

literature review

**Primary care Rural Innovative Multidisciplinary
Models (PRIMM) Project
East Coast Tasmania**

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background

This Literature Review is one of four key background documents developed for the scoping phase of the Primary care Rural Innovative Multidisciplinary Models (PRIMM) project on the East Coast of Tasmania. The purpose of PRIMM project is to develop a community-designed plan for multidisciplinary primary care services and innovative workforce solutions for the Glamorgan Spring Bay (GSB) Local Government Area (LGA).

Primary health services are defined as those which are delivered outside and acute setting with a restorative or health maintenance function. It includes general practice, nursing and services such as midwifery, pharmacy, dentistry, Aboriginal health services and allied health. The sector covers a range of public, private and non-government health services and health service providers.

The four background documents are:

- **Literature Review** – to explore Tasmanian primary healthcare-related research and grey literature from rural and remote contexts, with a particular focus on the GSB LGA
- **Needs Analysis** – to provide a broad overview of the primary health needs
- **Funding Mapping** – to identify key sources and amounts of primary health funding into GSB LGA
- **Service Mapping** – to identify all primary health services delivered in the GSB LGA

These documents discuss primary health services that are delivered within GSB, remotely via telehealth, or accessed through travel outside of the GSB LGA.

The aim of the Literature Review is to undertake a rapid review of primary health care literature relating to the East Coast of Tasmania.

These four documents constitute the scoping phase of the PRIMM project and will provide the basis for the second phase of this project, the consultations in July-December 2023. The third and fourth stages are service design and consolidation and workforce partnership.

executive summary

Geography impacts healthcare access, impacts which are particularly felt by widely dispersed populations such as those in rural and remote Australia¹ and are whom are known to experience greater challenges in accessing healthcare services than those who live in major cities and regional centres, contributing to poorer health outcomes¹⁻³.

Tasmania is a small island state of Australia, with a population of around 560,000 people⁴. The majority of the island is classified as rural or remote⁵. Around 35% of the population lives outside the regional centres of Hobart, Launceston, Devonport and Burnie⁴.

The upper two-thirds of the east coast of Tasmania comprises two local government areas, Break O'Day and Glamorgan Spring Bay, and localities are classed as either small rural towns (MM5) or remote communities (MM6)^{6,7}.

Broadly speaking the health needs of the region can be summarised as “compared to Tasmanians living in urban areas, those living in rural and remote areas are older, sicker, poorer and experience more negative health outcomes related to the social determinants of health.”⁸.

Primary healthcare (PHC) “is a whole-of-society approach to health that aims at ensuring the highest possible level of health and well-being and their equitable distribution by focusing on people’s needs as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care, and as close as feasible to people’s everyday environment.”⁹. As a whole-of-society approach, primary health care has three crucial and inter-related components; a) primary care and essential public health functions as a core of integrated health services; (b) multisectoral policy and action; and (c) empowered people and communities⁹.

Primary healthcare services are crucial to overcoming geographical barriers to healthcare access and addressing health inequities^{1,9}, such as those experienced by people living on the east coast of Tasmania. Thomas et al¹⁰ suggest that the “primary care and essential public health services” elements of primary healthcare can be separated into eight key categories (Table 1) and recommend population sizes where these services should be provided by resident health workers in Australia¹¹. However, the mere presence of health services does not imply equitable access¹². In the Australian context, access has usefully been described as “the potential ease with which consumers can obtain health care at times of need....that access is determined by the fit between how well the health system meets differing population characteristics across a set of specific dimensions”¹³. The seven interrelated dimensions of access discussed by Russell et al are summarised in Table 2.

Table 1: Components of Primary healthcare and key categories of Primary Care and Public Health Services

Component of PHC		Code
Multisectoral Policy & Action		MPA
Empowered People & Communities		Emp
Core Primary care/ essential Public Health service	<i>Illustrative list</i>	
Care of the sick & injured	24h care including evacuation, treatment of injury and poisoning, pathology, radiology, provision of essential drugs, patient advocacy	ACUTE
Public health & illness prevention	Immunisation, communicable disease control, targeted and broad health promotion programs, screening programs, youth programs, well men's and womens programs, advocacy	PH
Mental health & social & emotional wellbeing	Counselling, drug and alcohol treatment	MH&SEWB
Rehabilitation	Post stroke care, programs, alcohol and other drug rehabilitation, after trauma	REHAB
Maternal & child health	Antenatal care, postnatal care, universal child health checks, immunisation	MCH
Oral and dental health		DENT
Sexual & Reproductive health	Sexually transmitted infections and blood borne virus screening and management, Family-planning services,	S&RH
Allied health services	Aged and disability services, Palliative care, Counselling & social work, Family and domestic violence support, Audiology, Dietetics, Occupational Therapy, physiotherapy, Podiatry, speech pathology, psychology, optometry	AH

Table 2: Dimensions of Access

Dimension	Definition ¹	Code
Availability	As a dimension of access, availability relates to the type and amount of PHC facilities and services compared to population health needs (p63)	Av
Timeliness	Timeliness “refers to the degree of separation by time between health care providers and health care consumers, relative to the urgency of the PHC need” (p65)	T
Geography	In terms of PHC access, geography relates to the ease with which people can travel the distance between their location and the location of the PHC service (p63)	Geo
Affordability	Affordability is the dimension of PHC access related to the ease with which a person can meet the direct and indirect costs of their healthcare (p63)	Af
Acceptability	The acceptability of PHC services involves the relationship between consumer attributes, attitudes and beliefs about their health to provider and health service characteristics such as provider attributes and the attitudes of providers towards consumers ¹³ .	PH
Acp	Counselling, drug and alcohol treatment	MH&SEWB
Accommodation	The degree of accommodation of PHC services refers to the ease with which consumers can contact, gain entry to and navigate the service or system (p65)	REHAB
Acm	Antenatal care, postnatal care, universal child health checks, immunisation	MCH
Awareness	Relates to the communication of health and health system/service information between providers and consumers ¹³ .	DENT

In 2021 the Australian Government introduced competitive funding through Primary Care Rural Innovative Multidisciplinary Models (PRIMM) grants. The grants enable organisations to work with rural and remote communities and develop models of healthcare that better meet community needs¹⁴.

This review intends to explore Tasmanian primary healthcare-related research and grey literature from rural and remote contexts, with a particular focus on the Glamorgan-Spring Bay (GSB) local government area (LGA). The purpose of the review is to provide background information that can be utilised in the development of a community-designed plan for multidisciplinary primary care services and innovative workforce solutions for the GSB LGA, funded through a PRIMM grant.

A rapid review was conducted, the method is described in further detail in Appendix 1. Structural coding was applied to all identified sources informed by the three key components of primary health care (World Health Organisation & United Nations Childrens Fund, 2018), the eight key categories of primary health care services described by Thomas¹⁰ and the dimensions of access as defined by Russell et al¹³ structural coding was applied to relevant sections of all identified sources. Findings are presented as a narrative summary.



Image 1: Tasmanian Health Service regional boundaries



Image 2: Statistical Area 4 Boundaries

findings

Findings are reported under sub-headings indicating primary relevance to specific components of primary healthcare, category of primary care or public health service or dimension of access. Health workforce issues also significantly impact primary healthcare in rural and remote settings and an additional sub-heading for Workforce (W) has been included. Inter-relatedness is demonstrated through the application of relevant additional codings as described in Table 1 and Table 2, highlighting the complexity of identifying and understanding primary healthcare systems and services in Tasmania.

General findings

Discussion of rural health-related data commonly occurred in groupings that reflect the Tasmania Health Service regions of North-West, North and South and Statistical Area Level 4 groupings which have similar boundaries to the three THS regions (Image 1, Image 2).

Of the three key components of Primary Health Care, data relating to primary care services was the most frequently discussed. Discussion on health workforce issues was prevalent in research and grey literature. Only four sources contained data explicitly related to GSB LGA^{8,15-17}, two additional sources contained data specific to Break O'Day LGA^{18,19}.

Glamorgan Spring Bay specific findings

- At 122 per 1000 people, the SA3 South-East coast region had the equal highest crude incidence rate of annual ambulance dispatches in the state for the period 2009 – 2015¹⁶ (**Acute, T, Av, Geo**).
- Anecdotally the recent provision of salaried paramedics in the GSB LGA has reduced the number of emergency presentations at the General Practices in the towns where paramedics are located⁸ (**Acute, Av, T**).
- Anecdotally Extended Care Paramedics further enhance home-based assessments and local management of patients where appropriate, supporting the work of local General Practices⁸(**Acute, T, Av**).
- There is reduced access to imaging, pathology and allied health services in GSB and Break O'Day LGAs⁸ (**Acute, AH, PH, T, Geo, Av, Af**).
- There are no First Nation's specific health services on the east coast of Tasmania¹⁷ (**Acute, PH, Av, Af, Acp**).
- Financial incentives and smoking cessation support provided by rural community pharmacists may improve access to smoking cessation programs in rural and remote regions¹⁵ (**PH, Av**).

Collective findings for rural and remote Tasmania

Availability (Av)

Specific considerations for the availability of PHC in rural and remote Tasmania are the known higher rates of multi-morbidity, socio-economic disadvantage, lower levels of health literacy and a hyper ageing population^{3,8}.

The centralisation of health services in Tasmania, a state with a decentralised population, has resulted in a lack of non-GP specialist and allied health services in rural and remote regions^{8,20,21} and a greater reliance on generalist service providers such as General Practitioners (GPs) and Registered Nurses (RNs)^{8,20} (**Acute, AH, Rehab, PH, SRH, M&CH, MH&SEWB**). There is a shortage of GPs and RNs in these areas which has subsequent implications for the affordability, availability and timeliness of care⁸ (**Af, T, W**). Notably, for the period 2011-2016 the SA4 South-East region of the state had the highest population dependency ratio and lowest per capita hours of care across all health and care profession types²² (**W**).

There are few permanent or outreach public health or priority population health services, such as immunisation clinics, sexual health services, LBGTIQ+, First Nations, migrant and refugee health, in rural and remote Tasmania^{8,23-25} (**Acm, PH, SRH**). These services are frequently provided through private general practice in rural and remote areas, or patients are required to travel to access them^{24,25} (**Geo, Acm, Af**). Similarly, the local availability of dental care is a concern^{8,20} (**DENT, Ti**).

Furthermore, whilst numerous sources highlight that increasing health literacy and access to collaborative multi-disciplinary care is critical to reducing the strain on the acute care sector^{8,20,21,26-29}, difficulty in accessing these supports and services in rural and remote Tasmania is evident^{8,20,28,29} (**Ti, Geo, Af, MPA, PH**). Notably, Tasmania is reported as having proportionately, a smaller allied health workforce than other states, with a disproportionate shortage in rural and remote regions⁸ (**AH, Ti**).

Timeliness (Ti)

Timeliness is of particular importance for rural and remote populations where there may be additional delays in access due to provider availability or the implications of travel time¹³ (**Av, Geo**).

An additional consideration in the timeliness of PHC in rural and remote Tasmania are frequently reported delays in healthcare seeking^{8,20,29,30}. Reasons for this delay may be singular or multiple and interrelated^{8,20}. A lack of access to bulk-billed GP services may be contributing to people delaying seeking healthcare and presenting at emergency departments either as an alternative to GP care or because of deterioration in their health status^{8,20,29} (**Af**).

Other commonly reported reasons for delays in seeking care include a lack of available local appointments (**T, Av, Acm**) or the inability to afford services or travel (**Af, Geo**), a lack of inclusive and culturally safe services for diverse and priority population groups (**Acp**) or low levels of health literacy that result in reduced awareness of the need for healthcare or knowledge of available services (**Aw**). When there are delays in people seeking healthcare it can result in increased acuity or complexity of health problems and results in greater health resource utilisation^{8,29,30}, thereby further impacting resource availability (**Av, T**).

The higher health needs of rural and remote Tasmanians and lower GP-to-population ratios than elsewhere, contribute to significant wait-times to access GP-provided primary care in many regions⁸. Fewer resident allied health providers, pathology providers and locally based imaging services and a reliance on visiting services also impact the timeliness of PHC **(AH)**.

Tourist-based adventure activities are increasing the rate of rural and remote trauma presentations which is increasing the demand on emergency services⁸. Emergency department presentations in Tasmania have been increasing at rates inconsistent with population growth and Tasmania has the longest wait-times for patients requiring hospital admission from the emergency department in the nation. This is impacting quality of care, results in ambulance ramping which in turn delays the return of rural/remote ambulances to their regions, further impacting ambulance response times there^{8,21} **(Acute, Av)** .

Geography (Geo)

Population size and density in Tasmania means it is not feasible for certain specialist services to be provided in the state. The cost of travel interstate to access some specialist services has significant financial implications for the state's health system and individuals (PTAS, Subcommittee) **(Av, Af)**.

The centralisation of health services within the state has also resulted in an increased travel-burden on people from rural and remote Tasmania^{8,20} **(Av)**. Transport costs are threefold; the direct cost of transport and indirect costs such as income lost due to work absences and social cost in terms of implications on family logistics and community obligations³¹ **(Av, Af)**. Travel associated with local appointments can also be problematic due to a lack of public transport services^{29,32}. Difficulties with travel may be exacerbated for those with mobility problems, even where public transport options are available²⁰.

Several transport assistance schemes exist to help address difficulties and costs associated with healthcare-related travel. These include the Patient Transport Assistance Scheme (PTAS), Community Transport Services Tasmania and Community Cars^{8,20}. Community Cars and Community Transport Services rely on volunteer drivers and availability varies as a result⁸. Despite subsidies and subsidised services, the cost of healthcare-associated travel is still a significant burden on many people^{8,20,31} **(Af)**. Other funded transport services to assist people in rural Tasmania include the Cancer Council *transport2treatment* service, the Department of Health subsidised Health Link bus and transport support services funded through First Nation's Integrated Team Care (ITC) funding, examination of public domain information suggests that none of these services operates on the east coast of Tasmania, in either north or south administrative regions^{8,33,34}.

Affordability (Af)

People living in rural and remote areas of Tasmania experience higher direct PHC costs due to reduced rates of bulk-billing by both GP and allied health providers, and indirect costs such as transport, lost income due to time away from work and costs associated with accessing digital technology to support the use of the growing number of telehealth services^{8,20}. In terms of affordability of PHC services, Callander and colleagues (2017) found that nationally, Tasmania and the Northern Territory had the highest out-of-pocket costs for key primary health care services and the poorest overall health status.

Numerous sources point to failures in Medicare Benefits Scheme (MBS) funding arrangements for primary health care as the reason for higher out-of-pocket costs^{8,20,29}. Multiple submissions to the states inquiry into Rural Health Services⁸ noted that the MBS does not adequately provide for the higher costs of providing care in rural and remote regions where rates of multi-morbidity are higher. Workforce recruitment and retention challenges, a heavy reliance on locum providers and drive-in-drive out services also increase the cost of delivering services in these areas whilst challenging continuity of care⁸.

Le and colleagues²⁰ noted that in one rural region of Tasmania, the out-of-pocket costs of both GP and specialist appointments resulted in people avoiding care, opting instead for alternative and first-aid type treatments for complex health problems (**Ti**). Costs of care were noted as particular barriers for both young and First Nations people^{17,32}. Use of emergency departments as a free alternative to GP, medical specialist and outpatient imaging was discussed in multiple submissions reported in the *Report on Rural Health Services in Tasmania*⁸.

The centralisation of obstetric and maternity services to the centres of Hobart, Launceston and Burnie has resulted in significant additional costs, social disruptions and concern for rural women and families in accessing maternity care³¹ (**Av, Acp, Mch**). Notably, 73% (16/22) of participants in one study reported that the financial burden of accessing care was a significant issue³¹ (**Mch, Acp**). The majority of participants felt that antenatal check-ups (Strongly Agree/Agree, 95.1%), antenatal classes (Strongly Agree/Agree, 93.2%) and postnatal check-ups (Strongly Agree/Agree, 98.1%) should be provided locally³¹ (**Av**).

Acceptability (Acp)

Definitions of acceptability point towards the importance of contemporary concepts such as cultural safety and inclusivity in ensuring the acceptability of PHC services. Similar to the rest of the nation, access to inclusive services, particularly inclusive mental health and sexual health services is a concern for LGBTIQ+ people living in rural and remote Tasmania^{8,24,25,32} (**Av**).

Sex-workers in Tasmania also report difficulty in accessing inclusive services³⁶ (**Av**). Furthermore, more than one-third of First Nations people in Tasmania report not accessing care due to a lack of culturally appropriate care³ (**Ti, Av**). As the state with the second highest proportion of First Nations people in the nation, this is a significant concern. There are few Aboriginal Community Controlled services operating in the state and none of the east coast of Tasmania¹⁷ (**Av, Geo, W**). Primary Health Tasmania and the Tasmanian Health Service have recently identified the need to improve the cultural safety of services^{3,26}.

Accommodation (Acm)

Russell and colleagues¹³ suggest that accommodation is a particularly important dimension of access for people who have multiple or complex needs and may need to navigate multiple service providers/systems or negotiate multiple appointment arrangements. Rural and remote Tasmania has a higher proportion of people with multi-morbidity and complex care requirements than elsewhere in the state, accommodation is therefore a significant consideration in accessibility. In Primary Health Tasmania's submission to the state's inquiry into rural health services, they comment that:

"Primary care is critical and comprehensive, but organisations are challenged by fragmentation, poor coordination, and variable integration into the overall health

system. People in rural and remote areas have less access to health professionals and to multidisciplinary teams than people who live in more urban areas”⁸

Health system navigation is a particular issue for people in rural and remote Tasmania^{3,26,29}. Lower levels of health literacy, needing to access multiple healthcare providers and a lack of resourcing for care coordination across the spectrum of PHC services, are reported as key concerns^{8,26} (**Aw, Af**).

Awareness (Aw)

Awareness is a dimension of access particularly relevant for people who have poor health literacy or who are unaware of available services¹³. A lack of awareness of PHC services may be contributing to a increasing number of emergency department presentations and is a particular concern in Tasmania^{3,8,29} (**Acute, Ti**).

Ridge et al²⁹, suggest that disease-specific education interventions are likely to have little effect on reducing rates of potentially preventable hospitalisations and that targeting health literacy more broadly may be more effective. However, Hughes²⁸ identifies the following challenges in Tasmania related to health promotion;

- the responsibility for resourcing health promotion is contested
- there is only a small, qualified health promotion dedicated workforce in the state
- there are limited opportunities for education and professional development related to health-promotion in Tasmania further impacting workforce availability and capacity.

Workforce

Discussion on workforce issues dominated the research literature (7/29, 24%). In terms of the healthcare workforce, Tasmanian research evidence suggests:

- The largest health workforce growth in Tasmania (2011-2016) was in the number of Carers²².

Medical workforce:

- University of Tasmania international fee-paying medical students do not contribute significantly to the rural and remote medical workforce post graduation³⁷.
- Graduates of the University of Tasmania’s School of Medicine who spent at least 12 months at a Rural Clinical School are more likely to practice in a rural or remote location than students who did not attend a Rural Clinical School³⁸.
- Rural General Practice intern programs can be delivered successfully in Tasmania, offer diverse clinical and non-clinical experiences and may help interns identify rural training pathways for the future³⁹.
- Challenges for rural general practices in hosting intern programs include the availability of space, understanding and managing workflows, and staff and community understandings of intern scopes of practice³⁹.
- The majority of International Medical Graduates (IMGs) who arrive in Tasmania stay for 2 years or less, the intention of IMGs to remain in Tasmania is strongly linked to their families’ desire to remain in the state⁴⁰.

Nursing workforce:

- Rurally based preceptors of nursing students report difficulties in balancing their own clinical workloads and preceptor responsibilities⁴¹.
- An alternative model of nursing student placement supervision, that addresses unique location needs in rural/remote Tasmania (whole-of-community facilitators) was accepted and valued by students and host facilities and increased the quality of placement experience and the capacity for facilities to host students⁴².
- There is a lack of clarity in the definition of the term 'community nurse' and a poor understanding of the role of community nurses by the acute-care sector, state-wide there is variability in the hours of operation and role of community nurses in rural settings⁴³
- The diversity and acuity of care in the community is increasing and community nurses require ongoing access to education and training to maintain the broad skill-sets required in their roles⁴³.
- Graduate nurses and midwives in Tasmania feel that obtaining regional and rural employment is easier than urban employment where competition for roles is greater but the decision to apply for rural roles is influenced by the availability of transition to practice programs⁴⁴.

Allied health workforce

- Obtaining graduate employment was perceived as being difficult for allied health professionals with fewer roles and greater competition resulting in some graduates accepting less preferential clinical or locality based roles⁴⁴.
- Rural radiographers can provide support to rural GPs in timely image interpretation, this support can be enhanced by clear communication pathways and additional training for radiographers⁴⁵ (**Ti, Av**).

Research findings related to categories of PHC service

Mental health, social and emotional wellbeing

- Community gardens were found to be sites of informal mental health, grief and loss, drug and alcohol and family and domestic violence support with users reportedly linking others to local service providers⁴⁶ (**Aw, Emp**). Some service providers utilised community gardens as sites to provide outreach, education and support in informal settings⁴⁶ (**Acp**).
- There are specific considerations for the successful implementation and ongoing sustainability of a systems-based approach to suicide prevention in rural Tasmanian locations; clear and early communication, co-design, community ownership and appropriate resourcing are identified as crucial elements¹⁸, and Working Group participants felt that a participatory action research approach contributed to sustainability¹⁹ (**Emp, MPA**).
- Despite the presence of mental health professionals in some regions, locally based mental health services were lacking²⁰ (**Av, Ti**).
- Of the 11 OECD Better Life Indicators, the majority of Tasmanians rank 'Health' as the most important for their overall well-being, but also at the top of their concerns for the future⁴⁷.

- Young Tasmanians report it is important for their GPs to discuss mental health in consults even when it is not the presenting issue³² (**MH, Acp**).

Public health and illness prevention

- In regional and rural Tasmania the rates of potentially undiagnosed asthma in children are higher than elsewhere in the nation⁴⁸.
- Community gardens can be sites of health-promoting activities such as cooking classes, access to low-cost/free nutritious food and social connectedness⁴⁶ (**Emp, MH**).
- Telephone mentoring provided by nurses improved chronic condition management for people living with chronic obstructive pulmonary disease, but did not improve quality of life⁴⁹.

Care of the sick and injured

- Nationally, at a Primary Health Network level, Tasmania and the Northern Territory have the highest out-of-pocket costs for primary health care and the poorest health⁵⁰
- Children from rural (OR 0.64, 95% CI 0.48, 0.86) and remote (OR 0.18, 95% CI 0.11, 0.28) Tasmania are less likely to be frequent presenters at emergency departments in the states major hospital facilities⁵¹
- Tasmanian ambulance response times are on the increase and are the highest in the nation¹⁶
- Residents of rural Tasmania report a desire for improved after-hours urgent care services²⁰

Maternal and child health

- Living in outer remote and regional Tasmania was associated with a high service usage of universal child health and early education services⁵².
- Many regions of rural and remote Tasmania lack locally available maternity services and there is significant consumer desire for antenatal and postnatal care to be provided locally in rural and remote Tasmania³¹.
- GPs in Tasmania report that access to termination of pregnancies is more difficult for women who live in rural and remote locations and GPs from rural locations were more likely to be interested in providing early medical abortion than those in urban locations⁵³.

Sexual and reproductive health

- Bi-sexual women report barriers accessing sexual health care in rural Tasmania, visual displays of inclusivity in clinics, use of gender neutral language and evidence of non-judgemental attitudes during consults can increase the acceptability of services for women in these locations²⁴.
- Some gay and bi-sexual men in Tasmania report challenges accessing public sexual health clinics due to their opening hours, conflicts with work schedules and the amount of travel involved²⁵.
- Despite discrete signage, gay and bi-sexual men in Tasmania report concerns regarding confidentiality when accessing public sexual health services, some men prefer to access

sexual health care through their GPs as a more discrete alternative however cost was a concern²⁵.

- HIV positive men report barriers in accessing authorised prescribers for antiretroviral therapy (ART) and travel involved in access ART results in challenges in continuity of therapy for some people²⁵.
- Sexual health, contraception and STIs were identified by young rural Tasmanian's as priority issues they would like their GPs to raise in all discussions even if they were not the reason for presentation³².

discussion

Implications of administrative boundaries, terrain and transport

The common practice in government publications and research reports of discussing data in terms of administrative boundaries such as THS regional boundaries, or at the Statistical Area (SA) 3 or SA4 level separates the east coast in two across the 'North' and 'South' regions^{3,16,22,26,27,40}. This is likely obscuring the realities of health status and healthcare access for people who live in the GSB LGA and on the east coast in general. Additionally, the absence of data reporting from district hospital sites (St Mary's Community Health Centre, St Helen's District Hospital) and THS contracted bed sites (May Shaw Health Centre) is also preventing a comprehensive understanding of health status and healthcare utilisation in the region.

Significantly, data such as admissions and emergency department presentations at District Hospital sites are not included in publicly available datasets, impacting population health analysis and health service planning for the region. Additionally, nationally PHC performance data reported by the Australian Institute of Health and Welfare is grouped at the Primary Health Network level, Tasmania has a single PHN, concealing performance data for the discrete geographical regions that comprise rural and remote Tasmania.

Terrain has a significant impact on the availability of road access to the east coast of Tasmania. Communities in the Glamorgan-Spring Bay and Break O'Day LGAs are separated from the population centres of Launceston in the north and Hobart in the south by numerous mountains, ranges and mountain tiers. This has resulted in the presence of only four key, bitumenised, access roads to the coastal regions. In the last two years, prolonged closures of sections of the A3, south of Orford, and St Mary's Pass and Elephant Pass, south of St Helen's, due to landslips and road instability significantly impacted access to healthcare and other services for people on the east coast.

Burden of care

A lack of funded population health programs and services in rural and remote regions of Tasmania suggests that the burden of care for sexual health, youth health, refugee and migrant health and immunisation services rests with GPs. In centres such as Hobart, Launceston and Devonport or Burnie this care may be provided by dedicated services, alleviating some of the pressure on General Practice. Furthermore, in rural localities with District Hospitals, Community Health Centres or funded THS beds, rural GPs, contracted by the THS through Rural Medical Practitioner Agreements, also assume the burden of care for emergency presentations and sub-acute inpatient management⁵⁴. Thus, due to MBS primary care and public and population health funding mechanisms and health system design, a relatively small GP workforce maintains significant day-to-day burden of care responsibility for rural and remote communities. A lack of multidisciplinary care teams and scope of practice limitations on some health professional groups also places significant strain on the rural healthcare workforce in Tasmania⁸.

Equitable distribution of health services, based on identified needs, is a key element of primary health care. Except for studies related to the National Suicide Prevention pilot^{18,19}, this review failed to identify any examples of equitable healthcare distribution in rural and remote Tasmania. Rather, the majority of sources highlighted access barriers and workforce issues. Similarly, few sources provided evidence of community empowerment or multi-sectoral policy and action elements of primary healthcare^{18,46,52}.

conclusion

Despite broad inclusion criteria, this rapid review identified few sources describing programs or initiatives on the east coast of Tasmania, or rural and remote Tasmania in general, that fit WHO descriptors of primary health care.

Evidence suggests that GPs maintain the burden of primary care and public health services in these regions, without ease of access to integrated, multidisciplinary support as indicated by complexity of need, or in line with the State Governments aspirational goals of equitable care delivered closer to home.

This review has highlighted significant issues in rural and remote Tasmania in terms of the interrelated domains of access that are likely contributing to the geographical manifestation of health inequities seen in the state. Population-based approaches to primary healthcare service design may be more successful in addressing these disparities if they focus on discrete localities rather than the three commonly utilised THS or SA3, SA4 regions. Increased understanding of local health service utilisation patterns, including emergency presentation and admission data from District Hospitals would contribute significantly to a more comprehensive understanding of need in order to inform service design.

The limited sources that described programs or services broadly fitting definitions of primary health care highlighted the importance of community participation in design and engaging local knowledge and expertise, alongside multi-agency participation, for the long-term sustainability of initiatives. Given that readily available health data obscures the reality of health on the east coast, this is a particularly relevant consideration for policy makers and funders, who are more likely to be located in urban locations and lack the lived experience of health or health service utilisation in rural and remote Tasmania¹.

references

1. McGrail MR, Humphreys JS. Spatial access disparities to primary health care in rural and remote Australia. *Geospat Health*. 2015;10(2):138–43.
2. Australian Institute of Health and Welfare. Profile of rural and remote Australians [Internet]. *Rural And Remote Health*. 2022 [cited 2022 May 19]. Available from: <https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health#Profile%20of%20rural%20and%20remote%20Australians>
3. Primary Health Tasmania. *Health in Tasmania*. 2021;(November 2021).
4. Australian Bureau of Statistics. Snapshot of Tasmania [Internet]. 2021 [cited 2023 Mar 24]. Available from: <https://www.abs.gov.au/articles/snapshot-tas-2021>
5. Department of Health. Modified Monash Model [Internet]. Australian Government. 2021. Available from: <https://www.health.gov.au/health-topics/rural-health-workforce/classifications/mmm#:~:text=under>
6. Land Information System Tasmania. LISTmap [Internet]. 2023 [cited 2023 Mar 24]. Available from: <https://maps.thelist.tas.gov.au/listmap/app/list/map>
7. Australian Government Department of Health. Health Workforce Locator [Internet]. 2018 [cited 2018 Jan 10]. Available from: <https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/health-workforce-locator>
8. Forrest R, Duigan N, Edmunds L, Gaffney M, Harriss D, Lovell S. *Report on Rural Health Services in Tasmania*. Hobart; 2022.
9. World Health Organisation, United Nations Childrens Fund. *A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals*. Geneva; 2018.
10. Thomas SL, Wakerman J, Humphreys JS. What core primary health care services should be available to Australians living in rural and remote communities? *BMC Fam Pr* [Internet]. 2014;15:143. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25143194>
11. Thomas SL, Wakerman J, Humphreys JS. Ensuring equity of access to primary health care in rural and remote Australia - what core services should be locally available? *Int J Equity Health* [Internet]. 2015;14(111). Available from: <https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-015-0228-1>
12. Saurman E. Improving access: Modifying penchansky and thomas's theory of access. *J Heal Serv Res Policy*. 2016;21(1):36–9.
13. Russell DJ, Humphreys JS, Ward B, Chisholm M, Buykx P, McGrail M, et al. Helping policy-makers address rural health access problems. *Aust J Rural Health*. 2013;21(2):61–71.
14. Department of Health and Aged Care. Primary Care Rural Innovative Multidisciplinary Models (PRIMM) [Internet]. 2023 [cited 2023 Mar 24]. Available from: <https://www.health.gov.au/our-work/primm>
15. Breen RJ, Frandsen M, Ferguson SG. Incentives for smoking cessation in a rural pharmacy setting: The Tobacco Free Communities program. *Aust J Rural Health*. 2021;29(3):455–63.
16. Edwards LJ. Applied Primary Health Care Epidemiology in Tasmania. 2018;(November).
17. Australian Institute of Health and Welfare. Aboriginal and Torres Strait Islander Health Performance Framework 2020 key health indicators - Tasmania. Canberra; 2020.
18. Grattidge L, Purton T, Auckland S, Lees D, Mond J. Stakeholder insights into implementing a systems-based suicide prevention program in regional and rural tasmanian communities. *BMC Public Health* [Internet]. 2022;22(1):1–15. Available from: <https://doi.org/10.1186/s12889-022-14721-5>
19. Smith L, Purton T, Auckland S, Lees D, Mond J. Local evaluation of the Tasmanian component of the National Suicide Prevention Trial—Preliminary learnings. *Aust J Rural Health*. 2020;28(2):218–23.
20. Le Q, Nguyen HB, Auckland SRJ, Hoang H, Terry DR. Access to Health Care Services in An Australian Rural Area—A Qualitative Case Study. *Int J Innov Interdiscip Res*. 2012;1(3):29–36.
21. Ascencion-Lane DJC. Submission to the Tasmanian Department of Health on Our Healthcare Future : Advancing Tasmania ' s Health. Hobart: *Australiasian College for Emergency Medicine*; 2022. p. 1–5.

22. Jessup B, Barnett T, Obamiro K, Cross M, Mseke E. Review of the health, welfare and care workforce in Tasmania, Australia: 2011–2016. *Int J Environ Res Public Health*. 2021;18(13).
23. Department of Health Tasmania. Service Locations Map. 2021. p. 2021.
24. Grant R, Nash M. Young bisexual women's sexual health care experiences in Australian rural general practice. *Aust J Rural Health*. 2019;27(3):224–8.
25. Lea T, Anning M, Wagner S, Owen L, Howes F, Holt M. Barriers to accessing HIV and sexual health services among gay men in Tasmania, Australia. *J Gay Lesbian Soc Serv* [Internet]. 2019;31(2):153–65. Available from: <https://doi.org/10.1080/10538720.2019.1567427>
26. Department of Health T. Advancing Tasmania's Health. 2022.
27. Department of Health Tasmania. Healthy Tasmania Five-Year Strategic Plan 2022-2026. Hobart; 2022.
28. Hughes R. Building capacity for health and wellbeing promotion in Tasmania: A workforce development strategy for local government. Hobart: *University of Tasmania*; 2021.
29. Ridge A, Peterson GM, Seidel BM, Anderson V, Nash R. Healthcare providers' perceptions of potentially preventable rural hospitalisations: A qualitative study. *Int J Environ Res Public Health*. 2021 Dec 1;18(23).
30. Ridge A, Peterson GM, Kitsos A, Seidel BM, Anderson V, Nash R. Potentially preventable hospitalisations in rural community-dwelling patients. *Intern Med J*. 2021;53:228–35.
31. Hoang H, Le Q, Terry D. Women's access needs in maternity care in rural Tasmania, Australia: A mixed methods study. *Women and Birth* [Internet]. 2014;27(1):9–14. Available from: <http://dx.doi.org/10.1016/j.wombi.2013.02.001>
32. Turner L, Spencer L, Strugnelli J, Chang J, Di Tommaso I, Tate M, et al. Young people have their say: What makes a youth-friendly general practice? *Aust Fam Physician*. 2017;46(1):70–4.
33. Primary Health Tasmania. Integrated Team Care (ITC) Activity Work Plan [Internet]. 2020 [cited 2023 Apr 7]. Available from: www.primaryhealthtas.com.au
34. Cancer Council Tasmania. transport2treatment [Internet]. [cited 2023 Apr 7]. Available from: <https://www.cancer.org.au/support-and-services/transport-to-treatment/tas>
35. Callander E, Larkins S, Coruscadden L. Variations in out-of-pocket costs for primary care services across Australia: A regional analysis. *Aust J Prim Health*. 2017;23(4):379–85.
36. Reynish TD, Hoang H, Bridgman H, Nic Giolla Easpaig B. Mental health and related service use by sex workers in rural and remote Australia: 'there's a lot of stigma in society'. *Cult Heal Sex* [Internet]. 2022;24(12):1603–18. Available from: <https://doi.org/10.1080/13691058.2021.1985616>
37. Cheek C, Hays R, Allen P, Walker G, Shires L. Building a local medical workforce in Tasmania: where are international fee-paying medical graduates likely to work? *Rural Remote Health* [Internet]. 2017 Aug 28 [cited 2023 Feb 23];17(3). Available from: <https://www.rrh.org.au/journal/article/4292/>
38. Shires L, Allen P, Cheek C, Wilson D. Regional Universities and Rural Clinical Schools Contribute to Rural Medical Workforce, A Cohort Study of 2002 to 2013 Graduates. *Rural Remote Health*. 2015;15(3):1–7.
39. Andrewartha J, Allen P, Hemmings L, Dodds B, Shires L. Escape to the Country. *Aust J Gen Pract*. 2020;49(9):606–11.
40. Terry DR, Quynh L. Challenges of working and living in a new cultural environment: A snapshot of international medical graduates in rural Tasmania. *Aust J Rural Health*. 2021;29(4):549–53.
41. Zournazis HE, Marlow AH. The use of video conferencing to develop a community of practice for preceptors located in rural and non traditional placement settings: an evaluation study. *Nurse Educ Pr*. 2014/12/02. 2015;15(2):119–25.
42. Coe S, Marlow A, Mather C. Whole of community facilitators: An exemplar for supporting rural health workforce recruitment through students' professional experience placements. *Int J Environ Res Public Health*. 2021 Jul 2;18(14).

43. Barrett A, Terry DR, Lê Q, Hoang H. Factors influencing community nursing roles and health service provision in rural areas: a review of literature. *Contemp Nurse*. 2016;52(1):119–35.
44. Jessup B, Barnett T, Cross M, Obamiro K, Mallick S. Rural employment: A get-go for recent nursing and allied health graduates? *Aust J Rural Health*. 2021;29(5):688–700.
45. Squibb K, Smith A, Dalton L, Bull RM. The 'radiographer-referrer game': image interpretation dynamics in rural practice. *J Med Radiat Sci*. 2016;17–22.
46. Marsh P, Brennan S, Vandenberg M. 'It's not therapy, it's gardening': Community gardens as sites of comprehensive primary healthcare. *Aust J Prim Health*. 2018;24(4):337–42.
47. Lester L, Banham R, Horton E, Pisanu N, Remund A, Steel R, et al. *Report for the Premier's Economic and Social Recovery Advisory Committee: The Tasmania Project Wellbeing Survey*. Hobart: Institute for Social Change, University of Tasmania; 2021.
48. Weber HC, Walters EH, Frandsen M, Dharmage SC. Prevalence of asthma and allergic disorders in regional, rural, and indigenous children aged 6–8 years in Tasmania. *J Asthma* [Internet]. 2019;56(10):1062–9. Available from: <https://doi.org/10.1080/02770903.2018.1527931>
49. Walters J, Cameron-Tucker H, Wills K, Schuz N, Scott J, Robinson A, et al. Effects of telephone health mentoring in community-recruited chronic obstructive pulmonary disease on self-management capacity, quality of life and psychological morbidity: a randomised controlled trial. *BMJ Open*. 2013/09/10. 2013;3(9):e003097.
50. Callander E, Larkins S, Corscadden L, Callander E, Larkins S, Corscadden L. Variations in out-of-pocket costs for primary care services across Australia: a regional analysis. *Aust J Prim Health* [Internet]. 2017 Sep 11 [cited 2023 Feb 8];23(4):379–85. Available from: <https://pubmed.ncbi.nlm.nih.gov/28502310/>
51. Neil AL, Chappell K, Wagg F, Miller A, Judd F. The Tasmanian Conception to Community (C2C) Study Database 2008–09 to 2013–14: Using linked health administrative data to address each piece in the puzzle. *Soc Sci Med* [Internet]. 2021;284(May):114216. Available from: <https://doi.org/10.1016/j.socscimed.2021.114216>
52. Taylor CL, Christensen D, Jose K, Zubrick SR. Universal child health and early education service use from birth through Kindergarten and developmental vulnerability in the Preparatory Year (age 5 years) in Tasmania, Australia. *Aust J Soc Issues*. 2022;57(2):289–313.
53. Ogden K, Ingram E, Levis J, Roberts G, Robertson I. Termination of pregnancy in Tasmania: Access and service provision from the perspective of GPs. *Aust J Prim Health*. 2021;27(4):297–303.
54. Tasmanian State Service, Tasmanian Industrial Commission. Rural Medical Practitioners (Tasmanian State Service) Agreement 2019. 2020.
55. Tricco AC, Antony J, Zarin W, Striffler L, Ghasssemi M, Ivory J, et al. A scoping review of rapid review methods. *BMC Med* [Internet]. 2015; Available from: <http://dx.doi.org/10.1186/s12916-015-0465-6>

Appendix 1

A rapid review of research and grey literature (Government and organisational publications available in the public domain) was undertaken in which elements of a systematic review were modified to produce information in a brief period of time⁵⁵.

The search strategy and inclusion and exclusion criteria are outlined in Table 3 and PRISMA flowchart (Image 3).

Table 3 Rapid review search strategy

	Inclusion criteria	Exclusion criteria
Databases	Medline, Scopus, Proquest Central and Google Scholar (first 1000 records only)	Google scholar record >1000
Search terms with BOOLEAN operators AND/OR	health, Tasmania, primary care, primary health care, community health	acute care setting only, medication focussed intervention,
Type of source	Research or grey literature (organisational or government reports/publications)	Study protocols only,
Place	Rural or remote Tasmania	Urban/Major city/ Regional centre Tasmanian, No Tasmanian data
Time period	01/01/2012 – 03/01/2023	
Language	English	Languages other than English

Abstracts and document summaries were reviewed by a single reviewer and inclusion and exclusion criteria were applied. A single reviewer completed fulltext review of all sources where inclusion and exclusion criteria were applied in further detail. Quality appraisal of sources did not occur.

Atlas Ti Windows (version 23.0.8.0) was utilised for the structural coding of all sources to inform the narrative summary. Structural coding was informed by the three key components of primary health care (World Health Organisation & United Nations Childrens Fund, 2018), the eight key categories of primary health care services described by Thomas¹⁰ and the dimensions of access as defined by Russell et al¹³. Key characteristics of included sources are included in Appendix 2.

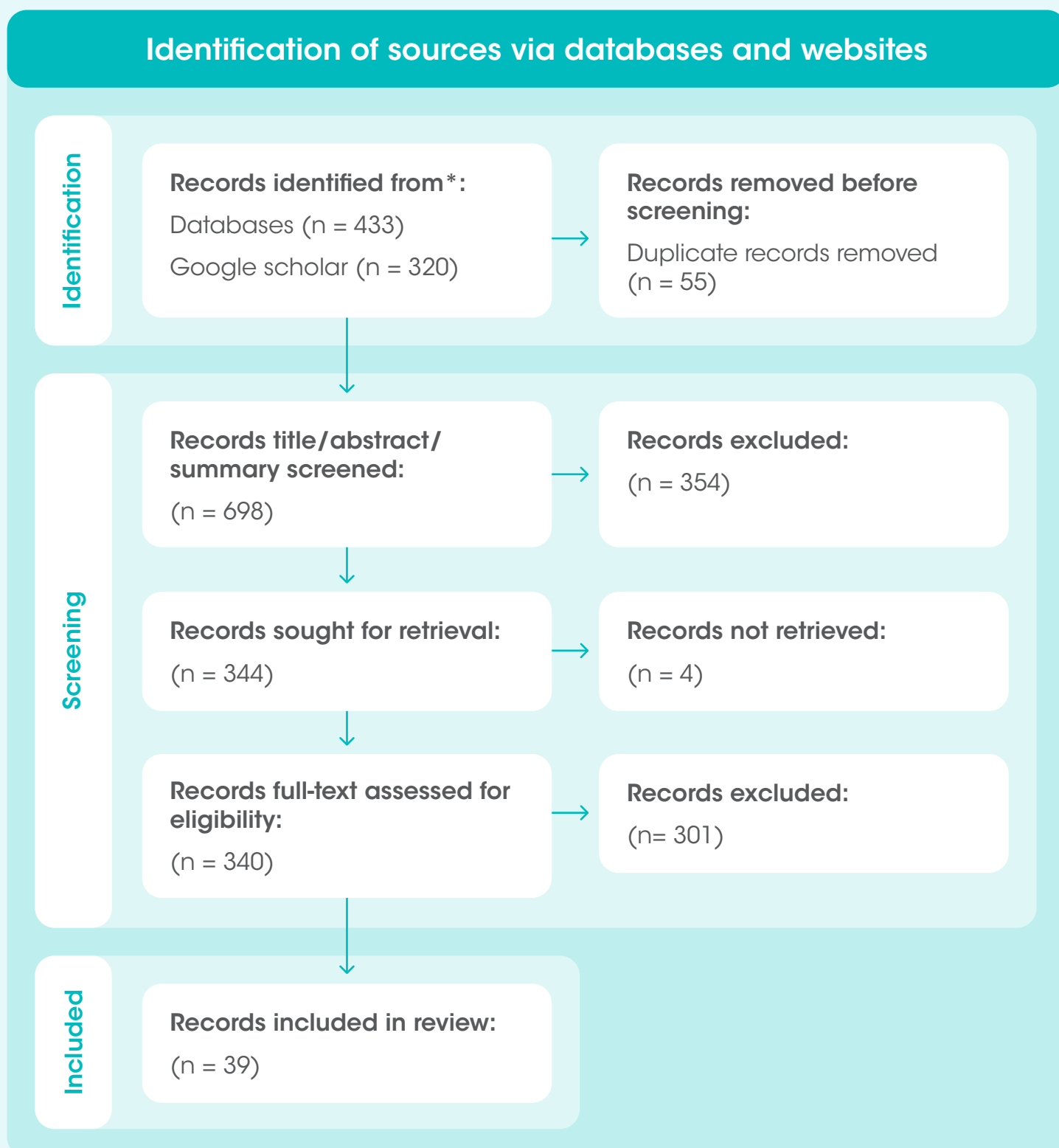
Appendix 2

Table 4 Source details

Author	Year	Source Type	Source detail
Andrewartha J, Allen P, Hemmings L, Dodds B, Shires L	2020	Research	Qualitative research
Ascencion-Lane DJC	2022	Grey literature	Organisational document
Australian Institute of Health and Welfare.	2020	Grey literature	Government report
Barrett A, Terry DR, Lê Q, Hoang H	2016	Research	Qualitative research
Breen RJ, Frandsen M, Ferguson SG	2021	Research	Intervention trial
Callander E, Larkins S, Corscadden L	2017	Research	Quantitative
Callander E, Larkins S, Corscadden L, Callander E, Larkins S, Corscadden L.	2017	Research	Quantitative research
Cheek C, Hays R, Allen P, Walker G, Shires L	2017	Research	Cohort study
Coe S, Marlow A, Mather C	2021	Research	Action research
Department of Health Tasmania	2021	Grey literature	Government report
Department of Health Tasmania	2022	Grey literature	Government report
Department of Health Tasmania	2022	Grey literature	Government report
Edwards LJ	2018	Research	Quantitative research
Forrest R, Duigan N, Edmunds L, Gaffney M, Harriss D, Lovell S.	2022	Grey literature	Government report
Grant R, Nash M.	2019	Research	Qualitative research
Grattidge L, Purton T, Auckland S, Lees D, Mond J	2022	Grey literature	Qualitative research
Hoang H, Le Q, Terry D	2014	Research	Qualitative research
Hughes R.	2021	Grey literature	Organisational report
Jessup B, Barnett T, Cross M, Obamiro K, Mallick S	2021	Research	Mixed methods
Jessup B, Barnett T, Obamiro K, Cross M, Mseke E	2021	Research	Quantitative
Le Q, Nguyen HB, Auckland SRJ, Hoang H, Terry DR	2012	Research	Qualitative research
Lea T, Anning M, Wagner S, Owen L, Howes F, Holt M	2019	Research	Qualitative research
Lester L, Banham R, Horton E, Pisanu N, Remund A, Steel R, et al	2021	Grey literature	Organisational report
Marsh P, Brennan S, Vandenberg M	2018	Research	Action research
Neil AL, Chappell K, Wagg F, Miller A, Judd F.	2021	Research	Cohort study
Ogden K, Ingram E, Levis J, Roberts G, Robertson I	2021	Research	Mixed methods
Primary Health Tasmania	2021	Grey literature	Organisational report
Reynish TD, Hoang H, Bridgman H, Nic Giolla Easpaig B	2022	Research	Qualitative research
Ridge A, Peterson GM, Kitsos A, Seidel BM, Anderson V, Nash R	2021	Research	Cohort study
Ridge A, Peterson GM, Seidel BM, Anderson V, Nash R	2021	Research	Qualitative research
Shires L, Allen P, Cheek C, Wilson D	2015	Research	Cohort study
Smith L, Purton T, Auckland S, Lees D, Mond J	2020	Research	Action research
Squibb K, Smith A, Dalton L, Bull RM	2016	Research	Qualitative research
Taylor CL, Christensen D, Jose K, Zubrick SR.	2022	Research	Cohort study
Terry DR, Quynh L	2021	Research	Quantitative research
Turner L, Spencer L, Strugnelli J, Chang J, Di Tommaso I, Tate M, et al	2017	Research	Mixed methods
Walters J, Cameron-Tucker H, Wills K, Schuz N, Scott J, Robinson A, et al	2013	Research	Randomised control trial
Weber HC, Walters EH, Frandsen M, Dharmage SC	2019	Research	Quantitative research
Zournazis HE, Marlow AH	2014	Research	Mixed methods

Image 3: PRISMA 2020 flow diagram

PRISMA 2020 flow diagram



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: <http://www.prisma-statement.org/>

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