THE INTEGRATED MENTAL HEALTH ATLAS OF THE FAR WEST

THE UNIVERSITY OF SYDNEY

WESTERN SYDNEY UNIVERSITY

UNIVERSIDAD LOYOLA ANDALUCÍA

UNIVERSITY OF WOLLONGONG AUSTRALIA

Mental Health Commission of New South Wales

AUTHORS:

UNIVERSITY OF SYDNEY
PROF. LUIS SALVADOR-CARULLA (CHIEF INVESTIGATOR-HEAD OF THE PROJECT)
DR. ANA FERNANDEZ (COORDINATOR, ASSESSMENT OF THE SERVICES)
MS. CAILIN MAAS (GEOGRAPHICAL INFORMATION SYSTEMS; SERVICE ASSESSMENT)
PROF. FELLOW. ALAN ROSEN (ADVISOR)
UNIVERSITY OF WESTERN SYDNEY
DR. THOMAS ASTELL-BURT (GEOGRAPHICAL INFORMATION SYSTEMS)
UNIVERSITY OF WOLLONGONG
DR. XIAOQI FENG (GEOGRAPHICAL INFORMATION SYSTEMS)
UNIVERSITY OF LOYOLA (SPAIN)
DR. JOSE ALBERTO SALINAS-PEREZ (HEALTH GEOGRAPHY ADVISOR)

ISBN: 978-1-74210-382-2

ACKNOWLEDGMENTS

We are grateful to all the services providers who participated in this study. We want to thank Alan Rosen for his useful input; and to Susan Daly and David Lyle for all the support provided. Lastly, we are thankful to the Mental Health Commission of New South Wales for supporting this Atlas.

SUGGESTED CITATION:

Salvador-Carulla, L., Fernandez, A., Maas, C., Feng, X., Astell-Burt, T.Salinas-Perez, JA (2016). *The Integrated Mental Health Atlas of the Far West*. Mental Health Policy Unit, Brain and Mind Centre, Faculty of Health Sciences, University of Sydney.

CONTENTS

Index of Figures

Index of tables

ABBREVIATIONS

ATAPS Access to Allied Psychological Services
ATSI Aboriginal and Torres Strait Islander
BSIC Basic Stable Inputs of Care
DESDE- LTC Description and Evaluation of Services and Directories in Europe for long-term care
FaCS Family and Community Services
FW Far West
GIS Geographical Information System
HASI House and Accommodation Support Initiative
IRSD Index of Relative Socio-Economic Disadvantage
LGA Local Government Area
LHD Local Health District
MHEC - RAP Mental Health Emergency Care – Rural Access Program
MTC Main Type of Care
NGO Non-Governmental Organisation
NDIS National Disability Insurance Scheme
NSW New South Wales
PARC Prevention and Recovery Care
PIR Partners in recovery
RFDS –Royal Flying Doctor Service
WHO World Health Organisation

A NOTE ON THE LANGUAGE

The language used in some of the service categories mapped in this report eg outpatient-clinical, outpatient-social, day hospital may seem to be very hospital-centric and even archaic for advanced community –based mental health services which are already recovery-oriented and highly devolved. However, these categories are employed for comparability with standardized categories which have been used for some years in European mental health service mapping studies and the resulting Atlas [this standard classification system is the "Description and Evaluation of Services and Directories in Europe for long-term care" model (DESDE-LTC)].

EXECUTIVE SUMMARY

The recent *National Review of Mental Health Programmes and Services* by the National Mental Health Commission has drawn attention to the need of local planning of care for people with a lived experience of mental illness in Australia and the relevance of a bottom-up approach to understanding "services available locally [in] the development of national policy". It also calls for responsiveness to the diverse local needs of different communities across Australia.

THE FINDINGS FROM THE NATIONAL REVIEW ARE IN LINE WITH THE RECOMMENDATIONS PRESENTED BY THE NSW MENTAL HEALTH COMMISSION IN THE REPORT *LIVING WELL: A STRATEGIC PLAN FOR MENTAL HEALTH IN NSW 2014-2024.*

Living Well identified that Local Health Districts should implement strategies to ensure that scarce clinical skills are employed to the best effect and the need to harness new technology to support clinicians and service providers with new tools to improve care, data collection and information sharing. The Integrated Mental Health Atlas of the Far West aligns with these recommendations. The Atlas is the region's first inventory of available mental health services, from which it will be possible to derive benchmarks and comparisons with other regions of NSW. This will inform services planning and the allocation of resources where they are most needed.

It is a tool for evidence-informed planning that critically analyses the pattern of mental health care provided within the boundaries of Far West Local Health District. We used a standard classification system, the "*Description and Evaluation of Services and Directories in Europe for long-term care*" model (DESDE-LTC), to describe and classify the services; as well as geographical information systems to geo-locate the services.

Use of the DESDE-LTC, widely used in Europe, has enabled a more robust understanding of what services actually provide and will enable planners to make comparisons across areas and regions, once this methodology is more widely available.

This atlas has identified some major strengths in the provision of mental health care in the Far West:

- the good availability of inpatient residential and outpatient care;
- although 85 per cent of the services are located in Broken Hill (where 61 per cent of the population resides), there are substantial efforts to increase accessibility to the surrounding areas; and
- the crucial role of effective partnerships.

On the other hand, the Atlas also identified some gaps:

- While the Local Health District has two clinicians whose specialty is Specialist Mental Health Services for Older People (SMHSOP) (one in the Broken Hill Community Mental Health Team and one in the Dareton Community Mental Health Team), there is a lack of specific services for older people;
- an absence of core components of the balanced model of mental health care, as seen in other LHD across NSW (such as absence of day care and long term accommodation for people with a lived experience of mental illness); and

- a low capacity of the workforce, in particular a shortage of skilled/qualified workers, including psychiatrists

Taken together the information in this Atlas highlights key areas for consideration for future planning for the provision of mental health services Far West. The findings reflect some of the findings and recommendations in the recent report of the National Review of Mental Health Programmes and Services made by the National Mental Health Commission.

1. FRAMEWORK

The philosophy of mental health care reform has been built on key principles of community psychiatry, with four inter linked areas of action[1]:

i) deinstitutionalisation and the end of the old model of incarceration in mental hospitals;
ii) development of alternative community services and programs;
iii) integration with other health services; and
iv) integration with social and community services.

More recently this has also included a focus on recovery orientation and person-centred care.
Australia started this journey of reform in 1983, with David Richmond's report on care for people experiencing mental ill-health and intellectual disabilities in NSW: *Inquiry into Health Services for the Psychiatrically Ill and Developmentally Disabled*. But it took 10 years to establish the first National Mental Health Strategy[2]. Since then, there have been considerable systemic changes made, including the closure or downsizing of many large psychiatric hospitals and the development of the community mental health movement[3].

However, this journey has not been completed and application of reform has been patchy. For example, the Australian mental health system still has high rates of readmission to acute care, with at least 46% of patients hospitalised being readmitted during the year following the admission [4]; we have high rates of compulsory community treatment orders, ranging from 30.2 per 100,000 population in Tasmania to 98.8 per 100,000 population in Victoria[5]; and high rates of seclusion with 10.6 seclusion events per 1,000 bed days in 2011-12[6]. These features are associated with a system characterised by a fragmented, hospital-based, and inefficient provision of care[2]. It has been argued that we lack a clear service model, that reform has not been informed by evidence, and that quality and access to care is a lottery dependent on postcode[2].

Unfortunately, we have insufficient evidence to know the most efficient provision of mental health services. However, there are some International and Australian models that may guide the service planning and the delivery of services to people with a lived experience of mental illness.

Thornicroft and Tansella [7] conducted a review of the relevant evidence on mental health service planning and a series of surveys including more than 170 experts with direct experience of mental health system planning. They integrated the data and developed a balanced care model for the provision of mental health relevant to different resource setting. According to that model, high-resources settings, such as Australia, need to focus on:

1) The recognition and treatment of common mental illness **in primary care** for common mental disorders;
2) A good development of **'general adult mental health services'**, including outpatient clinics, community mental health teams, acute inpatient services, community residential care and work/occupation; and
3) Provision of '**specialised mental health services'** in the categories listed under 'general mental health'. This implies the provision of:

a. specialised out-patient facilities (for instance for eating disorders, based on an analysis of the local context);
b. specialised community mental health teams, such as assertive community treatment or early intervention teams;
c. alternatives to acute in-patient care, including acute day care, crisis houses; and home treatments;
d. alternative types of long-stay community residential care, ranging from 24-hour staffed residential care to lower supported accommodation; and
e. specialised services for increasing the access to employment, such as the Individual Placement and Support model, in addition to vocational rehabilitation.

Similarly, the TAMHSS group has recently recommended *"The Essential Components of Care for Community-Oriented Mental Health Services"* to be provided in Australia[8]. In addition to inpatient hospital care, the Australian mental health system should guarantee the provision of:

1. Access and triage
2. Early intervention
3. Care coordination
4. Crisis interventions and acute treatment in the community
5. Recovery oriented practice for community living
6. Engagement and community based support for people with complex needs
7. Medication
8. Physical health care
9. Effective psychological therapies

Both models are quite similar, highlighting the need to improve integrated and coordinated care that enables the inclusion of the people with lived experience of mental illness in the community. However, these models are mainly developed for urban and populated areas.

The challenges of Mental Health in Rural and Remote Australia

The provision of mental health care in rural and remote Australia has specific challenges that require tailored planning. Remote Australia is characterised by a sparse population with some moderately large regional towns where services are concentrated. These towns are surrounded by small, isolated communities often with a large proportion of Aboriginal people[8]. With regard to mental health, evidence suggests that residents of rural and remote areas in Australia do not report more mental health problems when compared with metropolitan areas. However, suicide rates are higher, particularly for young men, which can be a proxy of severity and different environmental factors (adverse weather events), contextual factors (increased accessibility to guns and toxins) as well as the demographics of the population (a higher proportion of the population is Aboriginal who have a higher risk of suicide). In addition, they are less likely to seek professional help for mental health problems[9]. This may due to different factors including the availability and accessibility of the services and the stigma associated with mental health in rural areas.

There are different initiatives developed at the State and Federal level to increase the availability of, and accessibility to, mental health services in rural and remote areas. For instance, the "Mental Health Services in Rural and Remote Areas" (MHSRRA) program funded by the Department of Health, provides funding to NGOs such as Primary Health Networks, Aboriginal Medical Services and the Royal Flying

Doctor Service to deliver mental health services in rural and remote communities that would otherwise have little or no access to mental health services. This program is critically important as the access to Medicare-subsidised mental health services is low in these remote areas. In the Tansella and Thornicroft model, this would be related to increasing access to primary mental health services that primarily deal with mild to moderate mental disorders.

On the other hand, the new NSW Rural Health Plan includes mental health as a top priority to encourage healthy rural communities (direction 1) as well as promote the integrated rural health services (direction 3). To achieve that, the Rural Health Plan proposes the following strategies:

- To enhance the rural health workforce
- To strengthen rural health infrastructure, research and innovation, particularly investing in models of care.
- To improve eHealth infrastructures

In this context it is crucial to provide policy and service decision makers with every tool and opportunity to make better, more informed choices about future investments in rural mental health care, including which services are needed and where and how they can be most effectively delivered. In other words, they need a map that will guide them through the mental health reform journey in rural and remote areas.

This Atlas is an ideal tool to help them in this process.

1.1. WHAT ARE INTEGRATED MENTAL HEALTH ATLASES?

The WHO Mental Health Gap Action Program (mhGAP) [10] has highlighted the need for a comprehensive and systematic description of all the mental health resources available and the utilisation of these resources. It is not only important to know the **numbers** of services in each health area, but also to describe **what** they are doing and **where** they are located. This information also enables an understanding of the context of health-related interventions which are essential for the development of evidence-informed policy.

Evidence-informed policy is an approach to policy decisions which is intended to ensure that the decision making process is well-informed by the best available research evidence. Evidence refers to facts intended for use in support of a conclusion. It is important to highlight that evidence alone does not make decision, as this evidence has to be also valued and filtered by the policy makers. However, evidence-informed policy tries to make this process more transparent, so that others can examine it. Evidence-informed policy combines 'global evidence' available from around the world, with 'local evidence', from the specific setting in which decisions and actions will be taken. This includes a detailed analysis of the area, taking into account the prevalence of mental health problem and other demand driven indicators, together with the availability of resources[11].

An in depth understanding of the local context is crucial to the implementation of any new strategy. There is no agreed definition of context; however, it can be defined as all those variables that can be related to both the new strategy that we want to implement and the outcome that we want to achieve. In other words, it makes references to "where" the process is happening, including: organisational and divisional structures and cultures; group norms; leadership; political processes; and broader economic, social and political trends and events[12].

The 'integrated care model' [13] has challenged the way health-related care should be assessed and planned. It enables us to identify new routes for linked, consumer-centred approaches to care. Greater integration relies on a global picture of all the services available, regardless of which sector is funding them (e.g. Health, Social Welfare and Family, Employment, Criminal Justice). Such 'systems thinking' enables policy planners to capture the complexity of service provision holistically. It offers a comprehensive way of anticipating synergies and mitigating problems and barriers, with direct relevance for creating policies that integrate the different systems of care [14, 15]. This is particularly important in the mental healthcare sector, which is characterised by increasing the personalisation of services and care coordination programs such as Partners in Recovery (PIR) or the National Disability Insurance Scheme (NDIS).

Within this context, Integrated Atlases of Mental Health are essential tools for decision making and quality assessment. These Integrated Atlases include detailed information on social and demographic characteristics and health-related needs, as well as data on service availability and care capacity. Integrated Atlases of Mental Health allow comparison between small health areas, highlighting variations of care, and detecting gaps in the system. The holistic service maps produced through an Integrated Atlas of Mental Health also allow policy planners and decision makers to build bridges between the different sectors and to better allocate services [16].

Integrated Atlases of Health include maps and graphics as a main form of presenting the data. As a visual form of communicating health information, they crucially bridge the gap between complex epidemiological presentations of statistics and the varied educational backgrounds represented by policymakers, other decision makers and consumers [17]. Policy makers and health planners may use the information presented in the Atlas as a visual reference point from which to quickly present and structure their ideas. In addition, the new knowledge presented in an Atlas will quickly increase a planner's self-efficacy and personal mastery of the field. Consequently, policy makers and health planners will be more willing to make informed decisions bolstered by solid evidence. In parallel, as Atlases are integrated (e.g. they include all funding providers and sectors) they may increase collaboration across services as they can act as a shared reference point from which to discuss the system. Consequently, it is expected that the Integrated Mental Health Atlas of the Far West will change the culture of planning and, from this, the provision of care through facilitating the integration and coordination of services. This will be reflected in the quality of care provided and, in the longer term, better health outcomes for people with a lived experience of mental illness[18].

The Integrated Mental Health Atlas of the Far West aligns with some key recommendations made by the *National Review of Mental Health Programmes and Services* by the National Mental Health Commission[3]. The report draws attention to the local level of MH planning in Australia and the relevance of a bottom-up approach to understanding "services available locally [in] the development of national policy". It also calls for responsiveness to the diverse local needs of different communities across Australia: *"Mental Health Networks, in partnership with Local Health Networks, should conduct comprehensive mapping of mental health services, programmes and supports available* ***in regional, rural and remote areas*** *through Commonwealth, state and territory and local governments, private and not-for-profit sectors".*

The "Living Well: A Strategic Plan for Mental Health in NSW: 2014-2024" [19] indicates that the current mental health system is highly fragmented, difficult to navigate and characterised by disjointed policy, financing and service delivery systems at national and state levels. Furthermore, there is a mismatch between top-down policies developed centrally at national and state levels and the local need for

efficient resource allocation. The lack of a comprehensive mapping of the available services constitutes an additional barrier to understanding the accessibility of mental health services in this disjointed system.
The Integrated Mental Health Atlas of the Far West can help us to understand the current scenario in the prevision on mental health care.

1.2. How was the Integrated Atlas of Mental Health Assembled?

Typically, general Atlases of health are formed through lists or directories of the services and inclusion of services is based on their official or everyday titles. This is particularly problematic for several reasons [20]:

1) The wide variability in the terminology of services and programs even in the same geographical area and the lack of relationships between the names of services and their actual functions (e.g. day hospitals, day centres, social clubs, etc.), as the service name may not reflect the actual activity performed in the setting; and,

2) The lack of a common understanding of what a service is. The word 'services' is an umbrella term that is used to describe very different components of the organisation of care. It merges permanent, highly structured services, with clinical units, or even short-term programs and interventions.

In order to overcome these limitations, we have used the "*Description and Evaluation of Services and Directories in Europe for long-term care*" (DESDE-LTC)[21] . This is an open-access, validated, international instrument for the standardised description and classification of services for Long Term Care (LTC). It includes a taxonomy tree and coding system that allows the classification of services in a defined catchment area according to the main care structure/activity offered, as well as the level of availability and utilisation. It is based on the activities, not the name of the service provider. This classification of services based on the actual activity of the service therefore reflects the real provision of care in the territory.

It is important to note that in research on health and social services there are different units of analysis and that comparisons must be made across a single and common 'unit of analysis' group. Different units of analysis include: Macro-organisations (e.g. a Local Health District), Meso-organisations (e.g. a hospital), and Micro-organisations (e.g. a service). It could also include smaller units within a service: Main Types of Care, Care Modalities, Care Units, Care Intervention Programs, Care Packages, Interventions, Activities, Micro Activities or Philosophy of Care. Our analysis, based on DESDE-LTC, is focused on the evaluation of the minimal service organisation units or Basic Stable Inputs of Care (BSICs).

1.2.1. What are Basic Stable Inputs of Care (BSIC)?

A Basic Stable Input of Care (BSIC) can be defined as a team of professionals working together to provide care for a group of people. They have time stability (that is, they have been funded for more than 3 years) and structural stability. Structural stability means that they have administrative support, their own space, their own finances (for instance a specific cost centre) and their own forms of documentation (i.e. they produced their own report by the end of the year) (See Box 1).

Box 1. Basic Stable Input of Care: criteria

Criterion A: Has its own professional staff.
Criterion B: All activities are used by the same clients.
Criterion C: Time continuity (more than 3 years)
Criterion D: Organisational stability
Criterion D.1: The service is registered as an independent legal organisation (with its own company tax code or an official register). This register is separate and the organisation does not exist as part of a meso-organisation (for example a service of rehabilitation within a general hospital) → **IF NOT:**
Criterion D.2.: The service has its own administrative unit and/or secretary's office and fulfils two additional descriptors (see below) → **IF NOT:**
Criterion D.3.: The service fulfils **3** additional descriptors:
D3.1. To have its own premises and not as part of other facility (e.g. a hospital)
D3.2. Separate financing and specific accountability (e.g. the unit has its own cost centre)
G3.3. Separated documentation when in a meso-organisation (e.g. specific end of the year reports).

We identified the BSICs using these criteria and then labelled them. The typology of care provided by the BSIC (or service) is broken down into a smaller unit of analysis that identifies the "Main Type(s) of Care" (MTC) offered by the BSIC. Each service is described using one or more MTC codes based on the main care structure and activity offered by the service. For instance, the same service might include a principal structure or activity (for example a 'residential' code) and an additional one (for example, a 'day care' code). Figure 1 depicts the different types of care used in our system.

There are 6 main types of care[21]:

- **Residential care:** The codes related to residential care are used to classify facilities which provide beds overnight for clients for a purpose related to the clinical and social management of their health condition. It is important to note that clients do not make use of such services simply because they are homeless or unable to reach home. Residential care can be divided in Acute and Non-Acute branches, and each one of this in subsequent branches. Figure 2 depicts the Residential Care branch.
- **Day Care:** The day care branch is used to classify facilities which (i) are normally available to several clients at a time (rather than delivering services to individuals one at a time); (ii) provide some combinations of treatment for problems related to long-term care needs (e.g. providing structured activities or social contact/and or support); (iii) have regular opening hours during which they are normally available; and (iv) expect clients to stay at the facility beyond the periods during which they have face to face contact with staff. Figure 3, below, depicts the day care coding branch.
- **Outpatient Care:** The outpatient care branch is used to code facilities which (i) involve contact between staff and clients for some purpose related to the management of their condition and associated clinical and social needs and (ii) are not provided as a part of delivery of residential or day services, as defined above. Figure 4 depicts the outpatient care branch.
- **Accessibility to Care:** The accessibility branch classifies facilities whose main aim is to facilitate accessibility to care for clients with long term care needs. These services, however, do not provide any therapeutic care. Figure 5 depicts the specific codes under this branch.

- **Information for Care:** These codes are used for facilities that provide clients with information and/or assessment of their needs. Services providing information are not involved in subsequent monitoring/follow-up or direct provision of care. Figure 6 depicts the information care branch.
- **Self-help and Voluntary Care:** These codes are used for facilities which aim to provide clients with support, self-help or contact, with un-paid staff that offer any type of care as described above (i.e. residential, day, outpatient, accessibility or information). Figure 7 depicts the self-help and volunteer care branch.

A detailed description of each one of the branches is available here:
http://www.edesdeproject.eu/images/documents/eDESDE-LTC_Book.pdf

Figure 1. Main Type of Care: core codes

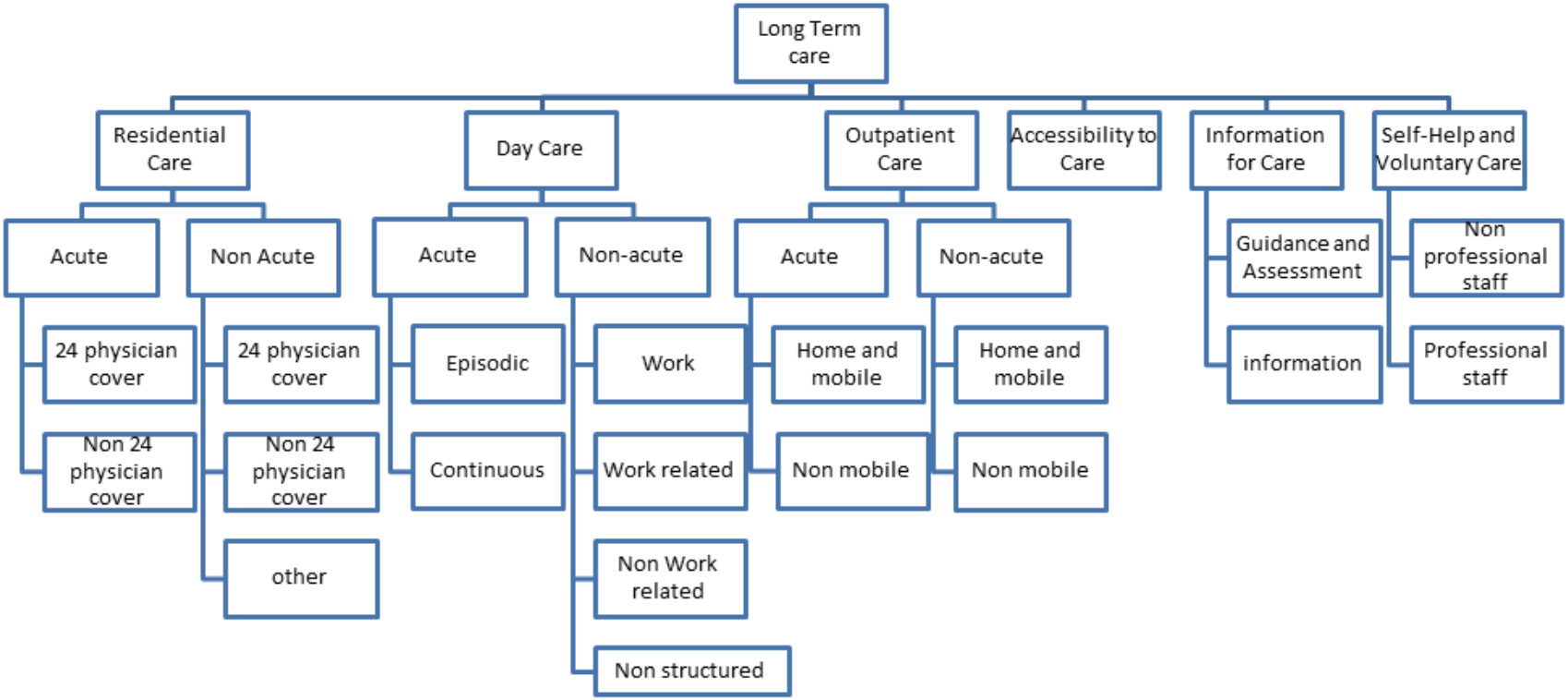


Figure 2. Residential care coding branch

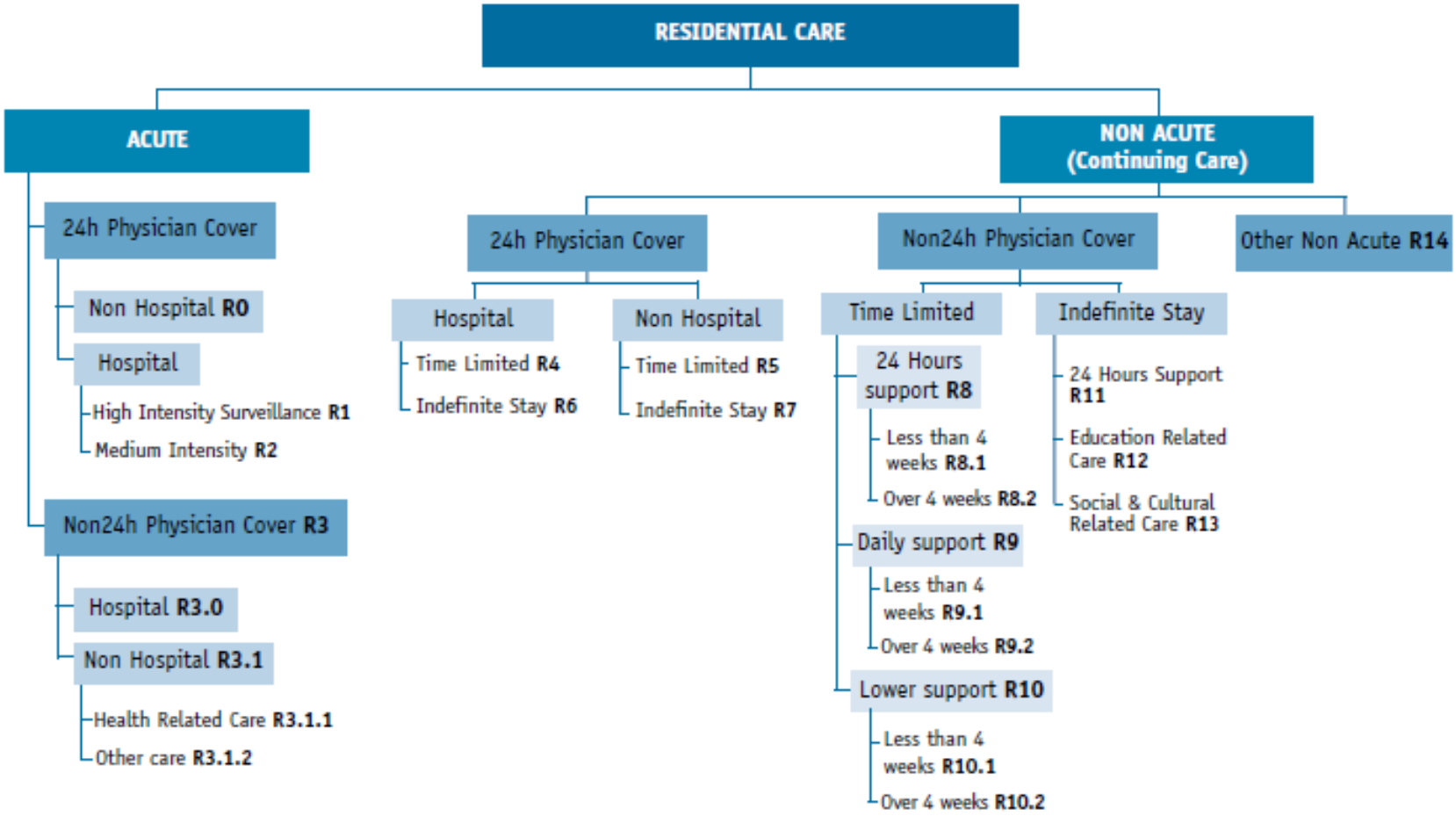


Figure 3. Day care coding branch

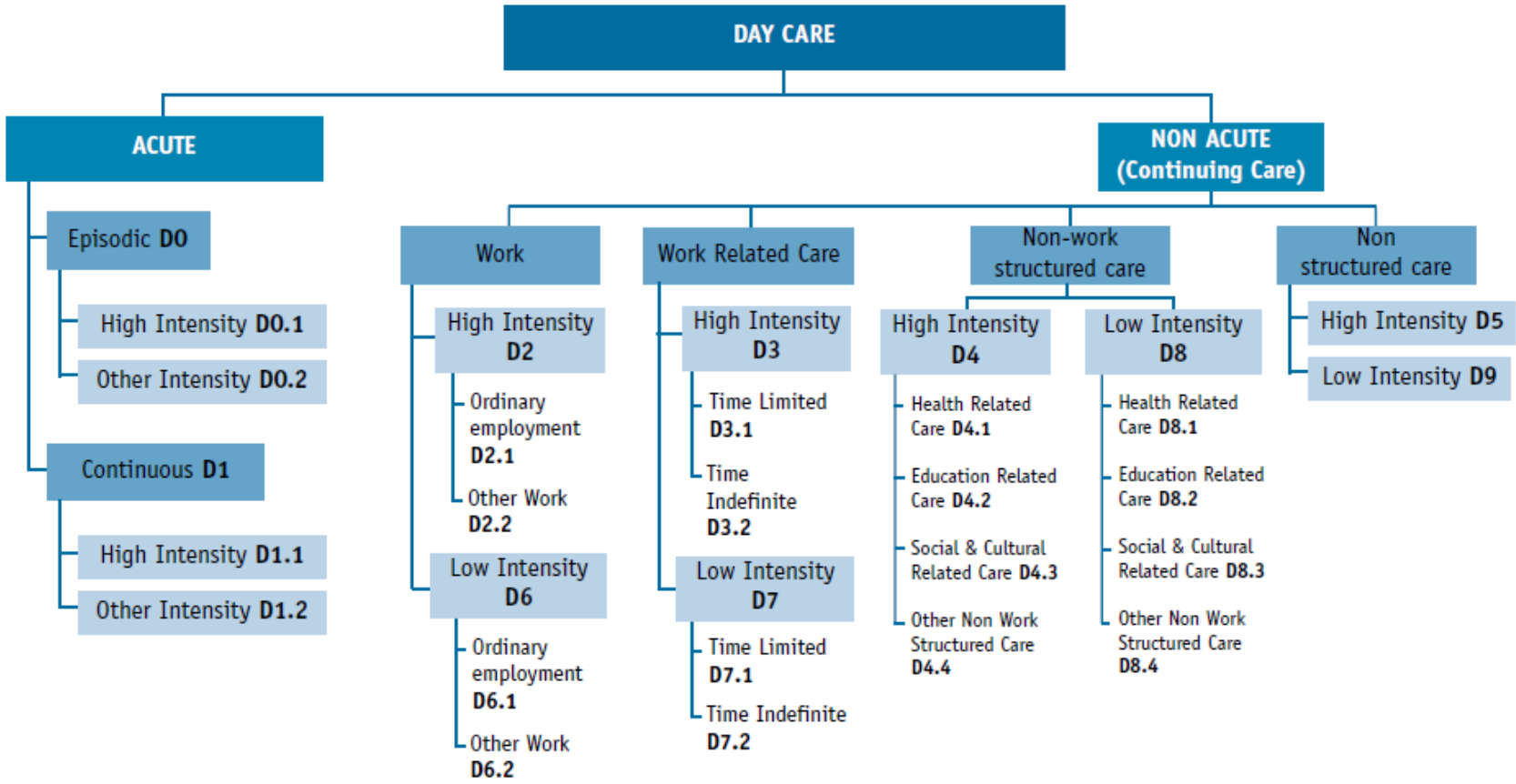


Figure 4. Outpatient care coding branch

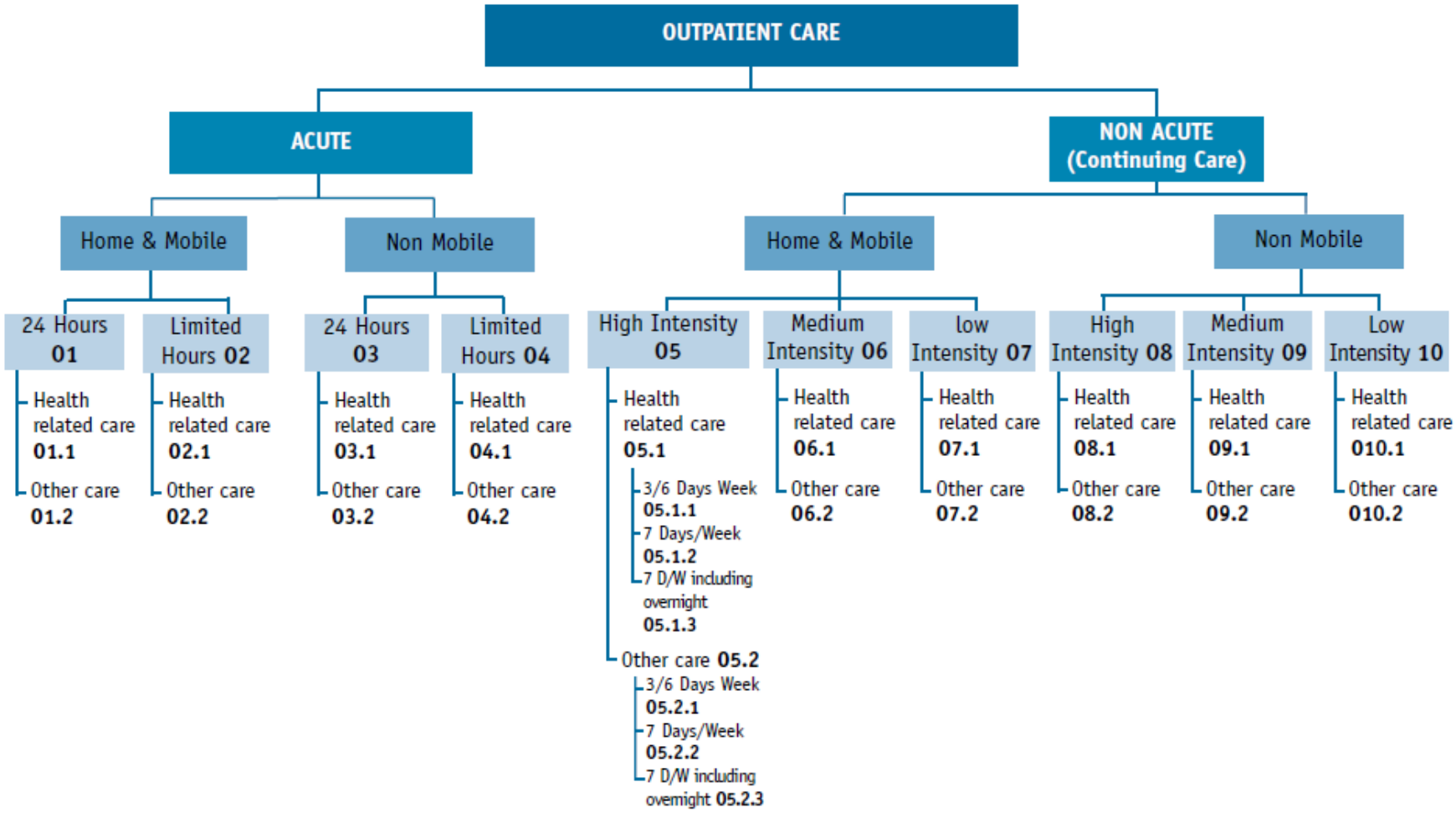


Figure 5. Accessibility to care coding branch

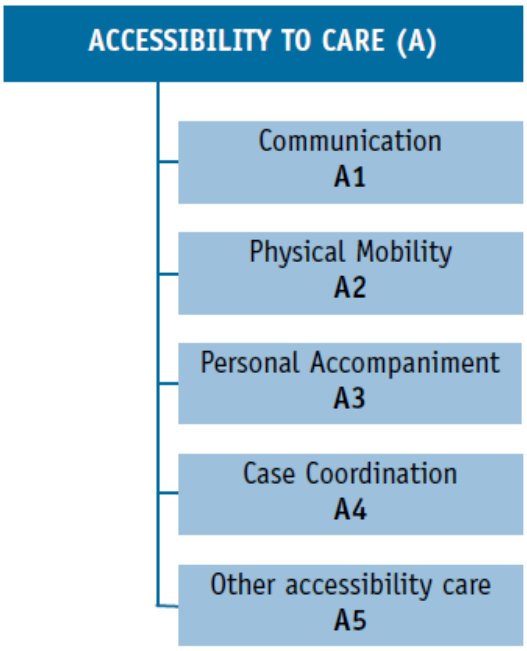


Figure 6. Information for care coding branch

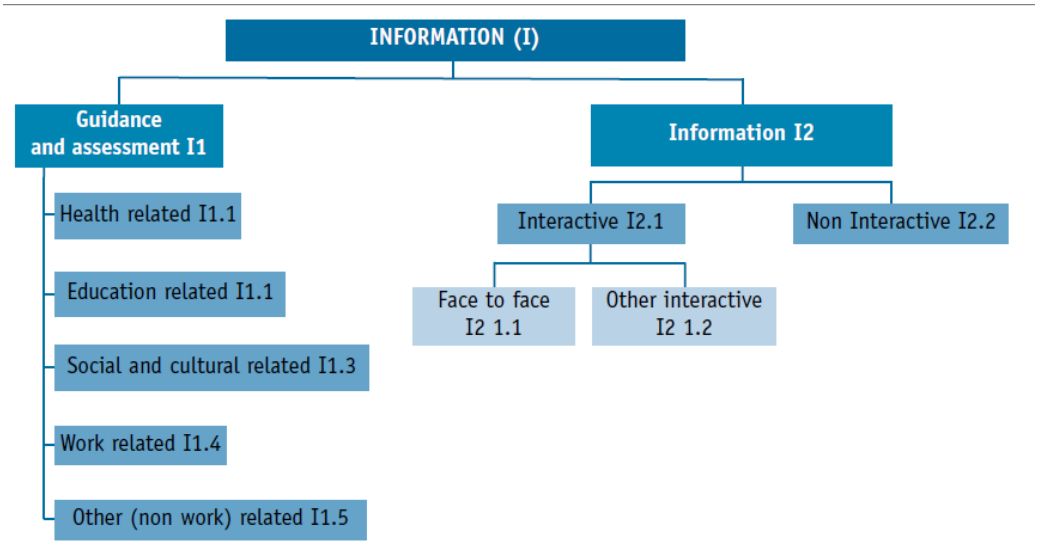
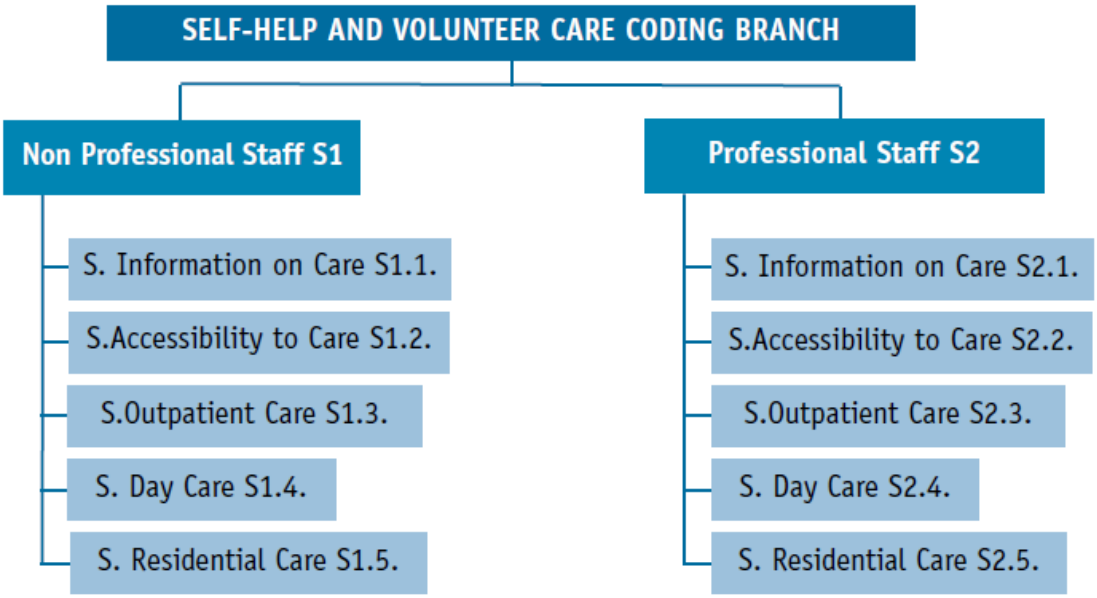


Figure 7. Self-help and volunteer care coding branch



1.2.2. Inclusion Criteria

In order to be included in the Atlas a service had to meet certain inclusion criteria:

1) **The service targets people living with mental illness**: The primary presentation for using the service has a mental health problem or a psychosocial disability. The inclusion of services that are generic, and lack staff with the specialised training and experience to treat people with a lived experience of mental ill-health, may lead to bias which obscures the availability of services providing the specialised focus and expertise needed in mental health.

2) **The service is publicly funded**: The study focuses on services that are universally accessible. Access to most private mental health services in Australia requires an individual to have private health insurance coverage, high income or savings. The inclusion of private providers would give a misleading picture of the resources available to most people living with mental ill-health and obscures the data for evidence informed planning of the public health system. Most private services have some level of public funding, for example Medicare subsidies of private hospitals or community-based psychiatric specialist services. It would be useful in future mapping exercises to include an additional layer of private service mapping to inform those who can afford private health care and for planning in the private sector. However, as a baseline the importance of establishing the nature of universal and equitably accessible health care necessitates that these maps remain distinct.

3) The service has received funding for more than 3 years: The inclusion of stable services (rather than those provided through short term grants) guarantees that we are mapping the robustness

of the system. If we include services with less than three years of funding it will jeopardize the use of the Atlas for evidence informed planning.

4) **The service is within the boundaries of the Far West LHD:** The inclusion of services that are within the boundaries of the Far West LHD is essential to have a clear picture of the local availability of resources. However, we will include services outside the area if there is an agreement that allows residents from the Far West to use it.

5) **The service provides direct care or support to clients:** We excluded services that were only concerned with the coordination of other services or system improvement, without any contact with people with a lived experience of mental ill-health

1.3. WHAT PROCESS WAS FOLLOWED IN THE FAR WEST?

There were four distinct steps in the creation of the Integrated Mental Health Atlas of the Far West. These steps are explained below and summarised in figure 9.

Step 1 - Data collection: First we developed a list of all health related services providing care for people experiencing mental ill-health. Then we contacted the services by phone to gather the following information: a) basic service information (e.g. name, type of service, description of governance); b) location and geographical information about the service (e.g. service of reference, service area); c) service data (e.g. opening days and hours, staffing, management, economic information, legal system, user profile, number of clients, number of contacts or admissions, number of days in hospital or residential accommodation, number of available beds or places, links with other services); d) additional information (name of coder, date, number of observations and problems with data collection). We then contacted the providers via email and asked them to fill in an online survey. Alternatively, they could ask for a face-to-face on-site interview with one of the researchers.

Step 2 - Codification of the services followed criteria defined in DESDE-LTC, according to their MTC (not the official name).
The codes can be split into four different components:

a) **Client age group:** This represents the main target group for which the service is intended or currently accessed by, using capital letters.

GX All age groups
NX None/undetermined
CX Child & Adolescents (0-17 years old)
AX Adult (>17 years old)
OX Old > 64
Cc Only children (0-12 years old)
Ca Only adolescent (12-17 years old)
TC Period from child to adolescent (8-12 years old)
TA Period from adolescent to adult (16-25 years old)
TO Period from Adult to old (60- 70 years old)

b) Diagnostic group: ICD-10 codes in brackets after the age group code but before DESDE-LTC code were used to describe the main diagnostic group covered by the service. In the majority of the

services we have used the code [F0-F99], which means that the service includes all types of mental disorders or does not specify any. If the service is not targeting mental ill-health, but psychosocial problems (for instance with some child and adolescent services) we have used the code [Z56-Z65]. If the client of the service is a child, but the professional is working with the family, we have included the code [e310] (immediate family) from the International Classification of Functioning (ICF).

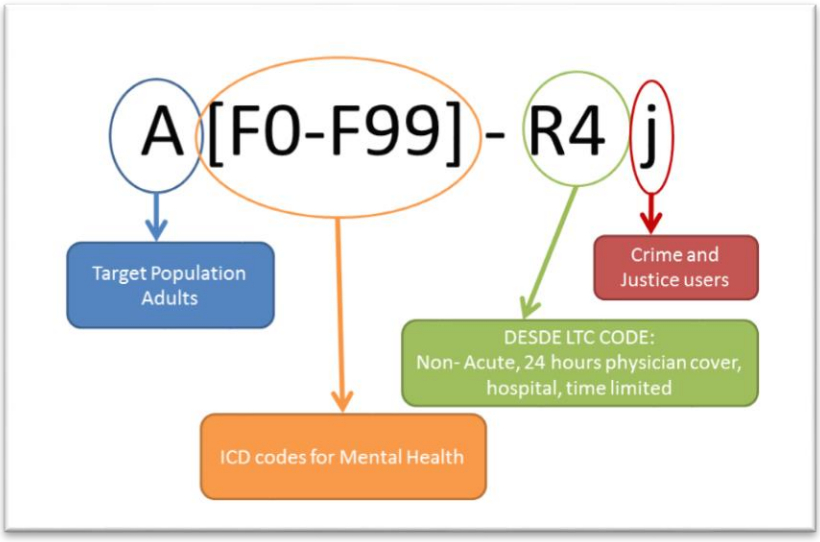
c) DESDE-LTC code: The third component of the code is the core DESDE-LTC code which is the MTC. As we have explained before (pages 11-19) the services are classified according to their main type of care. This care can be related to: a) residential care (codes starting with R); b) day care (codes starting with D); c) outpatient care (codes starting with O); d) Accessibility to care (codes starting with A); e) Information for care (codes starting with I); and f) Self-Help and Voluntary care (codes starting with S).

d) Qualifiers: In some cases, a 4th component may be incorporated to facilitate a quick appraisal of those characteristics of the services which may be relevant to local policy. The qualifiers used in these Atlas are:

- **"b" based-care:** This additional code typifies outpatient/ambulatory services that do not provide any care outside their own premises
- **"d" mobile-care:** This additional code is used in those non-mobile services, which have between 20% and 49% mobile contacts.
- **"e" eHealth:** This additional code characterises services that are provided using telecommunication techniques (videoconference).
- **"u" unique:** This additional code describes single-handed BSICs where care is delivered by a health care professional (psychiatrist, psychologist, nurse).

Example: A sub-acute forensic unit in a hospital for adults with lived experience of mental illness will receive the following code presented in Figure 8:

Figure 8. Components of the code- an example of a sub-acute forensic unit based in a hospital.



Step 3 Mapping the BSICs:

A series of indicators were calculated to describe the area. This information was also visualised using choropleth maps (maps that use different colours inside defined geographical areas) were visualised in the GIS to illustrate the distributions and small-area variations in each of the indicators calculated, including:

- Density Index: Population/ Km^2
- Dependency Ratio: (Population between 0-15 + >64 years old/ Population 16-64) *100
- Aging Ratio: (Population >64 years old/ Population 0-15) *100
- Percentage of people born overseas: (Population born overseas/ total population) *100
- Percentage of people living alone: (Number of homes with just 1 person/ Total Population)*100
- Percentage of people not married or in a de facto relationship: Number of people non married or in a de facto relationship/population >17 years old *100
- Percentage of Unemployed People: (Number of unemployed people/ population 16-64 years old) *100
- Percentage of people with psychological distress: Age standardized ratio of people with high or very high levels of psychological distress according to the Kessler-10
- Percentage of people who express need of assistance: (Number of people who express are in need of assistance / population 16-64 years old) *100
- Index of Relative Socio-Economic Disadvantage (IRSD): decile of the area (from worst to best).
- Percentage of private dwelling with no internet connection: (Number of private dwellings with no internet connection/total number of private dwellings) * 100
- Percentage of Aboriginal and/or Torres Strait Islanders living in the area: (Number of Aboriginal and/or Torres Strait Islanders living in the area/ total population) * 100

A second set of maps was then constructed to visualise the locations of the services/BSICs in relation to some of these indicators. These maps enhanced with the derivation of a spatial accessibility metric, classifying all areas within the LHD jurisdiction by their distance to the mental health services being presented.

Step 4 Description of the pattern of care: service availability and capacity

We have analysed the availability of services, by MTC as well as the capacity.

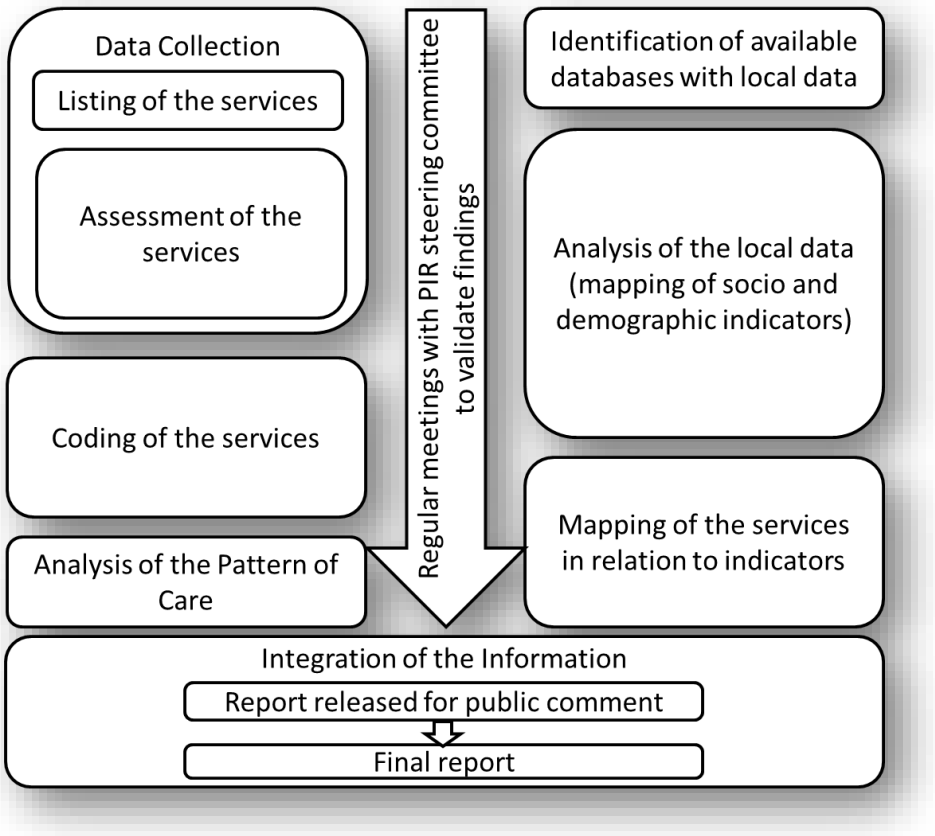
- **Availability:** Defined as the presence, location and readiness for use of services or other organisational units in a care organisation or a catchment area at a given time. A service is available when it is operable or usable upon demand to perform its designated or required function. The calculated availability rates of an MTC is calculated by 100,000 residents.

- **Placement Capacity**: Maximum number of beds in residential care and of places in day care in a care delivery organisation or a catchment area at a given time. Rates have been calculated by 100,000 residents.

- **Workforce Capacity:** Maximum number of staff available in a care delivery organisation or in a catchment area at a given time. Care workforce capacity usually refers to paid staff providing direct care (e.g. it excludes voluntary care providers and administrative staff). It is typically measured in Full Time Equivalents units (FTE), in this case 37.5 hours per week. Rates have been calculated by 100,000 residents.

This analysis allows us to compare the availability and capacity rates with other areas and to estimate if the provision is adequate with regard to the populations needs. We have compared the area of the Far West with rural areas from Northern Europe (Norway) and Southern Europe (Catalonia). The information on Norway has been developed as part of the Refinement Project[22], funded by the European Commission. The information on Catalonia is from the Integrated Mental Health Atlas of Catalonia.

Figure 9. Steps followed in the development of the atlas.



2. MAPPING THE FAR WEST: SOCIO AND ECONOMIC INDICATORS

The Far West Local Health District is the most remote district in New South Wales with a population of 30,095 people. The district covers five local government areas: Balranald, Broken Hill, Central Darling, Wentworth and the Unincorporated Far West. Table 1 summarises the main socio and economic indicator in the Far West. Figures 10 to 25 visualise some selected indicators using choropleth maps.

Overall these LGAs are characterised by low rates of people who are born overseas, having a higher percentage of Aboriginal and Torres Straight Islanders, an extremely low population density, and low internet access in private dwellings which may be problematic for eHealth initiatives in the region. The majority of the population are concentrated in Broken Hill the geographically smallest LGA inside the mid-west of the Unincorporated Far West. Broken Hill additionally has the highest rate of people needing assistance, and highest aging and dependency indexes. Dependency index is used to measure the pressure on productive population suggests a problematic situation in a context where it has been estimated that a population older than 64 years old will have a 34% increase by the year 2021.
The relatively lower rates in the surrounding LGAs, in particular the low disadvantage (indicated by the high Index of Relative Socio-Economic Disadvantage (IRSD) decile) in the unincorporated Far West, may indicate that this is due to populations in greater financial and social need having migrated from the more remote areas to those with a higher population and service density. Furthermore, Broken Hill and the Central Darling to the east stood out as having higher levels of unemployment, lowest levels of personal income, high rates of lone parent households and rates of people living alone.

Finally, the Central Darling also has by far the highest percentage of Aboriginal and Torres Straight Islanders.

Table 1. Description of the socio and economic characteristics of the area.

LGA	Balranald	Broken Hill	Central Darling	Wentworth	Unincorp. Far West	Total
Population (%)	2,281 (7%)	18,519 (61%)	1,991 (6%)	6,609 (21%)	695 (2%)	30,095 (100)
People per km2	0.11	108.74	0.04	0.25	0.01	0.15
Aging index	73.1	103.2	56.6	74.9	57.5	89.7
Dependency index	57.8	64.5	53.3	61.6	43.5	62.0
Unemployment rate (%)	3.8	8.3	10.0	6.2	1.4	7.3
Lone Parent (%)	3.3	5.6	5.9	3.8	2.3	5.0
Living Alone (%)	9.7	13.6	13.4	9.5	9.9	12.3
Not married or in a de facto relationship (%)	35.5	44.5	49.5	36.0	34.1	42.1
Needs assistance (%)	5.2	8.1	3.7	5.5	2.7	6.9
IRSD (Decile)	3.0	2.0	1.0	4.0	8.0	
ATSI (%)	6.7	7.5	38.2	10.3	5.2	10.1
Income <$600 wk (%)	59.5	63.1	66.3	59.8	54.9	62.1
Dwellings with no Internet connection (%)	33.3	33.8	38.4	30.3	21.0	-
% of the population with high or very high psychological distress (K10)	11.1	12.4	12.4	11.1	-	-

Figure 10. Population LGA (left) and visualisation of the Far West taking into account the population residing in the LGA (right)

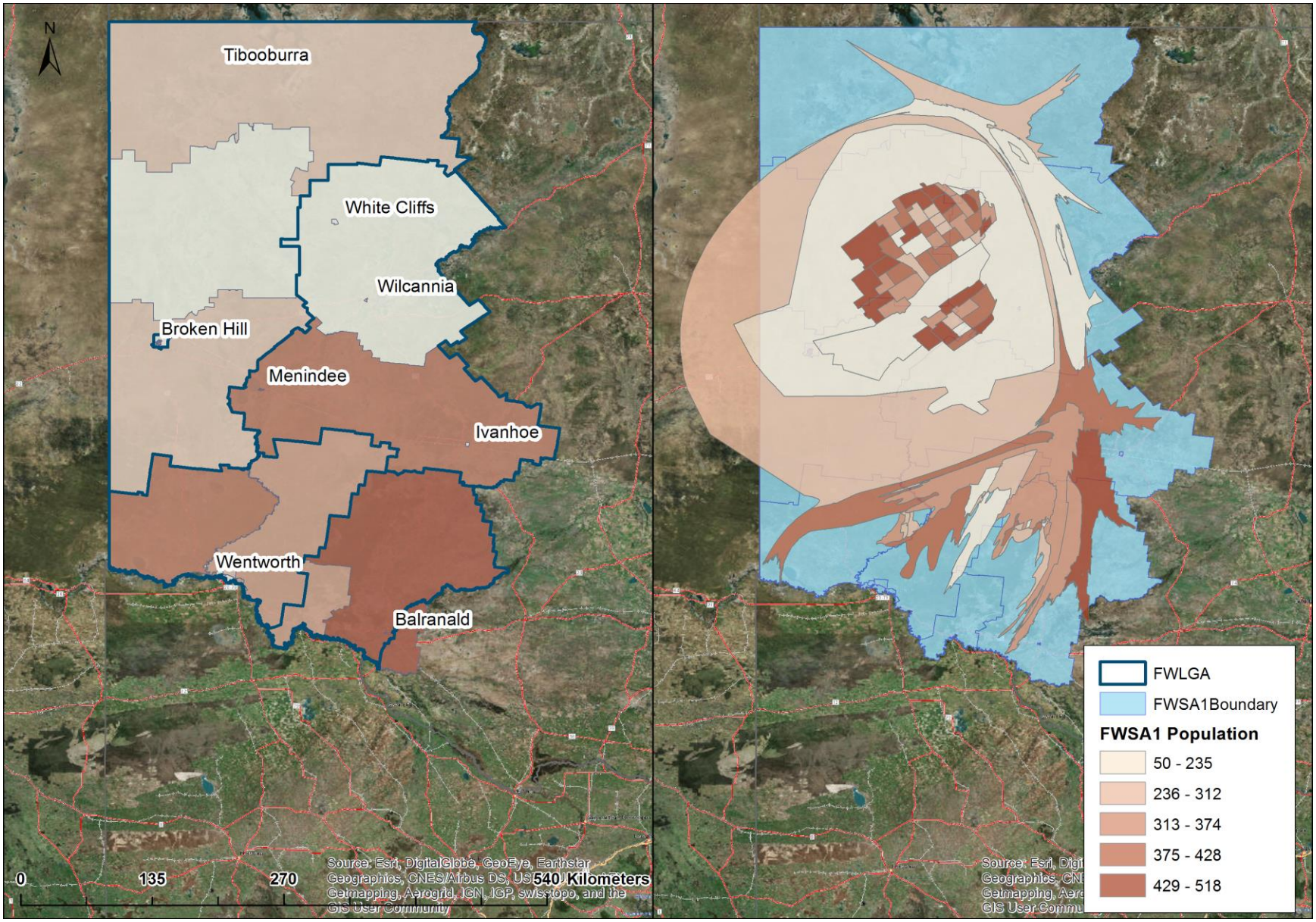


Figure 11. Residents per km^2

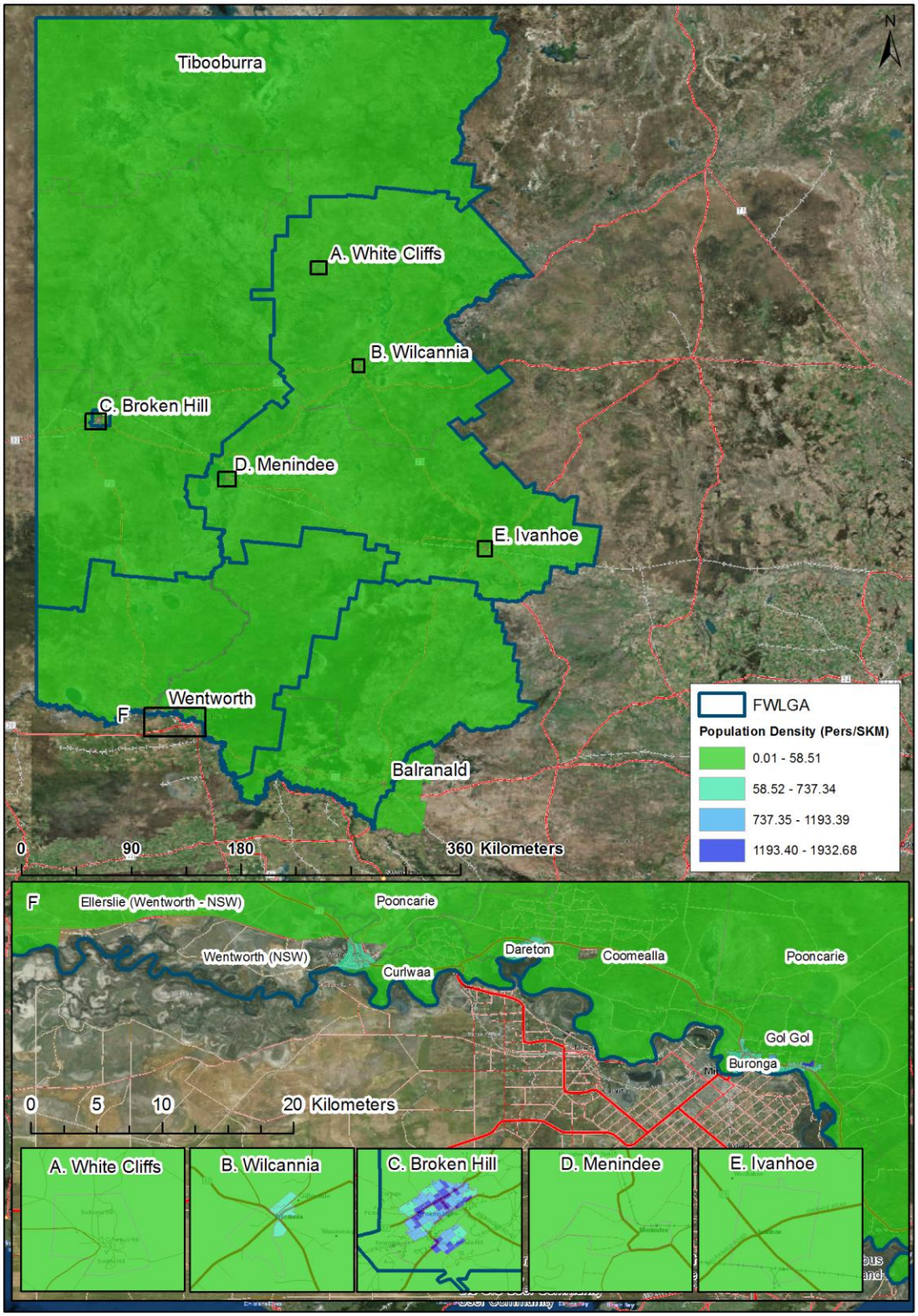


Figure 12. Ageing ratio

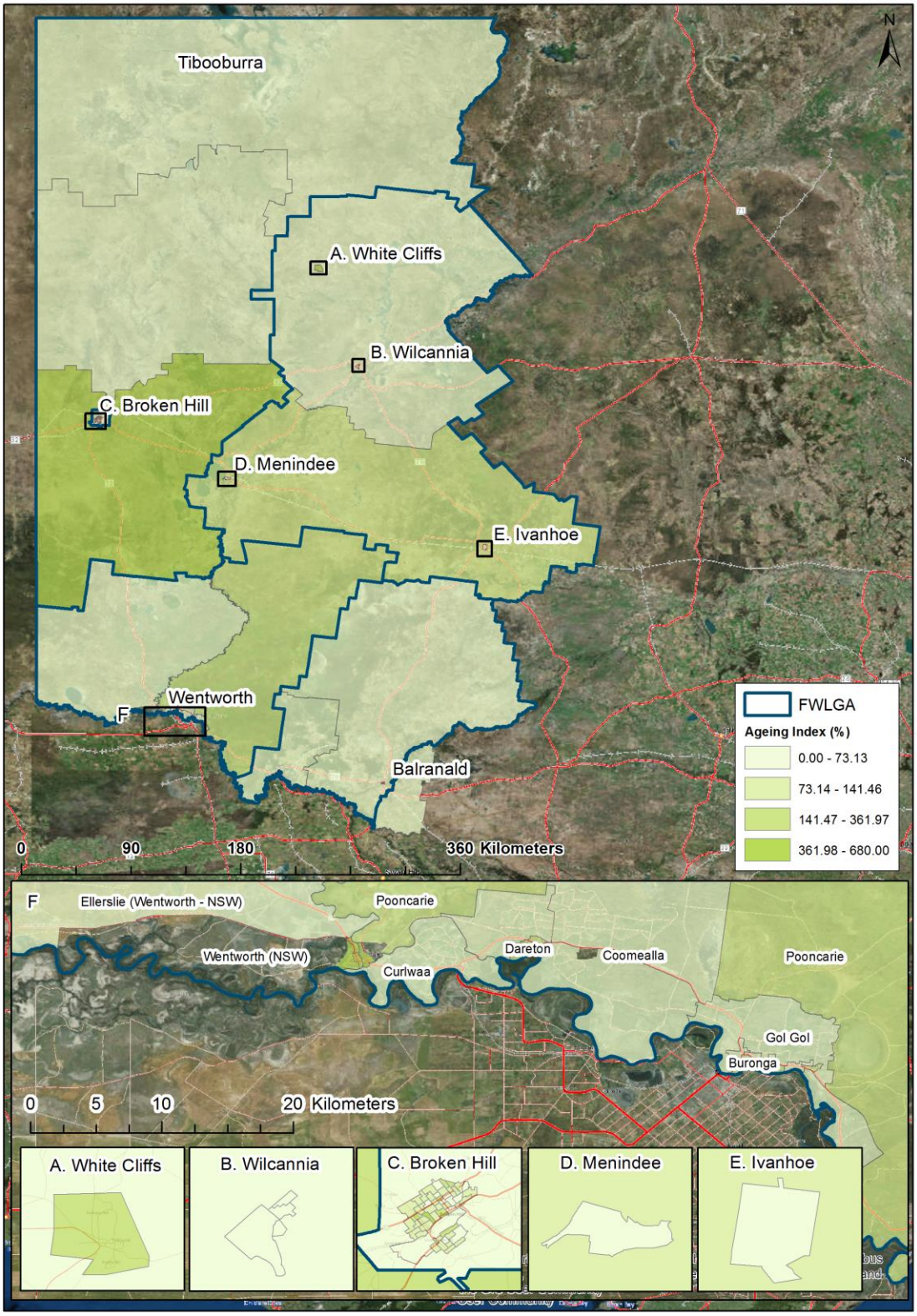


Figure 13. Percentage of people older than 64 years old.

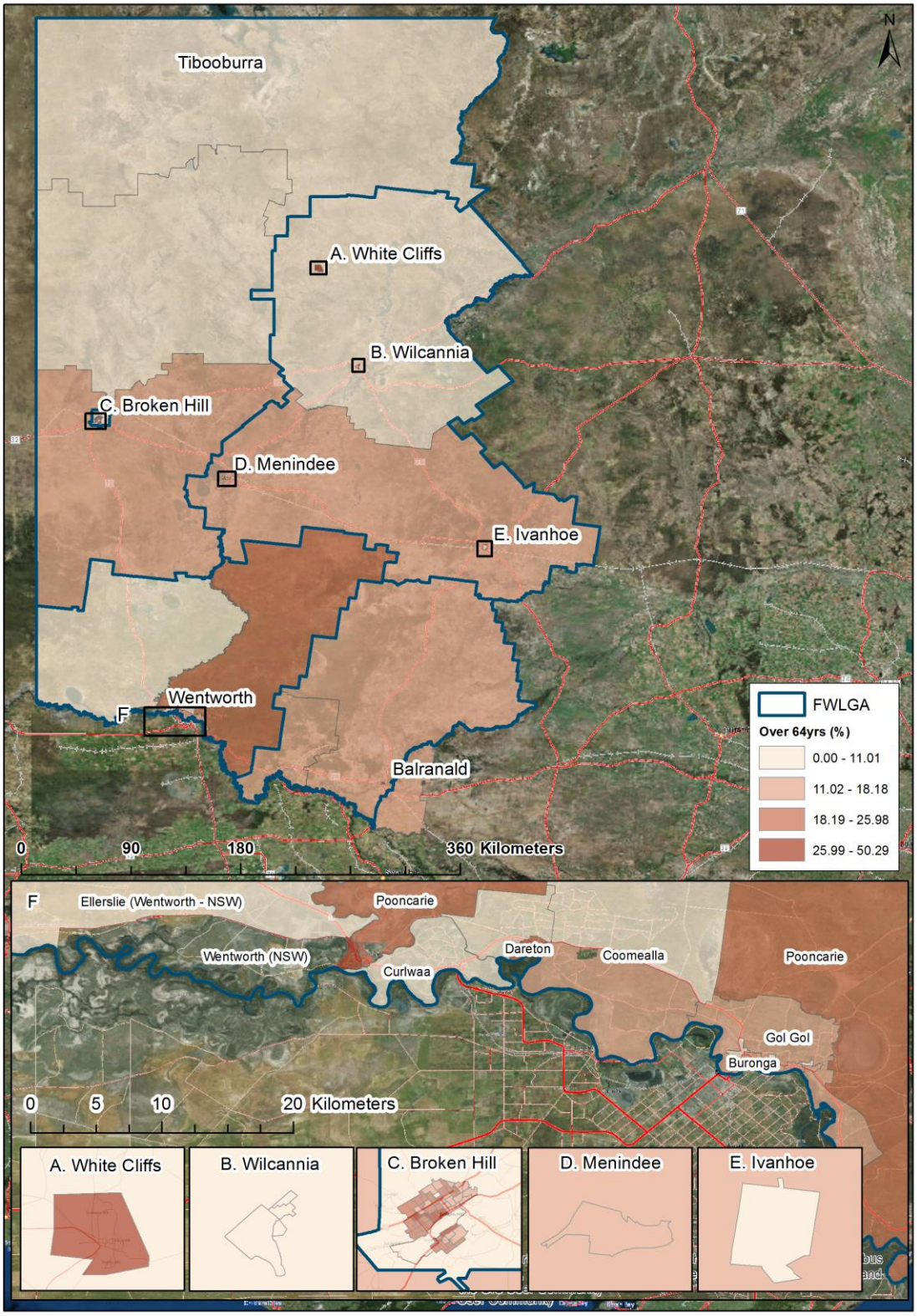


Figure 14. Dependency Ratio

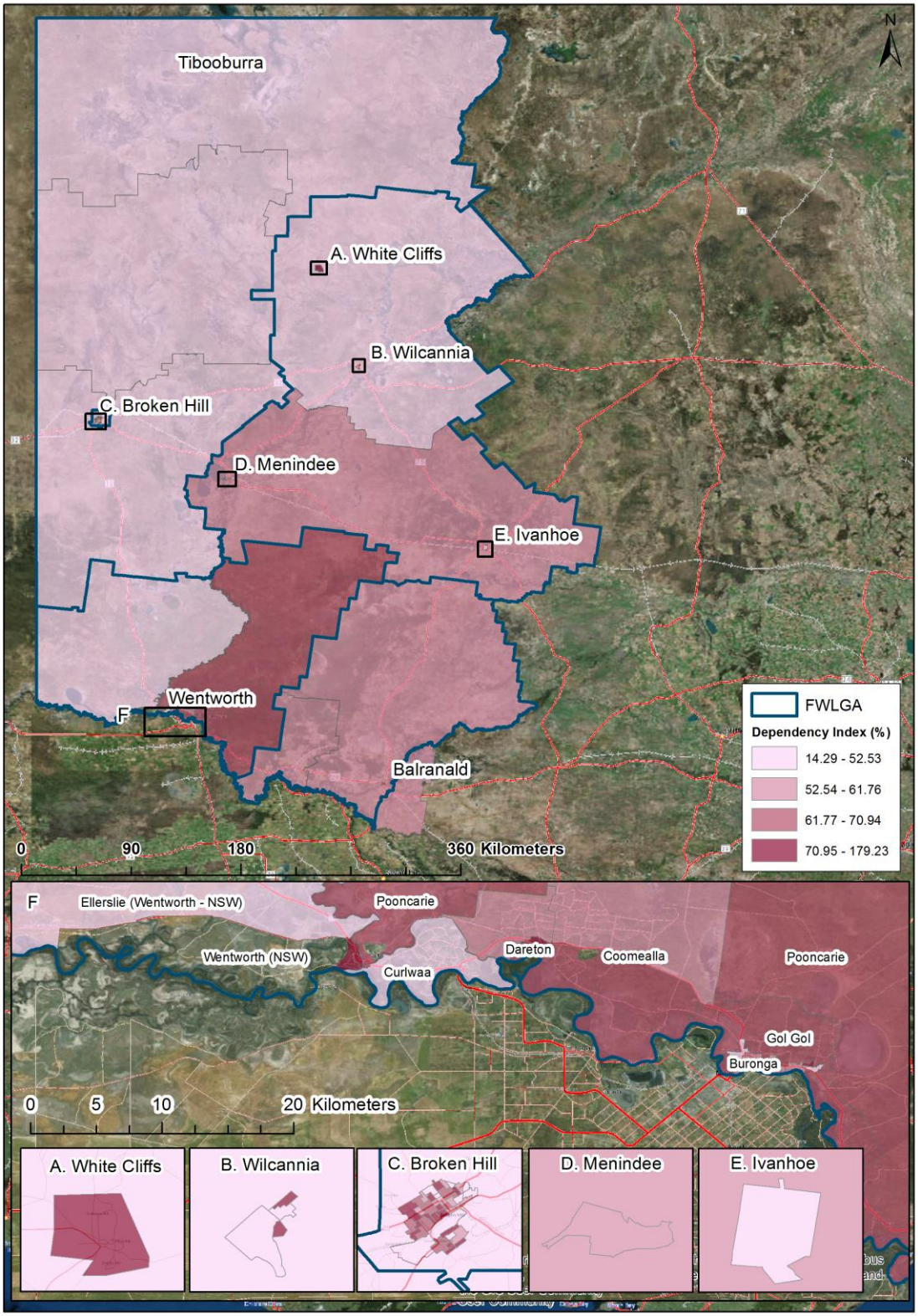


Figure 15. Percentage of people who are unemployed

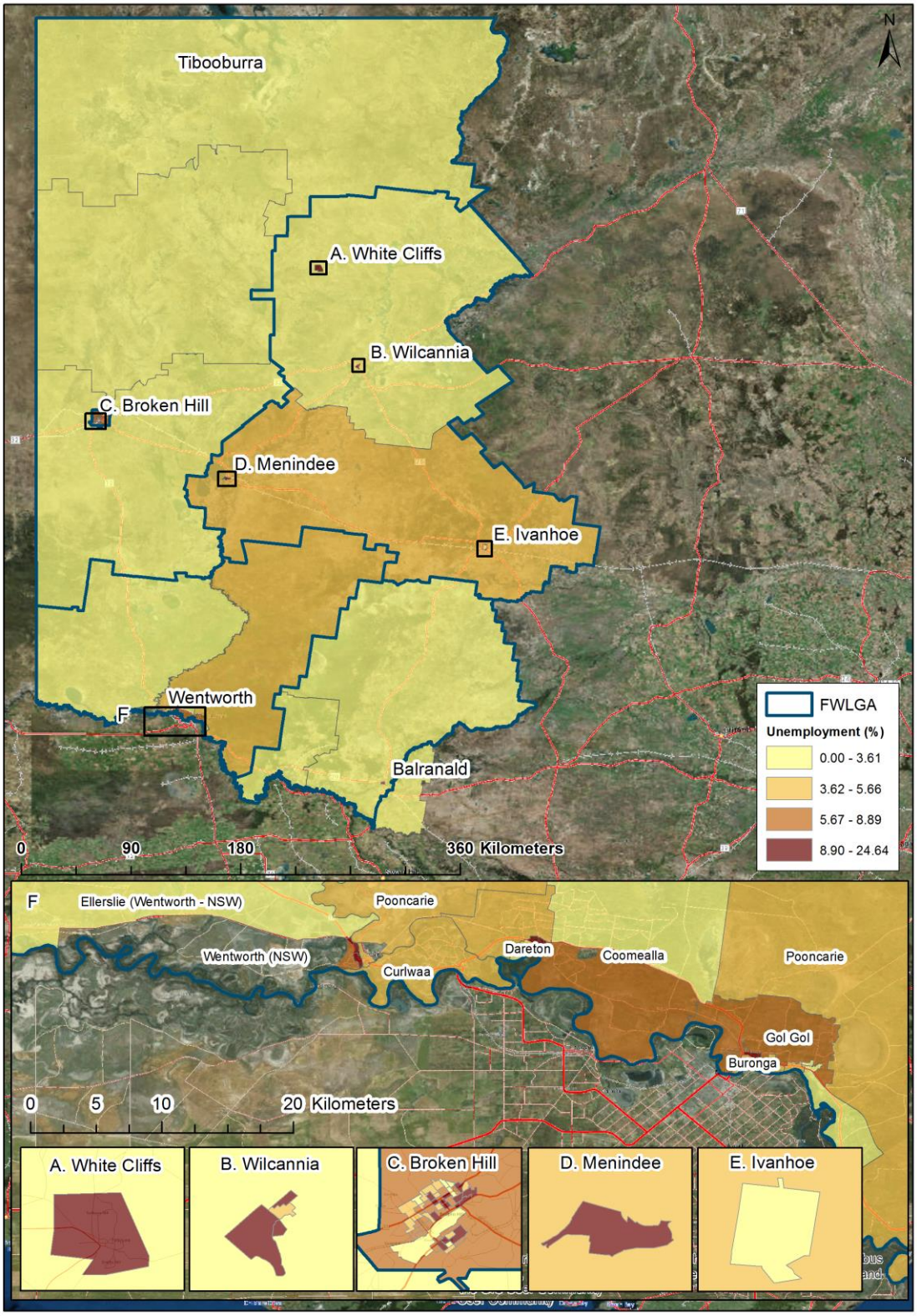


Figure 16. Percentage of lone parents

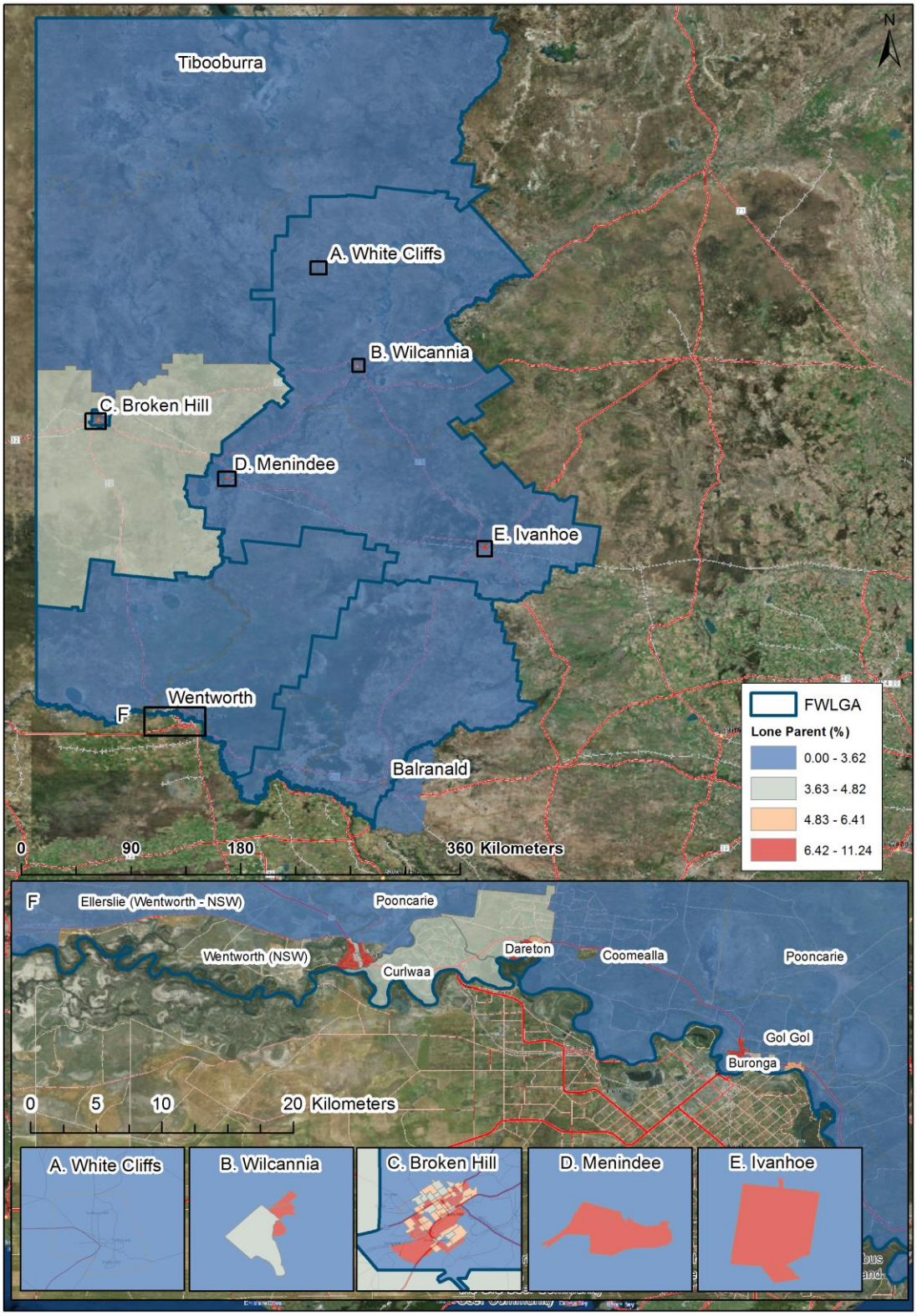


Figure 17. Percentage of people who are not married or have a de facto Partner

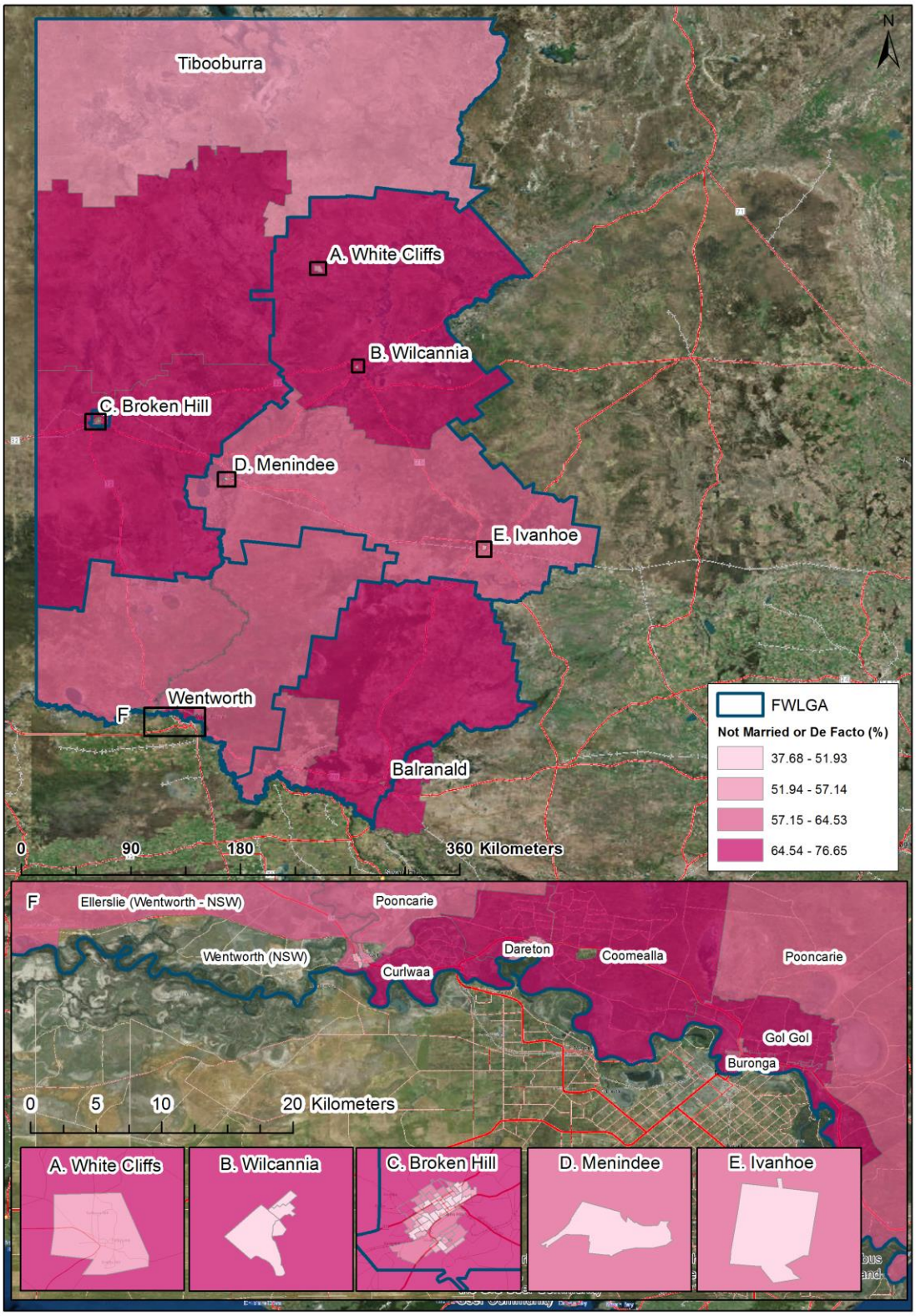


Figure 18. Percentage of people living alone

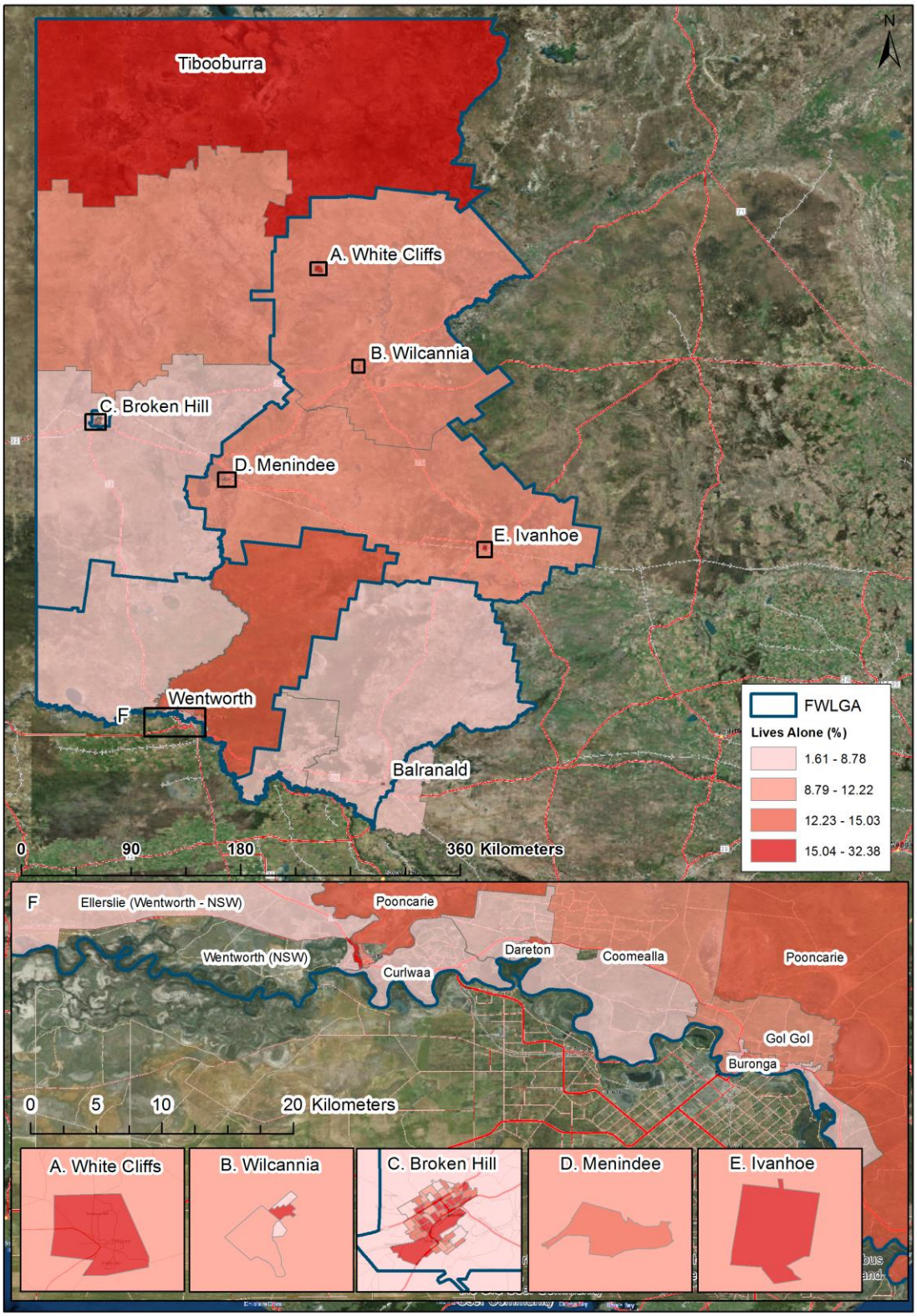


Figure 19. Percentage of personal income < $600 week

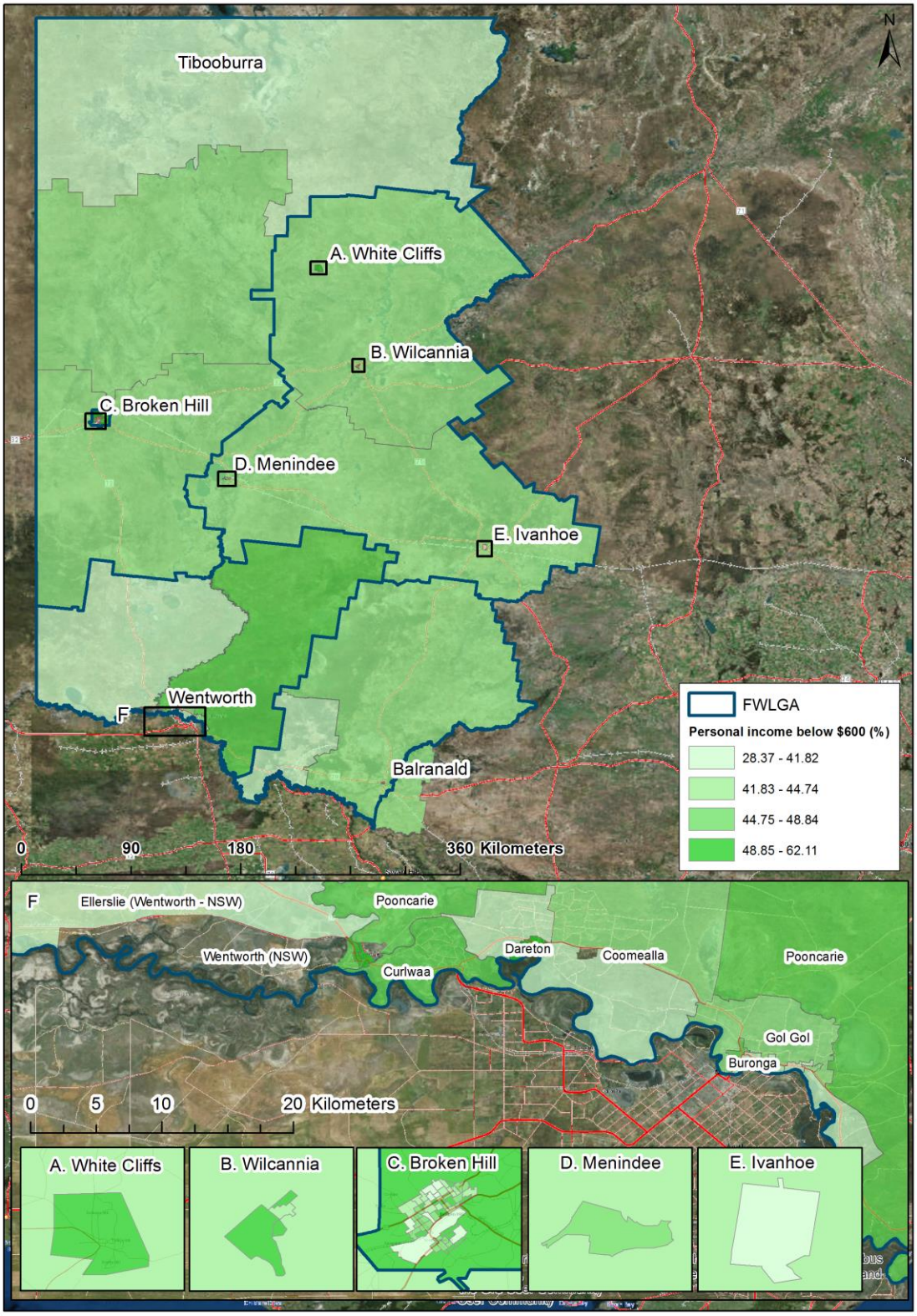


Figure 20. Percentage of Aboriginal and Torres Islander People

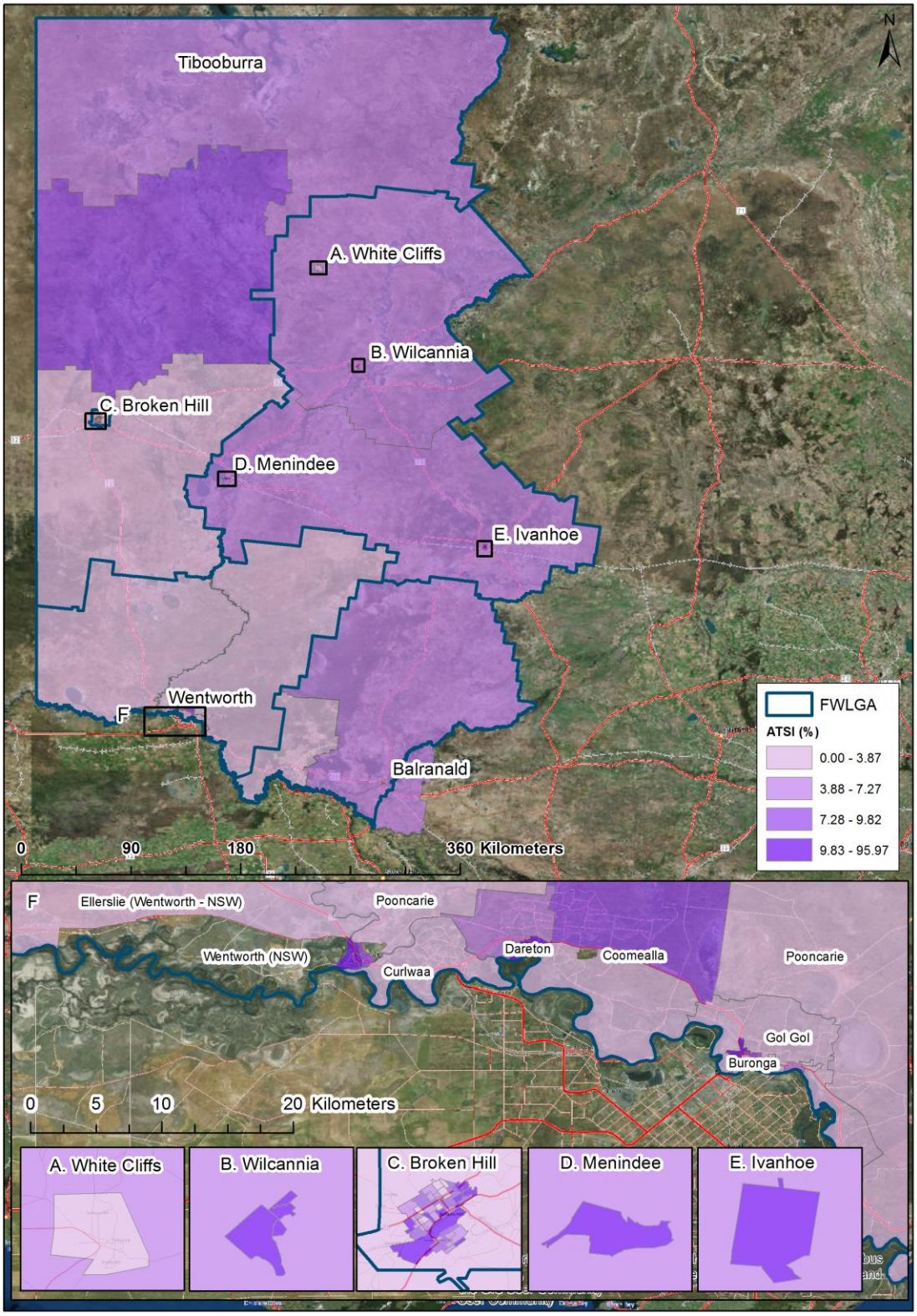


Figure 21. Percentage of people who provide assistance with core activities

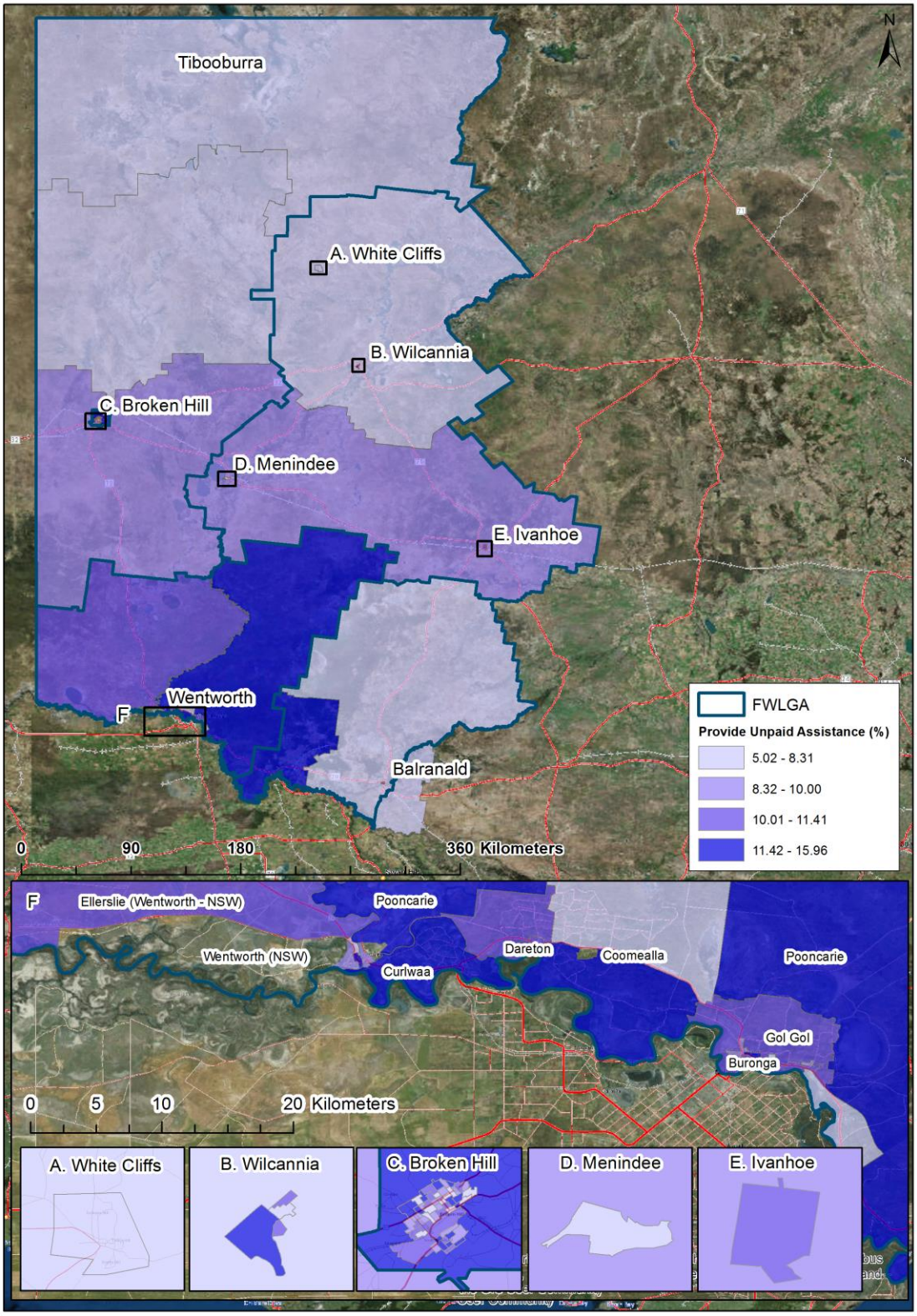


Figure 22. Percentage of people born abroad

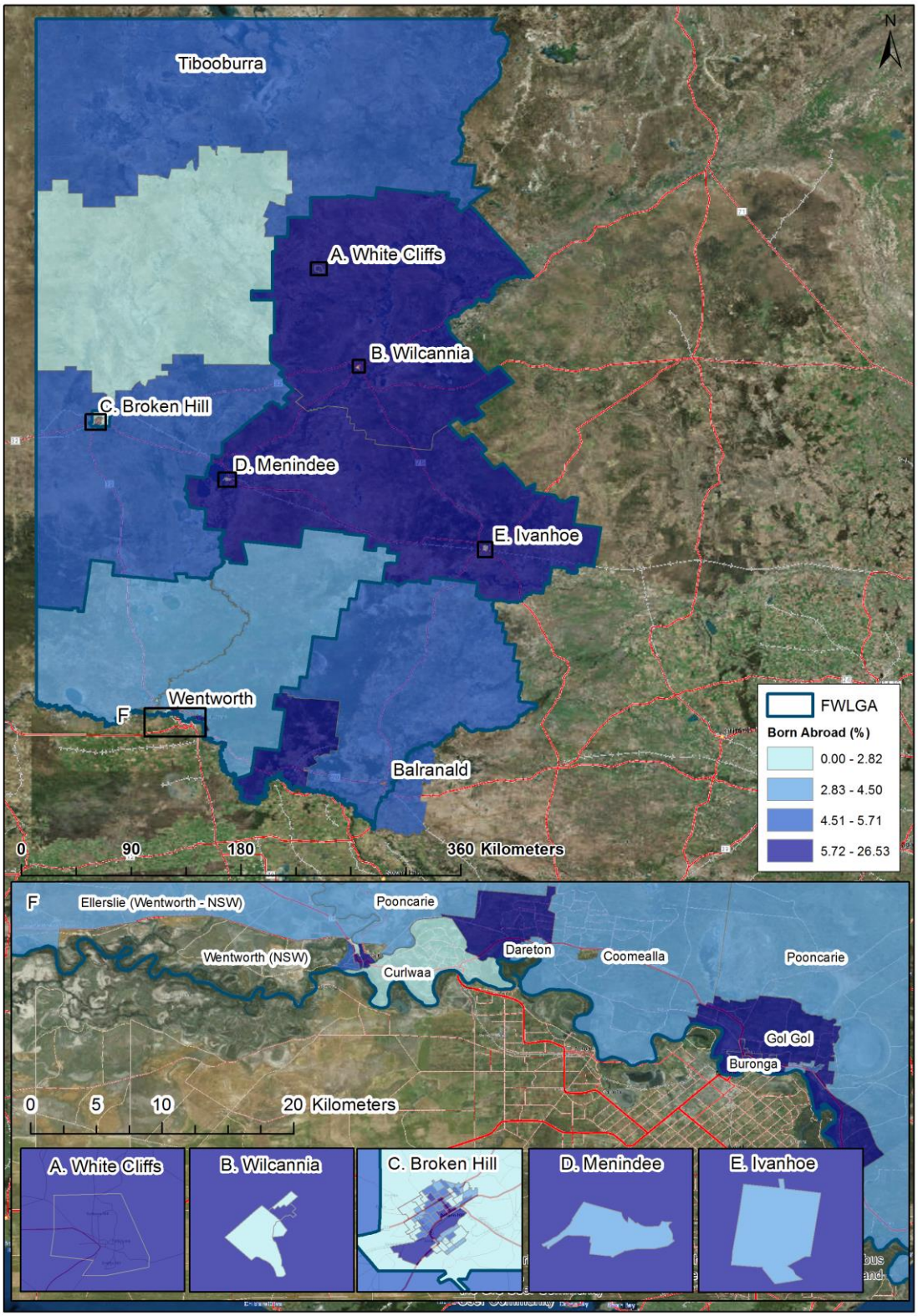


Figure 23. Percentage of people with low English Proficiency

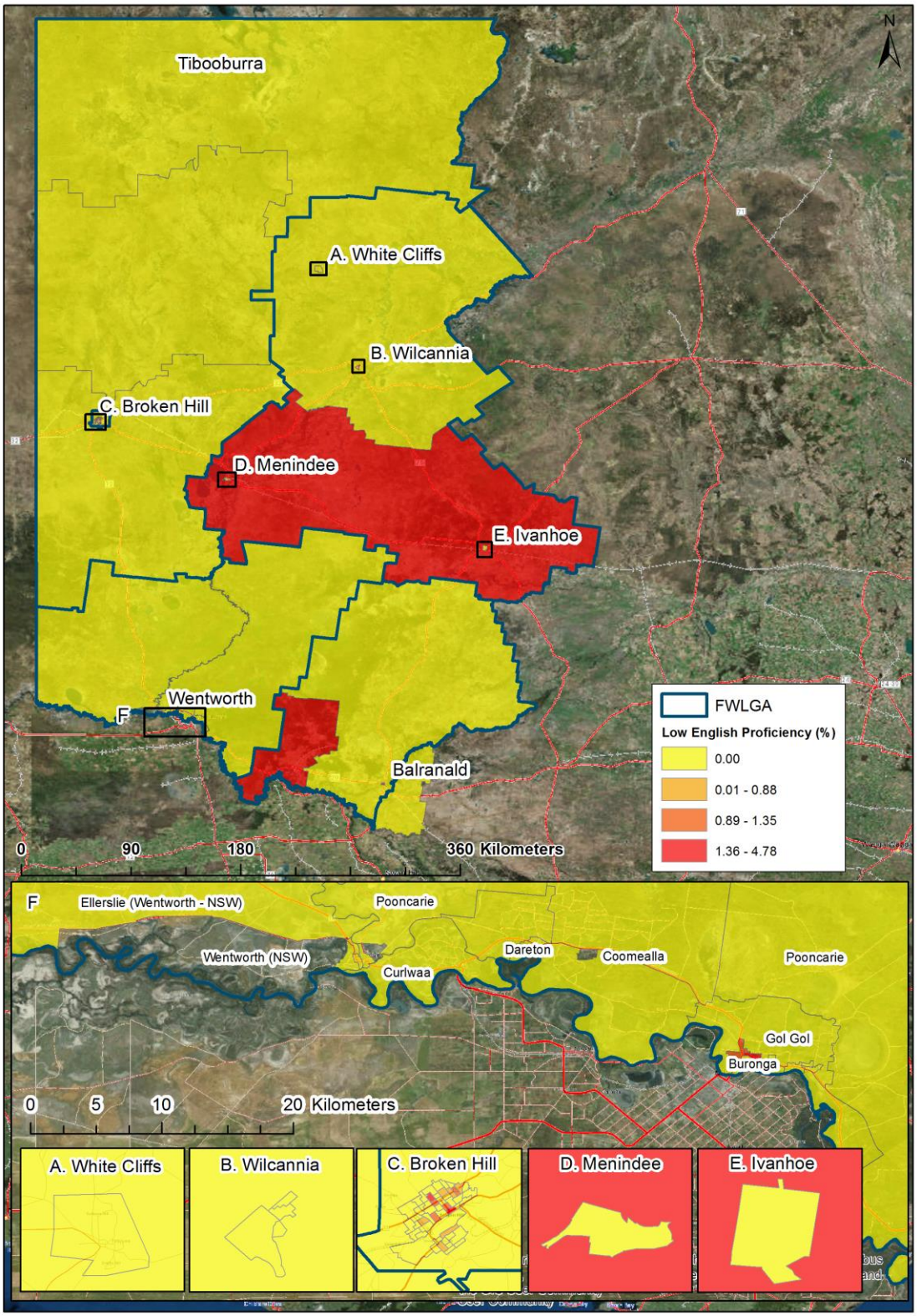


Figure 24. IRSD distribution

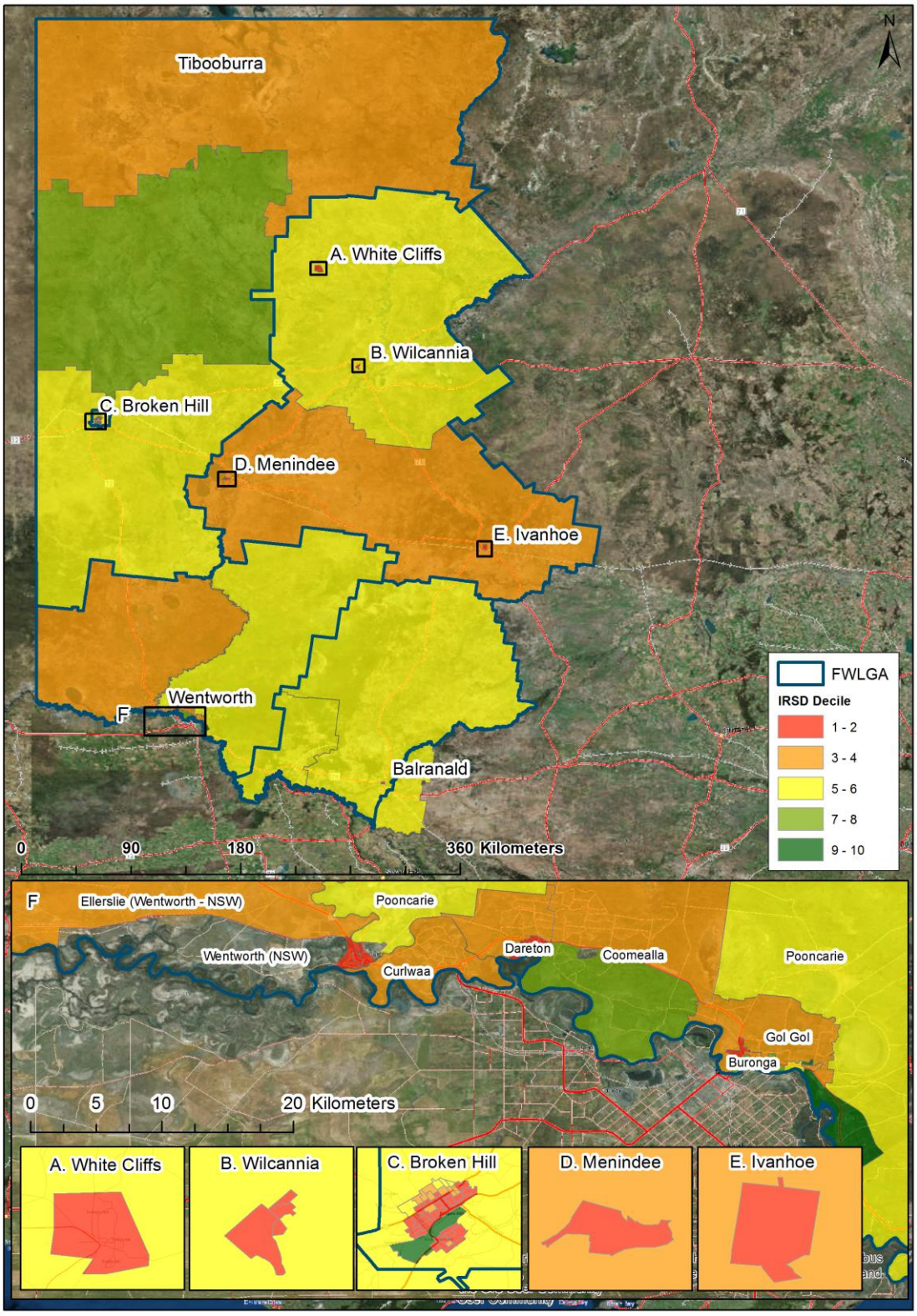
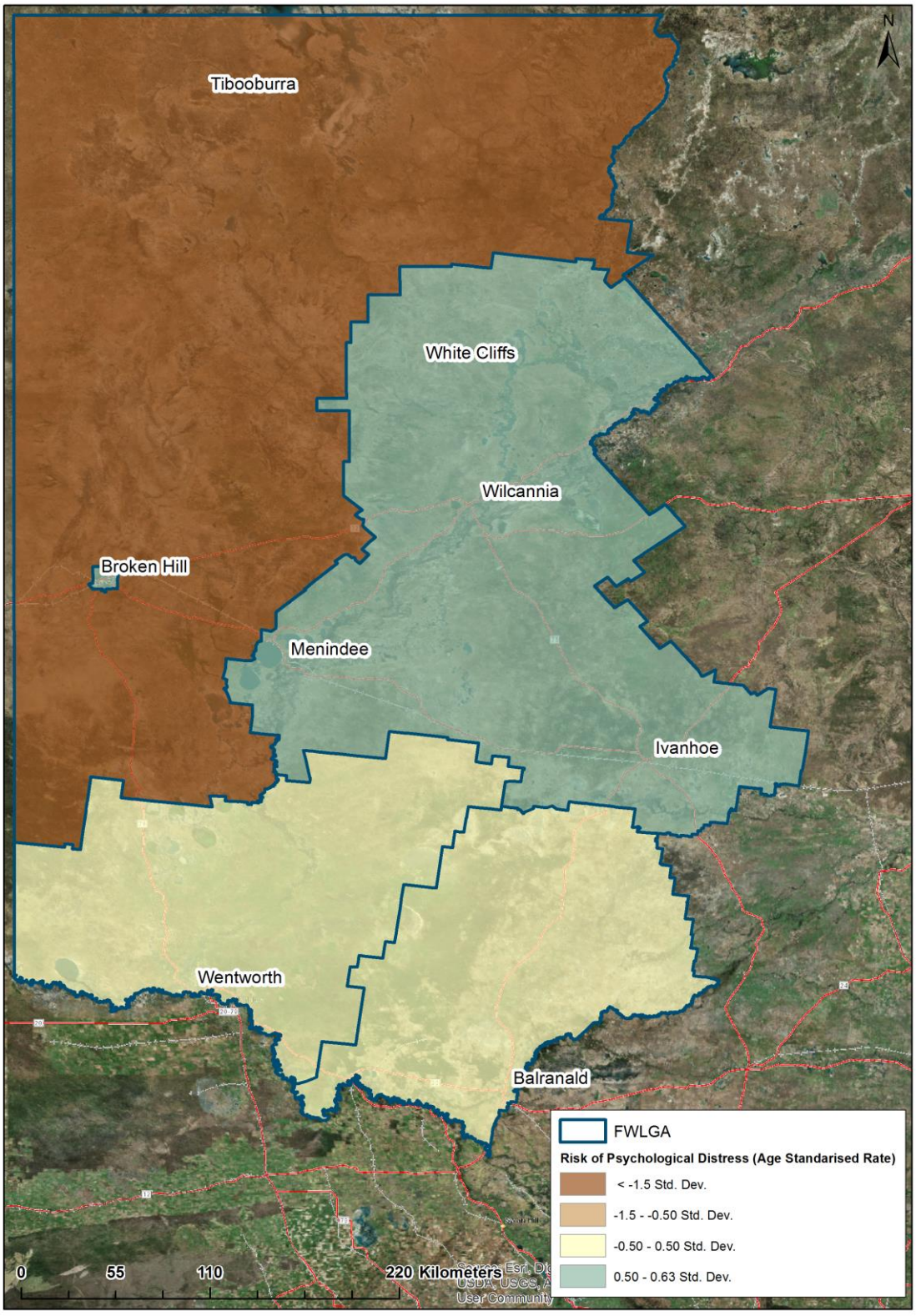


Figure 25. Percentage of people with high risk of psychological distress



3. DESCRIBING THE SERVICES PROVIDING CARE FOR PEOPLE WITH A LIVED EXPERIENCE OF MENTAL ILL-HEALTH IN THE FAR WEST

3.1. GENERAL DESCRIPTION

Data on services providing care for people with a lived experience of mental ill-health in the Far West was collected from the 6th of August 2015 to the 13th of October 2015. We received 6 on-line responses complemented with 14 face to face or telephone interviews with mental health provider organisations. The Atlas was publicly presented on the 26th November 2015 in Broken Hill, and the report was opened for public comments for 1 month. During this time, only 1 new service was included

We found a total of 26.3[1] BSICs (or teams) for people with a lived experience of mental health ill-health or psychosocial problems. However, if we take into account the satellites from the Royal Flying Doctor Services and the Mental Health Community teams, the number of MTCs will be increased to 46.3.

We are not including services where the primary presentation is not for mental health for example: alcohol and other drugs, intellectual disability or homelessness.

Table 2 depicts the distribution of the MTC by sector and population group.

Figure 26 briefly describes the MTCs identified.

With regards to the age distribution of clients provided for, 34% of the care provided is specific for adults and 2% for child and adolescents. 51% of the services are general (i.e. they provide care for all the ages groups) and 13% are offering services for carers, families and friends. While the Local Health District has two clinicians whose specialty is Specialist Mental Health Services for Older People (SMHSOP) (one in the Broken Hill Community Mental Health Team and one in the Dareton Community Mental Health Team), we have not found any services providing specific mental health care for older people.

Almost 67% of the care for people with mental health problems is provided by the health sector, while the remaining 33% is provided by the NGO sector.

Lastly, the distribution of MTCs in the health sector is similar to the distribution of MTCs in the NGO sector. Outpatient is the type of care most frequently provided.

[1] There is one service, the acute ward at Mildura Hospital (Victoria), which can be used by people from the FW. We have weighted it to avoid over-estimating the availability of services.

Figure 26. Description of the MTCs identified

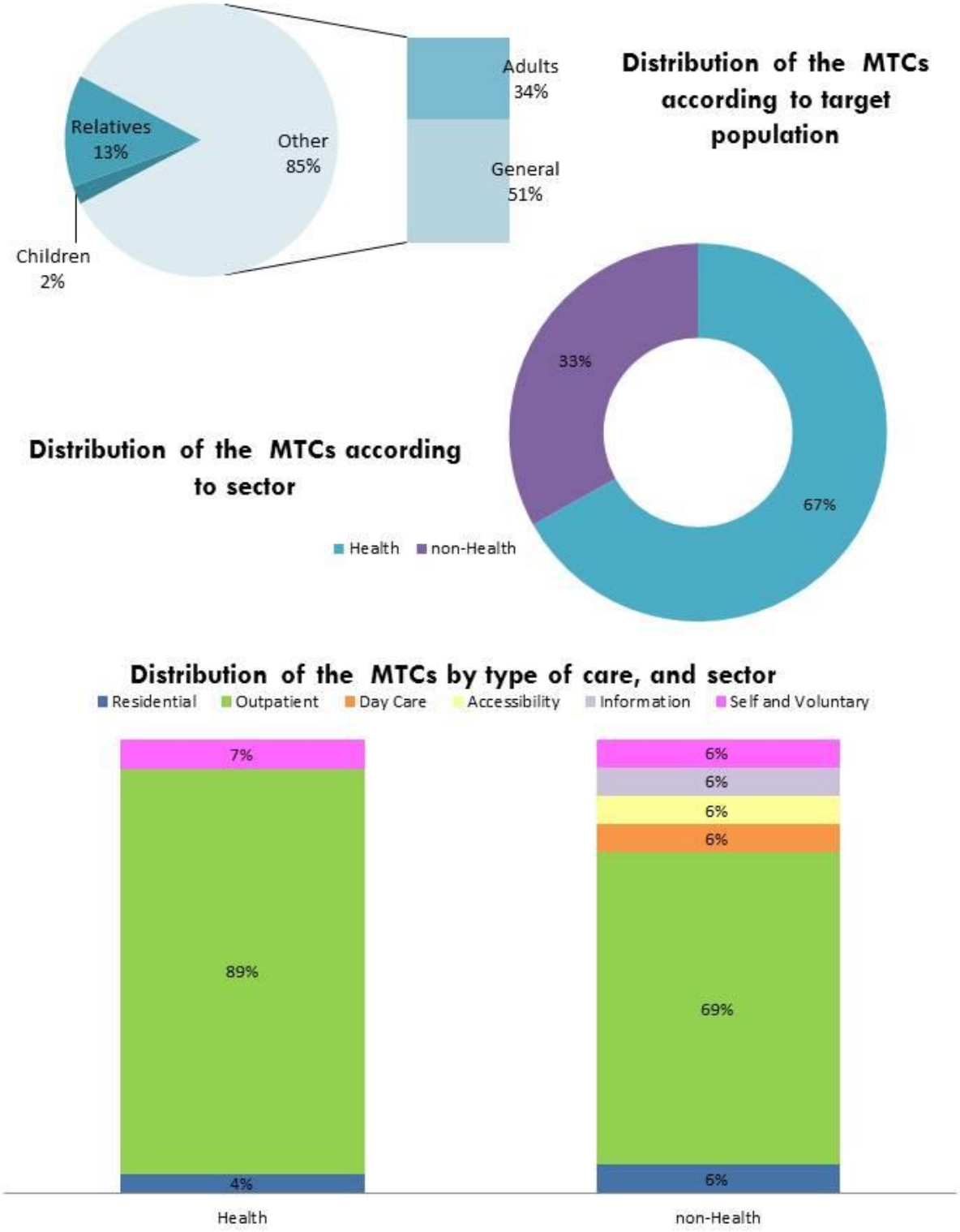


Table 2. Description of the MTCs per age group and sector

		Adults			Children and Adolescents			Relatives and Families			Total		
MTC	**Definition**	**H**	**NGO**	**TOTAL**	**H**	**NGO**	**TOTAL**	**H**	**NGO**	**TOTAL**	**H**	**NGO**	**TOTAL**
RESIDENTIAL: Facilities that provide beds overnight for purposes related to the clinical and social management long term care													
R3	Acute, 24 hour physician cover, hospital, medium intensity *	1.3		1.3							1.3	0	1.3
R8.2	Non-acute, 24 hour support, non-hospital, time limited, non-24h physician cover		1	1							0	1	1
DAY CARE: Facilities that are normally available to several users at a time, provide some combination of treatment/support/care for problems related to long-term care needs; have regular opening hours, and expect service users to saty at the facility beyond periods druing which they have face-to-face contact with staff													
D5	Non-acute other structured care, high intensity		1	1								1	1
OUTPATIENT: Facilities that involve contact between staff and users for a purpose related to management of their condition and its associated clinical and social dificulties													
O3.1	Acute, non-mobile, 24-h, health related care	1		1							1	0	1
O8.1	Non-Acute, non-mobile, High intensity , health related care	2		2	1		1				3	0	3
O9.1	Non-Acute, non-mobile, Medium intensity , health related care	12		12							12	0	12
O10.1	Non-acute, non-mobile, low intensity, health related care	11		11							11	0	11
O5.2	Non-Acute, Home & Mobile, High Intensity, other care		1	1					3	3	0	4	4
o6.2	Non-Acute, Home & Mobile, Medium Intensity, other care		1	1					1	1	0	2	2
O7.2	Non-Acute, Home & Mobile, low Intensity, other care			0							0	0	0
O8.2	Non-Acute, non-mobile, High intensity , other care		2	2							0	2	2
O9.2	Non-Acute, non-mobile, Medium intensity , other care		2	2					1	1	0	3	3
ACCESSIBILITY: Facilities for which the main aim is to provide accesibility aids for users with long term care needs													
A3	Personal Accompaniment by non-care professionals.		1	1							0	1	1
INFORMATION AND GUIDANCE: Facilities for which the main aim is to provide users with information and or assessment of their needs. This service does not entail subsequent follow-up or direct care provision													
I2.1.1.	Information Interactive and Face to face		1	1							0	1	1
VOLUNTARY CARE: Facilities which main aim is to provide users with long term care needs with support, self-help or contact with unpaid staff that offers accessibility, information, day, outpatient and residential care (as described above), but the staff is unpaid													
S1.3	Non-professional staff outpatient care	1		**1**					**1**	**1**	**1**	**1**	**2**
S1.4	Non-professional staff day care		1	1							**0**	**1**	**1**
TOTAL		28.3	11	38.3	1	0	1	0	6	6	29.3	17	46.3

3.2. ADULTS

In this section we describe the availability and placement capacity of the BSICs (or services) providing care for adults (> 18 years olds) experiencing mental ill-health by sector. Specific care related to the transition from adolescence to adulthood is included in the section on Child and Adolescent Care. Similarly, specific care for older people experiencing mental health problems is presented in an independent section.

3.2.1. RESIDENTIAL CARE

3.2.1.1. RESIDENTIAL CARE PROVIDED BY THE PUBLIC HEALTH SECTOR

Acute Inpatient Services

A total of 2 BSICs (or services) were identified which provide acute inpatient care for people living within the boundaries of the Far West Local Health District. One is the acute unit at the Broken Hill Hospital. It has 6 beds. The second unit providing acute care is located outside the boundaries of the Far West LHD, in Mildura, Victoria (Ramsay Health). There is an agreement between the Mental Health Services at the LHD and Ramsay Health that allows residents from the Far West to use the service in Mildura[2]. This service has 12 beds.

The number of acute beds per 100,000 residents is 43. The number of BSICs providing acute care per 100,000 residents is 5.6[3]

Table 3. Acute inpatient services: Availability and Placement Capacity

Provider	Name	Main Desde code	Beds	Town	Coverage Area
Mental Health Services FW LHD	Inpatient Unit	Ax{F00-F99]-R3.0o	6	BroKen Hill	Far West
Mildura Base Hospital (Ramsay Health Care)	Acute Ward	Ax{F00-F99]-R3.0o	12	Mildura	Victoria* agreement with the FW LHD

The next table shows the workforce capacity related to adult acute inpatient services in the area of the Far West. We have not included the staff form Mildura to avoid any over estimation. Mental health nurses, as expected, account for the higher percentage of the workforce. There is one psychiatrist in the inpatient unit who also works in the community services. In the event of an emergency, he is on-call but he is not always available at the acute unit.

Table 4. Acute inpatient services: Workforce Capacity.

Provider	Name	Psych	Psychol	MH Nurse	Total
Mental Health Services FW LHD	**Inpatient Unit**	0.5	1	11.5	13
Rate per 100,000 inhabitants		2.15	4.30	49.46	55.91

PSYCH: PSYCHIATRIST: PSYCHOL: PSYCHOLOGIST.

[2] We have weighted this service by 0.3 in order to account for the fact that is not a service for people in the Far West, although it may be used by them.

[3] Rates have been calculated taking into account the number of people older than 17 years old in the Far West LHD (23,252 residents > 17 years old, according to CENSUS 2011)

SUB-ACUTE INPATIENT SERVICES

We have not found any services providing sub-acute care within the boundaries of the Far West LHD.

3.2.1.2. RESIDENTIAL CARE PROVIDED BY FAMILY AND COMMUNITY SERVICES (FACS)- PUBLIC AND COMMUNITY HOUSING

The department of Public Housing is not present in the Far West.

However, people with a lived experience of mental illness in the Far West (as with the whole of the State) can access the Housing and Accommodation Support Initiative (HASI). HASI is a partnership between NSW Health, Housing NSW which is an agency of the NSW Department of Family and Community Services (FACS) and an array of non-government organisations (NGOs) that provides people with mental health problems access to stable housing linked to clinical and psychosocial rehabilitation services. HASI can be delivered at an individual's privately owned or rented property or through social housing.

Mission Australia and Richmond PRA provides the support in the property, the Mental Health Services at the FW LHD delivers the clinical care and Compass Housing manages a total of 12 properties with HASI clients. T**his equals to a rate of 52 HASI packages in community housing per 100,000 residents.**

3.2.1.3. RESIDENTIAL CARE PROVIDED BY NGOS

We have identified one residential service provided by a NGOs (NEAMI National).

NEAMI National, in partnership with the Mental Health Service, provides the Far West Mental Health Recovery Centre. It is residential care in the community that guarantees that the client receives 24 hours care. The stay is time limited but is over 4 weeks. The Recovery Centre provides subacute MH inpatient care in the grounds of Broken Hill Health Service. The building is owned by the Local Health District which contracts a Non-Government Organisation (NGO), Neami National, to operate the 24/7 service. Although the facility is in the grounds of the hospital, it is not registered as a hospital.

It is one of only two services in NSW that follows the Victorian Prevention and Recovery Care (PARC) model. This model is focused in offering voluntary short-term, recovery focused subacute residential services by providing the least restrictive environment possible. It provides both pre-and post-acute support, so it can be seen as a step up/ step down facility.

The number of BSICs providing time-limited residential care in the Far West per 100,000 residents is 4.3; with 43 beds per 100,000 residents.

Table 5. Time limited residential care in the NGO sector: availability

Meso-orgnisation (i)	Name	Desde1	Beds	Town	Area of Coverage
NEAMI National	Recovery Unit	Ax[F00-F99]-R8.2	10	Broken Hill	Far West

This service is staffed with 11.4 mental health works and 1 clinical case manager. Clinical support, when needed, is provided by the Local Health District.

3.2.2. Day Care

We have located 1 service providing Day Care within the boundaries of the Far West LHD. This service is managed by Salvation Army and provides structured activities related to the social and cultural needs of people with mental health problems.

The Recovery centre by NEAMI National has a Day Care Program but it is coded as Outpatient according to the DESDE system.

Provider	Name	Desde1	Town	Area of Coverage
Salvation Army	Recovery and Wellness Program	Ax[F00-F99]-D9	Broken Hill	Broken Hill

3.2.3. Outpatient Care

3.2.3.1. Outpatient Care provided by the Public Mental Health Sector

Acute Outpatient Care (Emergency Care)

We identified a total of 1 BSICs (or services) providing emergency care for adults with a lived experience of mental ill-health who live within the boundaries of the FW LHD. Emergency care in Broken Hill is provided through the Mental Health Emergency Care-Rural Access Program (MHEC-RAP), which is located at the Bloomfield Hospital, in Orange (Western NSW). Mental Health Nurses provide assessment by video-conference on a 24/7 basis.

Table 6. Acute Outpatient Care: Availability

Provider	Name	Main Desde code	Town	Coverage Area
Mental Health Services Western NSW	MHEC-RAP	Gx[F00-F99]-O3.1e	Bloomfield	Western NSW, but they also include the Far West

Non-Acute Mobile Outpatient Care

We have not found a non-acute mobile outpatient care service in the Far West. It has to be kept in mind that to be classified as a mobile service, more than 50% of the activity should be done outside the centre or the usual place of contact (i.e. if the client has to go to a location to receive the care is not mobile).

Non-Acute Non-Mobile Outpatient Care

We identified 7 BSICs (or services) providing non-acute, non-mobile outpatient care. These teams provide face to face services to people with mental health problems living in different areas in the Far West

- There are 2 Community Mental Health Teams (Broken Hill and Dareton).
    - The team in Broken Hill has two satellites in Wilcannia and Menindee. While the team in Broken Hill is coded as high intensity (i.e. they have the capacity to see clients 3 days per week if needed); the satellites in Wilcannia and Menindee have been coded as medium intensity, as the team does not have the capacity to see clients there 3 days per week. However, though they can see clients fortnightly in Wilcannia and on and weekly in Menindee. The team in Broken Hill has high mobility also being able to do home visits.
    - The team in Dareton has one satellite in Balranald. Similarly to the team in Broken Hill, this team has a high capacity when they are in Dareton, and medium capacity in Balranald. The team in Dareton has high mobility when is in Dareton, but it is office-based in Balranald.
- There are 2 BSICs managed by Maari Ma Health Aboriginal Corporation. The two teams sit in Broken Hill: 1 is providing psychological services and the second team sits under the ATAPs program. They have the capacity to see their clients in a weekly basis, if necessary (medium intensity)
- The Royal Flying Doctor Service has a specific mental health team that sits in Broken Hill but that flies to 15 locations across, or close to, the borders of the Far West. The intensity of the contact by location from medium (weekly/fortnightly) to low (less than fortnightly). However, they provide telephone/e-mail/videoconference support. At least 50% of their activities are telehealth. They provide care for all age-groups.
- There is a Psychologist in Broken Hill providing psychological support through the ATAPs program.
- Lastly, the GP Super Clinic has a psychiatric telehealth program. He provides care for all age groups.

There are 7 BSICs or services providing non-acute non-mobile outpatient care for people living in the Far West. This equals to 30 BSICs per 100,000 residents. If we include the satellite services, the number of services increases to 25 and the rate of services per 100,000 residents to 107.5. However, when taking into account the capacity of the services, only 8% (N=2; rate per 100,000 residents=8.6) are able to provide high intensity care (3 times per week if needed), 48% (N=12; rate per 100,000 residents= 51.6) provide medium intensity care (weekly/fortnightly) and 44% (N=11; rate per 100,000 residents=47.30) low intensity care (less than fortnightly/monthly).

Table 7. Non-acute non-mobile outpatient care: availability

Provider	Name	Desde1	Town	Coverage Area
Mental Health Services FW LHD	Community Mental Health and AOD Team (i)	Ax[F00-F99]-O8.1m	Broken Hill	Far West
	Community Mental Health and AOD Team (i)-satellite A	Ax[F00-F99]-O9.1m	Wilcannia	Far West
	Community Mental Health and AOD Team (i)-satellite B	Ax[F00-F99]-O9.1m	Menindee	Far West
	Community Mental Health and AOD Team (ii)	Ax[F00-F99]-O8.1m	Dareton	Far West
	Community Mental Health and AOD Team (ii)-satellite A	Ax[F00-F99]-O9.1b	Balranald	Far West
Maari Ma Health Aboriginal Corporation	Psychological Services	Ax[F00-F99]-O9.1	Broken Hill	Far West
	ATAPs providers	Ax[F00-F99]-O9.1b	Broken Hill	Far West
Royal Flying Doctors Service	RFDS Clinic Broken Hill	Gx[F00-F99]-O9.1	Broken Hill	Far West
Royal Flying Doctors Service (satellites)	RFDS Clinic Hungerford	Gx[F00-F99]-O10.1	Hungerford	Far West
	Ivanhoe Health Service	Gx[F00-F99]-O9.1	Ivanhoe	Far West
	Menindee Health Service	Gx[F00-F99]-O9.1	Menindee	Far West
	Monolon Station	Gx[F00-F99]-O10.1	Monolon	Far West
	RFDS Clinic Tilpa	Gx[F00-F99]-O10.1	Tilpa	Far West
	RFDS Clinic Pooncarie	Gx[F00-F99]-O10.1	Pooncarie	Far West
	Wanaaring Health Service	Gx[F00-F99]-O10.1	Wanaaring	Far West
	White Cliffs Health Service	Gx[F00-F99]-O9.1	White Cliffs	Far West
	Wilcannia Health Service	Gx[F00-F99]-O9.1	Wilcannia	Far West
	Innaminka Station	Gx[F00-F99]-O10.1	Innamincka	Far West
	RFDS Clinic Louth	Gx[F00-F99]-O10.1	Louth	Far West
	RFDS Clinic Packsaddle	Gx[F00-F99]-O10.1	Packsaddle	Far West
	Tibooburra Health Service	Gx[F00-F99]-O9.1	Tibooburra	Far West
	Wiarera Station	Gx[F00-F99]-O10.1	Wiawera	Far West
	RFDS Clinic Yunta	Gx[F00-F99]-O10.1	Yunta	Far West
GP Super Clinic	GP Super Clinic Psychiatric Telehealth	Nx[F00-F00]-O.10.1eu	Broken Hill	Far West
ATAPS providers	ATAPS provider	Gx[F00-F99]-O.9.1u	Broken Hill	Far West

Table 8 shows the workforce providing non-acute non-mobile care related to health needs. The most common professional were mental health nurses, followed by psychologists and mental health workers.

Table 8. Non-acute non-mobile BSICS provided by the public health sector: Workforce

		Psych	Psyhcol	MH Nurses	OT	SW	AW	HE	MHW	Total
Mental Health Services FW LHD	Community Mental Health team (i)	0.25	2	6		2	1	1		12.25
	Community Mental Health team (ii)	0.25	2	2	1		1			6.25
Maari Ma	Psychological Services		3	5		1			6	15
	ATAPS		2	1						3
RFDS	Mental Health Team		2.5	1.5						4
GP Super Clinic	GP Super Clinic Psychiatric Telehealth	1		2.5						3.5
ATAPS providers	ATAPS provider		1							1
	Total	1.5	12.5	17	1	3	2	1	6	44
	Rate per 100,000 professionals	6.45	53.76	73.11	4.3	13	8.60	4.3	25.8	189.22

3.2.3.2. Outpatient Care Provided by NGOs

Mobile Outpatient Care

We identified 2 BSICs (or services) providing non-acute mobile outpatient care for people with mental health problems. They are related to the HASI program. Affordable housing is delivered by social housing providers, clinical care by the mental health services, and accommodation support by the NGOs. In the area of the Far West LHD, accommodation support is provided RichmondPRA and Mission Australia. This type of care can be described as mobile (they provide support in the home of the person or wherever the client wants to meet) and non-acute. According to the information provided, RichmondPRA has the capacity to meet with the client every day, if needed, while Mission Australia while have a lower capacity (less than 3 days per week but more than fortnightly).

The total number of BSICs (or services) from the NGO sector providing mobile outpatient care (non-acute) in the Far West is 8.60 per 100,000 residents.

Table 9. Non-acute mobile outpatient care in the NGO sector: availability

Provider	Name	Desde1	Town	Area (i)
RichmondPRA	HASI Program	Ax[F00-F99]-O5.2	Broken Hill	Broken Hill
Mission Australia	HASI Program	Ax[F00-F99]-O6.2	Broken Hill	Broken Hill

With regard to the workforce, RichmondPRA has 3.2 FTE support workers while Mission Austalia has 1 FTE support worker. The total number of support workers under the HASI program in the Far West is 18.5 per 100,000 residents.

Non-Mobile Outpatient Care

We have found 4 BSICs (or services) providing non-mobile outpatient care. NEAMI National runs a day program in the Recovery Centre that is open to all the residents in the Far West. It offers structured activities related to life skills and social and cultural needs. The professionals are shared within this program and the residential unit.
On the other hand, Lifeline has 3 teams providing counselling: one is a general counselling team, while the other two are specific for gambling and finances. They cover all age groups.

The total number of BSICs (or services) from the NGO sector providing non-mobile outpatient care (non-acute) in the Far West is 17.20 per 100,000 residents.

Table 10. Non-acute non-mobile outpatient care in the NGO sector: Availability

Provider	Name	Desde1	Town	Area (i)
NEAMI National	Day Program	Ax[F00-F99]-O9.2	Broken Hill	Far West
Lifeline	Counselling: General	Gx[z56-z65]-O9.2b	Broken Hill	Far West
	Counselling: Gambling	Gx[F63.0]-O8.2b	Broken Hill	Far West
	Counselling: financial	Gx[D860-D879]-O8.2b	Broken Hill	Far West

Lifeline has a total of 6 register counsellors; this is equivalent to a rate of 25.8 counsellors per 100,000 residents in the Far West.

3.2.4. Accessibility Services

We have found one service providing accessibility (personal accompaniment) to people with mental health problems. It is provided by Annecto under its respite program for people with disabilities (including psychosocial disabilities). They have a total of 4 support workers

3.2.5. Information and Guidance

3.2.5.1. Information and Guidance Services provided by NGOs

We have identified 1 BSIC (or service) providing information for people with mental health problems. The service is run by Lifeline. The service is focused on information related to services, both health and social related.

3.2.6. Self and Voluntary Support

The Mental Health Services at the Far West Local Health district manages 2 services run by volunteers: one of them is for users/consumers, who meet on a weekly basis; the second one is for carers who meet on a monthly basis.

Lifeline also runs a voluntary workshop for people with a lived experience of mental illness once per week. They do different activities related to cultural and social aspects. People can stay at the facility once the activity is finished socialising if they want.

3.2.7. Other Specific Services for Adults (Parents and Carers)

3.2.7.1. Parents with Mental Health Problems

Mission Australia has two teams under the **Brighter Future Program**. One sits in Broken Hill and the other in Dareton. They provide support for parents with a lived experience of mental health problems or women who are pregnant with a lived experience of mental health problems.

It is a mobile non-acute outpatient service that can meet with the clients as required.

3.2.7.2. Carers

We have found 3 BSICs/services that support carers, relatives and friends of people with a lived experience of mental illness.

Mission Australia has the Family Support team, which targets parents of kids with behavioural problems. It is a mobile non-acute outpatient service, which has the capacity to meet with clients at least on a weekly/fortnightly basis. On the other hand, CentaCare has a community and Family and Carer Mental Health Program. They provide information and support for family members or carers of people with a lived experience of mental illness. Lastly, there is a partnership between RichmondPRA, Salvation Army, Lifeline and Carelink Centre to provide a respite service, named "My Time Project". The My Time Project partnership as part of the referral process conducts a needs assessment (i.e respite provision between the Far West Commonwealth Respite and Carelink Centre and RichmondPRA) the assessment is conducted at the FWCRCC premises with the carer. Once this has been done, each consortium partner has occasional direct contact with carers, families and care recipients. They have the capacity to see them on a weekly basis, but there is not a set time. They meet at the person's home to support them with their needs.

There are 13 services targeting relatives of people with mental health problems per 100,000 residents in the Far West.

Table 11. Services for relatives of people with a lived experience of mental illness: availability

Provider	Name	Desde1	Town	Area (i)
CentaCare Wilcannia Forbes	Family and Carer Mental Health Program	Ax [e310][F00-F99]-O9.2	Broken Hill	Broken Hill
Mission Australia	Community and Family Mental Health Support Service	Ax[Z56-Z65][e310]-O6.2	Broken Hill	Broken Hill and Merindee
RichmondPRA+Salvation Army+ Carelink Centre + Lifeline	Respite Services - My time Project (Partnership)	Ax[e310][F00-F99]-O5.2	Broken Hill	Broken Hill

With regard to the workforce capacity, Mission Australia has 3 case workers, while My Time Project has 1 casual Carer Representative/Peer Worker, 1x Part Time Employee and 18 carer volunteers (in addition of the coordinators and the workers at Carelink Centre)

3.3. Children and Adolescents

In this section we describe the availability and placement capacity of the BSICs (or services) providing care for children and adolescents with mental health problems. Specific care related to transition from adolescence to adulthood is also included in this section.

3.3.1. Residential Care

We have not found any services providing residential care for children and adolescents within the boundaries of the Far West Local Health District

3.3.2. Day Care

We have not found any services providing day care for children and adolescents.

3.3.3. Outpatient Care

3.3.3.1. Outpatient Care provided by the Public Health Sector

We have found one service providing mental health care for children and adolescents. It provides non-acute non-mobile outpatient care and it is staffed with 2 psychologists, 1 social worker, 1 Aboriginal Mental Health Worker. The service sits in Broken Hill and has no mobility.

3.3.3.3. Outpatient Care provided by NGOs

Non-Mobile Outpatient Services

The Royal Far West, located in Manly, Sydney, provides care for kids younger than 12 years old with behavioural problems (non acute). The family stays in Manly from 3 to 5 days and they receive an assessment, guidance and education, by a multidisciplinary team of professionals. They link the family with local services and they do regular face to face follow ups every 6 months and more frequent telephone follow-ups. They also have a telecare program where they deliver CBT therapy via skype. They cover all rural NSW and it is also available for children and their families in the Far West.

3.4. Older People

While the Local Health District has two clinicians whose specialty is Specialist Mental Health Services for Older People (SMHSOP) (one in the Broken Hill Community Mental Health Team and one in the Dareton Community Mental Health Team), we have not identified specific service for older people with mental health problems in the Far West.

3.5. Other Specific Populations

3.5.1. Multicultural Services

We have not found specific service targeting people with a cultural and linguistically diverse background; however, the percentage of this population in the Far West is very low (less than 1%).

3.5.2. Specific Services for Aboriginal and Torres Strait Islanders

Maari Ma (see adult section) provides specific mental health care for Aboriginal and Torres Strait Islander people. The LHD also employs an Aboriginal Mental Health and Alcohol and other Drugs Clinical Leader.

3.6. Other Services

3.6.1. Alcohol and Other Drugs

The Mental Health Team at the LHD provides integrated care also for people with AOD problems. The LHD also runs the Magistrates Early Referral Into Treatment (MERIT) program and an opiate treatment program (OTP). The RFDS team also includes a full time general alcohol and other drugs counsellor. We have not identified any other specific service for people with a dual diagnosis. The complexity of AOD requires a specific AOD atlas.

3.6.2. Homeless Services

Similarly to the case of AOD, the complexity of homelessness requires a detailed analysis. We acknowledge that most of the people who are homeless may have an additional mental health problem. However, the main objective of this Atlas is to describe the services that target mental illness/mental health. If we include the services for homeless people in the analysis we will bias the picture.

In spite of this, it may be worth mentioning that Mission Australia has two services – "Re-connect" and "Young people housing support"- that provide care for young people who are homelessness (or at risk). Most of them also have mental health issues and alcohol and other drugs problems.

Re-connect supports people from 12 to 18 years old who are homeless; they refer them to other services, and train them in life skills programs. They provide case managers and advocacy. They cover the area of Broken Hill and the North of Broken Hill as well as Wilcannia. This service is staffed with 2 support workers.

They also have a program, the "Young people housing support", where they provide housing to young people (16-25 years old) who are homeless. The property is managed by Compass Housing. Mission Australia provides the tenancy support, case management, referrals, coordination and living skills training. The length of stay oscillates between 3 and 6 months and clients receive daily support, but they live independently. This program is staffed with 3 FTE support workers and 0.5 FTE peer support worker.

4. MAPPING OF THE MENTAL HEALTH SERVICES

In this section we present a series of maps illustrating data on the supply of mental health services in relation to selected demand-related indicators and the spatial accessibility metric. Separate maps are shown for: (i) Adult Residential; (ii) Adult Outpatient Care (non-mobile); and (iii) Adult Outpatient Care (mobile).

The background of the maps represents the risk of disadvantage.

Overall, the maps show that the public funded services are located in Broken Hill, where the majority of the population of the Far West live (61%).

We have also included maps visualising the accessibility to residential and non-mobile non-acute outpatient services. People living in the northern area of the Far West may need to travel for more than 3 hours to get residential care in Broken Hill. People from the southern LGAs, thanks to an agreement for interstate mental health services provision with Ramsay Health, in Mildura, Victoria, have improved accessibility to residential services to residential services.

The accessibility to non-mobile outpatient services is better when compared with accessibility to residential care. This is the result of the efforts to increase accessibility to services outside Broken Hill through:

- The RFDS mental health team
- Outreach to some of the smaller towns

Figure 27. Geo-location of services providing residential care (inpatient units and recovery centre). The background depicts the Index of Relative Socio-Economic Disadvantage (RSD). The lower the index, the worse the area.

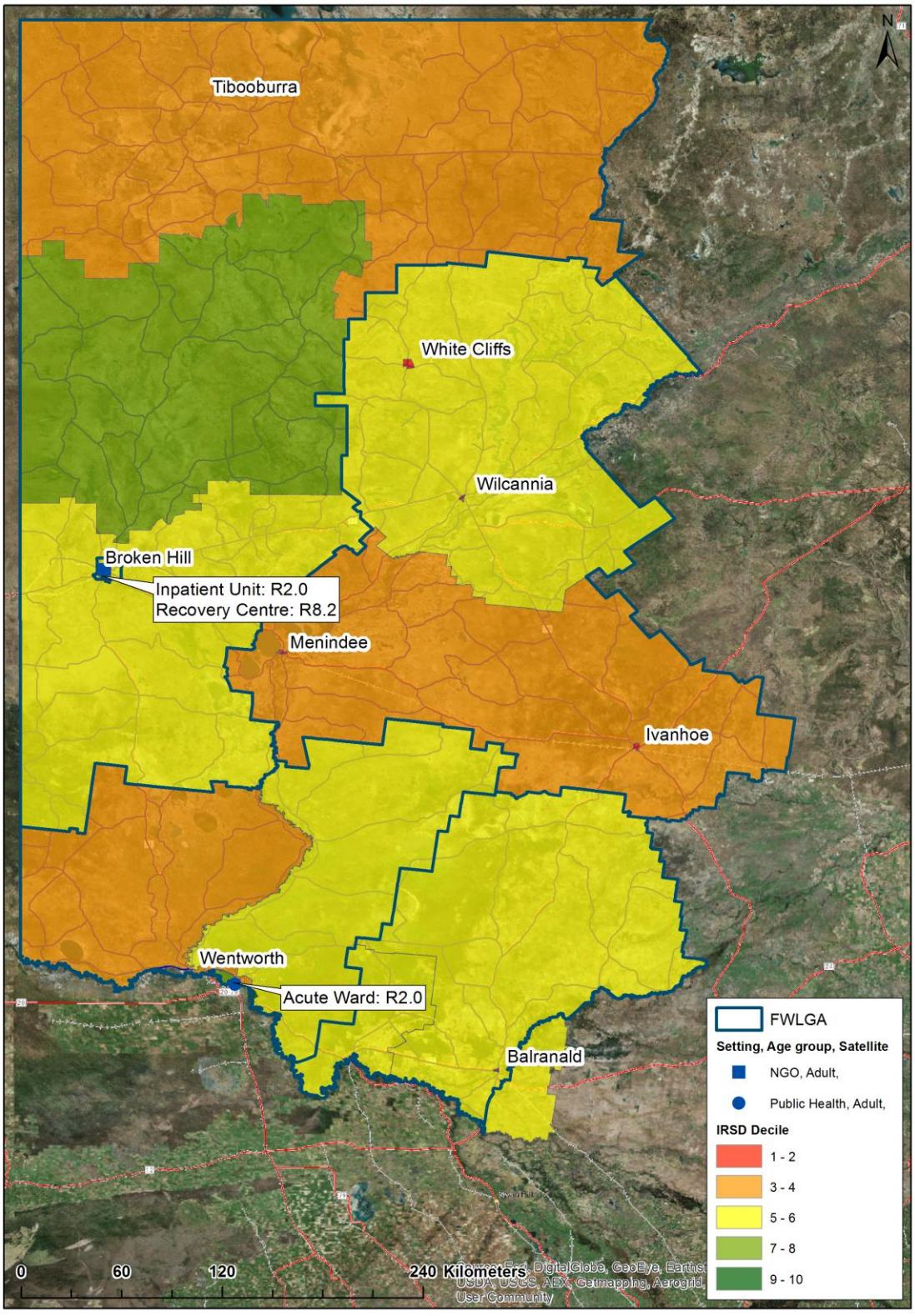


Figure 28. Geo-location of services providing outpatient non-mobile non-acute care and low intensity day-care (i.e. Community Mental Health Team- and its satellites- Maari Ma, ATAPs providers and the RFDS and it's satellites). The background depicts the Index of Relative Socio-Economic Disadvantage (IRSD). The lower the index, the worse the area.

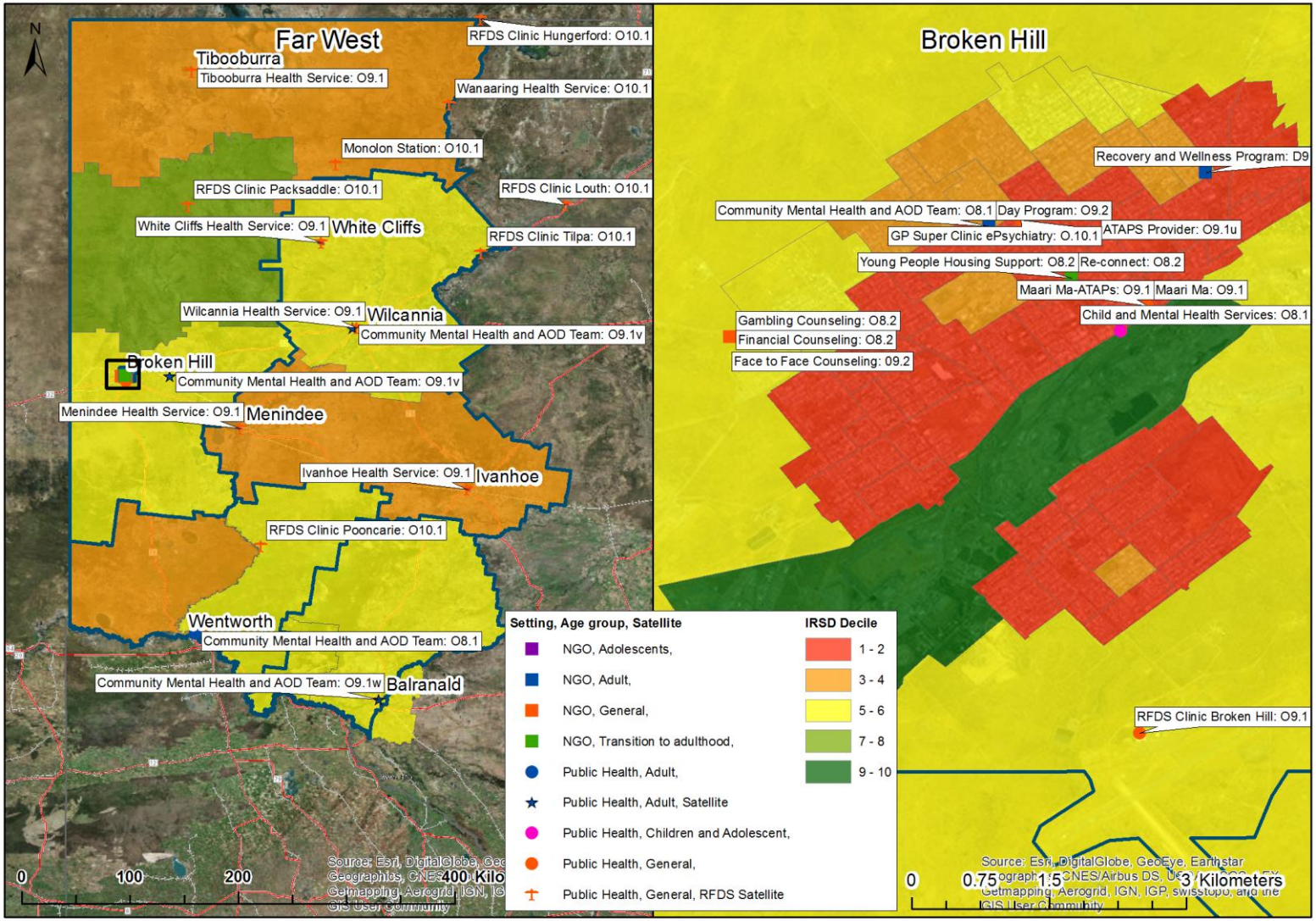


Figure 29. Geo-location of services providing outpatient mobile non-acute care (i.e.HASI program, respite services). The background depicts the Index of Relative Socio-Economic Disadvantage (IRSD). The lower the index, the more disadvantaged.

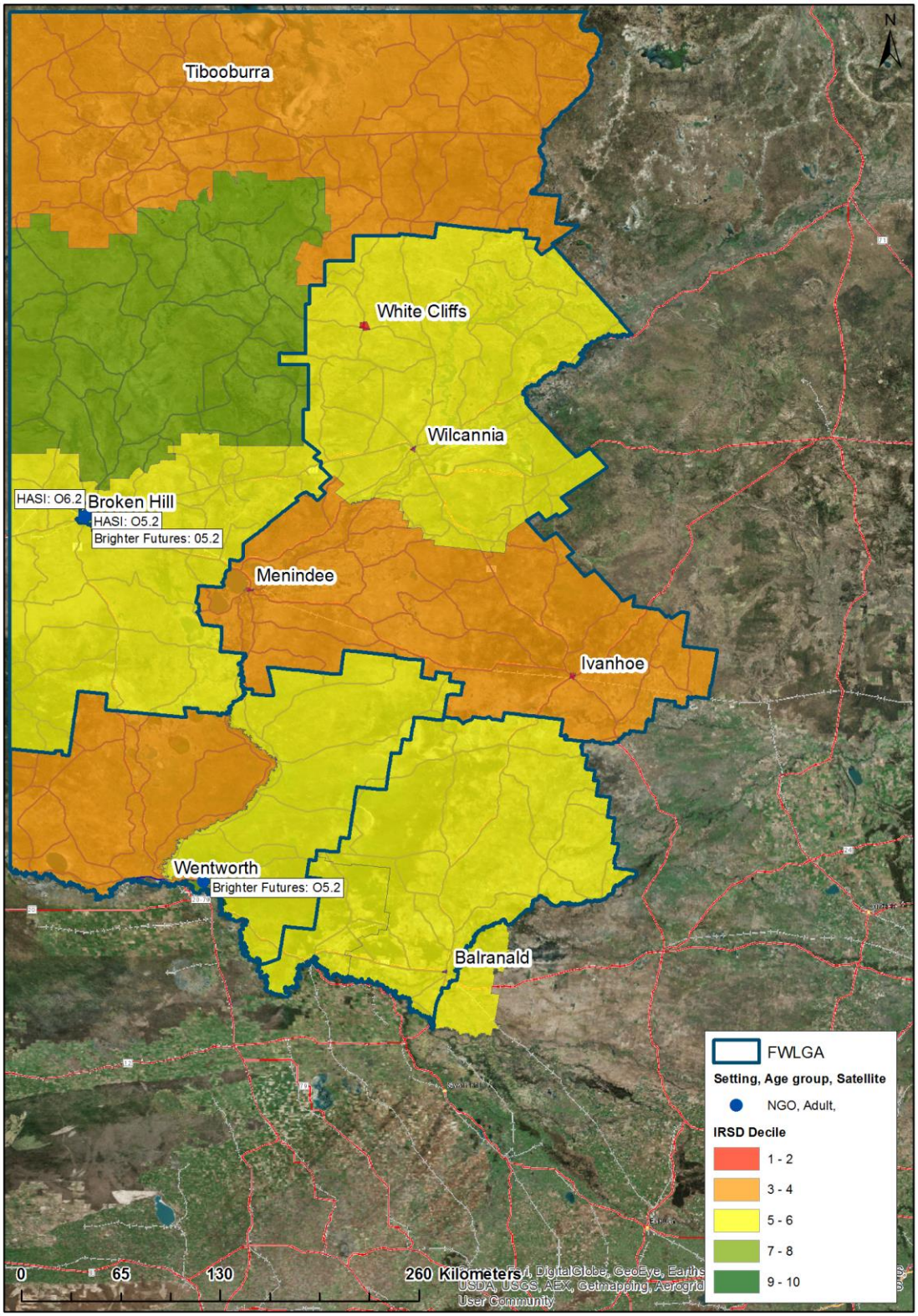


Figure 30. Accessibility to residential services (inpatient unit and Recovery Centre). Travel-time in minutes.

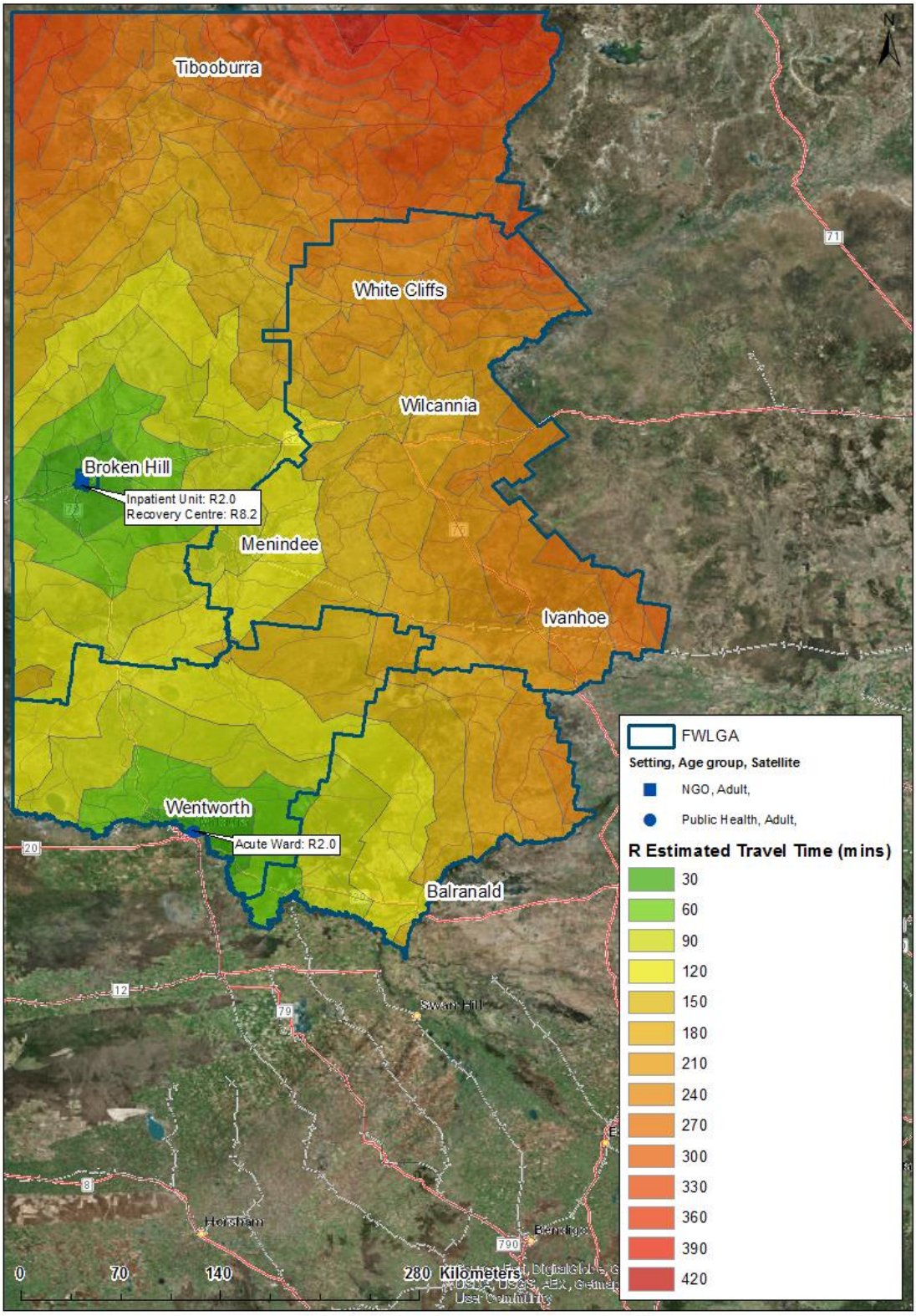


Figure 31 Accessibility to outpatient non-mobile services and low intensity day care (e.g. Community Mental Health Team-and its satellites- Maari Ma, ATAPs providers and the RFDS and it's satellites). Travel-time in minutes.

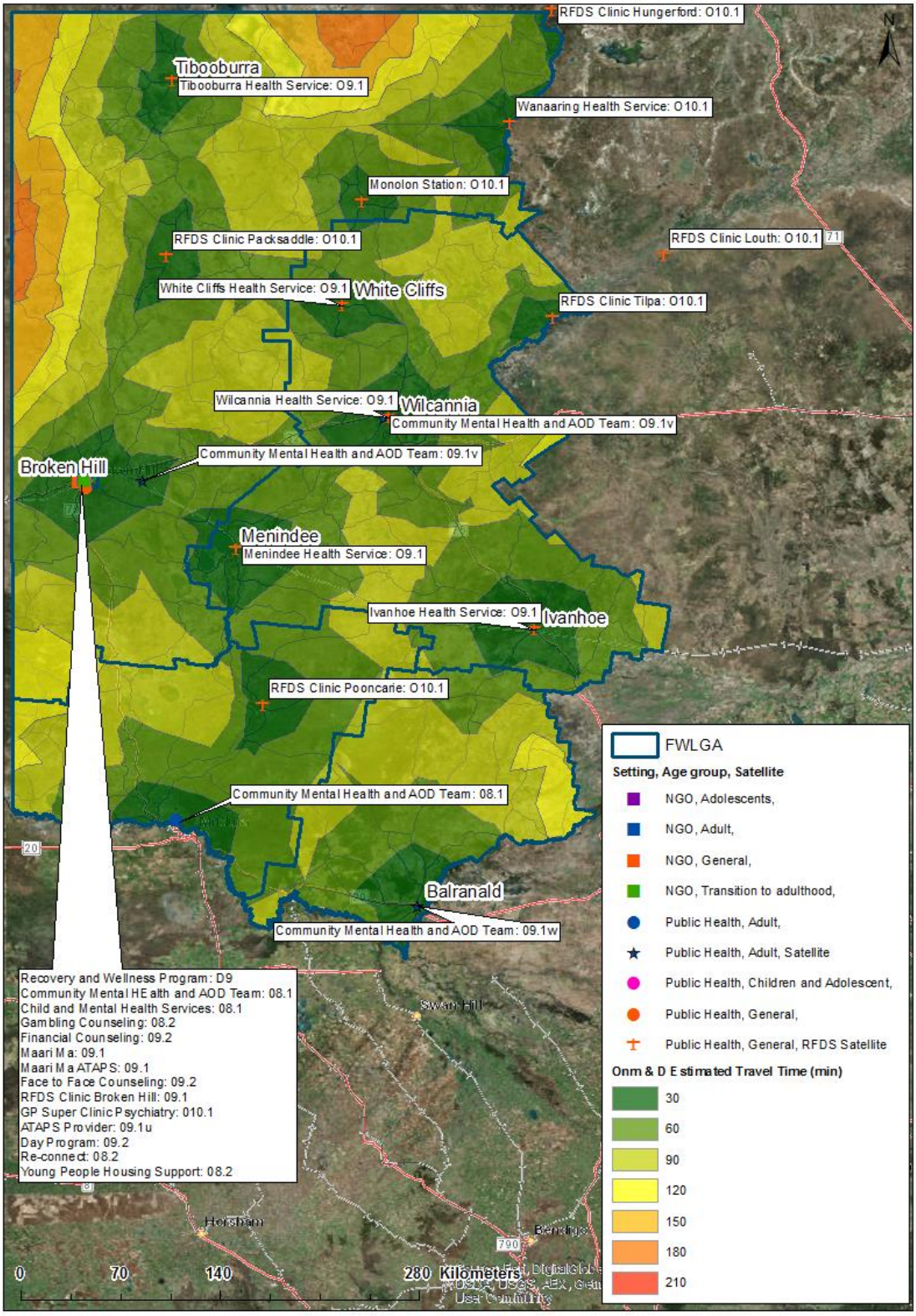


FIGURE 32 Accessibility to only high-intensity outpatient non-mobile and low intensity day care services. Travel time in minutes.

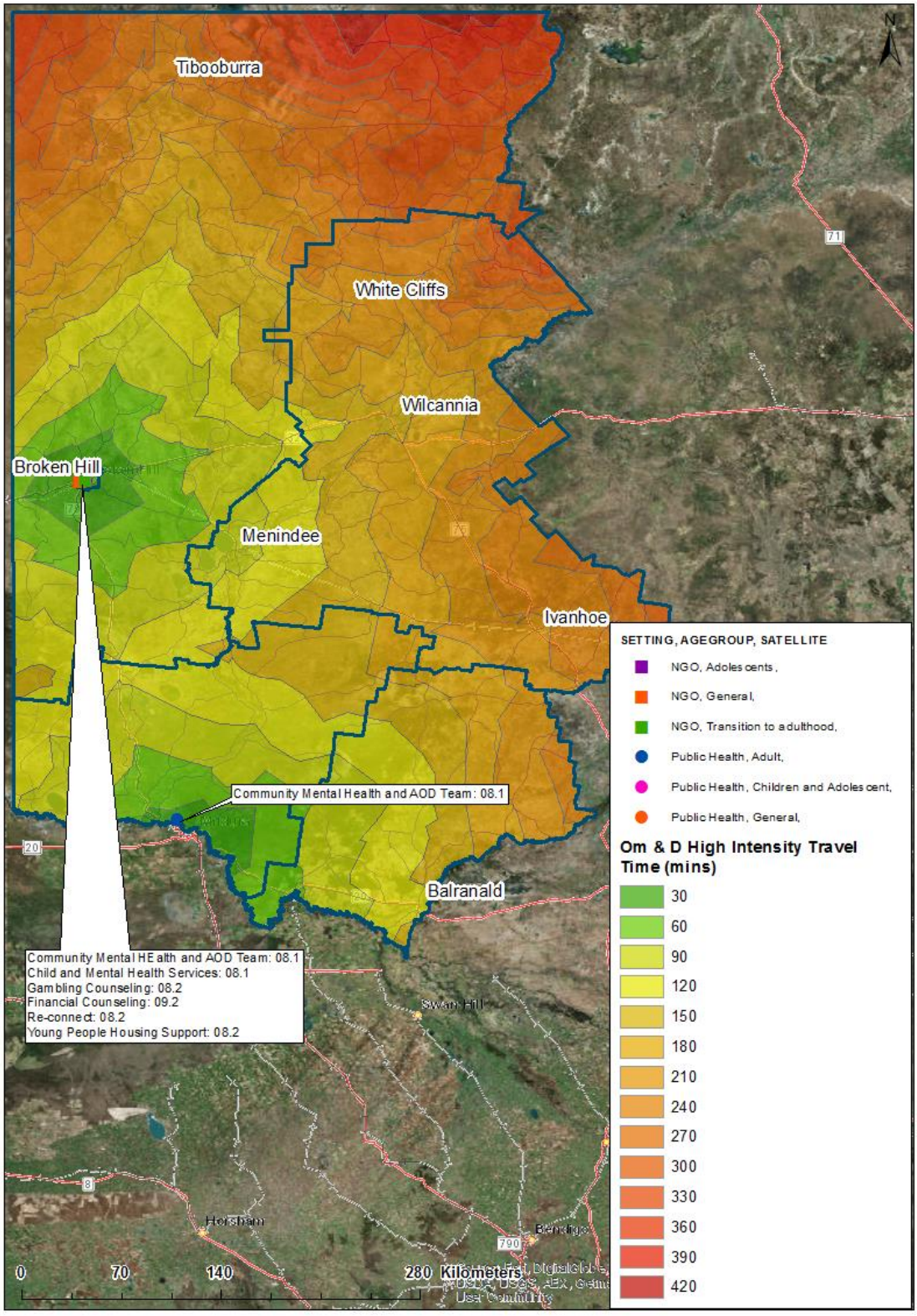


FIGURE 33 Accessibility to only core outpatient non-mobile and low intensity day care services (excluding satelites). Travel Time in minutes.

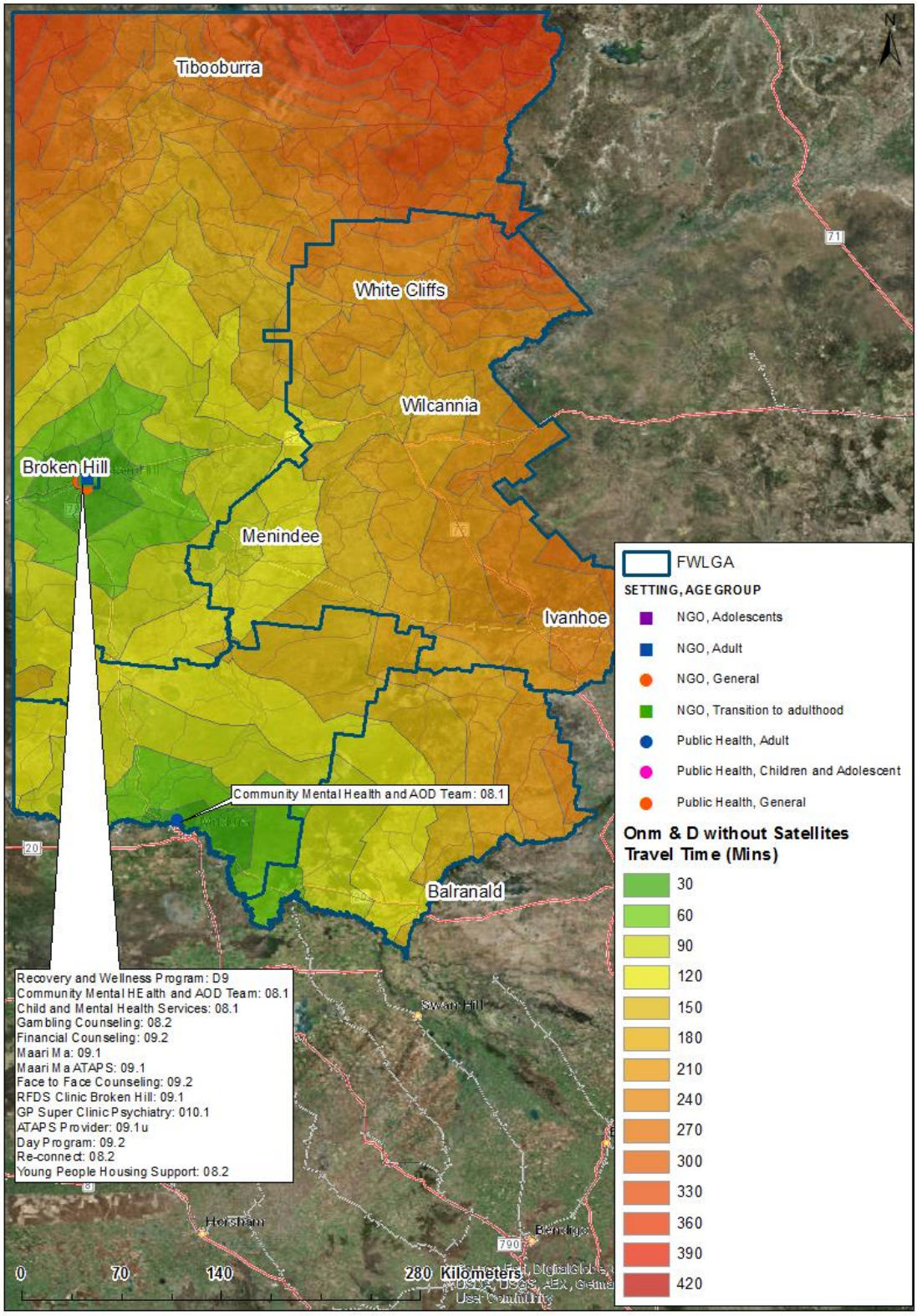


Figure 34 Accessibility to outpatient mobile services. Travel-time in minutes.

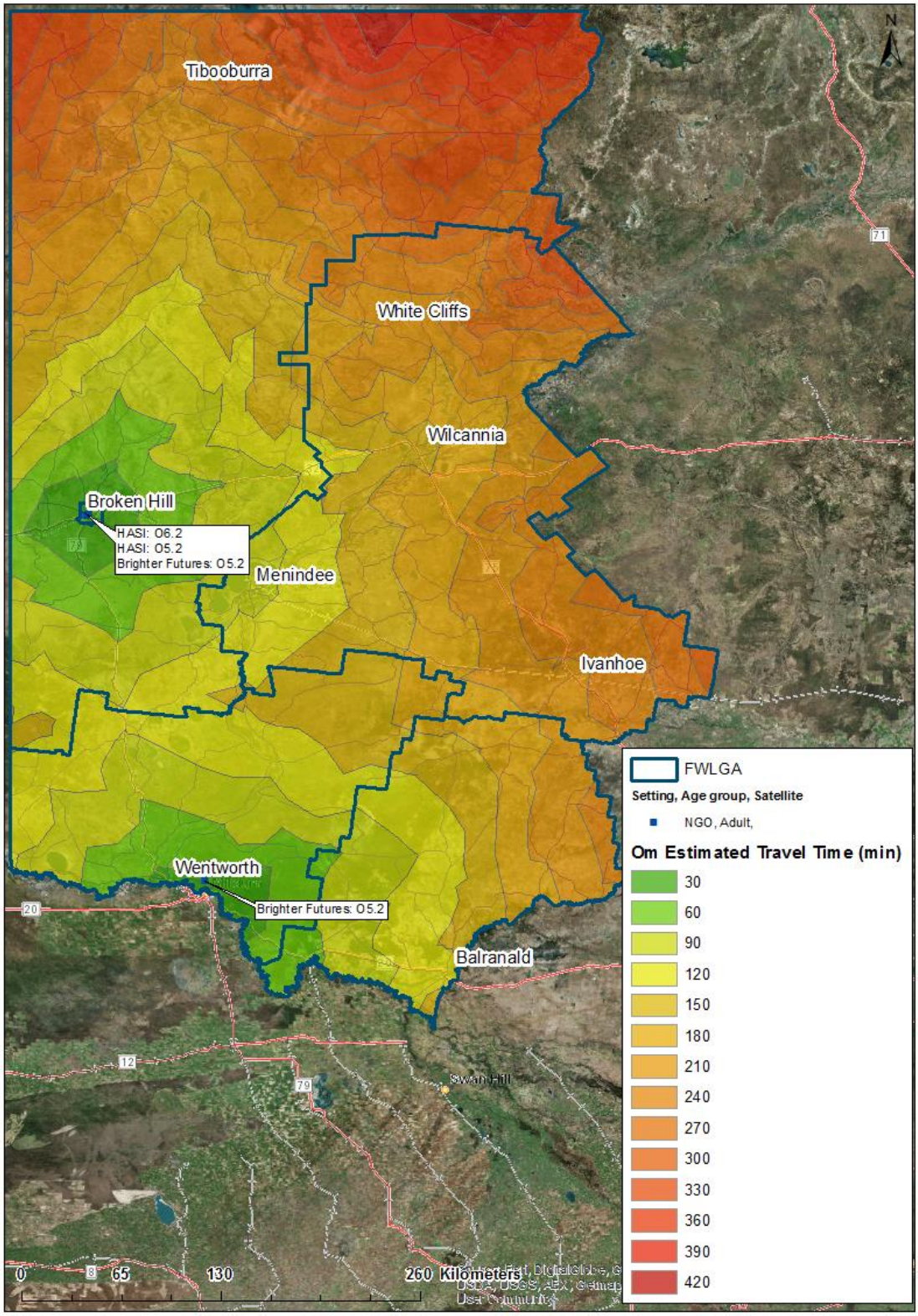
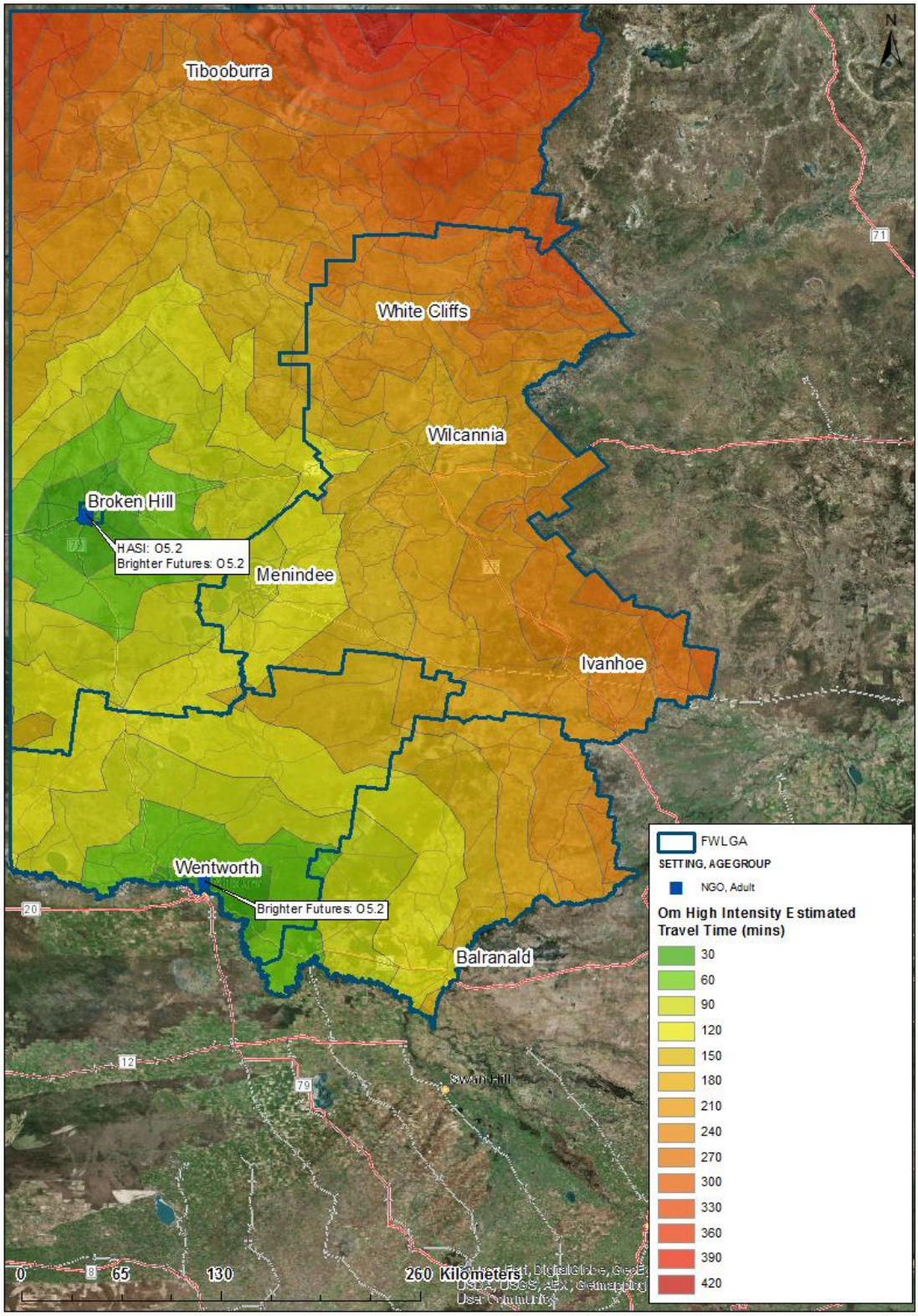


FIGURE 35. Accessibility to only high intensity outpatient mobile services. Travel time in minutes.



5. DESCRIPTION OF THE PATTERN OF CARE IN THE FAR WEST

Figure 36 depicts the pattern of adult mental health care in the Far West. To allow comparisons with other areas, we are only including the services for adults (i.e. specific services for children, adolescents and younger people; older people; carers and multicultural populations are not included).

The blue area refers to residential care, the orange area to day care, the green to outpatient care and the yellow, to accessibility.

The overall availability of acute residential and community services, taking into account population density, is good. Indeed, due to the low population, the estimated rates are extremely high relative to other areas across NSW (i.e. the rate of acute wards is 5 per 100,000 inhabitants, when in Western Sydney and South Western Sydney is around 1). It has to be taken into account, though, that when analysing the availability of rural and remote areas different standards should be considered.

It is worth mentioning the presence of the recovery centre, managed by NEAMI National, which is inspired in the PARC model. It can be described as a Step Up service (from the place the person usually lives) or a Step Down (if the person is coming from an inpatient unit). When used as a Step Up it provides an alternative to hospitalisation in the community; while when used as a Step Down facility it can ease the pathway from hospitalisation to community. This model is seen as national best practice as it is inspired by Personal Recovery Framework. In the PARC model area mental health services partner with the NGOs to provide balanced clinical and non-clinical care. Good partnerships are key in the delivery of these services and may play a crucial role in the Far West area.

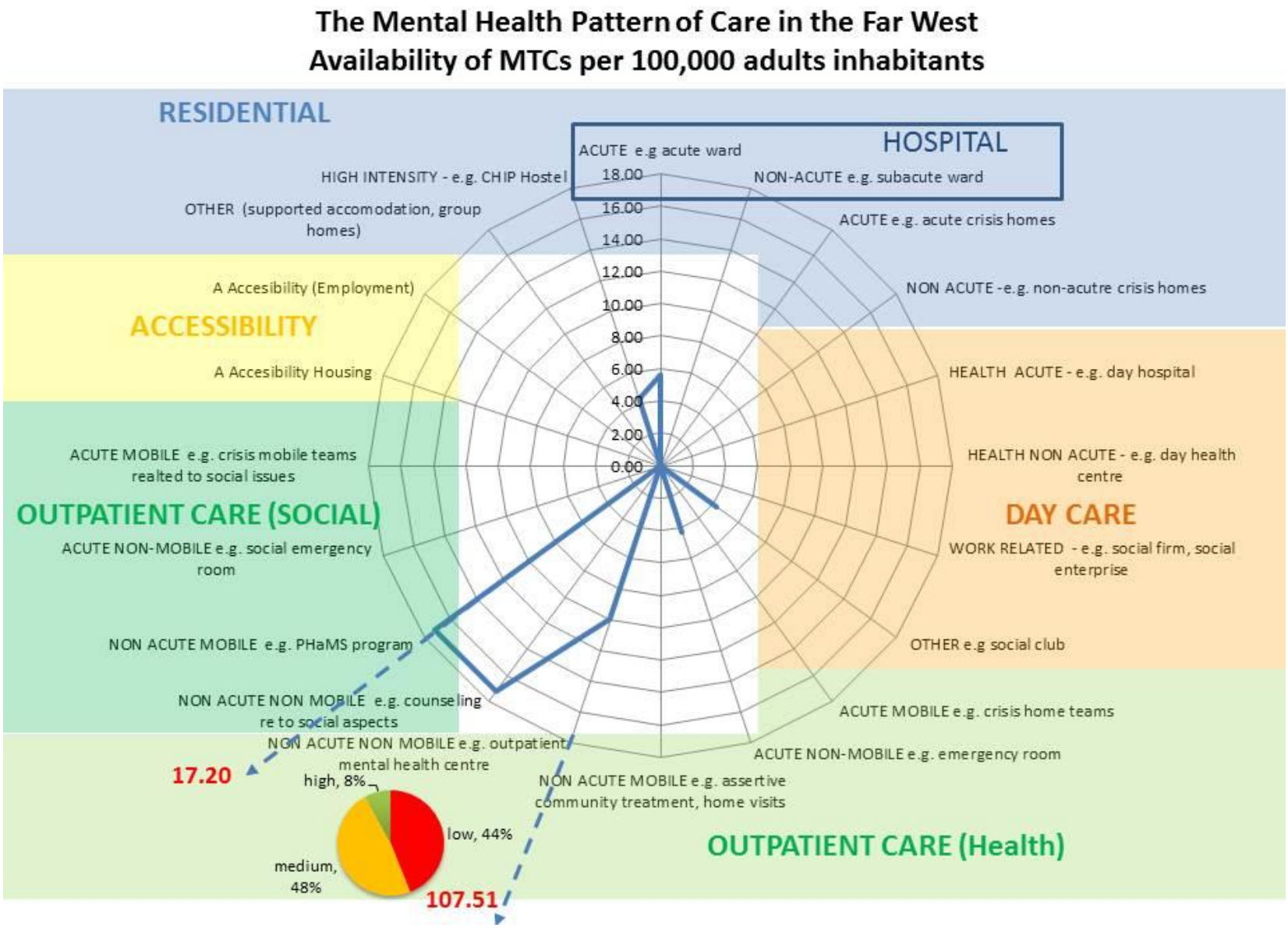
The availability of outpatient care (when taking into account the satellites) is also high. However, the intensity of the system is low, as 44% of the services providing outpatient care related to health needs only have the capacity to see the client face to face on a monthly basis.

In addition, there are some core components of a balanced model of mental health care that are missing, similar to other areas across NSW. These areas are related to: the absence of acute and non-acute day care; the lack of specific services targeting employment for people with a lived experience of mental illness; and the lack of services to increase accessibility to housing.

Acute day care related to health includes sources which provide an alternative to hospitalisation. People in a mental health crisis are not admitted in a hospital, but treated in the community. They spend all day at the facility, but they sleep at home. On the other hand, non-acute day care includes day care centres staffed with at least 20% of mental health high skilled professionals. In these types of centres people with lived experience of mental illness can spend the day, socialising and participating in structured activities related to health, such as cognitive training.

Lastly, we have not found services related to employment for people with a lived experience of mental illness. The absence of public housing in the Far West may be considered a major gap, but it has to be analysed taking into account the population density. In spite of this, the availability of the HASI program is filling this gap in the area.

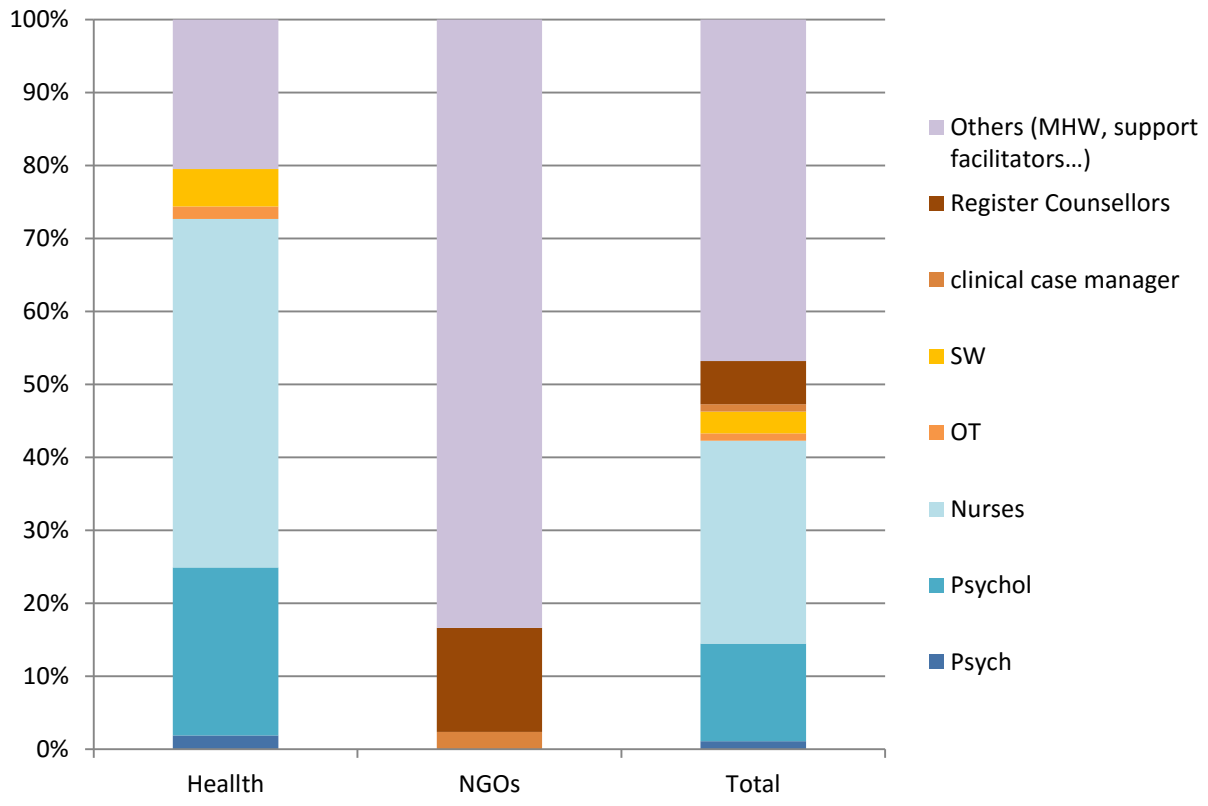
Figure 36. The Pattern of Mental Health Care in the Far West



In this section we present an overview of the workforce capacity in the Far West. This data must be interpreted with caution as we did not get any response from some service providers. In addition, the different terminology used by the providers makes the analysis difficult. More research is needed in order to understand the workforce capacity. This has to be seen as a first approximation of the data.
The rate of professionals in the public mental health sector providing care for people with a lived experience of mental illness per 100,000 residents in the Far West is around 251.5 per 100,000 residents (excluding children and adolescents). If we add the staff at the NGOs, this rate increases to more than 400 staff per 100,000 residents. However, as it has been noted before, this rate has to be taken with caution due to the low population in the Far West. For instance, there is only 1 psychiatrist shared by all the Local Health District and another who provides telecare in the GP super clinic. The rate of psychiatrists will be 8.6 per 100,000 residents but the reality is that there are only 2 psychiatrists available in the area, which raises issues about the capacity of the workforce.

As can be observed, the profile of professionals in the health sector and the NGO sector is very different (figure 37). In the health sector the most common professional is the mental health nurse followed by the psychologist and the psychiatrist. Although there is only 1 fte psychiatrist at the LHD which provides 24/7 psychiatry coverage and 1 FTE psychiatry registrar position, it is hoped that this will provide some sustainability to the psychiatry program. There are no clinical professionals at the NGO sector which may reduce their capacity to provide more intensive care. Overall, the number of clinical professionals is lower than in other areas, suggesting that the capacity of the workforce should be strengthened as at that moment it is quite fragile as the number of professionals is low. Some of the NGO professionals may have health qualifications, however they are not employed for these qualifications.

Figure 37. Description of the workforce by sector



6. INTERNATIONAL COMPARISONS

In the absence of a gold standard for planning the provision of mental health services, international comparisons are useful for problematizing things that are often taken for granted, and identifying policy learnings and borrowings[23].

However, in order to conduct meaningful comparisons, it is important to use a standardised tool that goes beyond terminological variability. We have mapped the pattern of Mental Health in different European areas using the DESDE-LTC. The use of a common language allows us to compare the Far West with different community care models in Europe. The information on the European Countries has been presented as part of the The Refinement Research Project [22] funded by the European Commission. Unfortunately, we do not have any area similar to the Far West (i.e. remote); so we are only able to compare with two areas that, in spite of not being remote, are highly rural.

In any case these comparisons need to be taken with caution as the Far West presents unique characteristics. Any rural planning for mental health has to be tailored to the local context as differences across rural and remote areas are far greater than in urban areas.

Having said that, preliminary comparisons with rural areas in Southern and Northern Europe suggest that the availability of services in the Far West is higher.

Table 12. Description of the areas

	Sør-Trøndelag (NORWAY)	Vall d'Aran i Alt Pirineu (Catalonia, Spain)
Population density (inhb./ km²)	15.60	13.32
Ageing Index (>64/<15x100)	81.42	124.71
Dependency ratio (<15 & >64/15-64x100)	49.55	47.59
People living alone (%)	40.78	11.23
Immigrants (%)	6.64	16.56
Unemployment rate (%)	2.79	8.26
Total health care expenditure per capite Purchasing Power Parity (in Euros) (2010)[4]	€4156	€ 2345
Total health care expenditure as a share of GDP[5]	9.4%	9.6%

[4] This data refers to all the country.
[5] This data refers to all the country.

6.1. Northern Europe Community Mental Care Model

Figure 38 compares Far West with an area in Norway (Sør-Trøndelag).

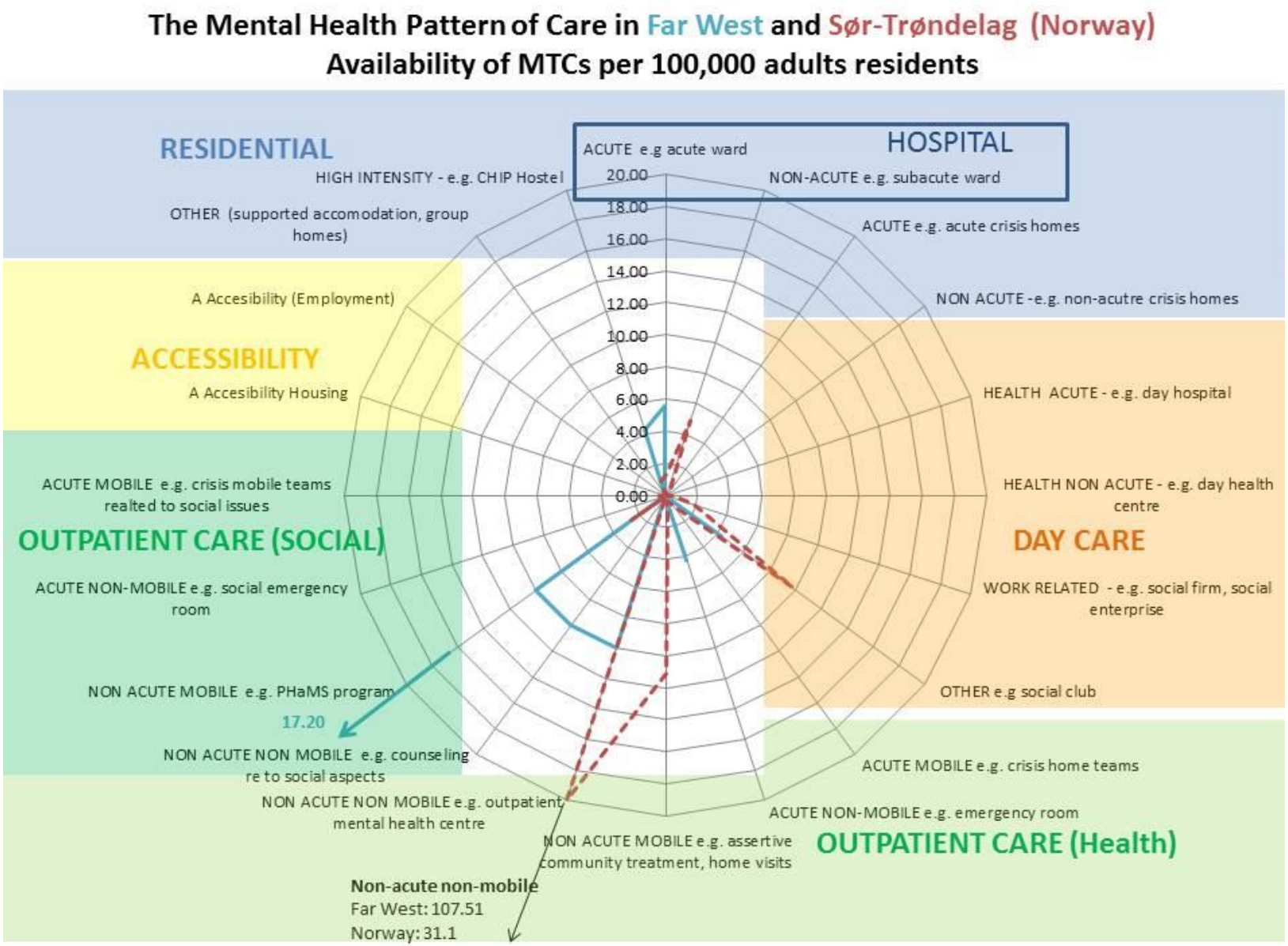
The main characteristic of the Northern Europe Community Mental Care Model is the high availability of different types of services. Indeed, Norway has one of the highest per capita health care expenditures per capita. Norway raise funds for mental health mainly from general taxes.

The provision of mental health services in Norway is organized within Health Authorities (HF), each one including several institutions/hospitals. The area in Norway (Sør-Trøndelag) covers 25 municipalities and it is the catchment area of the St Olavs Hospital HF. The municipalities are obliged to offer primary health care and long term care to all people in need of municipal services regardless of diagnosis. The GP is responsible for planning and coordinating preventive work, evaluation, and treatment and provides an important link between primary health care and the specialised health services,
With regard to socio and economic characteristics, Sør-Trøndelag las a low population density (15.60 inh/km^2). It also has a very low unemployment index.

The Far West has even a lower population density, with most of the population concentrated in Broken Hill. This low density may explain the higher rates in the Far West.

The main differences in the pattern of mental health care provision between Norway and the Far West is related in the higher availability of mobile teams related to health needs of the Norwegian System. It has to be kept in mind that a service is coded as mobile if the team goes to the home/place where the person lives (so, the person does not need to go to a facility). On the other hand, the Far West has more teams providing mobile outpatient care related to social needs. As it has been observed in other areas across NSW, there is no day care related services in the Far West. This highly contracts with the situation in Norway. In addition, the availability of residential acute care is higher in the Far West while in Norway they have more residential non-acute care at the hospital.

Figure 38. Pattern of Mental Health Care in the Far West (blue line) and Sør-Trøndelag –Norway (red line).



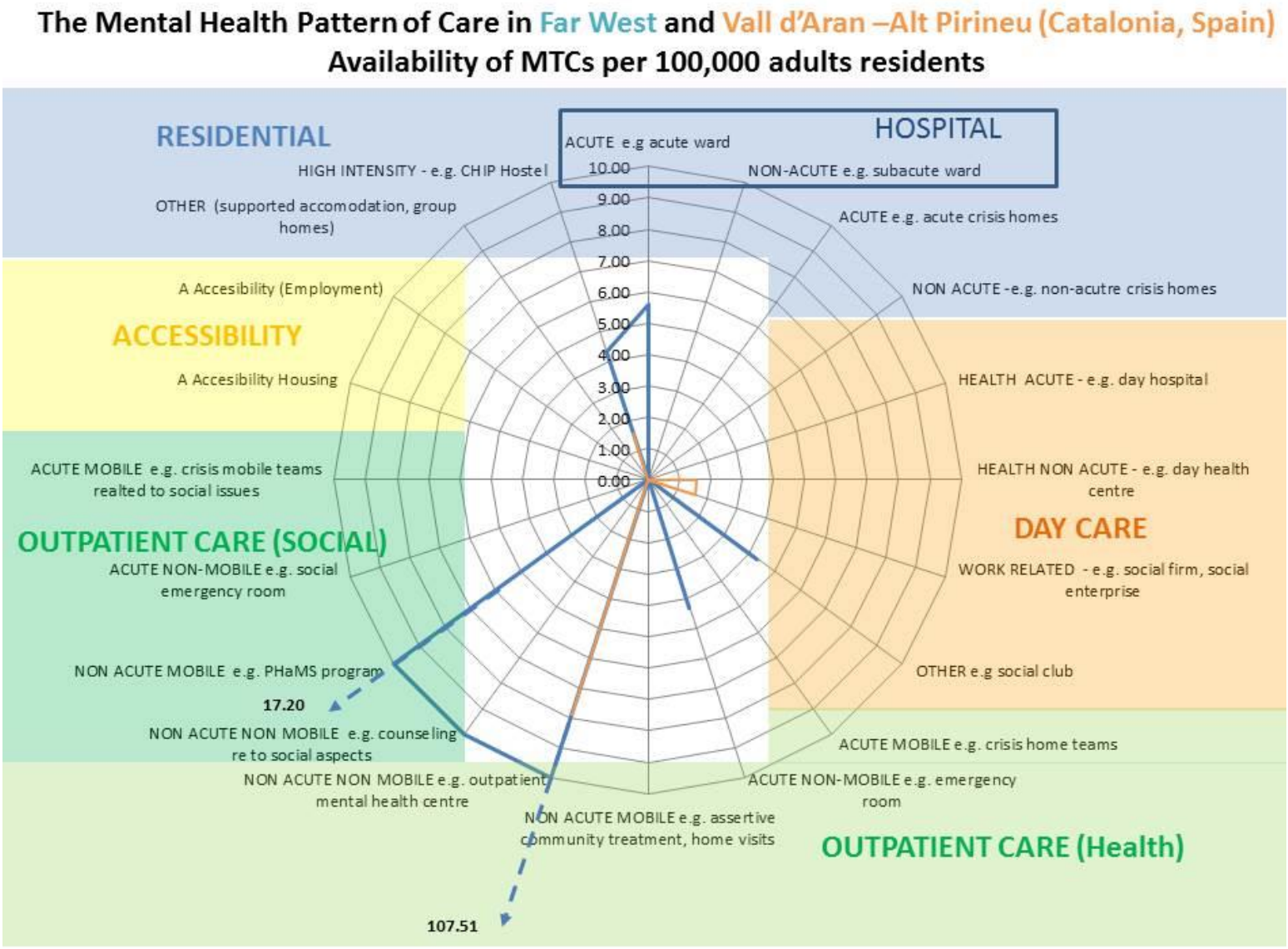
6.2. Southern Europe Model of Mental health Care

Figure 39 compares the Far West with a Health Region in the North of Catalonia (Spain), Vall Aran-Alt Pirineu, which is highly rural and isolate. It is in a valley surrounded by mountains (Pyrenees).
Mental Health in Southern Europe is characterized by a strong emphasis on community care, and low availability of psychiatric hospitals. As in the case of Northern Europe, the public health sector is funded from general taxes.

In Spain, most of the Mental Health Services are funded by the Regional Health Authorities. Social services are paid for by the social and employment authority. The Community Mental Health care is organized in seven areas that include an Adult Mental Health Centre and other specific services. Mental health patients enter the system through primary care (PC) that fulfills a gatekeeping function. In the area of Vall d'Aran there is no hospital; due to accessibility issues, they have special agreements with hospitals in France.

When compared with Vall d'Aran, the Far West has more and more varied services, specially related to services providing care related to social needs. It is possible that this type of care is provided by the Day Care sector.

Figure 39. Pattern of Mental Health Care in the Far West (blue line) and Vall d'Aran (orange line).



6.4. Placement Capacity- Cross-national comparisons

6.4.1. Residential Care

There are large differences across countries related to the availability of beds per 100,000 residents. These rates mirror the different models of mental health care. The Far West has a higher rate of acute hospital beds than the two other areas, but this can be partially explained but the low population. Vall d'Aran has not inpatient acute beds

Table 13. Cross-national comparisons- Placement capacity- beds per 100,000 residents according to type of residential care

	Far West (NSW, Australia)	Sør-Trøndelag (Norway)	Vall d'Aran (Catalunya, Spain)
Hospital			
R ACUTE HOSPITAL CARE: R1 - R2 - R3.0	38.70	28.43	0.00
R NON_ACUTE HOSPITAL: R4 – R6	0.00	75.08	0.00
Non Hospital- Community			
R ACUTE NON-HOSPITAL: R0 R3.1.1	0.00	64.42	0.00
R NON ACUTE NON-HOSPITAL: R5 - R7	0.00	0.00	0.00
R OTHER R9,R10,R12,R13,R14	0.00	0.00	0.00
R NON-HOSPITAL HIGH INTENSITY R8 R11	43.10	8.89	23.54

6.4.2. Day Care

Some of the most advanced models, such as the Norwegian one, are characterized by a good balance between beds at the hospital, and places at day health acute and day health non acute centres. It is also important to develop work related centres, where people with a lived experience of mental ill-health can develop work related skills and be paid for their work. The day care sector is progressively disappearing from the Far West (and New South Wales). Day Care is important as it provides structured activities related to a range of life areas. Additionally, day care centres providing care for health related needs may work as step down facilities, easing the transition from the hospital to the community and promoting recovery and rehabilitation. The Day Care program by NEAMI National can be seen as a proxy to this type of care; which is more intensive and staffed by high skilled professionals.

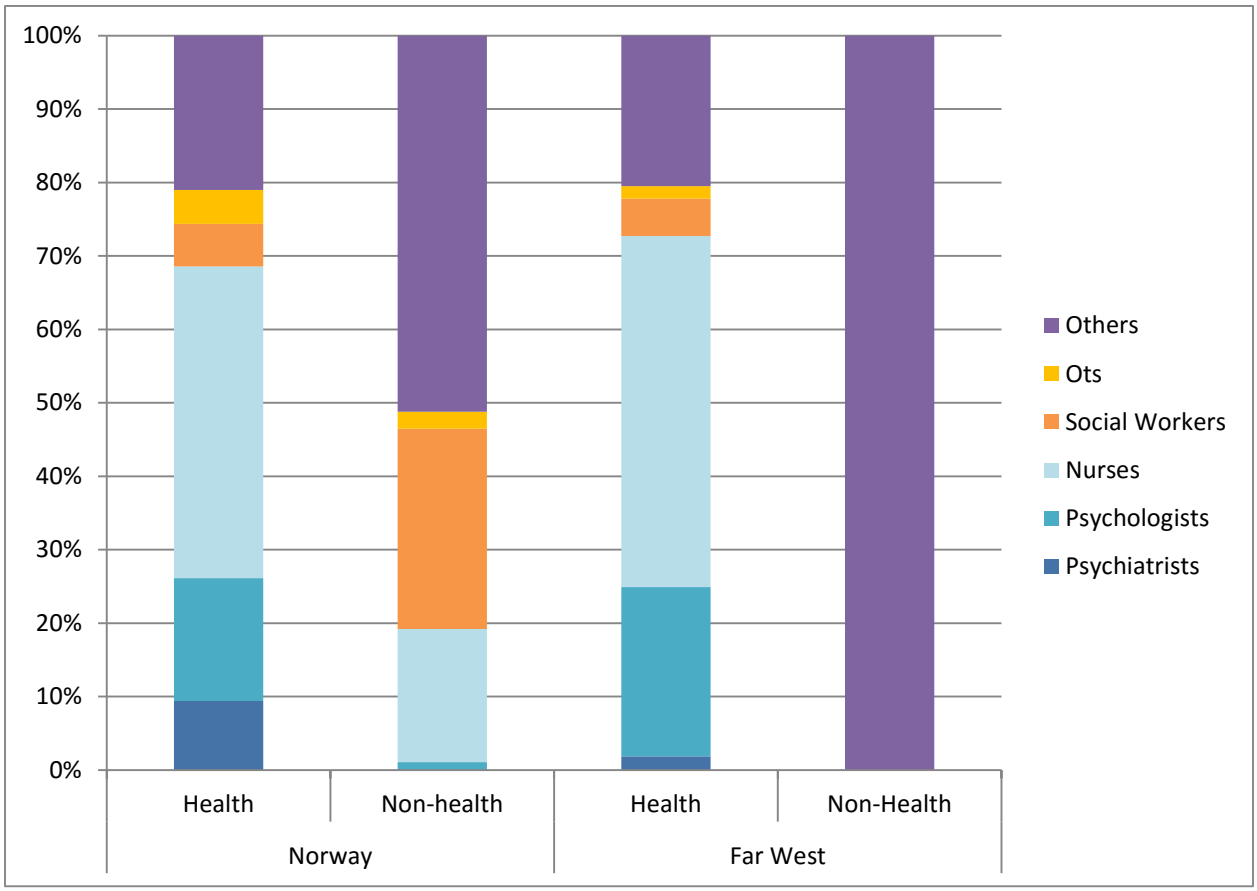
Table 14. Cross-national comparisons- Placement capacity- places per 100,000 residents according to type of day care

	Far West (NSW, Australia)	Sør-Trøndelag (Norway)	Vall d'Aran (Catalunya, Spain)
D HEALTH ACUTE: D1 - D1.1 - D1.2	0	0	0
D HEALTH NON ACUTE: D4.1 - D8.1	0	0	0
D WORK RELATED D2, D3, D6, D7	0	8	0
D OTHER D4.2,D4.3,D4.4,D8.2,D8.3,D8.4,D5,D9,D10	0	*Not available*	23.54

6.5. WORKFORCE CAPACITY- CROSS-NATIONAL COMPARISONS

The distribution of the workforce in the health sector is very similar in the Far West and Norway, although Norway seems to have a slightly higher rate of psychiatrists. The main difference is in the provision of care related to social needs: in Norway the workforce providing this type of care is more skilled and multidisciplinary than in the Far West.

Figure 40. Cross-national comparisons- workforce capacity- comparison between the Far West and Norway.



7. DISCUSSION

In recent years several key principles have been outlined which guide the improvement and reform of rural and remote health systems.

Moving to an integrated care model within a community of care approach requires clear knowledge of the existing structure and potential of the existing health services, the provision of investment in rural return, and a focus on sustainability[24]. When considering the leading role of the Far West in the development of the integrated care approach in Australia[26], the Far West is an ideal location to evaluate and monitor new initiatives and models of care.

The Integrated Mental Health Atlas of the Far West can support decision-making by planners to refine and improve the provision of mental health services in the area. Planning must always be tailored to the local context to ensure an equitable, sustainable and effective mental health system. This is even more essential in an area like the Far West as the differences across rural and remote areas are often far greater than those in urban areas.

This atlas has revealed some major strengths and areas for improvement in the pattern of mental health care in the Far West. The major strengths relate to: the good availability of inpatient residential and outpatient care; the efforts to increase accessibility; and the crucial role of partnerships. On the other hand, the major gaps are related to: the lack of specific services for older people amongst an aging population; the absence of core components of the balanced model of mental health care as seen in other LHD across NSW; and the low capacity of the workforce. These are common challenges for rural health around the world [27]. All these factors compromise the quality of care in rural and remote health.

The key findings are discussed below.

Availability and Accessibility to Services

Overall, when compared with rural areas in Northern and Southern Europe, the availability of services per capita is higher, especially services providing residential care and outpatient care. However, it is important to take into account that the population thresholds for core services need to be lower in remote than rural and metropolitan areas[25].

Lower spatial access to services is a central issue for remote and rural populations across the world and access to mental health services in the Far West is no exception. Lower population thresholds for the provision of health care in rural and remote Australia are considered essential in policy making due to the principles of “equity; consideration of social determinants of health; flexibility, effective expenditure of resources, tailoring services to ensure consumer acceptability, prioritising services according to need, and providing services as close to home as possible” [25]. The development of key indexes have highlighted nuances in accessibility and some exceptions to the rule of low spatial access in rural and remote areas [28].

Despite the low accessibility to mental health services in the rural and remote areas of the Far West[29] (more than 85% of the mental health services are located in Broken Hill), there are substantial efforts to increase accessibility in the surrounding remote areas. Furthermore, the Local Health District has an interstate agreement with Ramsay Health in Mildura to improve accessibility to mental health care for the population on the southern border with Victoria. In the near future, similar agreements can be developed with South Australia to increase the availability and capacity of the system.

The Mental Health Services in Rural and Remote Areas (MHSRRA) program funds the provision of mental health services in rural and remote communities that would otherwise have little or no access to mental health services which includes the Royal Flying Doctors Service (RFDS), Aboriginal Health Services, and the Primary Health Network. The mental health team of the RFDS is perhaps the most notable case. The RFDS travels to nine remote and rural locations across the Far West, and to an additional two sites just outside, and three fairly close to the boundary of the Far West which are also likely accessed by people living within the jurisdiction. This service provides crucial access to areas that would otherwise not have access to mental health care. However, 44% of these sites are only visited by a team on a monthly basis. This has led to the development of hybrid approaches that combine face-to-face and eHealth services.

The other key to improve accessibility to mental health services in the Far West has been through the provision of eHealth services in line with the Rural eHealth Program of the NSW rural health plan. The Mental Health Emergency Care-Rural Access Program (MHEC-RAP) provides access to mental health specialists twenty-four hours and day, seven days a week, over the phone. Current research has shown that MHEC-RAP has been widely utilised for emergency presentations, including increasing numbers of Aboriginal people and young people, across western NSW. This research has also shown the majority of patients are referred to outpatient care with the number of patients admitted to hospital significantly declining[29,30]. In addition to MHEC-RAP, there is low intensity telephone psychiatric care at the GP Super Clinic and almost half of the activity of the RFDS is via telephone, email and video call.

While eHealth is undoubtedly a crucial component of mental health care in rural and remote areas several aspects of care must be kept in consideration. Firstly, according to the TAMHHS report it is important that eHealth does not substitute, but instead is considered supplemental to, locally based services[31]. Secondly, with eHealth forming a key component of healthcare access in the area, more research is required to understand the levels of eHealth literacy in the Far West. Electronic health tools will provide little value if the intended users lack the skills or resources to effectively engage with them [32].

Availability of services for Aboriginal and Torres Strait Islanders

The high proportion of Aboriginal and Torres Strait Islanders in the area necessitates specific service development and response. While it was not within the scope of the Atlas to assess the appropriateness of care, the multidisciplinary team of allied mental health professionals and Aboriginal health workers at Maari Ma form an integral component of the system of mental health care in the area. The LHD and other services have also made important efforts to include Aboriginal health workers in the mental health teams.

Gaps in Availability

In spite of a relatively high availability of Mental Health services, two gaps have been identified: day care and specialised mental health services for older people.

Availability of day care

The atlas has identified a gap in the day care sub-system in the Far West, both in health related day care (day hospitals and rehabilitation centers with the availability of a psychologist, a mental health nurse or a psychiatrist) and the social sector (for instance; work-related centres and social clubs). This gap has also been identified in urban areas in NSW (Western Sydney, South Western Sydney) and contrasts to the availability of these type of services in rural areas in Europe (Norway and Spain). Nevertheless, the overall effectiveness of day care in rural and remote areas has yet to be established.

Availability of specialised mental health services

While the Local Health District has two clinicians whose specialty is Specialist Mental Health Services for Older People (SMHSOP) (one in the Broken Hill Community Mental Health Team and one in the Dareton Community Mental Health Team), there is an absence of specific and specialized mental health services for older people in the Far West. Unmet needs of care for fragile older people is a common problem in rural and remote areas as shown in a recent study in South Australia. This problem is confounded because it also identified a higher use of health services by this population[33]. As stated in the TAMHHS report (2015)[31], rural people *"should have the same access to services as people living in metropolitan areas, albeit through different service models and funding arrangements".* Sub-specialty services may be less affordable in rural and remote areas. If this is found to be the cause, partnerships between generic social services for older people and the mental health community team may be useful to fill this gap.

Placement capacity

The rate of beds per capita in the residential sector is high, when compared with rural areas outside Australia, both in the health and the social sector. The absence of Public Housing in Broken Hill may compromise the capacity of the system to provide accessibility to long term residential care.

Workforce capacity

Rural health is currently going through a huge human resources and recruitment crisis worldwide, as it has been recently recognized at the 12th World Rural Health Conference organised by WONCA (Dubrovnik, Croatia; April, 2015). The solution to this shortage of professionals is not an easy one; the different alternatives implemented in the Far West during the last two decades may provide a very important contribution to the available knowledge-base on this issue, especially if Broken Hill is considered as a pilot area for the development of integrated care in rural Australia[26].

A key factor for the improvement of rural and remote health is the direct involvement of primary care in the specialised care delivery sub-system within an integrated care perspective[34]. Following a building block strategy and a multi-step approach, it is firstly important to ensure that a fully accessible and integrated primary health network is available, secondly, that this network has the capacity to assess, treat and coordinate care for mild to moderate mental illness at adequate standard levels, and at a third step ensure that the specialised care component of the community care system constitutes the third step of this improvement process, ensuring that appropriate staff with an adequate balance between eHealth and face-to-face care is implemented and sustained.

Thomas and colleagues conducted an expert-based qualitative study to define the main components of core primary care in rural and remotes areas in Australia. The population thresholds identified by the Delphi panel were 101-500 pop for 'mental health', 'maternal/child health', 'sexual health' and 'public health' services in remote communities compared to 501-1000 for rural communities[25]. A similar process should be followed to guide the development of minimum standards of FTEs in the specialised sector taking into account that these standards should be related to 1) an effective primary care system with availability of mental health care; and 2) the comparison with other rural and remote areas in the state, in the country and internationally, to understand the range of variability, and to produce benchmarks for quality improvement.

A preliminary comparison with Norway indicates that the highly specialised and skilled workforce capacity in the health care sector is somewhat lower in the Far West than in the comparator areas in selected in Norway, but the major differences appear in the social care sector.

Several alternatives to increase the workforce capacity in rural and remote areas have been explored. An interesting approach is the development of longitudinal integrated clerkship (LIC) on the healthcare community as shown in a recent study in two rural communities in the South Coast of NSW[24]. The implementation of nurse practitioner-led primary healthcare in rural mental health services is another possible alternative that requires further analysis in the near future [35].

The role of Partnerships

In line with the NSW Rural Health Plan, partnerships play a key role in the area. Partnerships may involve collaborative work between different organisations in the same sector (i.e. different NGOs: “My Time Project”); across sectors (i.e. Public Health sector and NGOs: HASI program and particularly the recovery centre managed by NEAMI National and the LHD); and even interstate (i.e. the agreement with Ramsay Health in Mildura, Victoria, to provide care for people with a lived experience of mental illness who reside in the southern LGAs). The improvement of collaborative care either through local networks, and/or joint community mental health teams may play a relevant role in increasing the overall effectiveness of the system under conditions of low workforce capacity and high turnover as shown by a recent study [36]. However, a key issue in partnerships is the need to share a minimum data set.

Study Limitations

There are several limitations that need to be acknowledged. Firstly, some services may be missing because we did not reach them. However, we presented and discussed services included and coded in the study to different experts in the local area and, after different iterative reviews, it was agreed that the majority of the services have been included and coded. Nonetheless, some services that are not specific to mental health, but that are used by people with mental health problems, may be absent. Secondly, we have not included private providers. The inclusion of private providers in the mapping of publicly available services may increase noise, hamper the interpretation of the results and misrepresent the universality of access to services. Private services should be included as an additional layer in future analysis. Thirdly, the assessment of the services was made through interviews with the managers of the services. Some information may not be accurate and should be objectively verified (e.g. the percentage of activities made outside the office in order to be classified as a mobile service). Fourth, we have not included services delivered as part of research programs (i.e. eHealth services that may only be available during a trial period). The inclusion of these services would distort significantly the picture. Finally, we have only included services within the boundaries of the FW LHD. We acknowledge

that some of the residents in this area may use services from other LHDs, such as Western NSW, or even different States, such as South Australia or Victoria. A complete Atlas of NSW and Australia, and the analysis of the use of services would eventually resolve this problem. Despite this, we have included some services outside the boundaries of the Far West if there was an explicit agreement to provide services to the population living in the Far West.

Future Steps

Integrated Atlases of Mental Health are considered key tools for evidence informed policy and planning. In this Atlas we have mapped in a comprehensive way the stable services providing care for people with lived experience of mental illness. However, to have a complete picture of the situation, the results of this Atlas should be completed by mapping the:

(i) **Needs of the primary care providers (including general practitioners and community pharmacists) related to the provision of mental health:** General practitioner, family physicians and community pharmacists are usually the first contact with the health system and they can play a key role in the prevention of mental illness and the treatment of common mental health problems. It is therefore crucial to understand and meet the needs of these professionals.

(ii) **Level of e-literacy of the population:** the provision of eHealth is one of the major strategies in rural areas. However, it is important to have a deep understanding of the e-literacy of the population as well as the availability of Internet access in the area.

(iii) **Rates of utilisation of the services**, by MTC, using administrative databases: an analysis of service utilisation would detect hot and cold spots and areas of improvement.

(iv) **Care Packages:** The information presented in this Atlas may be complemented with an analysis of care packages: a set of services and interventions that are provided to a consumer at a single time period (complex or collaborative interventions)

(v) **Pathways to care:** understanding how people with a lived experience of mental ill-health navigate the system is a key area of knowledge needed for creating systems which increase accessibility and efficiency.

(vi) **Financing mechanisms and financing flows**: This will allow us to delve into important areas such as the benefits of *Better Access Program*

(vii) **Level of integration of the services providing mental health care and the philosophy of care of the services:** a collateral finding that emerges, but that should be included, related to integration is the different philosophy of care of the services. It is important to know what is the view of the different providers on the public mental health system and their role in it. This is a main area of research taking into account that one of the strategies envisaged by the NSW Rural Health Plan is to promote partnerships and integrated care. This will also require an analysis of the strength of the partnerships and alliance through network analysis and other techniques.

The information provided in this Atlas is particularly useful for the following areas of navigation, management and planning:

Support Facilitators: The data in this Atlas could facilitate a better understanding of the landscape in which support facilitators work and the services that are available to their clients.

Managers and Planners: The information gathered in this Atlas is useful for the development of bottom up system indicators that can be used to monitor the evolution of the system. The production of different Atlases based on the DESDE system every 4 or 5 years can assist in the monitoring of the changes and the evaluation of policies [18]. This can be easily done by introducing the classification system (DESDE) into an on-line program that automatizes the codification of the services. The Department of Social Welfare of Andalusia, in the South of Spain, has incorporated the DESDE into their web page, so services receive the code after answering some questions. It will be also important to evaluate the impact of this Atlas, as a visual tool to increase the capacity and efficacy of managers and planners in evidence-informed decision making and in system thinking.

Consumers: A user-friendly version of the Atlas may facilitate consumers' system navigation, appropriate location services and increase their local knowledge on service availability and capacity. For instance, the results of the Integrated Mental Health Atlas of Western Sydney have been used by Carers NSW in a submission to a NSW Parliament Inquiry into service coordination in communities with high social needs.

8. CONCLUSION

Our observations are in line with the recent report of the National Mental Health Commission's *National Review of Mental Health Programmes and Services,* that recommend, among others, boosting of *the role and capacity of NGOs and other services providers to provide more comprehensive, integrated and higher-level mental health services.* It is also important to strengthen the capacity of the overall workforce in the Far West.

This is a unique moment for the Far West to creatively develop new partnerships and services that are community based, promote recovery and empower consumers. We firmly believe that the use of this Atlas may assist in the planning and improvement of care provided for our population with a lived experience of mental illness.

REFERENCES

1. Vazquez-Bourgon J, Salvador-Carulla L and Vazquez-Barquero JL. Community alternatives to acute inpatient care for severe psychiatric patients. *Actas Esp Psiquiatri*. 2012; 40: 323-32.
2. Mendoza J, Bresnan A, Rosenberg S, Elson A, Gilbert Y, Long P, Wilson K, & Hopkins J. Obsessive Hope Disorder: Reflections on 30 years of mental health reform in Australia and visions for the future. *Summary Report*. Caloundra, QLD: ConNectica, 2013.
3. National Mental Health Commission. The National Review of Mental health Programmes and Services. Sydney: National Mental Health Commission, 2014.
4. Zhang JY, Harvey C and Andrew C. Factors associated with length of stay and the risk of readmission in an acute psychiatric inpatient facility: a retrospective study. *Aust Nz J Psychiat*. 2011; 45: 578-85.
5. Light E, Kerridge I, Ryan C and Robertson M. Community treatment orders in Australia: rates and patterns of use. *Australas Psychiatry*. 2012; 20: 478-82.
6. Australian Institute of Health and Welfare. Mental health services—in brief 2013. Canberra: Australian Institute of Health and Welfare, 2013.
7. Thornicroft G and Tansella M. The balanced care model for global mental health. *Psychological medicine*. 2013; 43: 849-63.
8. Transforming Australia's Mental Health Service System (TAMHSS) inc., 2015, Essential Components of Care [ECC] Framework to complement the National Guidance for Jurisdictional or Regional Flexible Action Plans, in response to Recommendations of the National Mental Health Strategy Report, Oct 2014.
9. Caldwell TM, Jorm AF and Dear KB. Suicide and mental health in rural, remote and metropolitan areas in Australia. *The Medical journal of Australia*. 2004; 181: S10-4.
10. WHO. Scaling up care for mental, neurological, and substance use disorders: Mental Health Gap Action Programme (mhGAP). . In: Orgnisation WH, (ed.). Geneve2008.
11. Oxman AD, Lavis JN, Lewin S and Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP) 1: What is evidence-informed policymaking? *Health research policy and systems / BioMed Central*. 2009; 7 Suppl 1: S1.
12. Health Foundation. *Perspectives on Context. A selection of essays considering the role of context in successful quality improvement.* London: Health Foundation, 2014.
13. Goodwin N. Understanding integrated care: a complex process, a fundamental principle. *Int J Integr Care*. 2013; 13.
14. Savigny DA, T. *Sytems Thinking for Health Systems Strengthening.* Geneve: World Health Orgnisation, 2009.
15. Aslanyan G, Benoit F, Bourgeault IL, et al. The inevitable health system(s) reform: an opportune time to reflect on systems thinking in public health in Canada. *Canadian journal of public health = Revue canadienne de sante publique*. 2010; 101: 499.
16. Bickenbach J, Bigby C, Salvador-Carulla L, et al. The Toronto declaration on bridging knowledge, policy and practice in aging and disability: Toronto, Canada, March 30, 2012. *International journal of integrated care*. 2012; 12: e205.
17. Parrott R, Hopfer S, Ghetian C and Lengerich E. Mapping as a visual health communication tool: promises and dilemmas. *Health communication*. 2007; 22: 13-24.
18. Fernandez A, Salinas-Perez JA, Gutierrez-Colosia MR, et al. Use of an integrated Atlas of Mental Health Care for evidence informed policy in Catalonia (Spain). *Epidemiology and psychiatric sciences*. 2014: 1-13.

19. Mental Health Commission of New South Wales. “Living Well: a strategic Plan for Mental Health in NSW 2014-2024”. Mental Health Commission of New South Wales. 2014.
20. Salvador-Carulla L, Romero, C., Weber, G., Dimitrov,H., Sprah, L., Venner, B., McDaid, D., for the DESDE-LTC group. Classification, assessment and comparison of European LTC services. Development of an integrated system. *Eurohealth*. 2011; 17.
21. Salvador-Carulla L, Alvarez-Galvez J, Romero C, et al. Evaluation of an integrated system for classification, assessment and comparison of services for long-term care in Europe: the eDESDE-LTC study. *Bmc Health Serv Res*. 2013; 13: 218.
22. The Refinement Project Consortium. The Refinement Project. Available in: http://www.refinementproject.eu/
23. Cacace M, Ettelt S, Mays N and Nolte E. Assessing quality in cross-country comparisons of health systems and policies: Towards a set of generic quality criteria. *Health Policy*. 2013; 112: 156-62.
24. Hudson JN, Thomson B, Weston K, M. and Knight-Billington PJ. When a LIC came to town: the impact of longitudinal integrated clerkships on a rural community of healthcare practice. *Rural and remote health*. 2015; 15.
25. Thomas SL, Wakerman J and Humphreys JS. Ensuring equity of access to primary health care in rural and remote Australia - what core services should be locally available? *International journal for equity in health*. 2015; 14: 111.
26. Perkins DA, Roberts R, Sanders T and Rosen A. Far West Area Health Service mental health integration project: model for rural Australia? *The Australian journal of rural health*. 2006; 14: 105-10.
27. Strasser R. Rural health around the world. *The Australian journal of rural health*. 2002; 10: 79.
28. McGrail MR and Humphreys JS. Spatial access disparities to primary health care in rural and remote Australia. *Geospatial Health*. 2015; 10.
29. Saurman E, Lyle D, Kirby S and Roberts R. Assessing program efficiency: a time and motion study of the Mental Health Emergency Care - Rural Access Program in NSW Australia. *International journal of environmental research and public health*. 2014; 11: 7678-89.
30. Saurman E, Kirby SE and Lyle D. No longer 'flying blind': how access has changed emergency mental health care in rural and remote emergency departments, a qualitative study. *BMC health services research*. 2015; 15: 156.
31. Allen J, Inder KJ, Lewin TJ, et al. Integrating and extending cohort studies: lessons from the eXtending Treatments, Education and Networks in Depression (xTEND) study. *BMC medical research methodology*. 2013; 13: 122.
32. Norman CD and Skinner HA. eHealth Literacy: Essential Skills for Consumer Health in a Networked World. *Journal of medical Internet research*. 2006; 8: e9.
33. Dent E, Hoon E, Karnon J, Newbury J, Kitson A and Beilby J. Frailty and health service use in rural South Australia. *Archives of gerontology and geriatrics*. 2015.
34. Thomas SL, Wakerman J and Humphreys JS. What core primary health care services should be available to Australians living in rural and remote communities? *BMC family practice*. 2014; 15: 143.
35. Barraclough F, Longman J and Barclay L. Integration in a nurse practitioner-led mental health service in rural Australia. *The Australian journal of rural health*. 2015.
36. Rees G, Huby G, McDade L and McKechnie L. Joint working in community mental health teams: implementation of an integrated care pathway. *Health & social care in the community*. 2004; 12: 527-36.