, positioning the Weenthunga 4 Rs of relationships, respect, responsibility and reciprocity at the heart of work.

Preface

This PHN Needs Assessment was undertaken by Murray PHN in three-phases according to the needs assessment guide 2021 (Australian Government 2021). This included a triangulation table (Appendix 3), which was included in the original guidelines and which provided the context and evidence the needs identified.

The PHN Needs Assessment would not have been possible without the help of many people who have contributed their time and expertise.

The Murray PHN region stretches inland approximately 150km from the Murray River, the whole way across Victoria's northern border from Mildura in the west to Albury-Wodonga in the east, a distance of 550 kilometres. The region is home to approximately 650,000 people (ABS Community Profiles, 2021). Compared with the rest of Victoria, our region has a high proportion of people living with socioeconomic disadvantage, an older population and many different groups of migrant and First Nations Peoples, making for a colourful and diverse cultural landscape.

2022 Update

The Murray PHN region is ageing, with a quarter of our residents projected to be aged 65 or older by 2030. Issues such as homelessness, mental illness, social or economic disadvantage can make it harder for people to achieve good health outcomes in older age.

We know that our First Nations communities face greater health challenges, at an earlier age, with a gap in life expectancy of up to nine years, compared with non-Indigenous people.

COVID has had a disproportionate impact on senior Australians in rates of severe disease and death, but also in social isolation, which saw them separated from family, friends and regular activities. The aged community in Victoria were locked down for their physical safety but now need confidence to re-engage in life's regular activities to achieve optimal health and wellbeing.

In 2021, Murray PHN received more than $11 million in funding over three years for aged care in our region, as part of the Commonwealth's response to the Royal Commission into Aged Care Quality and Safety. To support Murray PHN's vision for healthy rural and regional communities with timely access to the primary care, and to ensure the strategic targeting of

resources towards aged care and senior Australians, Murray PHN developed the Healthy Ageing Strategic Investment plan (HAIS).

The plan is drawn from the Murray PHN Health Needs Assessment 2022-25, with additional information provided by the Supplementary Needs Assessment (Care Finder) 2022, and consultations with our Advisory Councils, medical advisors, Aboriginal and Community Controlled Health Organisations (ACCHOs) and other key stakeholders.

2023 update

The 2023-24 Federal Budget and 2023-24 Victorian Budget made provision for a number of investments and initiatives, such as Strengthening Medicare and the Mental Health and Wellbeing Locals respectively to support regional and rural healthcare.

The Victorian Government has specifically funded in the region around this time:

- The Benalla, Wangaratta and Mansfield Local Adult and Older Adult Mental Health and Wellbeing Service (Local) accessible from January 2023 (sites open in Benalla and Wangaratta).
- Additional Local Adult and Older Adults Mental Health and Wellbeing Services (Locals) commencing from December 2023 in Bendigo / Echuca (including Loddon LGA), Shepparton (including Strathbogie and Moria LGAs) and Mildura.
- Two Family and Carer Led Centres, one each in the Hume and Loddon Mallee regions to provide better support to the families, carers and supporters of people experiencing mental health and/or substance use challenges.
- Victorian Virtual Emergency Department Service, making emergency doctors directly accessible to people and providers remotely, from their home or practice, connected to ambulance transport.
- Priority Primary Care Centres in the Albury Wodonga (Wodonga), Goulburn Valley (Shepparton) and Bendigo and Mildura regions.

Additionally, there was a transition to college-led GP training, coupled with increased John Flynn Prevocational Doctor Program rotations (aiming to get to up to 800 rotations nationally by 2025).

Needs Assessment methods and issues

Conceptual design

For this Needs Assessment, an adaptive framework design (Okwuokenye, 2019) was used. This enabled the integration of relevant information as the analysis evolved, and when new data, research and reports were identified.

Data collection and analysis

Quantitative data – phase I

In Phase I of this assessment, data from 18 different databases, listed in Appendix 1 were compiled. Population demographic and SEIFA data from the 2021 Census were not yet available. Quantitative demographic and health data were retrieved from the 2016 census, and where possible stratified into LGAs and Murray PHN regions, re-analysed and presented in LGAs and Murray PHN regions. Estimated changes in population sizes over time suggested minimal changes. Related to this, and especially in the LGAs with small populations, small population increases, or decreases make a big difference to apparent sizes of health effects, which was borne in mind when interpreting data about health needs.

Health workforce data were sourced from various places, including the Public Health Information Development Unit (PHIDU) and knowledge bank databases, which retrieve registration data from the Australian Health Practitioner Regulation Agency (AHPRA). These data sets changed during the time of producing this report, and the data sets used were the most recently available, except for allied health data in the LGAs of Wodonga, Strathbogie and Mount Alexander, that were inaccurately reported, so previously reported data (not the most up-to-date) were used for those places.

There were several high-quality reports providing data about specific areas already available in Aboriginal Community Controlled Health Organisation (ACCHO), Local Government Authority (LGA), and Primary Care Partnership (PCP) websites, which informed the Needs Assessment.

To understand the general structure of health status in the Murray PHN region and identify areas of need, key LGA variable data was grouped into the four Murray PHN regions (Central, North East and North West Victoria and the Goulburn Valley) and described either with summary scores or by presenting the range of scores within the region, as well as by describing variable scores for the Murray PHN catchment, and where available, comparing these with those for Victoria and Australia.

Qualitative data – phase I

In Phase I of the analysis, qualitative data was derived from various interviews and discussions with community groups and key stakeholders, including:

- Medical advisors
- Clinical (HealthPathways) editors
- Clinical advisory council
- Several primary health staff, including representatives from Aboriginal Health and school health services:
- Four community advisory councils

Summarising data from phase I

Data from phase I analysed and weighted to identify eight LGAs across the catchment showed to have poorest health outcomes. The results of Phase I were amalgamated into a triangulation table (Appendix 3).

Stakeholder consultation – phase II

The objective of phase II was to explore, through stakeholder consultation, the health and service needs identified in the eight priority LGAs identified in Phase I (see pictogram, Appendix 4). Consultation involved a series of qualitative online surveys (open for six weeks using Survey Monkey), and individual discussions and interviews/focus groups, conducted online. The survey included two forms, a mini-survey covering four broad open-ended questions and a long-form survey which expanded on these four themes. Respondents chose which form to complete, depending on the time they had available. The surveys were available on the Murray PHN website between early July and mid-August 2021 and diverse stakeholders were directly invited to participate, including consumers, professionals, advisory council members and interest groups across the Murray PHN catchment. Interviews and focus groups took between 30 and 90 minutes to complete. Interview and focus group notes and journal entries were collected and transcribed using thematic analyses.

Respondents to the survey included:

- 168 mini-survey responders
- 487 long-form survey responders

Approximately 23 semi-structured interviews and focus groups were conducted with a variety of people including:

- Eight focus groups with consumers (conducted by video)
- Eight focus groups with health care professionals (conducted by video)
- Five 'open' small group interviews with consumers and professionals (conducted by video)
- Two targeted key stakeholder focus groups (Murray PHN community advisory council, ACCHO representatives; conducted by video).

Results were reported using the thematic framework, with quotations as appropriate.

Appendix 3 was updated using Phase II results where appropriate.

Appraising all the data collected - Phase III

Phase III involved merging the data from Phases I and II (results presented across Sections 2-4 and Appendix 5). Firstly, a rubric methodology evaluation method was used based on the Primary Health Networks Health Needs Assessment Template (p. 7, Australian Government Department of Health, n.d.) and the data organised in a table. Secondly, resulting service needs were evaluated and tabulated, once again by applying a rubric methodology, informed by the IAP2 Quality Assurance Standard for Community and Stakeholder Engagement (International Association for Public Participation, 2015).

Reporting and dissemination

The Health Needs Assessment results will be condensed in a major report to inform Murray PHN and its population, which will be published on our website. The key learning will guide future Needs Assessment processes and planning, to ensure it is meaningful, relevant and strategic.

2022 Update

Between February 2021 and May 2022, additional needs assessment and consultations were undertaken to inform the Healthy Ageing Investment Strategy, which underpinned the development of the new Aged Care Schedule activity work plans. Murray PHN consulted ACCHOs and other key stakeholders about healthy ageing in our community, including Murray PHN's Advisory Councils which comprise of four community and one clinical advisory council. Stakeholders involved in this were engaged in face-to-face forums that were held across each of our regional centres in Albury, Bendigo, Shepparton and Mildura in June-August 2022. These sessions were attended by general practice staff and facilitated by Murray PHN with the key focus of building more knowledge and understanding of the landscape across each region, and how general practice interacts with aged care services.

For the Care Finder activity, a semi-structured survey targeted at care finder related service providers (ACH, ASP and CHSP) providers was developed to understand service and community strengths and gaps. The data captured through these consultations validated where the quantitative data has identified the LGAs in greatest need for investment to support healthy ageing and the priority areas relevant for the work of the Care Finder program. Stratified analyses of the latest Census and health service data including by aged care provider regions (ACPRs) was undertaken through Murray PHN's development of a protocol and collaborative engagement with Monash University School of Rural Health in July 2022. A summary and documentation were provided on Census data, population projection data, epidemiological data and demographic data, with each dataset including several tables on local population characteristics of interest to the care finder program.

2023 update

Focused needs and strengths assessments in priority areas

Murray PHN contracted Impact Co, consultants to undertake rapid needs assessments and service gap analysis using standardised structured stepwise sprint methodologies to result in prioritised scores at more granular geospatial levels. These were targeted on four priority areas for Murray PHN given the forecast commissioning and coordination work; after hours, mental health and alcohol and other drug (MHAOD), chronic disease and First Nations. Digital health was incorporated across the four priorities to provide an integrated perspective. For this update, the MHAOD and after hours needs assessment are included, as they are the only ones completed thus far. The insights from the chronic disease and First Nations needs assessments are not ready for inclusion for this update and will be incorporated at a later date.

The Impact Co after hours needs assessment was undertaken from May to August and involved co-design with our subject matter experts, document review, data cleansing and standardisation to SA2 granularity and adjusted in some cases to reflect population density. Quantitative analysis showed the SA2 regions of the highest need, unmet demand, supply and general urgency. Community and service provider engagement involved interviews, focus groups and an online survey. A particular focus was made to engage consumers with a lived experience to explore issues around cultural and linguistic diversity and refugees, rural and isolated communities and the needs of regional communities.

For the updates in mental health and AOD a similar method was followed and Impact Co consulted with medical advisers, Local Health Networks, Interim Regional Bodies, providers, the Victorian Government and consumer and community voices.

Larter is conducting a separate review of psychosocial services provision

A separate review of psychosocial service provision was conducted by Larter Consulting and they consulted consumers, ACCHOs, providers, regional PHNs and community voices to explore needs and service redesign options.

Workforce Planning and Prioritisation Program

Murray PHN led the Victorian statewide consortium for the Workforce Planning and Prioritisation Program and delivered a separate report on this to the Workforce Branch, to inform a prioritised area-level assessment (GP catchments) of general practice workforce supply relative to community need (the degree to which there are enough general practitioner services in an area to support the level of community need) and workforce training capacity to enable GP registrar placements. This report provides recommendations on areas where general practice capacity needs to be strengthened, which underpins many decisions about rural workforce development along with training pathways and Strengthening Medicare initiatives. It is particularly relevant to other policy decisions and grant funds that need to be targeted at thin markets.

Additional Data Needs and Gaps

– In this section the PHN should outline any issues experienced in obtaining and using data for the NA. In particular, the PHN can outline any gaps in the data available on the PHN website, and identify any additional data required. The PHN may also provide comment on data accessibility on the PHN website, including the secure access areas.
Where relevant, nominate which process your input is relevant to i.e., general population health, primary mental health care, alcohol and other drug treatment or Indigenous health NA.

Overall

Because of the variable quality, coverage, and age of the nature of available data, as well as the emergence of contemporary health issues that may not be measurable, this needs assessment only represents the best available evidence. Further significant changes are likely to happen in the five years following this Census as the health impacts of the SARS CoV-2 (COVID-19) pandemic become clearer, with possible important population demographic and epidemiological changes, as well as impacts on the social determinants of health.

Quantitative data

The Census, SEIFA, and most health data is derived from datasets which are now quite old. There is also data used that differs in collection years. However, where updated data was available the estimated impact of these was considered minimal.

At times, sequential surveillance reports were accessed (for example teenage fertility data), to enable Murray PHN to gain at least some perspectives, even though estimates were imprecise. In addition, it is possible that some community services were not identified through the search techniques used, for example there was no information gathered about Men's Shed activities.

The Census data is robust, and while five years old provides reliable population-wide data from standardised questions of entire populations. Data from the maternal and child health annual reports and the Australian Childhood Immunisation Register are similarly current and complete. Other data was drawn from population subset, including to inform dental health, screening, GP usage, communicable diseases, at times derived from reports and activity statements. They varied in their completeness (for example, it is unusual for diseases such as meningococcal infection to not be included in notifications, but influenza and gastroenteritis are not nearly so well covered). Other items such as Aboriginal and Torres Strait Islander (ATSI) status varied from one dataset to another because of the way that critical questions are asked (or not asked and assumptions made). Several question items that were used rely on self-reported health based on a Likert-type scale, for which responses can vary from the same responder from day-to-day. This data is inaccurately treated as continuous data rather than categorical, so that responses are not meaningful.

2023 update

After hours needs assessment had some limitations, as Murray PHN was unable to obtain data from the Victoria Emergency Minimum Dataset (VEMD) to enable analysis of Category 5 ED presentations that occurred during the after hours period. VVED (Victorian Virtual Emergency Department), PPCC (Priority Primary Care Centre), and UCC (Urgent Care Clinic) data sets were not available.

The Workforce Planning and Prioritisation (WPP) Program required specific data enhancements through updates in the HeaDSUPP tool. No data is able to be integrated with HeaDSUPP data, which limits the analysis and HeaDSUPP data has specific rules about sharing to external entities that must be followed.

Qualitative data

Lastly, qualitative data adds explanatory detail, but is not necessarily generalisable, so that it needs to be treated with circumspection.

Fixed catchments do not reflect functional health patterns

Another interesting problem is that the available data relates to only the southern part of the Victorian section of the Murray River, whereas many river-side towns operate in functional units. The various river crossing points mean that there is a flow of people, animals, insects, pollutants, and airborne contaminants (all of which affect population health) from one side of the river to the other. People visit health services wherever they are available and convenient and are not constrained by local political boundaries. Contaminants do not stop at state boundaries. Animals, birds, and insects also cross rivers. The information provided here is therefore constrained by borders and boundaries which do not always make sense from a broader functional perspective.

First Nations Health and Wellbeing

Localised data is not currently accessible on the health and wellbeing of First Nations Peoples in the Murray PHN catchment. This is an acknowledged gap and one that is being addressed in a scheduled Health Needs Assessments (commencing late 2023) through the development of authentic data sharing and data development indicators with the ACCHOs in our region. This means that detailed local information relating to the health of the local First Nations Peoples is not available for analysis for this Needs Assessment.

2023 update

All quantitative data requires qualitative insights for contextualisation. The qualitative insights on the WPP Program usefully happens in areas which are identified as high need, based on the quantitative analysis of the GP catchments. This approach enabled focus of limited qualitative resources, on driving solutions in specific thin markets.

For the after hours and other needs assessments, the qualitative data gathered was more general across the catchment, though useful for informing where the need for commissioning and coordination will need to be.

COVID-19 and broader Victorian threats

Two major practical problems affected the Needs Assessment. This Needs Assessment was researched and written during the second year of the ongoing SARS CoV-2 (COVID-19) pandemic imposing lockdowns in Victoria. This fuelled a huge burden on local primary care systems as the community had increasing infection rates, job losses, pressures from work and schooling from home, and restricted opportunities for wider social and health engagement. The lockdowns made site visits impossible, and most of the consultations were undertaken via videoconference. A major storm also occurred which affected much of the central part of Victoria, and power and road travel was disrupted for many days. Towards the end of the process a major earthquake occurred, which also affected power and services, although not in the same major way as did the earlier storm.

These events represented critical priorities for our community, which may have prevented some people from engaging with the Need Assessment. Equally, these issues highlighted the importance of a robust primary health care system.

Rurality

Rurality has been considered as it has been found that Australians living in rural and remote areas have higher levels of disease and rates of potentially preventable hospitalisations (PPHs) that were 2.6 times higher compared to those living in major cities.[1] As the entire catchment is outside of metropolitan Melbourne, Murray PHN is considered a regional catchment however, based on the Modified Monash Model (**MMM**), there are areas that are considered rural or remote.

[1] AIHW. (2023). Rural and remote health. Retrieved 22 July 2023 from: http://www.aihw.gov.au.

Additional comments or feedback

– In this section the PHN can provide any other comments or feedback on the Needs Assessment procedure, including any suggestions that may improve the process, outputs, or outcomes in future.

A suggestion for the next major health needs analysis is that it should be undertaken the year *after* the Census so that the most current data can be used estimating population needs.

Section 2 – Summarising health need

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
Mental health	*Overt mental health problems occur in the context of the need for better access to appropriate clinical staff, including psychiatrist consultants, psychologists, mental health nurses* and Aboriginal health workers/practitioners. *Local patterns of suicide are unexpected, with young women in some LGAs having much higher rates than men. The reasons for this are unclear and need further investigation.* *Both primary care staff and residents and their representatives report long waiting time for access to specialist mental health staff.* *2023 update* *There are high rates of ED presentations for mental health behavioural disorders in the region.* *Hospital admissions related to intentional self-harm on average across the catchment were 9 per cent higher than the national average, and the rate of deaths from suicide or self-inflicted injuries was 35 per cent higher than the national average.* *There is a growing need for child mental health supports, particularly psychological services.* *Exacerbated by the increase (and proposed increase) of mental health investment by the Victorian Government in the region, there are relative gaps and outstanding needs for mental health (including psychosocial) services in subregional areas.*	**Quantitative data (Phase I):** • *Australian Bureau of Statistics (ABS)* (2016-17) *[accessed May-June 2021, 2023]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021, May – August 2023]* • *Department of Health and Human Services (DHHS)* (2015) *[accessed May-June 2021]* • *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* • *Victorian Health Information Surveillance System (VHISS)* (2020) *[accessed May-June 2021]* • *Australian Institute of Health and Wellbeing (AIHW)* (2017) *[accessed May-June 2021]* • *AIHW [accessed May-Aug 2023]* • *Commonwealth Department of Health Workforce Data [accessed May-August 2023]* • *National Mental Health Service Planning Framework (NMHPF)* • *National Health Service Directory/Healthmap [accessed May - August 2023]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) • *Murray PHN Health Voices Survey, July 2023* • Victorian Mental Health Royal Commission – regional submissions

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
		Supplementary academic evidence searches (Phase I) **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Alcohol and other drugs	*Alcohol use is by far the leading AOD problem, resulting in both short-term problems (including episodes of violence, accidents etc.) and long-term consequences (inappropriate and prolonged alcohol use is a major risk factor for hepatic disease, cardiac disease, hypertension, renal disease, cancer etc.). It is the cause of a high proportion of police and ambulance attendances, and around half of all adults living in the Murray PHN catchment are noted to have a lifetime risk [2]of ill-health due to alcohol use.* *2023 update* *More than half of LGAs in the Murray PHN region had higher rates of AOD-related ambulance attendances than the Victorian average.* *There is an undersupply of pharmacotherapy services compared to the high need in the region.*	**Quantitative data (Phase I):** • *Victorian Health Information Surveillance System (VHISS)* (2020) *[accessed May-June 2021]* • *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* • *Ambulance Victoria* (2019) *[accessed May-June 2021]* • *Crime Statistics Agency* (2018; 2020) *[accessed May-June 2021]* • *Turning Point* (2021) *AOD Stats: Victorian alcohol and drug statistics [accessed May-June 2021]* • *Australian Bureau of Statistics [accessed 2023]*

[2] 'Lifetime risk' is an epidemiological term and is used in the PHIDU government-supplied tables. Lifetime risk measures the likelihood of a health outcome from an exposure over a period. It can denote a negative outcome (for example tobacco smoking on life expectancy), or a positive outcome (for example dental health and fluoride exposure).

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	There are a number of people with the need for support for mental health and AOD but limited dual diagnosis capability.	• *Australian Institute of Health and Welfare [accessed 2023]* • *Public Health Information Development Unit (PHIDU) [accessed May-June 2021, 2023]* • *Commonwealth Department of Health Workforce Data [accessed May-August 2023]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)* • *AOD Evaluation provider consultation (Dec 2022)* • *Murray PHN Medical Advisors consultations (Oct 2022 and Feb 2023)*
Prescription and non-prescription drug use	*Ambulance callouts, hospitalisation, and police responses related to the use of non-prescription drugs is low, however the misuse of prescribed drugs is the cause of a*	**Quantitative data (Phase I):** • *Victorian Health Information Surveillance System (VHISS)* (2020) *[accessed May-June 2021]*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	higher-than-average level of ambulance attendance and hospital admissions.	• *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* • *Ambulance Victoria* (2019) *[accessed May-June 2021]* • *Crime Statistics Agency* (2018; 2020) *[accessed May-June 2021]* • *Turning Point* (2021) *AODStats: Victorian alcohol and drug statistics [accessed May-June 2021]* **Supplementary academic evidence searches (Phase I)** **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Cancers	*There is a higher than average burden of cancer in the Murray PHN region in most LGAs for all, except for breast and prostate cancers.* *Screening for cervical cancer is higher than the state average, but lower for bowel and breast cancers.* *Other surrogate markers for cancer risk (diet, exercise, obesity alcohol and tobacco consumption etc.) are high in most Murray PHN LGAs.* *Update 2023:* *Insights from the chronic disease needs assessment suggests the Coronavirus (COVID-19) pandemic has delayed participant screening and diagnostic appointments, contributing to a 30 per cent reduction in cancer notifications since lockdown began in Victoria.* *The pandemic highlighted the need for equitable access to primary care cancer screening services to maximise recovery efforts and to reduce cancer incidence and late-stage diagnosis within the region. At the same time, vulnerable population groups are overrepresented in*	**Quantitative data (Phase I):** • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* • *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	COVID-19 notifications, with more than 50 per cent of cases occurring in people born overseas.	• *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Diabetes	*A pattern of diabetes (not otherwise defined as Type I or Type II) shows a gradient with higher levels of disease in the west to lower levels in the east of the Murray PHN catchment, roughly mirroring regional patterns of socio-economic disadvantage.*	**Quantitative data (Phase I):** • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* • *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2017) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)**

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
		• *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Prevention of chronic disease	*There is a burden of chronic disease in the Murray PHN region which is higher than average for both Victoria and Australia.* *Diseases sometimes described as 'lifestyle' do not necessarily occur because of deliberate choice, but often because of availability/access to long-term mitigation strategies including access to appropriate fresh foods and beverages, appropriate exercise opportunities, appropriate foods, and social support opportunities.* *One quarter of older Murray PHN residents live with at least one chronic condition. The most common conditions are hypertension and arthritis, rates of both of which above average in most Murray PHN LGAs.* *Identified factors which affect future health (for example: hypertension, cholesterolaemia, glucosuria, overweight, lack of sufficient exercise and inadequate diet).* *Measuring risk-factors and screening for modifiable biometric measures involves the development of appropriate screening programmes from middle-age onwards, to identify people at-risk of developing chronic disease.* *Mitigation strategies include access to appropriate exercise opportunities, appropriate foods, and social support opportunities.*	**Quantitative data (Phase I):** • *Victorian Population Health Survey (VPHS)* (2018) *[accessed May-June 2021]* • *Australian Institute of Health and Wellbeing (AIHW)* (2017) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
		• *Executive and Senior Leadership Group (Nov 2021)*
Developmental delay screening and support	*Antenatal and maternal and child health screening is routine, and in general adequate to identify children under six years of age with developmental delay.* *However, access to appropriate supports for children in the Murray PHN region who have special service needs is often hard, for the triple reasons of geography, cost, and availability of appropriate health workforce personnel.*	**Quantitative data (Phase I):** • *State Government of Victoria Department of Health & Human Services* (2019) *Maternal and Child Health Service 2017-18 annual reports [accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
First Nations health	*The primary health care needs of First Nations Peoples in the Murray PHN catchment are predominantly provided for through the local Aboriginal Community Controlled Health Organisations (ACCHOs).*	**Quantitative data (Phase I):** • *Australian Institute of Health and Wellbeing (AIHW)* (2017) *[accessed May-June 2021]*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	Access to culturally safe and appropriate care was a key concern alongside workforce burnout, importance of staff wellbeing, access to culturally safe workforce, funding restrictions, increased service demand and disparity in wages between mainstream/private and wage allocations that ACCHOs are allocated through funding bodies. *Provision of holistic, whole of wellbeing, connection to Country, Community and Identity, feeling welcomed and heard are all service delivery factors that enhanced access, and improved outcomes.* *Lack of comprehensive, collective data in our catchment of about First Nation's workforce.* *Problems accessing appropriate hospital (secondary rather than primary health care) services is however difficult, both in terms of physical access, supported visits, and culturally appropriate care.* *Cultural safety of mainstream services has been identified as a barrier to access care by First Nations peoples.* *ACCHOs are reporting an increase in pregnancies and deliveries since the start of the COVID-19 pandemic.*	**Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)* • *Health and Healing Lead yarning circle (Nov 2021)* • *ACCHOs and Murray PHN operational steering group (Nov 2021)*
Child and youth health	*School nurses cover basic youth health services but note that the specific needs of young people in the Murray PHN catchment are not adequately addressed.* *Specialised services (for example Doctors in Secondary Schools) exist but are patchy. School screening services are designed to identify children with developmental delay and mental health and sexual health problems.* *However, there is a lack of accessible, affordable, and confidential services for people. There needs to be better provision for all school children to enable comprehensive preventive and protective service provision.*	**Quantitative data (Phase I):** • *State Government of Victoria Department of Health & Human Services* (2019) *Maternal and Child Health Service 2017-18 annual reports [accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021)

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
		Supplementary academic evidence searches (Phase I) **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
LGBTQIA+ populations	*It is currently not possible to identify LGBTQIA+ people in the Murray PHN region, as data about these groups is not routinely collected. Research and advocacy groups provide estimates of the size of this population group, as well as information about their specific health needs. Both sexual health and mental health needs in these groups are clearly identified in academic literature and were identified in the qualitative data collection sections of our data collection process.*	**Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
		• *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Sexually transmitted infections (STIs)	*STIs are currently rising in some LGAs in the Murray PHN region, including rates of syphilis, gonococcal disease, and chlamydia. The patterns are not uniform between men and women, and while some of these problems are occurring in the homosexual male population, syphilis infection rates are rising in women leading to a concern about congenital syphilis in infants.*	**Quantitative data (Phase I):** • *Victorian Population Health Survey (VPHS)* (2018) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Refugee and migrants'	*The health of resettled peoples is a hidden problem. The physical and mental health of refugee and many migrant people is known to be poor because of the situation from which they have fled. The Murray PHN catchment has a recent and growing resettlement population, some of*	**Quantitative data (Phase I):** • *Australian Bureau of Statistics (ABS)* (2017) *[accessed May-June 2021]*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	whom have been the subject of specific projects (for example the Afghani Hazara community). *Twelve different European and twelve Asian and Southeast Asian languages are the first languages at home throughout the Murray PHN region.*	• *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
People living with a disability	*A higher than average proportion of older people in the Murray PHN catchment are living with at least one disabling condition, with between 4.3-8.1 per cent of residents living with a profound disability, and a similar number with a less severe impairment in Murray PHN LGAs. In some LGAs more than 10 per cent of residents are drawing a disability pension.* *While some in this group are older Australians, many different disabilities occur in all age groups and in all LGAs.* *2023 update* *At 7.2 per cent, the proportion of people living with a profound or severe disability (all ages) across the Murray PHN catchment was higher than the national average of*	**Quantitative data (Phase I):** • *Victorian Local Government Association (VLGA)* (2016) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2016) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2017) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2018) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2016) *[accessed May-June 2021]*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	6 per cent. Seymour, at 9.79 per cent, had the highest proportion of its population with a profound or severe disability, which was 63 per cent higher than the national average. High proportions of the population were also found in Kangaroo Flat – Golden Square (9.4 per cent) and Benalla (9.3 per cent).	• *Public Health Information Development Unit (PHIDU)* (2018) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)* • *AIHW. (2022). People with disability in Australia.*
Oral health	*The proportion of the Murray PHN population with poor oral health is generally high in both adults and children and linked with social determinants of health. The number of dentists per head of population is very low compared with the Victorian population. Access for people living outside main towns is very limited, both in terms of transport and cost. The Flying Doctor peripatetic dental service for children is much appreciated.*	**Quantitative data (Phase I):** • *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* • *Dental Health Services Victoria* (2018-19) *[accessed May-June 2021]* **Qualitative data (Phase I):**

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	Dental health is a major issue for First Nations communities, particularly young people.	• *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Infectious and communicable disease	*The evolving "One Health" area links environmental, animal, plant and human health. This is important for many reasons because of their interrelationships. Specific threats in the Murray PHN region include:* • *Arbovirus diseases (such as Ross River, Australian Encephalitis, Barmah Forest Virus)* • *Anthrax (which causes occasional cases in the Murray basin because of previous farming practices and the longevity of anthrax spores)* • *Q-fever risk to farm and abattoir workers and other people in close contact with some animal wastes (especially from sheep, cattle and goats)* • *'Bird flu', 'swine flu' and other influenza viruses* • *COVID-19, and in the future, other emerging coronaviruses jumping from animals to humans.* *Routine preventable disease vaccines*	**Quantitative data (Phase I):** • *The Australian Immunisation Register (ACIR)* (2021) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2021) *[accessed May-June 2021]* **Qualitative data (Phase I):** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)**

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	Childhood immunisation rates for the diseases for which vaccines are available (listed on the ACIR) are excellent. *Notably, COVID-19 vaccine rates are reasonable across Murray PHN LGAs due to community support, especially the use of mobile services for communities without good access to transport.* *Uptake of other vaccines – (HPV, influenza, pneumococcal disease, zoster) is not high enough for herd immunity. Five specific groups of people need access to various vaccines:* • *Young people need access to DPT and meningococcal diseases boosters and to HPV vaccines* • *Pregnant women need access to adult pertussis vaccine and SARS CoV-2 vaccine (COVAX), and seasonal influenza vaccines* • *People who are on specific registers, such as the Spleen Registry, who need protection from haemophilus influenza and meningococcal diseases* • *First Nations people need access to pneumococcal disease, influenza, and herpes zoster vaccine earlier than other Australians because of recognised vulnerability to these infections, as well as COVID-19 vaccines.* • *Older and vulnerable Australians who need protection from specific infectious diseases including pneumococcal disease, influenza, and herpes zoster.*	**Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Healthy Ageing	*2022 update* *Rapid increase in the older population of the Murray PHN region is projected. A range of social issues, more prevalent in regional and rural areas, can make it harder for people to achieve good health outcomes in older age. The challenge is even greater for our First Nations communities.* *COVID has also had a disproportionate impact on senior Australians with increased rates of severe disease, death and a loss of community engagement as a result of prolonged lockdowns.* *2023 update*	**Quantitative data (Phase I):** • *Victorian Local Government Association (VLGA)* (2016) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2016) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2017) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2018) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2016) *[accessed May-June 2021]*

Outcomes of the health needs analysis		
Identified Need	**Key Issue**	**Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)***
	Approximately 21 per cent of all Emergency Department presentations in financial year 2021 were made by consumers aged 65 years and older.	• *AIHW. (2022). Emergency department care activity. Retrieved 21 July 2023 from: http://www.aihw.gov.au.* • *Public Health Information Development Unit (PHIDU)* (2018) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* **Qualitative data (Phase II):** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Feb 2021-May 2022)* • *Community Advisory Council meeting (Feb 2021-May 2022)* • *Clinical Advisory Council meeting (Feb 2021-May 2022)* • *Executive and Senior Leadership Group (Feb 2021-May 2022)*

*Supplementary academic evidence is listed in the reference/bibliography appendix and discussed in detail in the accompanying Phase 1 report, which discusses the epidemiological scan of the Murray PHN catchment and provides greater detail regarding the summary presented here.

Section 3 – Summarising service need

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
GP access to residential aged care homes	*Multiple GPs attend separate aged care services resulting in fragmented services within and between facilities, noted by both GPs and community.* *2023 update* *Service gaps have been identified in Goulburn Valley region of Greater Shepparton. General Practitioners who provide services in residential aged care are close to retirement, solo practice owners, or have a high patient load.* *WPP report has identified aged care service distribution, but more work is underway to understand the GPs servicing aged care under the Strengthening Medicare initiative.*	**Quantitative data (Phase I):** • *Public Health Information Development Unit (PHIDU)* (2018) *[accessed May-June 2021]* • *Australian Institute of Health and Wellbeing (AIHW)* (2018) *[accessed May-June 2021]* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) • *Murray PHN primary care stakeholder survey 2022* **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		• *Community Advisory Councils meeting (Feb 2023)* • *Clinical Advisory Council (Feb 2023)*
RACF After Hours Planning and Coordination	*2022* *There are inconsistent protocols for communication between staff and GPs out of hours, which can lead to fragmented services and a lack of continuity of care.*	**Quantitative data (Phase I)** • *Existing Murray PHN Health Needs Assessment (2021)* • *Engagement with Monash University School of Rural Health in July 2022 produced a contemporary literature review and a stratified analysis of latest Australian Census data and other health service data, by age group, location, conditions, health service use and some analysis of future ageing population projections, in different places in our catchment.* **Qualitative Data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN Health Voices community surveys*. (2020-21) **Final Stakeholder Assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *In addition, consultation was undertaken across each of our regional centres in Albury, Bendigo, Shepparton, and Mildura in June-August 2022 as part of Murray PHNs General Practice Investment Strategy.*
Support to maintain healthy ageing	*Murray PHN has a rapidly ageing population who live in distributed rural communities. Eligibility for health programs does not guarantee access, because of both a physical inability to get allied health services nearby, and limited availability of staff. Appropriate support and maintenance programs need to*	**Quantitative data (Phase I):** • *Public Health Information Development Unit (PHIDU)* (2020) [accessed May-June 2021] **Qualitative data (Phase I)**

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	include multidisciplinary team-based care which is co-located and affordable: • *physical activity programs* • *physiotherapy/exercise* • *dietetics* • *podiatry* • *ophthalmology services* • *supported care* • *aged care consultants.* *Rates of participation in the Commonwealth-funded My Aged Care program over-65-year-olds (50-years for First Nations Peoples), which includes several screening components, is not currently known.*	• *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
First Nations Healthy Ageing	*2022* *Improved access to self-determined early intervention models is needed, as well as culturally sensitive responsive services to address the prevention of chronic disease for First Nations people older than 55 years of age.* *A culturally competent workforce, and appropriate local models of care that support healthy ageing grounded in Indigenous understanding of health and wellbeing are needed.*	**Quantitative data (Phase I)** • *Existing Murray PHN Health Needs Assessment (2021)* • *Engagement with Monash University School of Rural Health in July 2022 produced a contemporary literature review and a stratified analysis of latest Australian Census data and other health service data, by age group, location, conditions, health service use and some analysis of future ageing population projections, in different places in our catchment.* **Qualitative Data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Information shared across the Victoria Tasmania PHN Alliance (VTPHNA)*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		• *ACCHOs and Murray PHN operational steering group meeting* • *First Nations Health and Healing Lead interview meeting.* • *Murray PHN Health Voices community surveys* (2020-21) **Final Stakeholder Assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *In addition, consultation was undertaken across each of our regional centres in Albury, Bendigo, Shepparton, and Mildura in June-August 2022 as part of Murray PHNs General Practice Investment Strategy.*
Care Finder Program	*2022* *Rural communities are rapidly ageing, with limited-service delivery (thin markets). The older population has high complex health and social needs and may be a long way from family and formal supports.* *Limited health and social services, workforce pressure, distance/transport, service costs, community literacy and cultural responsiveness, affect service access.* *There is a need to improve the coordination of and access to aged care services and aged care arrangements within the community.*	**Quantitative data (Phase I)** • *Existing Murray PHN Health Needs Assessment (2021)* • *Engagement with Monash University School of Rural Health in July 2022 produced a contemporary literature review and a stratified analysis of latest Australian Census data and other health service data, by age group, location, conditions, health service use and some analysis of future ageing population projections, in different places in our catchment.* **Qualitative Data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Information shared across the Victoria Tasmania PHN Alliance (VTPHNA)* • *ACCHOs and Murray PHN operational steering group meeting* • *First Nations Health and Healing Lead interview meeting*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		• *Murray PHN Health Voices community surveys* (2020-21) **Final Stakeholder Assessment (Phase III)** • *Online meetings with current ACH providers to build relationships, receive feedback and work through requirements of the Care Finder program.* • *Semi structured survey for Care Finder related services to all current Assistance with Care and Housing (ACH) and Access and Support Providers (ASP) providers in the catchment, in addition to those providing the Commonwealth Home Support Program (CHSP)* • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *In addition, consultation was undertaken across each of our regional centres in Albury, Bendigo, Shepparton, and Mildura in June-August 2022 as part of Murray PHNs General Practice Investment Strategy.*
Population access to preventative and primary health care services	*Diseases sometimes described as 'lifestyle' are not necessarily because of deliberate choice. Identified factors which affect future health (for example: hypertension, cholesterolaemia, glucosuria, overweight, lack of sufficient exercise, inadequate diet) are driven by multiple reasons including lack of:* • *screening programs, and difficulty accessing GP appointments in a timely and affordable way* • *transport for accessing medical screening* • *access to healthy affordable food* • *access to safe, affordable, and appropriate exercise facilities*	**Quantitative data (Phase I)** • *Victorian Population Health Survey (VPHS)* (2018) [accessed May-June 2021] • *Australian Institute of Health and Wellbeing (AIHW)* (2017) [accessed May-June 2021] • *Australian General Practice Workforce Planning and Prioritisation Report (Feb 2023)* • *Australian General Practice Workforce Planning and Prioritisation Report (Oct 2023)*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	• *access to local referral services to enable locally coordinated care.* *2023 update* *The WPP report identifies GP services at GP catchment level that are adjusted and can be stratified to different population diseases (based on supply demand modelling).*	**Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Chronic disease management – increasing Burden of Disease and COVID impact of deferred care.	*High levels of many chronic diseases (refer to table above) for which there is insufficient ongoing management. COVID-19 has exacerbated this problem.* • *Appointments for chronic disease management have always been difficult to establish as a regular pattern due to lack of access to discipline-specific professionals in rural areas* • *Many parts of the region do not have adequate and reliable internet access (black spots)* • *While current data is not available, undoubtedly surgeries (specialist care) would have been delayed as has happened everywhere in Australia.* *2023 update*	**Quantitative data (Phase I)** • *Public Health Information Development Unit (PHIDU)* (2020) [accessed May-June 2021] • *Australian Institute of Health and Wellbeing (AIHW)* (2018) [accessed May-June 2021] • *Victorian Population Health Survey (VPHS)* (2017) [accessed May-June 2021] • *Health Demand and Supply Utilisation Patterns Planning Tool (HeADS UPP)* [accessed May-June 2021] • *Australian General Practice Workforce Planning and Prioritisation Report (Feb 2023)*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	The WPP report identifies GP services at GP catchment level that are adjusted and can be stratified to different population diseases (based on supply demand modelling)	• *Australian General Practice Workforce Planning and Prioritisation Report (Oct 2023)* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Sufficient primary care and allied health services for travellers/visitors	*Recreational hazards (e.g. traffic accidents, drowning in the Murray River, ski field accidents) are common and preventable and lead to additional demands on local facilities and resources, particularly during tourist seasons. This includes catering for grey nomads and other transitory populations (e.g. seasonal workers) tourism surges (e.g. ski fields and river destinations) who need primary care and emergency services.* *2023 update By law, private health insurance does not offer cover for out-of-hospital medical services including:* • *GP visits* • *consultations with specialists in their rooms*	**Quantitative data (Phase I)** • *Health Demand and Supply Utilisation Patterns Planning Tool (HeADS UPP)* [accessed May-June 2021] **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) • *Murray PHN priority primary care centre and urgent care clinic feedback* • *Australian Government, Department of Health and Aged Care, November 2022*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	• *out-of-hospital diagnostic imaging and tests.* *Travellers who require care are required to pay out-of-pocket for services and if unable to attain bulk billed appointments will attend local emergency departments.* *Non-Medicare card holders including international travellers and students are required to pay upfront for medical services and costs, then claim back through appropriate insurance pathways. This is not a feasible option for all patients, nor does every traveller hold insurance.* *WPP report shows prioritised GP service capacity based on community need, which can be applied to issues like where we commission multidisciplinary teams.*	**Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) • *Australian General Practice Workforce Planning and Prioritisation Summary Report (Oct 2023)* **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Access to services for young people	*There is a lack of accessible, affordable, and confidential services for young people. There needs to be better provision for all school children to enable comprehensive preventive and protective service provision.* *Specialised services (for example Doctors in Secondary Schools) exist but are patchy. School screening services are designed to identify children with developmental delay, mental health, and sexual health problems.* *2023 update* *The WPP report identifies GP services at GP catchment level that are adjusted and can be stratified to different population age cohorts.*	**Quantitative data (Phase I)** • *Victorian Population Health Survey (VPHS)* (2018) *[accessed May-June 2021]* • *Australian Bureau of Statistics (ABS)* (2017) *[accessed May-June 2021]* • *Australian General Practice Workforce Planning and Prioritisation Report (Feb 2023)* • *Australian General Practice Workforce Planning and Prioritisation Report (Oct 2023)* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021)

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		Supplementary academic evidence searches (Phase I) **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Oral health	*Delay in visiting dental services (especially in adults) because of cost is noted. There is a marked lack of dental and supporting oral health services in most parts of the Murray PHN catchment.* *Very high rates of acute type potentially preventable hospitalisations for dental issues/procedures.*	**Quantitative data (Phase I)** • *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* • *Dental Health Services Victoria* (2018-19) *[accessed May-June 2021]* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21)

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		Final key stakeholder assessment (Phase III) • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
Emergency management, planning care and surge capacity	*Many communities in the Murray PHN catchment are subject to environmental vulnerabilities (bushfires, floods etc.) due to climate change.* *Murray PHN and other primary care staff have excellent knowledge of the region and communities but are not routinely included in the risk development and management planning.* *2023 update* *The after hours needs assessment and the WPP each identified areas where emergency services need more capacity and where the GP workforce can be leveraged to support this.*	**Quantitative data (Phase I)** • *Forest Fire Management Victoria (2021) [accessed May-June 2021)* • *Rural Workforce Agency Victoria (RWAV) (2020) [accessed May-June 2021]* • *Victorian Department of Sustainability and the Environment (2024 [accessed May-June 2021]* • *Murray-Darling basin Authority (undated) [accessed May-June 2021]* • *Australian General Practice Workforce Planning and Prioritisation Report (Feb 2023)* • *Australian General Practice Workforce Planning and Prioritisation Report (Oct 2023)* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21)

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		Final key stakeholder assessment (Phase III) • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
After Hours/emergency care	*Many communities lack affordable and responsive after hours services, including for urgent care in small rural communities where primary care doctors are needed to provide sufficient emergency services. Many rural doctors are retiring or ceasing VMO services creating a reliance on transport and ambulance to reach higher level services, which can be life-threatening. People need affordable emergency care as close to home as possible as part of preventing hospitalisations and saving lives in the context of many small towns of the Murray PHN catchment.* *2023 update* *The after hours needs assessment and the WPP each identified areas where emergency services need more capacity and where the GP workforce is able to be leveraged to support this.*	**Quantitative data (Phase I)** • *Health Demand and Supply Utilisation Patterns Planning Tool (HeaDS UPP)* • *Australian Institute of Health and Wellbeing (AIHW)* (2018) [accessed May-June 2021] • *Victorian Population Health Survey (VPHS)* (2017) [accessed May-June 2021] **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		• *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)* • *After Hours community consultations 2023* • *National Health Services Directory – healthmap as a June 2023*
After Hours	*Greater availability of after hours services is identified as the second most needed improvement for access across the Murray PHN catchment. Appointment availability is identified as a significant barrier to accessing the correct healthcare – This can result in increased after hours urgent care demand.* *2023 update* *Healthmap data from the National Health Service Directory shows that there are no specific services for First Nations Peoples open during the After Hours period. The First Nations health needs assessment will retrospectively review after hours need, unmet demand and supply.* *Limited awareness in the community of services available during the after hours period and how to access them. There is a general assumption that services (other than the emergency department) will be expensive in the after hours period.* *The North West region within the Murray PHN catchment, including SA2 locations of Mildura, Buloke, Kerang and Irymple, was found to have overall highest after hours service need.* *Distance and travel are significant barriers to accessing health support and are heightened in the after hours period due to difficulty driving, reduction in public transport services and reduced service availability.* *The WPP identified areas where emergency services need more capacity and where the*	**Quantitative data (Phase I)** • *Health Demand and Supply Utilisation Patterns Planning Tool (HeaDS UPP)* • *Australian Institute of Health and Wellbeing (AIHW)* (2018) [accessed May-June 2021] • *Victorian Population Health Survey (VPHS)* (2017) [accessed May-June 2021] **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) • *Internal AH evaluation report* **Supplementary academic evidence searches (Phase I)** **Qualitative data (phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	GP workforce is able to be leveraged to support this.	• *Executive and Senior Leadership Group (Nov 2021)* • *After Hours community consultations 2023* • *National Health Services Directory – healthmap (accessed June 2023)*
Digital health and telehealth systems	*Multiple IT systems are used which are not capable of 'reading' each other's data.* *There has been a lack of enthusiasm by some GPs and some members of the public to use services online.* *The SARS CoV-2 pandemic has forced many primary care users to use telehealth (Murray PHN consultation estimates of 10-15 per cent has been integrated into the practice routine care, including to help with triaging and managing waiting lists, giving results and prescriptions as well as protecting clinicians and their patients from infectious diseases). However, taking physical readings – blood pressure, temperature, urinalysis etc. - is not possible without face-to-face contact. All GPs preferred hybrid models of care involved interspersed with face-to-face care. Many elderly and rural patients preferred seeing the doctor in person. Some services (in particular ACCHOs) solved this problem very effectively by having a healthcare workers attend remote clinical consultations and undertake several biometric readings.* *Apart from GPs, other primary care providers who used digital and online services during the pandemic include maternal and child health nurses and some physiotherapy and dietetics services. According to local feedback, the effect of these services going online has not been universally positively received by clients. Some services (like paediatrics and geriatrics) do not lend themselves well for telehealth.* *However, internet access is neither reliable nor even accessible at all in some instances. At times, it is an inaccessible service for some Murray PHN residents.*	**Quantitative data** • *Australian Institute of Health and Wellbeing (AIHW)* (2018) [accessed May-June 2021] • *Victorian Population Health Survey (VPHS)* (2017) [accessed May-June 2021] **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) • *Internal Digital Health evaluation report (2020)* **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
Digital health capacity to support healthy ageing	*2022 update* *Timely access to primary care both in and out of hours is required. Improved access to coordinated specialist care is required as is the ability to access person centred and culturally responsive models of care delivered via digital health.* *There is a need to develop a sustainable and effective approach to managing virtual care in residential aged care homes and to improve the use of My Health Record and transfer of healthcare information between providers.*	**Quantitative data (Phase I)** • *Existing Murray PHN Health Needs Assessment (2021)* • *Engagement with Monash University School of Rural Health in July 2022 produced a contemporary literature review and a stratified analysis of latest Australian Census data and other health service data, by age group, location, conditions, health service use and some analysis of future ageing population projections, in different places in our catchment.* **Qualitative Data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN Health Voices community surveys* (2020-21) **Final Stakeholder Assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *In addition, consultation was undertaken across each of our regional centres in Albury, Bendigo, Shepparton and Mildura in June-August 2022 as part of Murray PHNs General Practice Investment Strategy.*
Mental health and AOD	*Overt mental health problems occur in the context of a lack of access to appropriate clinical staff relative to need (especially in emergencies), including psychiatrist consultants, psychologists, mental health nurses, social workers and occupational therapists.* *Local patterns of suicide are unexpected, with young women in some LGAs having much higher rates than men. The reasons for*	**Quantitative data (Phase I)** • *Australian Bureau of Statistics (ABS)* (2016-17) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* • *Department of Health and Human Services (DHHS)* (2015) *[accessed May-June 2021]*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	this are unclear and need further investigation. *Suicide prevention programs are needed for both men and women, but these may need to be directed at nuanced underlying causes/triggers.* *A need for specialised alcohol and other drugs counsellors and support services was also identified.* *2023 update* *There is a growing need for child mental health supports, particularly psychological services.* *Exacerbated by the increase (and proposed increase) of mental health investment by the Victorian Government in the region, there are relative gaps and outstanding needs for mental health (including psychosocial) services in subregional areas.* *A lack of service integration and coordination is impacting consumers who are experiencing difficulty locating and engaging the services that they need.* *There is an undersupply of pharmacotherapy services compared to the high need in the region.* *There are a number of people with the need for support for mental health and AOD but limited dual diagnosis capability.* *Poor linkages and referral and feedback processes inhibit service provision.*	• *Victorian Population Health Survey (VPHS)* (2017) *[accessed May-June 2021]* • *Victorian Health Information Surveillance System (VHISS)* (2020) *[accessed May-June 2021]* • *Australian Institute of Health and Wellbeing (AIHW)* (2017) *[accessed May-June 2021]* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) • *Joint regional Mental Health, AOD and Suicide Prevention Foundation Plan (internal report, 2020)* **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) • *Health Voices Mental Health & AOD Survey (July 2023)* **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021* • *Impact Co Mental Health and AOD focus groups (May-Aug 2023)*
Refugee and migrants	*The specific needs of refugees and migrant populations involve being able to access primary (and secondary) healthcare in a culturally appropriate and non-threatening*	**Quantitative data (Phase I)** • *Australian Bureau of Statistics (ABS)* (2017) *[accessed May-June 2021]*

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	way, with appropriate language facilities such as access to translators. *Of note, most refugees and migrant populations include health practitioners trained in their countries of origin. While not necessarily able to provide the qualifications needed for APHRA registration, the skills they bring are culturally important for their own communities and could be incorporated into some aspects of primary healthcare.* *The specific needs of these people involve being able to access primary (and secondary) healthcare in a culturally appropriate and non-threatening way, with appropriate language facilities such as access to translators.*	• *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) **Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*
First Nations Health	*Within our catchment there are seven Aboriginal Community Controlled Health Organisations (ACCHOs) providing a range of care and a breadth of services for Aboriginal and non-Aboriginal clients alike.* *It has been identified that the ACCHOs service large geographical areas with clients travelling long distances to access their culturally respectful services. The services not only provide healthcare assessments and primary healthcare needs but also programs addressing the whole person by offering wraparound support, resulting in improved health outcomes.*	**Quantitative data (phase 1)** • *Health Demand and Supply Utilisation Patterns Planning Tool (HeaDS UPP)* [accessed May-June 2021] **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021) • *ACCHOs and Murray PHN operational steering* group

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
	Lack of access to relational commissioning of services due to short-term funding allocation and restrictive funding guidelines limits the flexibility and the sustainability of services. *The insecure nature of work contracts for Aboriginal staff, and the pay discrepancies between First Nations health professionals and non-Aboriginal health professionals, are two important issues which prolong inequity and inequality. The improvement of conditions and pay, including long-term/permanent employment contracts, would enable flexibility, promote ownership, and enhance program design.* *2023 Update* *Not all First Nations community members attend ACCHOs due to confidentiality concerns, wait times and family issues.*	**Supplementary academic evidence searches (Phase I)** **Qualitative data (Phase II)** • *ACCHOs and Murray PHN operational steering group meeting* • *First Nations Health and Healing Lead interview meeting* • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *First Nations Health and Healing Lead interview* • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)* • *After Hours community consultations 2023*
People living with disability	*While some in this group are older Australians, disability occurs in all age groups and in all LGAs.* *Access to the NDIS is limited by the assessment process, and the staff who are eligible and able to perform appropriate assessments.* *For people living with disability, receiving primary health services is frequently impacted by poor building design (accessibility) and limited transport options.*	**Quantitative data (Phase I):** • *Australian Bureau of Statistics (ABS)* (2018) *[accessed May-June 2021]* • *Public Health Information Development Unit (PHIDU)* (2020) *[accessed May-June 2021]* • *Victorian Local Governance Association (VLGA)* (2018) *[accessed May-June 2021]* **Qualitative data (Phase I)** • *Murray PHN staff and advisory council interviews* (2021) • *Preliminary stakeholder interviews* (2021)

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence (see Appendix 3 triangulation table for a more detailed analysis)
		Supplementary academic evidence searches (Phase I) **Qualitative data (Phase II)** • *Murray PHN 2022-2025 Health Needs Assessment Survey* • *Murray PHN 2022-2025 HNA online focus groups* • *Murray PHN Health Voices community surveys* (2020-21) **Final key stakeholder assessment (Phase III)** • *Internal medical advisor meeting (Sep-Oct 2021)* • *Community Advisory Council meeting (Oct 2021)* • *Clinical Advisory Council meeting (Oct 2021)* • *Executive and Senior Leadership Group (Nov 2021)*

*Supplementary academic evidence is listed in the reference/bibliography appendix and discussed in detail in the accompanying Phase 1 report, which discusses the epidemiological scan of the Murray PHN catchment and provides greater detail regarding the summary presented here.

As relevant, a short summary of how a particular health need is being addressed by current services, highlighting where:
o PHNs currently fund services that address the identified health need
o while specific health needs might have been identified within the PHN region, it will not translate into a priority as it is already adequately addressed by other existing non-PHN funded services.

How health needs are currently being addressed

From its inception, primary healthcare is about preventive health services and builds on the analogy of upstream-downstream healthcare. Upstream primary healthcare is about prevention of ill-health, while downstream secondary healthcare is about the cure of disease. Instead of 'pulling people out of the river' downstream, primary healthcare moves health services upstream, and through screening and prevention services stop people from falling in the ill-health river in the first place. Key to prevention therefore is the coordination of care and sustainable primary care systems.

The results of this aggregated health and service needs analyses support the notion of 'the missing middle'. Several important service gaps have been identified, including access to qualified staff and professionals, such as place-based supports for mental health and dental health services.

Some examples of how existing health needs are currently being addressed:

- Integrated Health Network (IHN) in the Buloke, Loddon and Gannawarra regions, with the IHN Alliance as the local leadership platform, addressing primary care workforce shortage in a rural area.
- Social prescribing scoping project in the Mallee region for addressing social isolation, assessing the region's readiness for a trial.
- A suite of multi-disciplinary team care arrangements including:
    - Paediatricians, mental health nurses and speech pathologists, to co-design sustainable approaches for vulnerable and under-serviced populations.
    - Investment in RIPRN nurse training and employment projects and trialling blended supervision approaches for attracting and training GPs, capacity building and sustainability is further enhanced.
    - Chronic disease management – podiatry, dietetics, diabetes education and cardio-pulmonary community rehabilitation.
    - Organising multidisciplinary professional development webinars.
- To increase the quality of virtual care, an enhanced model of care project examining telehealth use in residential aged care settings is starting soon.
- Application of a suite of clinical measures and interventions via telehealth to consumers struggling with suicidal ideation as part of psychological therapy service (PTS) offerings, including mood mapping apps and a distress safety plan.
- Murray PHN funds several services designed to provide identified gaps in care including:
    - My Emergency Doctor to support after hours workforce and prevention of hospital admissions and preventable emergency presentations. This program has seen an increase of 15 additional funded Urgent Care Centres in FY20, resulting in 25 Centres participating in the pilot since its inception in FY19. This program will conclude in December 2023. Through the After Hours Primary Health Care Program Schedule, Murray PHN will commissioning general practices to provide services that are for urgent but non-life-threatening conditions to reduce demand on emergency department.
    - GP telehealth consultation facilities, including the linking of patients to enhance integrated specialist services, supporting the upskilling of clinical GP practice staff.
    - Health system navigators to assist in linking higher need and underserviced populations to care. Specifically targeting refugee communities (Bendigo and Shepparton) and complex chronic care needs (East Wimmera and Mansfield/ Benalla areas).
- With strong focus on early intervention, the Doctors in Secondary Schools program has seen uptake of referrals for young people experiencing mental distress.

2022 update

The Murray PHN Care Finder supplementary needs analysis identified that assistance to understand and access aged care and connect with relevant supports is currently provided by ACHs and ASPs. However, some individuals lack the capacity to seek out services for themselves. This may be a result of being socially isolated, as well as having other vulnerabilities such as: cognitive decline, poor mental health, financial disadvantage and/or being from a diverse background.

The Care Finder Needs Assessment also identified that the existing ACH and ASP providers have existing service models similar to Care Finder. They have a broad geographic reach, strong workforce and are well connected with aged care services, health providers, emergency services,

community services, financial support services and housing assistance services. Many of these providers have established strong and enduring referral pathways over their years of service development across the Murray PHN catchment and are well placed to adopt the Care Finder model as having sufficient reach for servicing older people through the Care Finder program.

Geographical mapping of the ASP services show spread across the catchment, with absolute service gaps in just four of the 22 LGAs (Shepparton, Wodonga, Campaspe and Loddon). With just small adjustments to service model, completion of Care Finder training and implementation of new reporting requirements, Murray PHN considers that the ASP services have significant readiness to become care finder providers. Capacity of these services would be further enhanced by taking the opportunity to attract and develop their workforces, enabling greater geographic reach and intensity of service provision for the client needs identified.

Expected number of target cohort is likely to be significantly higher than initial DoHAC projections. Significant issue regarding actual access to aged, community and health services – regardless of navigation support, services are generally difficult to access due to workforce and funding issues. This can mean that the target group still wait long times to receive services once they have been assessed as eligible for services.

Distance between LGAs is vast and may limit the amount of face-to-face consultation for providers who work across multiple LGAs.

2023 update

The use of nurse practitioners has been highly effective with AOD where the consumers generally find it difficult to access GPs.

Murray PHN now funds an Indigenous Therapeutic Day Rehabilitation program on Dja Dja Wurrung Country, which supports First Nations communities experiencing AOD misuse through an intensive and unique day rehabilitation model. Including a focus of connecting with Culture, Country and Community.

In Echuca, Murray PHN funds a residential aged care program, that uses virtual reality with aged residents to deliver an alternative to traditional psychological therapy interventions.

Murray PHN continues to address integration issues across mental health, AOD, primary healthcare providers and broader stakeholders through engagement and coordination efforts so that services are easier for clients to navigate and access.

The WPP Reports are being used to discuss solutions with our stakeholders across the portfolio of rural workforce stakeholders, training providers and local health services. End-to-end training pathways into general practice are being submitted as part of the WPPO report.

Identified health needs for which there are no current programmes

Many ill-health problems have been identified, most of which are ongoing and already have programs in place to address some aspects of these specific needs, as shown in the 'Potential Lead Agency' column in the section 4 Table. However, the opportunity to undertake a systematic analysis of the health needs in the Murray PHN catchment has identified several opportunities, brought about by the acknowledgement of the effects of climate change on health, and sudden

and major effects of both environmental disasters and the ongoing SARS -2 pandemic. The interlinked nature of the issues identified are shown in the figures in Appendix 6.

Several areas have been identified in which services do not exist for vulnerable people (LGBTQIA+, migrant and refugees, people with disability, and people experiencing domestic violence) each have their own specialised health needs. These groups of people are not 'visible' and do not have dedicated services. Ensuring the provision of appropriate access to facilities, including culturally appropriate settings and translation services, is known to be beneficial.

Other program areas for consideration:

- Prevention of long-term chronic disease in more systemic manner, as well as programs targeting deferred care of chronic disease management.
- Local GPs undertake as much screening as they can, but it is opportunistic and not therefore systematic. Prevention programs which focus on the prevention of modifiable disease (for example hypertension and diabetes) from middle-age, much of which can be undertaken by appropriately trained nurse practitioners and RIPRN nurses, taking the pressure off general practitioners.
- A systematic and Murray PHN-wide need exists for an accessible diagnosis and treatment program for children diagnosed with intellectual and/or cognitive disability, including infants diagnosed with FASD or children with needs which emerge through the maternal and child health, and school health programs.
- Program planning for surges in visitor need for primary care and health services as a result of active recreation requires attention and resourcing.

Finally, it is worthwhile noting that inclusion in emergency management planning is becoming more important for Murray PHN, as climate change affects flood and fire events. People displaced by emergency events are mainly residents, who take with them their health needs. Health services on the other hand can be severely impacted by loss of power while needing to keep medicines or vaccines refrigerated. Inclusion of local GPs (who are usually also local residents) in emergency planning would assist in better understanding the needs of people evacuating to emergency shelters.

2023 update

More remote supervision models and networked supervision models with appropriate incentives may assist with WPP solutions in rural workforce training. Single Employer Model (SEM) trials are possible but these and scope of practice options and thin market interventions are slow to roll out and require extensive implementation support that PHNs need funding for (through Core funding).

Potential health issues which are likely to become evident in future, but which are not currently measured or specifically acknowledged:

LGBTIQA+ health

Gender and sexuality socio-demographic characteristics are not currently collected in a systematic way e.g. through the ABS Census. However, academic studies point to the need for healthcare - Primary and secondary – directed to this group of people, as they have specific health needs not routinely available in current services in rural areas, for example gender reassignment consultation and surgery.

In addition, for a variety of reasons, non-binary persons have high rates of mental ill-health and psychological distress and for some, STIs.

Vaping

Although tobacco smoking rates are declining, the use of vaping equipment and inhalation products seems to be increasing across Australia, particularly in young people. This poses three potential health problems:

- Vaping may emerge as a gateway route to smoking cigarettes, as some vaping products contain nicotine.
- Vaping potentially causes lung disease because of the components of the inhalation fluid.
- Vaping is a new activity and attempts to measure capsule components have been met with a general lack of enthusiasm. There is much conflicting research and opinion about whether vaping is successful transition to smoking cessation or as a gateway to smoking tobacco. Because it is a new activity, there is no data on the long-term effects of vaping, there is an emerging body of work suggesting it might well cause long-term problems.

Sequelae from communicable disease

'Long COVID' is being acknowledged as a long-term health problem. However, other communicable diseases, both viral and bacterial, also have long-term sequelae.

The emergence of 'long COVID' provides an opportunity to consider these long-lasting and sometimes permanent sequelae from any major infection, and not just the virus-du-jour.

Workforce and digital health for urgent care

More innovative workforce approaches using video-conferencing facilities, including capacity building of staff, ensuring coverage and improving digital literacy of consumers need to be considered. Focus should be on trialling a coordinated approach to enable multidisciplinary service delivery including specialist care.

Domestic violence

Another area for which we have no data is family violence. This undoubtedly occurs in our catchment and while some service delivery is available, under-reporting makes it hard to estimate both health and social needs, including the role of primary care. Again, this speaks to the possible role of PHNs in coordinating place-based programs to address associated health needs.

Section 4 – Opportunities and priorities

This section summarises the priorities arising from the Needs Assessment, their coding, and the opportunities for how they will be addressed. This could include priorities that:

- ***may be considered in the development of the Activity Work Plan, and supported by PHN flexible funding***
- ***may be undertaken using program-specific funding, or***
- ***may be led or undertaken by another agency.***

Please note that the pre-provided coding options should be used wherever possible in the first instance.

If 'Other' must be used for either of the priority area or priority sub-category coding, please include your alternative in bold at the top of the expected outcomes column.

Additional rows may be added as required by clicking on a row and selecting the '+' at the far right of the table.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
Alcohol use	Alcohol and other drugs	Access	Reduced ambulance callouts and police responses if workforce would be suitably resourced.	Clinical AOD providers (community health services/LHNs/ACCHOs), health promotion teams, (PHUs/councils/health and wellbeing teams), Ambulance Victoria partnership.
		2023 update Pharmacotherapy services	Increased supports for providers and upskilling for general practitioners	Pharmacotherapy Area-based Networks, existing providers, GP practices

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
Alcohol use	Population health	Potentially preventable hospitalisations	Thirty-year reduction in alcohol-related chronic conditions, such as cancer.	Clinical AOD providers (community health services/LHNs/ACCHOs/headspace), health promotion teams (PHUs/LGA/community health services/LHN/ACCHOs/headspace) Doctors in Secondary School project, health nurses.
Prescription and non-prescription drug use	Workforce	Health literacy	Appropriate consultation and assessment by for example, pharmacists (polypharmacy). Improved embedment of de-prescribing practices for elderly patients with polypharmacy use in residential aged care facilities.	Pharmacy Guild, police for non-prescription drug use, health promotion teams (PHU/LGA/community health services/LHN/ACCHOs/headspace). 2023 update Nurse practitioner led co-designed models and peer support

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
Prescription and non-prescription drug use	Mental health	Workforce	Ensuring drugs will not be used apart from purposes for which they are prescribed.	Clinical AOD providers (community health services/LHN/ACCHOs), primary care providers.
Population access to primary care services (in hours)	Population health	Other, lack of appropriate and affordable, reliable transport	Lack of appropriate and affordable, reliable transport. Provisions are made for services for people living in areas without access to appropriate transport.	RFDS project (community transport) in partnership with Western Victorian and Gippsland PHNs. IHN project, with the IHN Alliance working group of the Buloke, Loddon, Gannawarra Health Executive Network. Community health for refugee and migrant community work.
Population access to primary care services (after hours)	Population health	After hours	After hours service access is place-based, either through telehealth or in collaboration with local service providers.	2023 update WPP report shows prioritised GP service capacity based on community need, which can be applied to commissioning of multidisciplinary teams model of care

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			Remote patient monitoring for chronic disease management.	
Inclusion in emergency preparedness and response (management) planning	Health workforce	Safety and quality of care Continuity of Care 2023 Primary Care Support	Continuation of primary care services during major emergency events (e.g. access to asthma puffers and drugs, diabetes medication, C-PAP machines, pulse oximeters). Better integration of primary healthcare into emergency preparedness and response. Improved home monitoring (COVID Positive Pathways). Improved focus on inclusion of people living with a disability in emergency planning.	In the future: communicate with LGAs, seek to be included in risk management planning. Contribute to risk management plans when they are being reviewed. Data-sharing opportunities with NDIA and other relevant disability peak bodies. 2023 Feedback from affected primary care providers following an emergency event Implementing recommendations following recovery and reflection post emergency event

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			2023 Continual improvements in Emergency preparedness and planning through debrief, reflection and evaluation	
Emergency services, inclusive of surge events	Health workforce	After hours	Better access to urgent primary care in rural communities. Potential establishment of rural area community-controlled health organisations as per Primary Health Care 10 - year consultation plan. Improved identification and monitoring of patient's clinical deterioration including timely responsiveness to acute	RACGP, Murray City Country Coast - GP Training, Ambulance Victoria, Residential Aged Care Facility staff, Emergency Department providers.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			care needs during after hours.	
Healthy ageing	Population Health	Health literacy	Adequate access to primary health and prevention programs, including social prescribing to maintain healthy living at home and in aged care facilities in special retirement villages. Raise awareness and usage of comprehensive screening Commonwealth-funded My AgedC are program for people over 65 years old (50 for First Nations). Improved access to social prescribing trials.	Healthy ageing trial project, hopefully to be broadened dependent on outcomes. Social prescribing scoping project (Mallee region) and future project trials.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
Mental health including suicide	Mental health	Other, 'missing middle'	'Missing middle' Identification of the rate of mental health presentations at emergency departments. Reduction in potentially preventable hospitalisations.	Service implementation plans as result of regional mental health, alcohol and other drugs and suicide prevention foundation plan, in line with recommendations through Royal Commission's final report. Partnerships with LHN emergency departments and Victorian mental health providers, suicide prevention aftercare service providers (Way Back and HOPE).
		2023 Subregional needs	There are early indicators from postvention activation groups and networks that a number of those who have died by suicide were not known to mental health suicide services There is an opportunity to further explore avenues to reach those experiencing	Community health service, suicide prevention networks, local councils and mental health and wellbeing networks. Collaborations with LHNs, local providers, regional network, other Murray PHN initiatives such as the Sustainable Rural Health project.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			suicidality who are not presenting through optimising health system network coordination Address gaps and growing health inequity for rural areas.	
		Child mental health	Early intervention and support for children and families will mitigate longer term mental health concerns and limit acute presentations.	Local providers and regional networks
Modifiable disease and screening for prevention	Population health	Chronic conditions	Reduction in long-term chronic disease as a result of comprehensive universal screening programs from age 50. *My Aged Care* program does not commence until	RACGP and DOH publicising, My Aged Care program, public health units, Integrated cancer services.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			age 65 (55 for First Nations). Universal coverage of vaccine preventable disease at all ages.	
Diabetes-specific	Population health	Chronic conditions	Lower rate of diabetes. Better access to appropriate foods and exercise possibility.	Partnership with VicHealth and LGA-specific programs, public health units and community health services.
Prevention and management of complications of Chronic Disease	Population health	Chronic conditions	Prevention of chronic causes of potentially preventable hospitalisations. Increased quality of life with reduced number of disability affected years. Chronic disease management commissioning inclusive of	Rural health services, community health services, allied health providers, general practitioners, aged care facilities Advance Care Planning Australia, Palliative Care Australia, public health units, women's and community health services and local government bodies.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			strategies to address broader determinants of health. Improved uptake of advance care directive discussions and documentation led by general practitioners with focus on chronic diseases.	
Youth health	Population health	Vulnerable population	Nurturing a generation that can be proactive about taking care of their health needs.	School Health Service, Doctors in Secondary Schools, headspace, ACCHOs.
Developmental delay screening and support	Population health	Early intervention and prevention	Expansion of services for children diagnosed with developmental delay (e.g. FASD). Better access to services once people are diagnosed.	Industry partnership with tertiary institution to improve diagnostic capabilities, in conjunction with maternal child health services and FASD assessment clinic at GV Health, Sunraysia community health services, Hands Up Mallee and Noah's Ark (Loddon Mallee region).

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
Migrant health programmes	Population health	Workforce	Specialised workforce who are equipped to work with several community groups and members, including culturally safe practice. Increase access to workforce capacity and education building on the needs of migrants. Increase access to education in health opportunities for migrant communities about the Australian healthcare system and role of primary healthcare services.	In the future ensure appropriate representation when planning outreach services. Ethnic Councils - Shepparton, Mildura, Albury Wodonga, Bendigo.
People living with disability	Population health	Workforce Health Literacy	Specialised workforce who are equipped to work with several community groups	In the future ensure appropriate representation when planning outreach services.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			and members, including culturally safe practice.	
LGBTQIA+	Population health	Workforce	Specialised workforce who are equipped to work with several community groups and members, including culturally safe practice. Increase access to primary healthcare workforce capacity building and education opportunities on the needs of LGBTQIA+ communities.	In the future ensure appropriate representation when planning outreach services, care coordination through Gateway Health's gender clinic for gender affirmation counselling, family support and consultation. Develop service directory list with general practices that completed LGBTQIA+ awareness training and are endorsed culturally safe services. Primary health units, VIC health – LGBTQIA+ Rural and Regional Program Victoria Pride Centre, Koorie Pride Victoria, Transgender Victoria, Australian LGBTQIA+ Multicultural Council

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
First Nations health and wellbeing	Aboriginal and Torres Strait Islander health	Vulnerable populations	Increased culturally safe practice approaches in non-Aboriginal specific services. Continuation of trustful services and programs already in place. Increased focus on connection to Country. Becoming an anti-racist organisation. Address the needs of First Nations people during Sorry Business from diagnosis to terminal care, grief and bereavement.	ACCHOs and continuing the process of Murray PHN building trustful, appropriate, and respectful partnerships and services.
Infectious and communicable disease	Population health	Early intervention and prevention	Increased understanding of communicable disease	Collaboration with public health units, Palliative Care Australia, Palliative Care Victoria, Advance

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			control and prevention by DoH in the Murray PHN catchment. Increased understanding of long-term effects of communicable diseases including COVID-19. Better diagnosing, separating long-term sequalae of COVID-19 from mental ill-health. Embed discussions about end-of-life wishes and goals for people living with known infectious and communicable disease that are life-limiting illnesses.	Care Planning Australia, and disease-specific associations, e.g., Hepatitis Australia.
GP access to Residential Aged Care Facilities	Health workforce	Aged Care	Consistent primary care services through reduced number of providers (for	PHN residential aged care staff, general practitioners, allied health services, Dementia Australia, Palliative Care Victoria, Advance

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			example, one residential aged care facilities with nominated GPs/allied health professionals). Coordinate transition of care on admission to residential aged care facilities. Improved uptake of advance care directive discussions and documentation at admission. Improved identification and monitoring of patient's clinical deterioration including timely responsiveness to acute care needs during after hours.	Care Planning Australia, Ambulance Victoria, after hours services and local emergency departments. 2023 update WPP informs where to target Strengthening Medicare Initiatives at GP catchments (workforce supply relative to community need of different population cohorts) The WPP work involves co-designing solutions with stakeholders.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
Initiatives to bolster After Hours community-based access to care	After Hours		Reduced emergency department presentations for triage categories 4 & 5. Access to After Hours urgent care is equitable across catchment.	Pharmacies, urgent care centres, telehealth providers, GPs and general practice respiratory clinics. 2023 update WPP informs where to target Strengthening Medicare Initiatives at GP catchments (workforce supply relative to community need of different population cohorts) The WPP work involves co-designing solutions with stakeholders.
Sufficient primary care and health services for travellers and visitors	Health workforce	Practice support	Improved emergency response to recreation- and environmental-related accidents. Continuity of care for visitors to the Murray PHN catchment.	Murray PHN GPs 2023 update WPP informs where to target Strengthening Medicare Initiatives at GP catchments (workforce supply relative to community need of different population cohorts) The

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
				WPP work involves co-designing solutions with stakeholders.
IT systems	Digital health	After hours	Better primary health care access, especially at weekends and after hours. Upskilling workforce regarding digital health. Further development of hybrid models of care. Improving digital health literacy of consumers.	Continuation of series of after hours projects.
IT systems (Enhanced technology)	Digital health	Access	Increasing access to health, suitable IT systems, coverage, and technology to access primary health services.	NBN, reduction in blackspots telehealth enhanced aged care project.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
Dental health	Health workforce	Workforce	Improved dental health for adults, particularly in areas with low SEIFA scores.	Western part of the catchment: ADF dental service collaboration.
Cancer	Health workforce	Care coordination	More access to consultants. Treatment services available locally. Shorter waiting lists. Improved coordination of palliative care for end-of-life patients (Hospital in the Home program etc.). Increased engagement of primary care in patient survivorship screening and shared care.	Voluntary assisted dying project scoping to occur. Effective communication and liaison with Hospital in the Home (HITH), Loddon Mallee Integrated Cancer Services, Hume Regionals Integrated Cancer Services, Cancer Council.

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			Wholistic patient centred care.	
Cancer	Population health	Other, screening	Screening and improved screening coverage for cancers which benefit from early diagnosis (breast, bowel) including those becoming available in the future (e.g. prostate, ovarian). Patient alerts for monitoring and surveillance of health risks for cancer patients embedded in GP practice software for secondary prevention. Improved uptake of advance care directive discussions and	Cancer Councils and hospitals Integrated Cancer Services (LMICS, HRICS) Cancer Council Victoria Cancer shared care project (at point of diagnosis), in partnership with, ACCHOs, CALD organisations, oncologists at public health units and linkage with general practitioners, Advance Care Planning Australia and Palliative Care Victoria. 2023 update WPP informs where to target Strengthening Medicare Initiatives at GP catchments (workforce supply relative to community need of different population cohorts) The

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			documentation at diagnosis.	WPP work involves co-designing solutions with stakeholders.
Sexually transmitted infections	Population health	Early intervention and prevention	No congenital Syphilis. Reduction in infertility due to Chlamydia and Gonococcal infection. STIs reduced in homosexual men. HIV infections are currently well controlled (with population access to triple therapy).	Melbourne Sexual Health Centre (CERSH, for example in Mildura) partnership opportunity. Partnership opportunity with Multicultural Health and Support Service for CALD communities. Women's Health Loddon Mallee Women's Health Goulburn North-East
SARS CoV-2 / COVID-19	Population health	Health Pathways 2023 Primary Care Support	Appropriate COVID-19 positive pathways, including coordination, oversight, and clear delineation of responsibilities.	Public health units, health services and GPs. Build early pathways for referral for treatment of persons with sequalae of COVID-19, including 'long COVID'. 2023

Opportunities and priorities				
Priority (Identified need)	**Priority area**	**Priority sub-category**	**Expected Outcome**	**Potential lead agency and/or opportunities for collaboration and partnership***
			Good identification of chronic sequalae of long-term COVID-19 infections (long COVID). 2023 Improve COVID-19 vaccination rates of identified vulnerable populations.	Supporting primary care providers in infections control measures ensuring staff safety and decrease COVID-19 transmission. Providing point of care COVID-19 detection (Rapid Antigen Tests)

Section 5 - Checklist

This self-assessment checklist can be used to confirm that the key elements of the NA process have been undertaken. PHNs must be prepared, if required by the Department, to provide further details regarding any of the requirements listed below. Refer to the PHN Needs Assessment Policy Guide and the PHN Needs Assessment Completion Guide for further information.

Requirement	✓
Provide a brief description of the PHN's Needs Assessment development process and the key issues discovered.	✓
Outline the process for utilising techniques for service mapping, triangulation and prioritisation.	✓
Provide specific details on stakeholder consultation processes.	✓
Provide an outline of the mechanisms used for evaluating the Needs Assessment process.	✓
Provide a summary of the PHN region's health needs.	✓
Provide a summary of the PHN region's service needs.	✓
Summarise the priorities arising from Needs Assessment analysis and opportunities for how they will be addressed.	✓
Appropriately cite all statistics and claims using the Australian Government Style Manual author-date system. https://www.stylemanual.gov.au	✓
Include a comprehensive reference list using the Australian Government Style Manual. **Author-date as in APA. For 3 or more use first name and 'et al' in text and all authors in the ref list** Ref list: The general order is: 1. author or authoring organisation's name 2. publishing date 3. title (and series or issue details) 4. publisher details 5. accessed date (for digital content).	✓
Use terminology that is clearly defined and consistent with broader use.	✓
Ensure that development of the Needs Assessment aligns with information included in the PHN Needs Assessment Policy Guide.	✓

Appendices

References and Bibliography

Appendix 1: Primary data sources

Appendix 2: Abbreviations

Appendix 3: Phase I data analysis triangulation table

Appendix 4: Pictogram of phase I outcomes: informing focus group interview schedules conducted in phase II.

Appendix 5: Visual diagram of ranking priorities and opportunities as part of phase III of responses provided by Medical Advisors of Murray PHN.

Appendix 6: Murray PHN Areas needing complex interventions

- Mental health
- Healthy ageing and care of frail people
- Modifiable disease risk factors
- Environment and health
- Screening and prevention

Appendix 7: Murray PHN Health Needs Assessment 2022-25 on a page

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Appendix 1: Primary data sources

Data for this health needs analysis were retrieved from a wide variety of sources, as outlined below.

Quantitative data (Phases I and II)

- ABS demographic tables and community profiles (ATSI status, humanitarian settler status, LOTE)
- ABS SEIFA website for Department of Health. Accessibility Remoteness Index of Australia (ARIA) Review Analysis of Areas of Concern–Final Report. Australian Government, 2011, Commonwealth of Australia. (http://stat.data.abs.gov.au/Index.aspx?DataSetCode=SEIFA_SSC).
- Australia's health 2020: in brief at https://www.aihw.gov.au/reports/australias-health/australias-health-2020-in-brief/contents/summary. Australian Institute of Health and Welfare 2020. Australia's health 2020 data insights. Australia's health series no. 17. Cat. no. AUS 231. Canberra: AIHW.
- Australian Government MyAged*Care.* (https://www.myagedcare.gov.au)
- Behavioural Risk Factor Surveillance System (BRFSS)(https://www.cdc.gov/brfss/index.html
- Department of Education and Training Victoria (Victorian Child and Adolescent Monitoring System)
- Dental Health Services Victoria - Oral Health Profiles, 2014/15
- Department of Environment, Land, Water and Planning – Victoria in Future, 2016
- Department of Health and Human Services – 2015 Victorian Local Government Area Profiles, 2016
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- HeaDSUPP - Health Demand and Supply Utilisation Patterns Planning Tool
- Maternal and Child Health Victoria. Available at: https://www2.health.vic.gov.au/about/publications/researchandreports/mchs-2017-18-annual-reports.
- Murray Primary Care Network surveys: What we Have Heard - Community Survey results October 2017-2020, https://www.murrayphn.org.au/wp-content/uploads/2020/12/AC0312_AC_Health-Needs-survey-results
- Public Health Information Development Unit (PHIDU, Torrens University) (https://phidu.torrens.edu.au/help-and-information/latest-releases#data-release-28-june-2021-topic-specific-atlases-social-health-atlas-of-older-people-in-australia)
- NHWDS -the National Health Workforce Dataset
- PHN Exchange (https://www.phnexchange.com.au; and https://www.murrayphn.org.au/portfolio-view/phn-exchange/).
- Joint regional Mental Health, AOD, and Suicide Prevention foundation plan (December 2020) https://www.murrayphn.org.au/wp-content/uploads/2021/05/TOGETHER_FOUNDATION-PLAN_FINAL_V1.0-DATED-231220.pdf
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- Victoria Police Crime Statistics data (https://www.crimestatistics.vic.gov.au/crime-statistics/latest-crime-data-by-area)
- Victorian Local Governance Association (https://www.vlga.org.au/)

- WHO Stepwise approach to noon-communicable disease risk factor surveillance (STEPS) (https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps)

Qualitative data (Phase I analysis)

- Corporate knowledge and key stakeholder discussions (a schedule and specific details is available on request)
- Community Advisory Council Consumer Surveys. Accessed and checked 01/10/2021 at https://www.murrayphn.org.au/consumersurveys.

Qualitative data (Phase II)

- Results of Phase I
- Results of Phase II
- Results of key stakeholder survey of summary of results

Appendix 2: Abbreviations

ABS	Australian Bureau of Statistics
ACD	Advance Care Directive
ACCO	Aboriginal Community Controlled Organisations
ACH	Assistance with Care and Housing Support Service Providers
ADHD	Attention Deficit Hyperactivity Disorder
AIHW	Australian Institute of Health and Welfare
AHPHC	After Hours Primary Health Care
AOD	Alcohol and Other Drugs
APHRA	Australian Health Practitioner Regulation Agency
ASP	Access and Support Providers
BFV	Barmah Forest Virus
BMI	Body mass index
BRFSS	Behavioural Risk Factor Surveillance System
CDC	Centres for Disease Control (United States)
CALD	Culturally and Linguistically Diverse
CERSH	Centre for Excellence in Rural Sexual Health
CHF	Congestive Health Failure
CHSP	Commonwealth Home Support Program
ClAC	Clinical Advisory Council
CoAC	Community Advisory Council
COPD	Chronic Obstructive Pulmonary Disease
DET	Department of Education and Training
DHHS	Department of Health & Human Services (now Department of Families, Fairness and Housing)
DHSV	Dental Health Services Victoria
DoHAC	Department of Health and Aged Care (Australia)
DVA	Department of Veterans Affairs
ED	Emergency Department
FASD	Foetal Alcohol Spectrum Disorder
FOBT	Faecal Occult Blood Test
GP	General Practitioner
HAIC	Healthy Ageing Investment Strategy
HBV	Hepatitis B virus
HITH	Hospital in the Home
HPV	Human Papillomavirus
IT	Information Technology
LGA	Local Government Area
LGBTQIA+	Lesbian Gay Bisexual Transgender Queer Intersex Asexual and questioning
M&CH	Maternal and Child Health
MBS	Medicare Benefits Schedule
MJA	Medical Journal of Australia
MHR	My Health Record
MSHC	Melbourne Sexual Health Centre
NDIS	National Disability Insurance Scheme
NHMRC	National Health and Medical Research Council
PCP	Primary Care Partnership

PHIDU	Public Health Information Development Unit (Torrens University, South Australia)
PHN	Primary Health Network
PHU	Public Health Unit
RACGP	Royal Australian College of General Practitioners
RFDS	Royal Flying Doctor Service
RIPERN	Rural and Isolated Practice Endorsed Registered Nurse
RRFSS	Rapid Risk Factor Surveillance System (Canada)
RRV	Ross River Virus
RWA	Rural Workforce Agency Victoria
SDG	Sustainable Development Goals
SEIFA	Socio Economic Indexes for Areas
STI	Sexually Transmitted Infection
VACCHO	Victorian Aboriginal Community Controlled Health Organisation
VAED	Victorian Admitted Episodes Dataset
VCAM	Victorian Child and Adolescent Monitoring System
VEMD	Victorian Emergency Minimum Dataset
VGLA	Victorian Local Governance Association
VHISS	Victorian Health Information Surveillance System
VPHS	Victorian Population Health Survey
WEIS	Weighted Inlier Equivalent Separation
VWHA	Victorian Women's Health Atlas
WHO	World Health Organization

Appendix 3. Phase I and II data analysis triangulation table

Issue	Community/ consumer feedback	Service provider feedback	Health needs analysis	Service needs analysis	Triangulation result
Health issue					
Mental health	PHN Community Advisory Council survey 2020 overwhelmingly identified mental health as a community concern. Identified as an issue in every LGA where consultation was sought	GPs report mental health as an ongoing problem, both in terms of need and access to specialists (psychiatrists, social workers, accredited MH nurses, psychologists, and First Nations health professionals)	Data for mental health is complex and inconsistent. Major problems in some unexpected ways e.g., high rates of suicide in younger women – explore possible links with police/crime/domestic violence etc. data.	Good services in areas where the need seems to be under better control (e.g., Macedon Ranges). Opportunity for community consultation in areas of need.	Supported by all analyses as an issue for addressing.
Aged care	Identified as an issue in every LGA where consultation was sought	Identified as an issue in every LGA where consultation was sought	Comprehensive single appointment screening and specimen collection. (MyAgedCare).	Coordination of appointments. Relief for primary carers.	Supported by all analyses as an issue for addressing. Murray PHN region to establish and

			Maintenance of older persons immunisation schedule.	Improved coordination and referral pathways for rural and remote individuals requiring assistance to access aged care services.	maintain a network of Care Finders in rural and remote communities to assist and improve the referral pathway for aged care services and transition existing ACH and ASP providers to the Care Finder program.
Screening for prevention – adults	Access. Needing a good reason to attend screening – reasons of embarrassment etc. prevent engagement. Modifiable disease risk factors Identified as an issue in every LGA where consultation was sought	Critical for optimal primary health care. Much care is reactive, and screening becomes opportunistic. Ensuring people are viewed through a lens of optimal health rather than attributing all	Coverage is currently opportunistic rather than systematic. Screening for prevention critical for optimal primary health care.	No or few dedicated clinics due to lack of funding (and therefore time). Could be delivered through a peripatetic service and staffed by RIPEN/advanced care nurses. Could also be used for delivery of immunisation programmes,	Supported by all analyses as an issue for addressing.

		symptoms to ageing, pregnancy, gender etc.		particularly flu/pneumococcal/ herpes simplex to over 70 year olds.	
Immunisation coverage	Access	COVID vaccination strategies as appropriate for communities (e.g., vulnerable communities).	Immunisation coverage in the second year of life drops below herd levels in several LGAs and could pose a threat, especially with respect to measles. Mansfield has rates below herd immunity. Also – review the >100% HPV overage rates in Buloke.	Delivery through LGA programs and school health supplemented by opportunistic maternal and child health visits. Immunisation programmes for older Australians and First Nations people need better coordination, especially not that COVID vaccines are included. For older Australians a lack of knowledge about recommended vaccines.	Supported by all analyses as an issue for addressing.
Youth health	Some LGAs mentioned need for services for youth	Mental health and sexual health not	Key service provider interview appreciated using services such as	High mental health admissions and suicides amongst	Supported by all analyses as an issue for addressing.

		adequately addressed.	Doctors in Secondary Schools (needing to become more widely available).	young people (especially young women). Rates of teen pregnancy are higher than the Victorian average.	
Diabetes	Community Advisory Council surveys suggest more allied health would be good for all.	Identified during triangulation exercise by service provider.	Odd patterns of diabetes mellitus which do not fit well with diagnoses of Type 1 and Type 2 diabetes.	*More information needed about whether this is a real or spurious effect.*	It is alluded to as a hidden problem, in need of improved screening.
Sexually transmitted infections	No specific information.	Melbourne Sexual Health Centre (MSHC) and Monash have been awarded an NHMRC partnership grant focussing on prevention of Syphilis infection in rural areas.	High rates of chlamydia and gonococcal infection in Loddon and high rates of syphilis in a couple of LGAs.	*Investigate whether the pattern of diabetes cases is spurious or real, and what Vic DoH already knows from their contact tracing.*	Need for coordination of current research and service provision data.

		A campaign to curb Syphilis has commenced in Mildura in August 2021.			
Developmental problems	No information.	No information.	FASD and developmental assessment.	Need for screening to be carried out after maternal and child health services cease services and support.	Emerging issue which needs attention.

Issue	Community/ consumer feedback	Service provider feedback	Health needs analysis	Service needs analysis	Triangulation result
Service issue					
Accessibility	Cost of public transport, lack of transport, time off work. Time.	Difficult to access services due to lack of transport and cost.	Attendance for regular screening, immunisation etc.	Provision for all remote communities either: 1. Provision of public transport or 2. Take services to communities.	Medical Advisors with support from Advisory Councils.
Fragmented electronic systems and consultation and booking systems	eHealth generally appreciated during pandemic restrictions. Trust in data security. Reliable internet access.	Difficulty coordinating records because of lack of compatibility and difficulty accessing My Health Records. HotDocs works well when run through clinics, but it terrible when run through the	Access of accurate information in a timely way. Good when face to face care is difficult – e.g., allied health accompanying client for remote consultations.	Reduce number of systems and make them compatible. Could make out-of-hours 'emergency' consultations available through usual GP, reduce emergency department visits.	Medical Advisors with support from Advisory Councils.

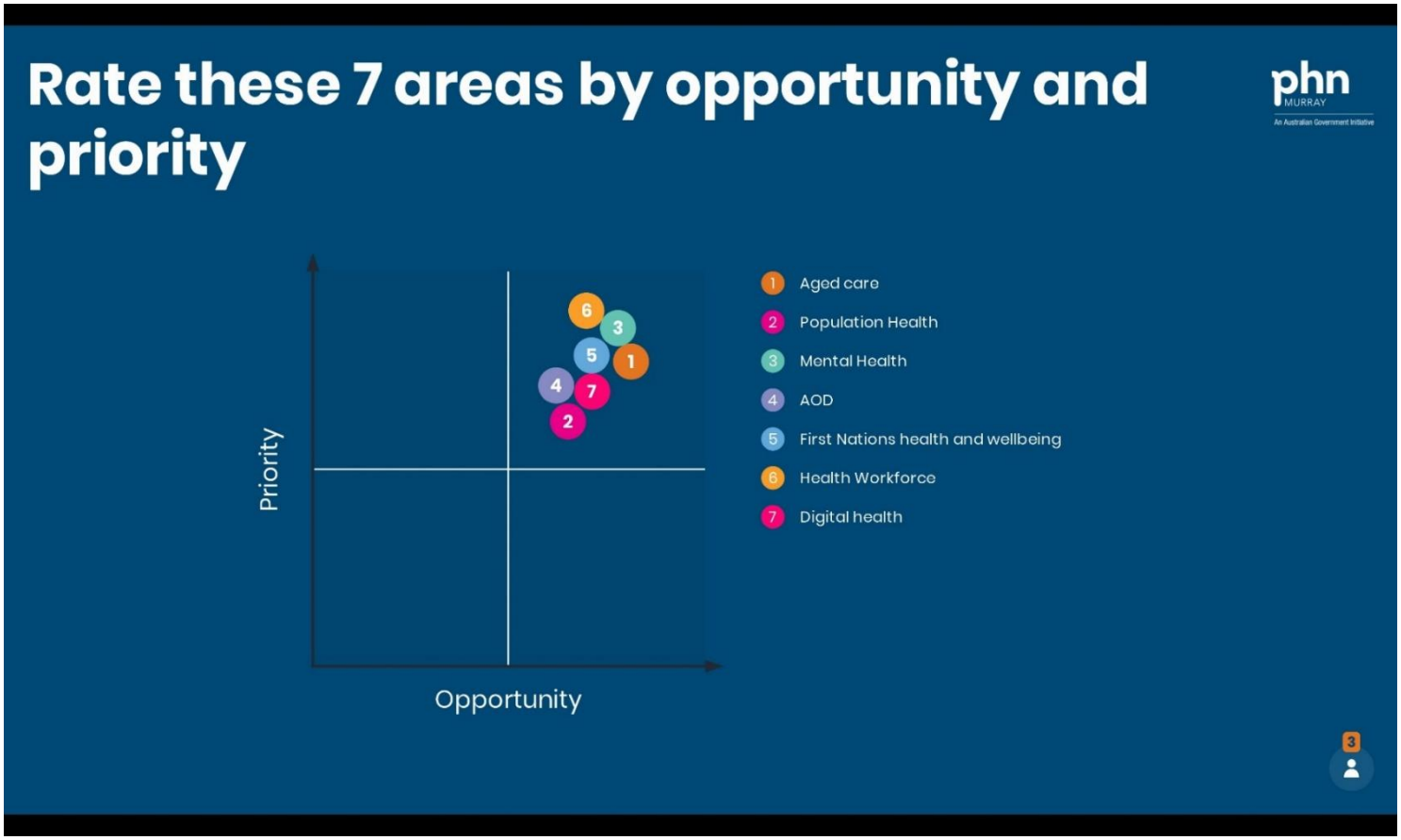
Issue	Community/ consumer feedback	Service provider feedback	Health needs analysis	Service needs analysis	Triangulation result
		government portal.			
Allied health access	Lack of some services noted in Community Advisory Council survey and Health Voices surveys.	Lack of services in some areas of allied health noted by others (e.g. psychology for diagnosing and support of ADHD and podiatry and dietetics for chronic disease clients).	Allied health staff are not spread across PHN LGAs according to population size. Some areas lack access to several services and find it hard to access because of reasons of transport, time etc.	*Lack of services in some areas will lead to suboptimal health outcomes. Partnering with local university schools to provide supported rural training opportunities need to be explored.*	Medical Advisors with support from Advisory Councils.
Murray PHN inclusion in community risk management plans	Not covered as part of qualitative design	Climate change identified as a growing and important threat to health and wellbeing.	Risks to mental health from short- and long-term relocation. Risks to physical health from arbovirus disease.	Environmental disruptions including climate change becoming more common, a need for GP inclusion in mitigation plans identified.	Emerging issue which needs attention.

Issue	Community/ consumer feedback	Service provider feedback	Health needs analysis	Service needs analysis	Triangulation result
			Risks to health due to lack of access to medicines. Risks to health due to heat stress. Risk to health due to interrupted food chain, unsafe water, sewerage disruption.		
Environmental usage and change	ACCHOs are becoming increasingly aware	Some evidence appears in literature regarding recreational travellers causing pressure on health services (e.g., Medivac).	Understanding of health needs of visitor populations (e.g., grey nomads). Understanding of health needs generated by climate change events (e.g., on bushfire days there is more asthma).	Flexibility of services to account for travellers. Explicit inclusion in plans for displaced populations due to climate change events.	Yet to understand size and shape of problem due to insufficient clinical data. Emerging issue which needs attention.
LGBTQIA+	Community surveys and recent qualitative		Literature supports the need for	Identified as an issue in every LGA where	Number of people for who these

Issue	Community/ consumer feedback	Service provider feedback	Health needs analysis	Service needs analysis	Triangulation result
	enquiry showed that an increasing number of respondents identified as gender diverse		services for this cohort due to poorer health status than their binary contemporaries (mental health, alcohol use, HIV)	consultation was sought Increasing recognition of this group of people indicates that various services will be needed for their health needs in the future.	services are required is unknown (Census 2021 data will not provide further clarity). Emerging issue which needs attention.
There is limited awareness and understanding in the community of the service scope available to them during the after hours period, and how to access them.	Community awareness of low-cost or free services is limited, and there is a general assumption that services (other than the ED) will be expensive in the after hours period.	Appropriate use of after hours care services eg. Urgent care vs emergency care. Virtual primary care before virtual emergency department (VVED).			Emerging issue which needs attention. The issue may become better defined as service data becomes available from VVED, PPCCs and UCCs.

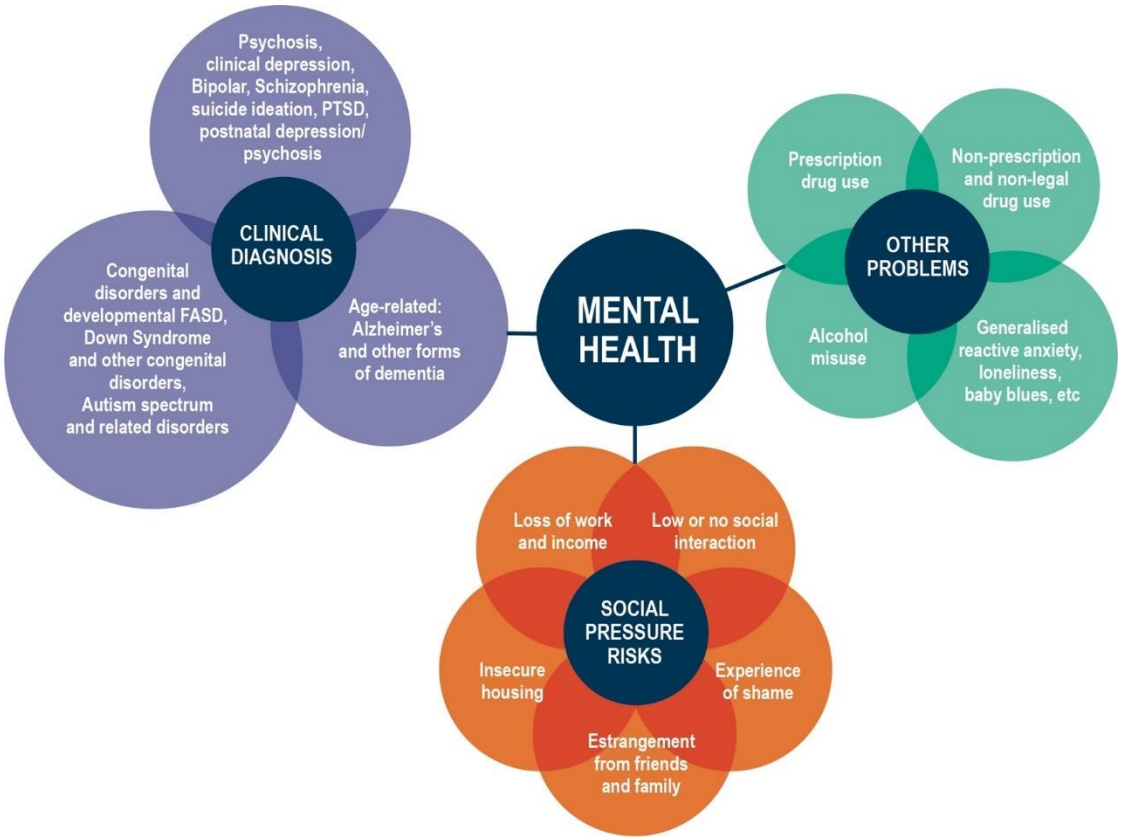
Appendix 4: Pictogram of phase I outcomes: informing focus group interview schedules conducted in phase II

Appendix 5: Visual diagram of ranking priorities and opportunities of responses provided by Medical Advisors of Murray PHN, as part of phase III

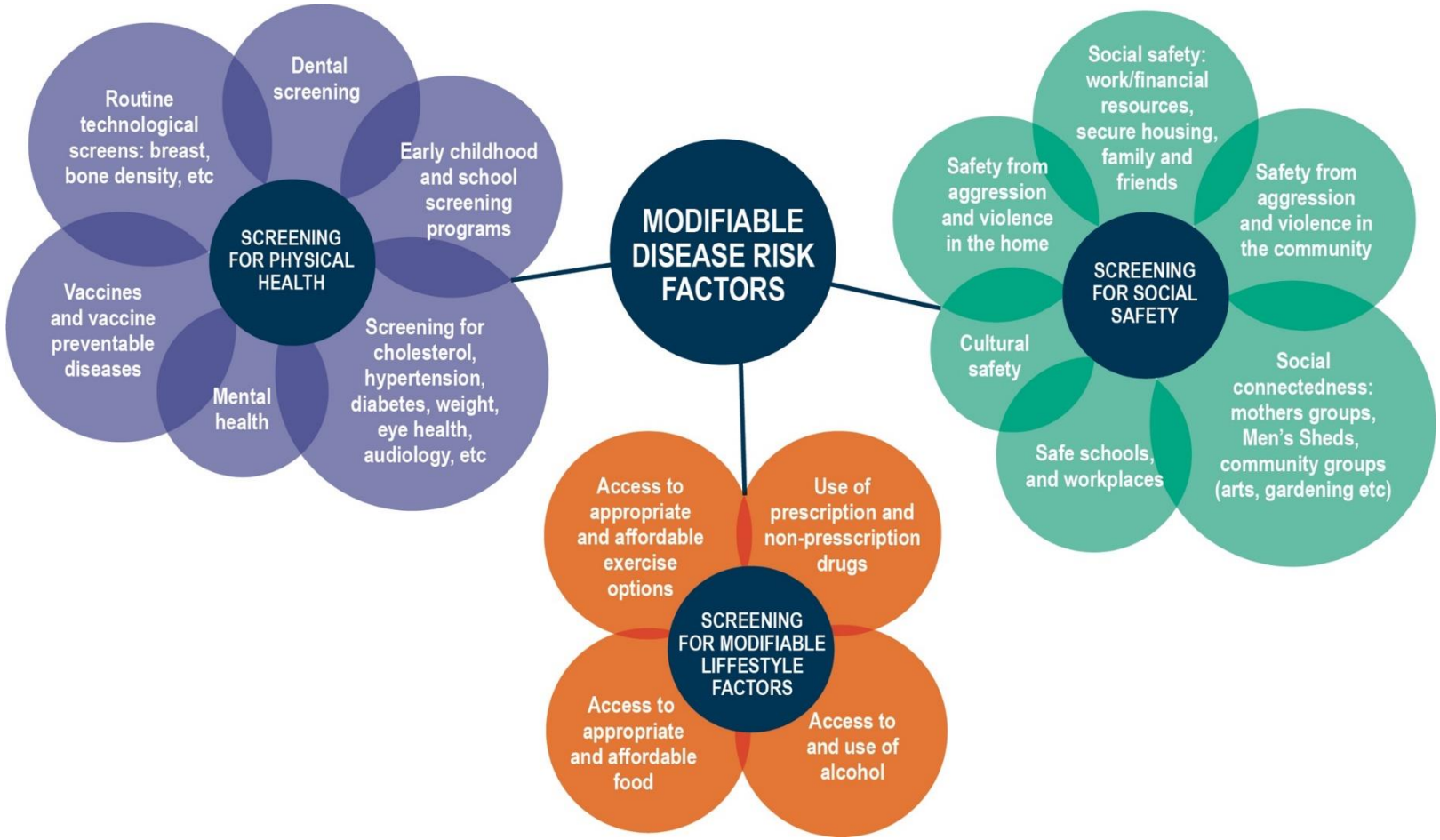


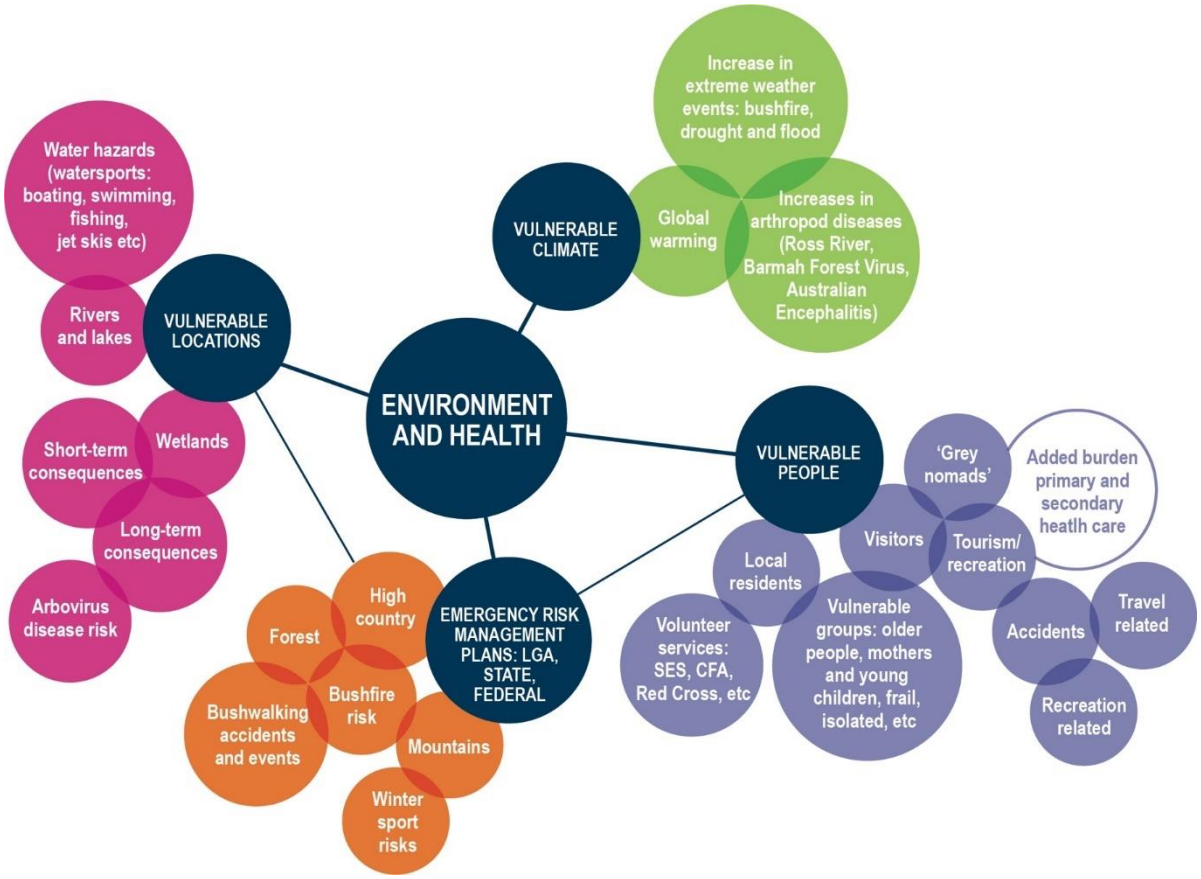
Appendix 6: Murray PHN Areas needing complex interventions

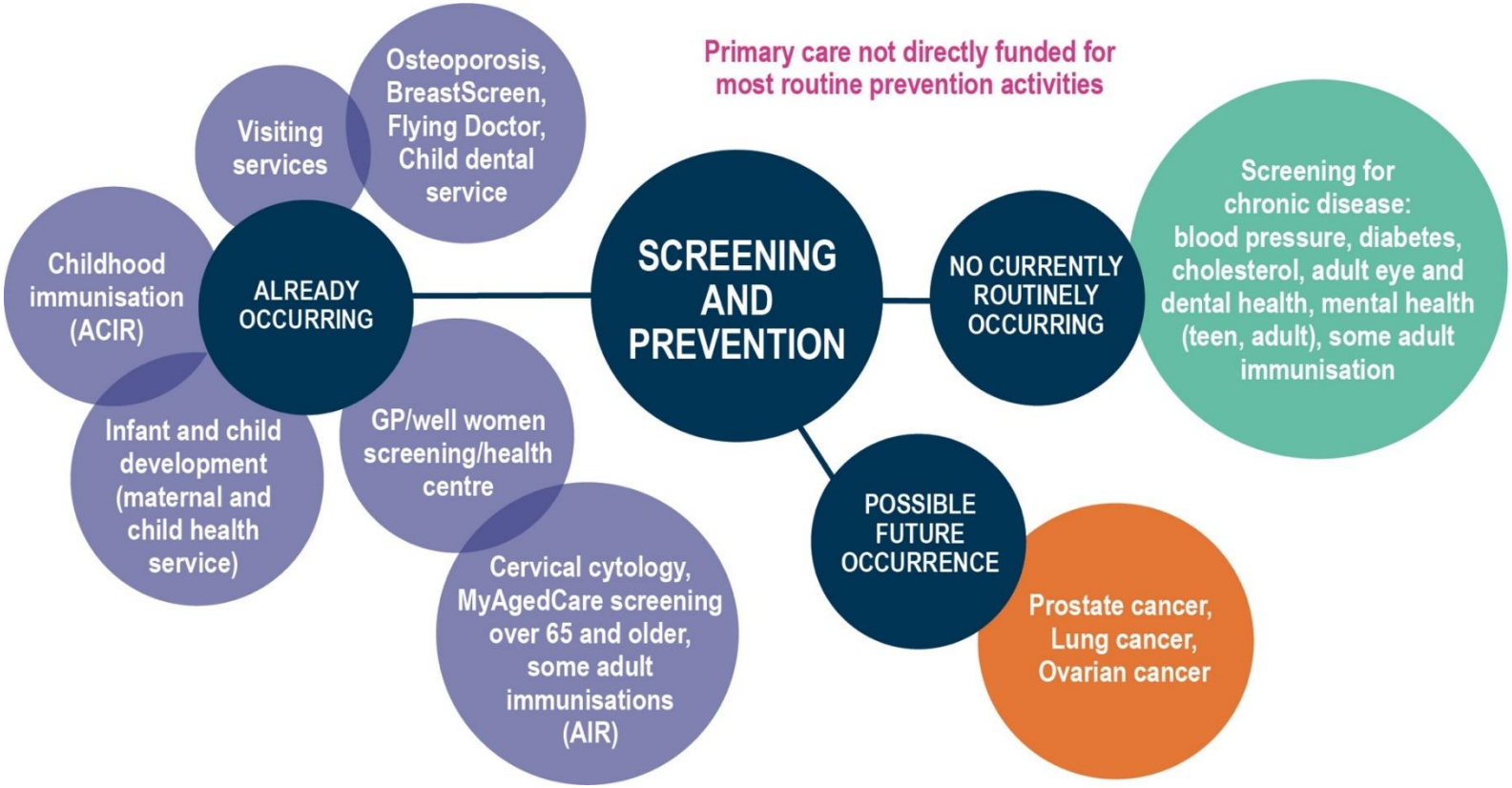
Mapping intersections between primary health care and addressable components of preventative health and social determinants


MENTAL HEALTH
CLINICAL DIAGNOSIS
Psychosis, clinical depression, Bipolar, Schizophrenia, suicide ideation, PTSD, postnatal depression/ psychosis
Congenital disorders and developmental FASD, Down Syndrome and other congenital disorders, Autism spectrum and related disorders
Age-related: Alzheimer's and other forms of dementia
OTHER PROBLEMS
Prescription drug use
Non-prescription and non-legal drug use
Alcohol misuse
Generalised reactive anxiety, loneliness, baby blues, etc
SOCIAL PRESSURE RISKS
Loss of work and income
Low or no social interaction
Insecure housing
Experience of shame
Estrangement from friends and family


HEALTHY AGEING AND CARE OF FRAIL-AGED PEOPLE
SOCIAL SUPPORT AND SECURITY
Threat to secure housing (especially women)
Reduced income
Support to maintain home (shopping, cleaning etc) MyAgedCare and other supports
Cost access to medical care
Older family members dying, younger family members moving away
Transport for essential services - driving ability, access to taxis, public transport
SHELTERED ACCOMMODATION
Fit for specific purpose
Contunuity of secondary and primary health care
Accessible to friends and family
PHYSICAL HEALTH AND DISEASES OF AGEING
Osteoporosis, heart disease, diabetes, cancer sreening, hypertension, etc
Access to screening and prevention programs etc
Access to appropriate exercise
Routine provision of vaccines to prevent influenza, Pneumonia, Shingles, COVID-19
MENTAL HEALTH
Dementia: Alzheimer's and other
Depression due to reduced social contacts etc


MODIFIABLE DISEASE RISK FACTORS
SCREENING FOR PHYSICAL HEALTH
Routine technological screens: breast, bone density, etc
Dental screening
Early childhood and school screening programs
Vaccines and vaccine preventable diseases
Mental health
Screening for cholesterol, hypertension, diabetes, weight, eye health, audiology, etc
SCREENING FOR SOCIAL SAFETY
Social safety: work/financial resources, secure housing, family and friends
Safety from aggression and violence in the home
Safety from aggression and violence in the community
Cultural safety
Safe schools, and workplaces
Social connectedness: mothers groups, Men's Sheds, community groups (arts, gardening etc)
SCREENING FOR MODIFIABLE LIFFESTYLE FACTORS
Access to appropriate and affordable exercise options
Use of prescription and non-presscription drugs
Access to appropriate and affordable food
Access to and use of alcohol


ENVIRONMENT AND HEALTH
VULNERABLE CLIMATE
Increase in extreme weather events: bushfire, drought and flood
Global warming
Increases in arthropod diseases (Ross River, Barmah Forest Virus, Australian Encephalitis)
VULNERABLE LOCATIONS
Water hazards (watersports: boating, swimming, fishing, jet skis etc)
Rivers and lakes
Wetlands
Short-term consequences
Long-term consequences
Arbovirus disease risk
VULNERABLE PEOPLE
'Grey nomads'
Added burden primary and secondary heatlh care
Visitors
Tourism/ recreation
Local residents
Volunteer services: SES, CFA, Red Cross, etc
Vulnerable groups: older people, mothers and young children, frail, isolated, etc
Accidents
Travel related
Recreation related
EMERGENCY RISK MANAGEMENT PLANS: LGA, STATE, FEDERAL
High country
Forest
Bushfire risk
Bushwalking accidents and events
Mountains
Winter sport risks


Primary care not directly funded for most routine prevention activities
SCREENING AND PREVENTION
ALREADY OCCURRING
Childhood immunisation (ACIR)
Visiting services
Osteoporosis, BreastScreen, Flying Doctor, Child dental service
Infant and child development (maternal and child health service)
GP/well women screening/health centre
Cervical cytology, MyAgedCare screening over 65 and older, some adult immunisations (AIR)
NO CURRENTLY ROUTINELY OCCURRING
Screening for chronic disease: blood pressure, diabetes, cholesterol, adult eye and dental health, mental health (teen, adult), some adult immunisation
POSSIBLE FUTURE OCCURRENCE
Prostate cancer, Lung cancer, Ovarian cancer

Appendix 7: Murray PHN Health Needs Assessment 2022-25 on a page