The Integrated Mental Health Atlas of Brisbane North

DRAFT REPORT FOR COMMENT

A project of Brisbane North Partners in Recovery

1ST SEPTEMBER 2015

NORTH BRISBANE PARTNERS IN RECOVERY

THE UNIVERSITY OF SYDNEY

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ABBREVIATIONS

ACT	Assertive Community Treatment
ATAPS	Access to Applied Psychology Services
BSIC	Basic Stable Input of Care
CCG	Clinical Commission Groups (UK)
CMC	Consortium Management Committee (Brisbane North PIR)
CMMH	Community-managed mental health
COAG	Council of Australian Governments
DESDE- LTC	Description and Evaluation of Services and Directories in Europe for long-term care
DoH UK	Department of Health, UK
DoH	Federal Department of Health and Ageing
EPPIC	Early Psychosis Prevention and Intervention Centre model
GIS	Geographical Information System
GP	General Practitioner
HASP	House and Accommodation Support Program
ICM	Intensive Case Management
LGAs	Local Government Areas
LHD	Local Health District (NSW)
MIFQ	Mental Illness Fellowship Queensland
MNHHS	Metro North Health and Hospital Service
MHNIP	Mental Health Nurse Incentive Program
MHPU	Mental Health Policy Unit, Brain and Mind Centre, University of Sydney
MTC	Main Type of Care
NDIS	National Disability Insurance Scheme
NGO	Non-Government Organisation (or community service provider)
NHHN	National Health and Hospitals Network
NHHRC	National Health and Hospitals Reform Commission
NSW	New South Wales
PARC	Prevention and Recovery Care
PCPs	Primary Care Partnerships
PHaMs	Personal Helpers and Mentors program
PHN	Primary Health Networks
PIR	Partners in Recovery
RBWH	Royal Brisbane and Women's Hospital
Red/Cab	Redcliffe-Caboolture Hospital
Qld	Queensland
TPCH	The Prince Charles Hospital
TWG	Transitions Working Group (PIR Brisbane North)
WHO	World Health Organization

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EXECUTIVE SUMMARY

ConNetica, with partners from the Mental Health Policy Unit, Brain and Mind Centre at the University of Sydney, were engaged by Metro North Brisbane Medicare Local (later the Brisbane North Primary Health Network – BN PHN) in February 2015 to undertake an analysis of the current mental health services and population mental health needs for the region. This 'mental health atlas' project was identified as one of a suite of priority projects by North Brisbane Partners in Recovery (NB PIR) to improve the "patient experience" and build a more collaborative, coordinated and integrated service system for people with severe disability from mental illness.

The aim of this Atlas is twofold; 1) to help providers and consumers to navigate the system, by improving their knowledge about the services available in the area; and 2) as a tool for evidence-informed planning, as it presents a critical analysis of the pattern of mental health care provided within the boundaries of the BN PHN.

The 'integrated care model' frames the Atlas. This model has challenged the way health-related care should be assessed and planned. Through focusing on possibilities for integration it enables us to identify new routes for linked-up, consumer-centred approaches to care. Greater integration relies on a global picture of all the services available, regardless of which sector is funding them (i.e. Health, Social Welfare and Family, Employment, Criminal Justice).

Integrated Atlases allow policy planners and decision makers to understand the landscape in which they work (including areas of gap or over-supply), make bridges between the different sectors and to better allocate services. This is particularly important as mental health services become more 'person-centred' (placing the person and their needs at the centre of their care) and public investment focuses on person-centred care coordination programs such as Partners in Recovery (PIR) or the National Disability Insurance Scheme (NDIS).

This Atlas uses a standard classification system, the "*Description and Evaluation of Services and Directories in Europe for long-term care*" model (DESDE-LTC), to map the services. The use of a common language has allowed us to compare the pattern of mental health care provided in Western Sydney with regions in Europe. These comparisons are useful for learning lessons from service and policy approaches taken in other countries.

Data on services providing care for people with a lived experience of mental ill-health in Brisbane North was collected from mid-April to end of July. We received 18 on-line responses and an additional 16 face-to-face interviews with large mental health provider organisations. These were from a list of 69 organisations provided by the Metro North Brisbane Medical Local.

The strengths in the mental health service system in Brisbane North, particularly with the addition of the PIR and ATAPS services, have been found to be:

1) An adequate number of acute care beds
2) A high degree of mobility for outpatient care
3) Existing service locations and catchments are relatively well aligned to geographic areas of higher population need, meaning that overall there is a good level of accessibility to those services.

However there are major deficiencies or gaps in both the spectrum of care available and the capacity relative to population needs in Brisbane North. We have found four major gaps in the provision of services in the Brisbane North region:

1) Hospital sub-acute care
2) Non-hospital acute and sub-acute care
3) Acute and non-acute health care day-related
4) Low availability of day care centres related to employment.

Future Steps

This Atlas maps in a comprehensive way the stable services providing care for people with lived experience of mental illness and uses publicly available socio-demographic information on the Brisbane North population. However, to have a complete picture of the situation, the results of this Atlas should be completed by mapping and analysing the:

(i) *Mapping the modalities of care provided by service providers*: using the International Classification of Mental Health Care

(ii) *Needs of the primary care physicians and other providers related to the provision of mental health*: General practitioners 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.

(iii) *Rates of other chronic diseases relevant to people with mental ill-health:* the rates of a number of other chronic health conditions including cardio-vascular disease, Type 2 Diabetes, obesity and musclo-skeletal conditions should be added to future maps.

(iv) *Rates of utilisation of the health care services*, by MTC, using the information provided in the administrative databases: the analysis of service utilisation will detect 'hot' and 'cold' spots and areas of improvement.

(v) *Rates of utilisation of the other relevant services:* the rates of and distributions of services such as Ambulance, Police, Domestic Violence and child protection.

(vi) *Financing mechanisms and financing flows:* This will allow us to delve into important areas such as the *Better Access Program*, community mental health services provided by NGOs and housing.

(vii) Level of integration of the services providing mental health care and the philosophy of care of the services.

The information provided in this Atlas is particularly useful for navigation, management and planning by PIR staff, service planners and managers and consumers.

Conclusions

The critical areas for progress listed here, complement the recommendations and action steps set out in the hospital transitions pathways report, *One System, One Team* provided by ConNetica to NB PIR in August 2015 (Mendoza et al, 2015).

To sum up, the critical areas of progress are to:

- Increase the number of sub-acute beds, specially due to the lack of alternatives to hospitalisation
- Develop alternatives to hospitalisation, such as day hospitals, and residential facilities in the community, such as crisis houses.
- Develop day care centres related to health staffed with high skilled mental health clinicians and other professionals that can focus on rehabilitation.
- Develop day care centres related to employment ('social firms' or 'social enterprises') for people with a lived experience of mental ill-health to promote their recovery.
- Change from a reactive system to a proactive system, to increase the robustness of the system, particularly for NGOs. This implies the provision of long-term funding for the NGO sector, which stabilises operations and allows for long-term planning.
- Incorporate system thinking into policy and planning. This will ease the development of an integrated mental health model of care.

The Mental Health Atlas has clear inclusion criteria. This criteria emphasise the range of services types and programs that are 'stable' – that is, services operating for more than three years and have relatively stable funding. The project revealed a significant number of services that did not meet these criteria – a situation analogous with Eastern European countries. Application of the international tool highlights that current state and Federal government approaches to funding for NGO human and health services is a barrier to integrated care and population level health planning and commissioning – a point highlighted in the 2014 National Mental Health Commission review of services.

This Mental Health Atlas is a starting point for the Brisbane North PHN and Metro North Health and Hospital Services to harness this local evidence to change the mental health system for the benefit of the community.

1. INTRODUCTION

ConNetica, with partners from the Mental Health Policy Unit, Brain and Mind Centre at the University of Sydney, were engaged by Metro North Brisbane Medicare Local PIR (MNB PIR) in February 2015 to undertake an analysis of the current mental health services and population mental health needs for the region. This 'mental health atlas' project was identified as one of a suite of four priority projects by BN PIR to improve the current response to needs by building future capacity within the region.

The other three projects focus on the transitions to and from hospitals, the development of a comprehensive web based directory navigation tool for mental health in the region, and a project to improve the effectiveness of NGO in-reach within the three hospital catchment areas.

The overall aim of this project is to improve the "patient experience" and build a more collaborative, coordinated and integrated service system for people with severe disability from mental illness.

The following objectives were set for this project:

- Increased understanding of the current state of mental health need and service response in Brisbane North.
- Future service planning will better meet the needs of adults with a mental illness residing in Brisbane North.
- Existing services will be provided in a more coordinated way, based on the needs of consumers and their family/carers.
- Access to services and supports will be easier for consumers, carers and service providers through service navigation information and support.

The key deliverables for the project were defined as:

- Map/profile mental health need of adults in Brisbane North through collating various sources of existing population based research and service data.
- Map and quantify current (2014/15 – 2015/16) service provision (building on service mapping already undertaken) and capacity.
- Map and quantify service utilisation through collating various sources of existing population data and service data.
- Hold a workshop with the Working Group (+ others) to present the mapping information and help develop meaning.
- Use the data to 'tell the story' of mental health need and service response.
- Produce a written report.

2. FRAMEWORK

The philosophy of mental health care reform has been built on key principles of community psychiatry, with four linked areas of action (Vazquez-Bourgon et al, 2012):

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 (Ibrahim et al, 2014).

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*. It took a further 10 years and the Human Rights Commission inquiry (The Burkedin Inquiry) to establish the first National Mental Health Strategy (Mendoza et al, 2013). 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 (National Mental Health Commission, 2014).

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 (Zhang et al, 2011); 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 (Light et al, 2012); and high rates of seclusion with 10.6 seclusion events per 1,000 bed days in 2011-12 (AIHW, 2015). These features are associated with a system characterised by fragmented, hospital-based, inefficient provision of care. 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 (Mendoza et al, 2013).

The situation in Brisbane North is no better than in the rest of Australia. There is no publicly available data on readmission rates, compulsory treatment orders, or rates of seclusion. Yet according to data from the Public Health Information and Development Unit, it an area that includes postcodes of high risk of psychological distress.

In this context it is crucial to provide policy and service decision makers with every tool and opportunity to make better, more intelligent choices about future investments in 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 their reform journey.

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

What are Integrated Mental Health Atlases?

The WHO Mental Health Gap Action Program (mhGAP) has highlighted the need for a comprehensive and systematic description of all the mental health resources available and the utilisation of these resources (WHO, 2008). 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 health (Health Foundation, 2014).

The 'integrated care model' has challenged the way health-related care should be assessed and planned (Goodwin, 2013). It enables us to identify new routes for linked-up, consumer-centred approaches to care. Greater integration relies on a global picture of all the services available, regardless of which sector is funding them (i.e. 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 (Savigny, 2009; Aslanyan et al, 2010). This is particularly important in the mental healthcare sector, which is characterised by increasing personalisation of services and care coordination programs such as Partners in Recovery (PIR) or the National Disability Insurance Scheme (NDIS). Indeed, there are only a handful of locations across Australia to systematically develop an innovative, system wide and sustainable service model for providing coordinated and integrated care services (NSW Health, 2014).

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 allows policy planners and decision makers to build bridges between the different sectors and to better allocate services (Salvador-Carulla et al, 2012).

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 (Parrott, 2008).

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 (i.e. they include all funding providers) 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 Brisbane North will change the culture of planning and, consequentially, 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 individuals experiencing mental ill-health (Fernandez et al, 2014).

How was the Integrated Atlas of Mental Health Assembled?

Typically, general atlases of health are formed through lists or directories of services and inclusion of services is based on their official or everyday titles. This is particularly problematic for several reasons (Salvador-Carulla et al, 2011):

> 1) The wide variability in the terminology of services and programs even in the same geographical area and the lack of relationship 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 'service' is an umbrella term that is used to describe very different components of the organization 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) (Salvador-Carulla L, Alvarez-Galvez J, Romero C, et al, 2013). 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 is focused on the evaluation of the minimal service organisation units or *Basic Stable Inputs of Care* (BSICs).

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, below).

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. end of 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 (Salvador-Carulla et al, 2013)[1]:

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. 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 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.

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

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FIGURE 1: MAIN TYPE OF CARE: CORE CODES

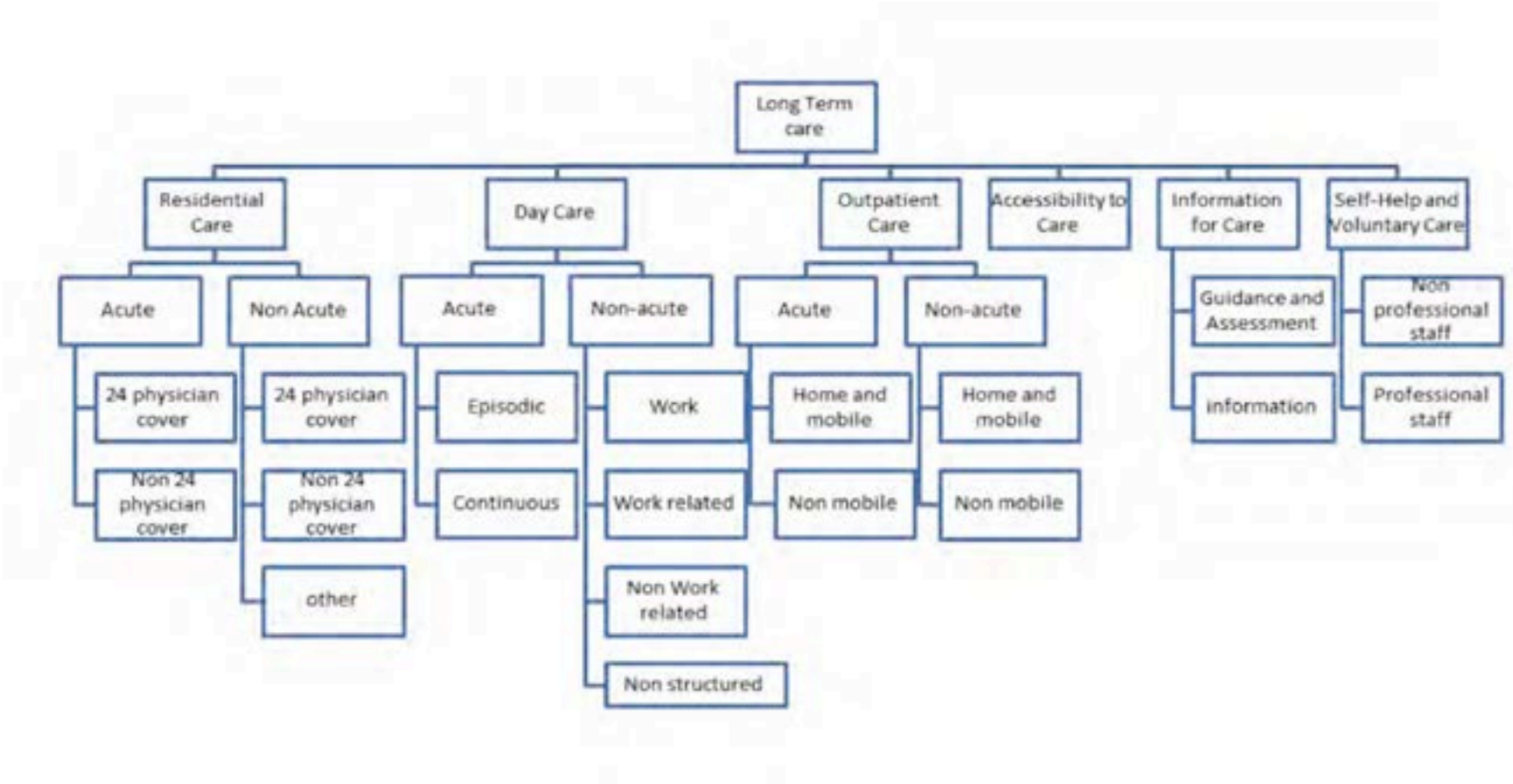

FIGURE 2: RESIDENTIAL CARE CODING BRANCH

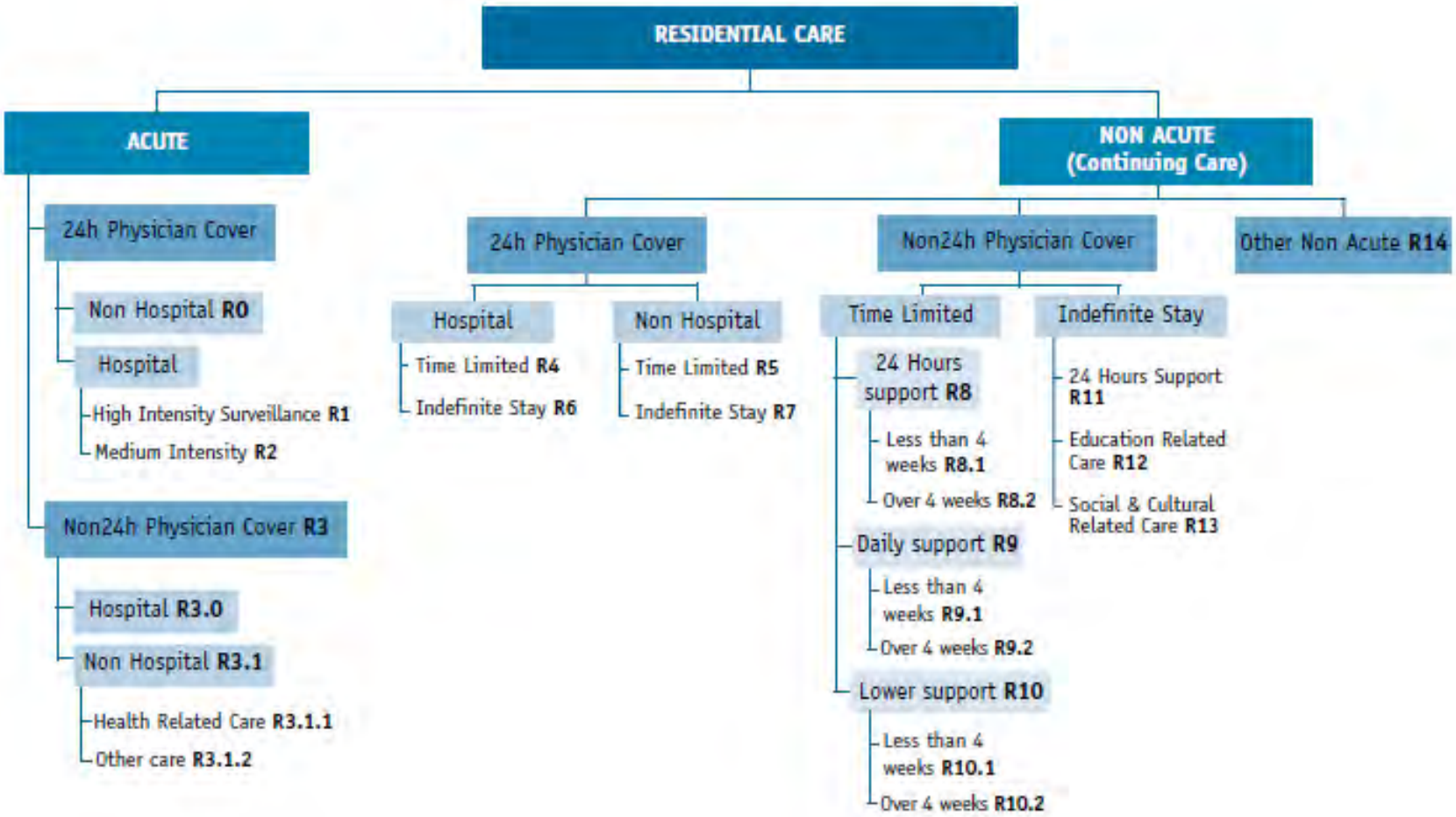

FIGURE 3: DAY CARE CODING BRANCH

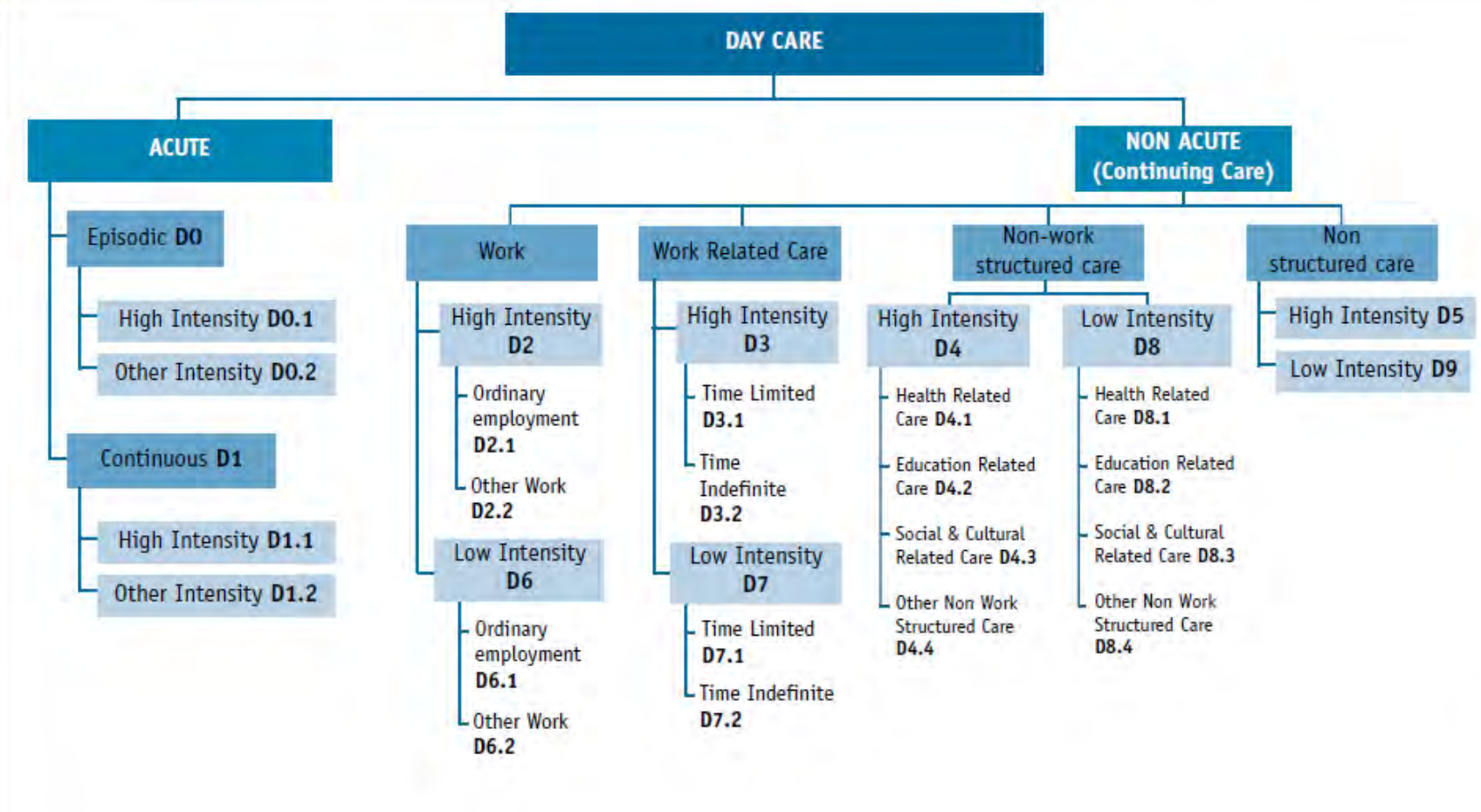

FIGURE 4: OUTPATIENT CARE CODING BRANCH

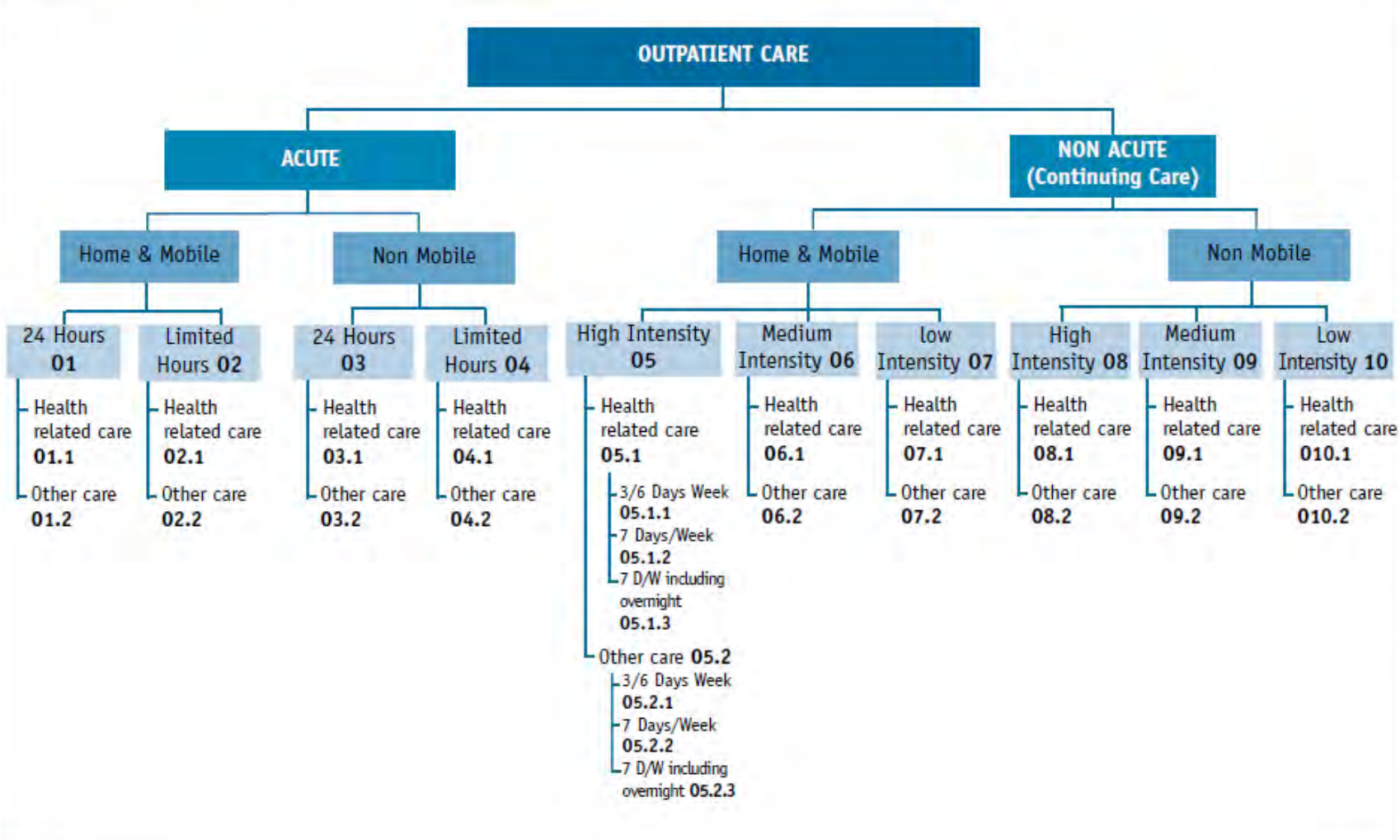

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FIGURE 5: ACCESSIBILITY TO CARE CODING BRANCH

FIGURE 6: INFORMATION FOR CARE CODING BRANCH

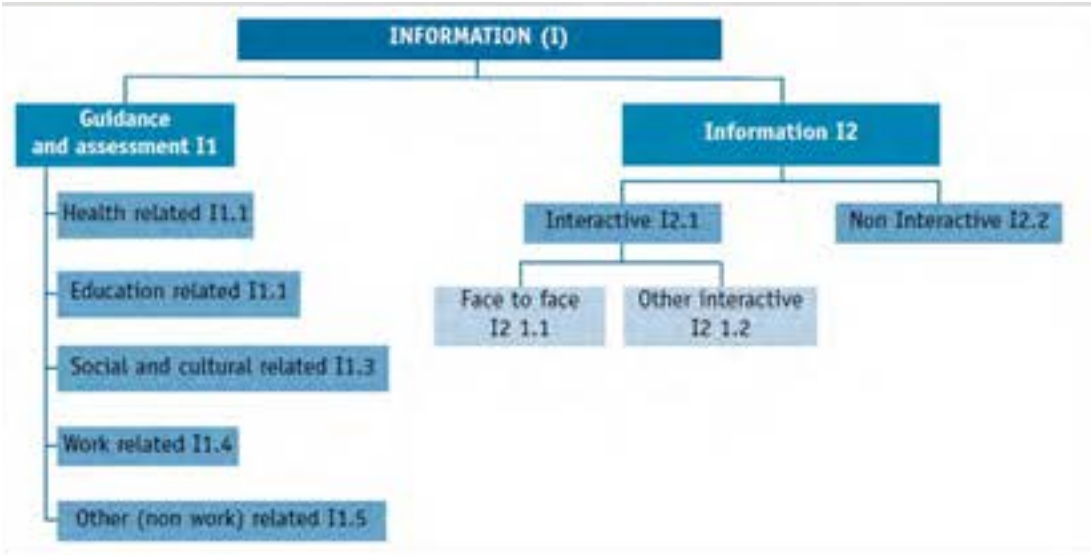
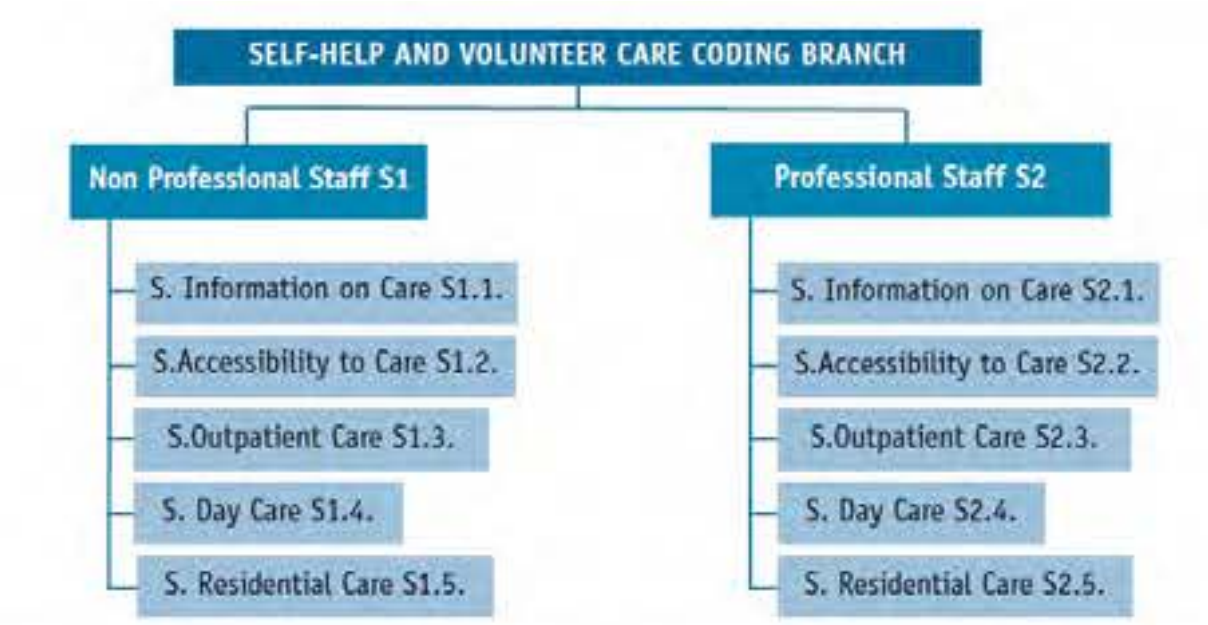


FIGURE 7: SELF-HELP AND VOLUNTEER CARE CODING BRANCH



Inclusion Criteria

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

1) **The service targets people with a lived experience of mental ill-health**: This means that at least 20% of its clients have experienced or are experiencing mental ill-health or psychosocial problems. 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, higher income or savings. 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 jeopardise the use of the Atlas for evidence informed planning.

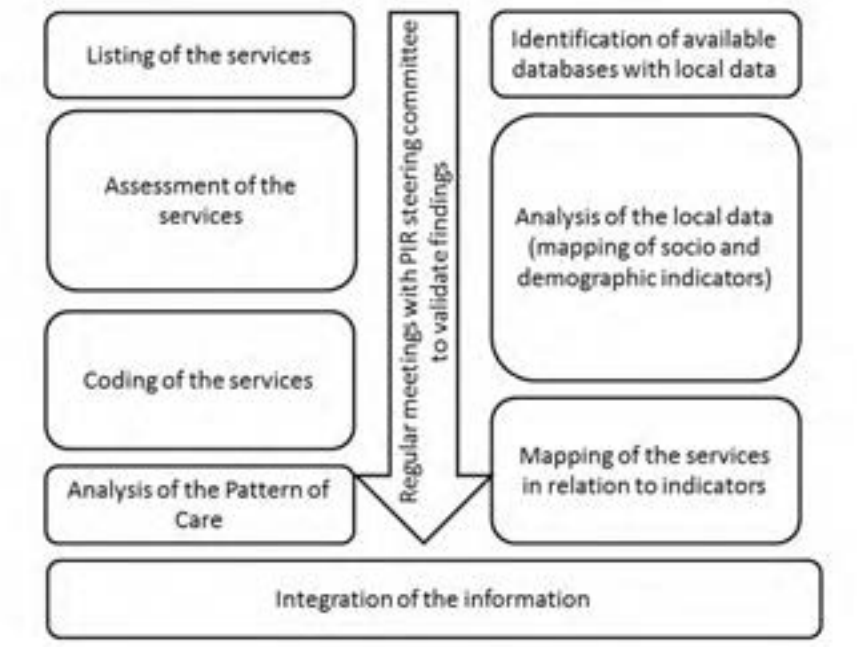
4) **The service is within the boundaries of Brisbane North PHN:** The inclusion of services that are within the boundaries of Brisbane North PHN is essential to have a clear picture of the local availability of resources.

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 type of contact with people with a lived experience of mental ill-health

What process was followed in Brisbane North?

There were four distinct steps in the creation of the Integrated Mental Health Atlas of Brisbane North. Figure 8 summarises the process followed in the development of the Atlas. These steps are explained below.

FIGURE 8: STEPS IN THE DEVELOPMENT OF THE INTEGRATED MENTAL HEALTH ATLAS OF BRISBANE NORTH



Step 1 - Data collection: First we developed a list of all health related services providing care for persons experiencing mental ill-health (provided by North Brisbane Partners in Recovery). 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 project team members.

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).

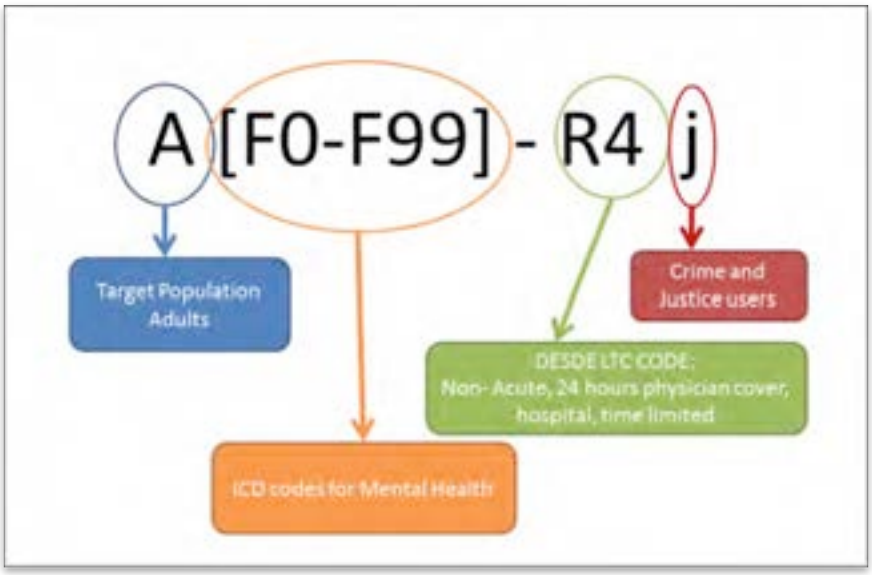
c) **DESDE-LTC code:** The third component of the code is the core DESDE-LTC code which is the MTC. As we have explained before (pages 13-21) the services are classified according to their main type of care. This care can be related to: a) Residential Care (codes starting with R); b) Day Care (codes 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.
- **"j" Justice care:** This additional code describes BSICs whose main aim is to provide care to individuals in contact with crime and justice services.
- **"l" Liaison care:** This additional code describes liaison BSICs where specific consultation for a subgroup of clients is provided to other area (e.g. outpatient consultation on intellectual disabilities to a general medical service, or consultation on mental ill-health for the general medical services of a hospital).
- **"s" Specialised care:** This additional code describes BSICs for a specific subgroup within the target population of the catchment area (e.g. services for Elderly people with Alzheimer's disease within the "E" group, or services for Eating Disorders within the "MD" group).
- **"e" eCare:** this additional code includes all care services relying on telephone, modern information and communication technologies (ICTs) (e.g. telecare/telemedicine, teleconsultation, teleradiology, telemonitoring)..

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 9:

FIGURE 9: COMPONENTS OF THE CODE- AN EXAMPLE OF A SUB-ACUTE FORENSIC UNIT BASED IN A HOSPITAL.



Step 3 Mapping the BSICs:

The next step in the construction of the Atlas was to map the supply of mental health services in relation to indicators of potential demand within Brisbane North PHN. To achieve this step, the classification of mental health services into BSICs was exported into a Geographic Information System (GIS) (Burrough, 1998). This data was augmented through the addition of selected indicators from the 2011 census, sourced from the Australian Bureau of Statistics (ABS), and an area-based indicator of psychological distress (PHIDU, 2015).

A series of chloropleth maps (maps that uses different colours inside defined geographical areas) were visualised in the GIS to illustrate the distributions and small-area variations in each of the demand-related variables, including:

- Density Index: Population/Klm^2
- Dependency Ratio: Population between 0-15 + >64 years old/ Population 16-64 per 100 persons
- Aging Ratio: Population >64 years old/ Population 0-15 per 100 persons
- Percentage of Non-Australian citizenship: Total non-Australian citizenship/total population per 100 persons
- Percentage of Aboriginal & Torres Strait Islander People: Aboriginal & Torres Strait Islander People /total population per 100 persons
- Percentage of Non Married people: population > 15 years old non married or de facto partner/ population > 15 years old per 100 persons

- Percentage of people living alone: Number of homes with just 1 person/ Total Population) per 100
- Percentage of Single Parent Home: Number of adult people living alone with children/ Population > 15 years old per 100
- Percentage of Unemployment People: Number of unemployed people/ population 16-64 years old per 100 persons
- Percentage of Household income <$600 week: Number of household with income <$600 week/ total number of household per 100 households
- Percentage of people who need assistance: Number of people who need assistance/ total population per 100 persons
- Percentage of people with psychological distress: Number of people with different levels of psychological distress according to the Kessler-10/total population per 100 persons.

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

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 Brisbane North with other local areas from England, Finland, France, Italy, Norway and Spain. Data has also been compared with the only other available Australian region to have used the DEDE-LTC Atlas method, Western Sydney. The information on the European Countries has been developed as part of the Refinement Project, funded by the European Commission (The Refinement Project Research Consortium, 2013).

3. Mapping Brisbane North – Socio-Demographic Indicators and Population Health Data

Data Sources

The project team examined publicly available data sources for information on the social, economic and demographic indicators for the Brisbane North region. The key data sources for this information were:

- 2011 Census of Population and Housing. Australian Bureau of Statistics; 2011. Population, population density, ageing ratio, people with a need for assistance with core activities, unemployment, aboriginals & Torres Islanders, non-citizenship, household income, non-married, lone parents, living alone. http://www.abs.gov.au/websitedbs/censushome.nsf/home/seifa
- Social Health Atlases of Australia. Public Health Information Development Unit, University of Adelaide; 2015. Data on estimated psychological distress are refer to 2011-2013. http://www.adelaide.edu.au/phidu/

Additional data sources included Metro North HHS reports and publications, The Chief Medical Officer's Report 2014 – The Health of Queenslanders and Metro North Appendix (Qld Health, 2015) and Population Health Report 2013-14 prepared for Metro North Brisbane Medicare Local compiled by Elliott Whiteing. Data from the latter report has not been replicated in this report.

Results

The Brisbane North PHN region covers over 4,000 square kilometres and at the 2011 Census recorded a population of just over 855,000 persons. This is now reported to be close to 930,000 persons (MN HHS Annual Report 2013-14)

According to the 2011 census data, the region has a younger age profile than the Australian average but is consistent with the Queensland age profile with approximately 7% under the age of 5 and nearly 34% under the age of 25 years. Children 5-14 years made up 12% while young adults 15-24 years made up 15% of the population. Just under 13% of the population were aged 65 years or more.

The Brisbane North region includes large areas of very low population density (less than 37 persons per square klm), with a number of smaller pockets of high density (over 2,264 persons per square klm) concentrated around the Brisbane River suburbs and inner north. This mix of high density urban, medium density urban, low density semi-urban (acreage) and very low density rural presents challenges for health service planning (see Figures 11 and 12).

The indigenous population totalled just under 15,000 persons or 1.7% of the total population. The largest numbers of Indigenous people reside in the Caboolture areas (see Figure 19). In terms of cultural diversity, some 22% of residents were born overseas. The highest concentrations of non-Australian citizens reside in the Nundah area, the river suburbs of the inner west and North Lakes/Mango Hill (see Figure 18).

A number of indicators of social and economic status are included in the population maps. These are: number of dependents, number of elderly people, lone parents, living alone, those with a need for assistance with core activities, unemployment and household income. The most socially and economically disadvantaged suburbs are found in Redcliffe-Caboolture hospital catchment – particularly Bribie, Deception Bay, Redcliffe, Mango Hill, Caboolture, Kilcoy-Linville.

Finally we have included the map of the estimated psychological distress for the region (see Figure 23). This is the estimated percentage of the adult population with high or very high levels of psychological distress. These are concentrated in the Bribie, Deception Bay, Redcliffe, Mango Hill, Caboolture areas and in the St Lucia (with a large student population), Chermside and Zillmere areas. Other notable areas include Enoggera (centred on the Australian Defence Force facility), the inner city, Caboolture South-Morayfield, Bracken Ridge-Bray Park-Brendale and Sandgate-Deagon-Nundah.

Table 1 provides a summary of each social-demographic factor for each hospital catchment, the region as a whole and for all of Queensland and Australia.

Table 2 provides some key socio-demographic data with morality due to intentional self-harm (suicide) and road trauma across the Federal Electorates in the region. Suicide deaths exceed road trauma deaths by a factor of three.

There are significant gaps in the available data and this is indicative of the paucity of data on suicide rates by region across Australia – an issue highlighted by the National Mental Health Commission (2014). The data does highlight the significantly higher mortality due to suicide but there is insufficient data to draw correlations between suicide, unemployment and lower educational attainment (both known risk factors for suicide). Figure 10 is an infographic representation of some of this same data.

Table 3 includes the codes for all suburbs across the region.

Comorbidity data on rates of a number of chronic diseases and conditions including cardio-vascular diseases, some cancers (e.g. liver, lung, stomach), Type-2 Diabetes, musculo-skeletal conditions and obesity should be considered in future mapping as these have known high rates on prevalence among people with mental illnesses. Other behavioural risk factors such as smoking, diet, exercise and alcohol and other drug use are also relevant to gaining a complete understanding of the epidemiological and social determinants of mental health and ill-health across the region.

TABLE 1: HOSPITAL AREA SOCIO-DEMOGRAPHICS

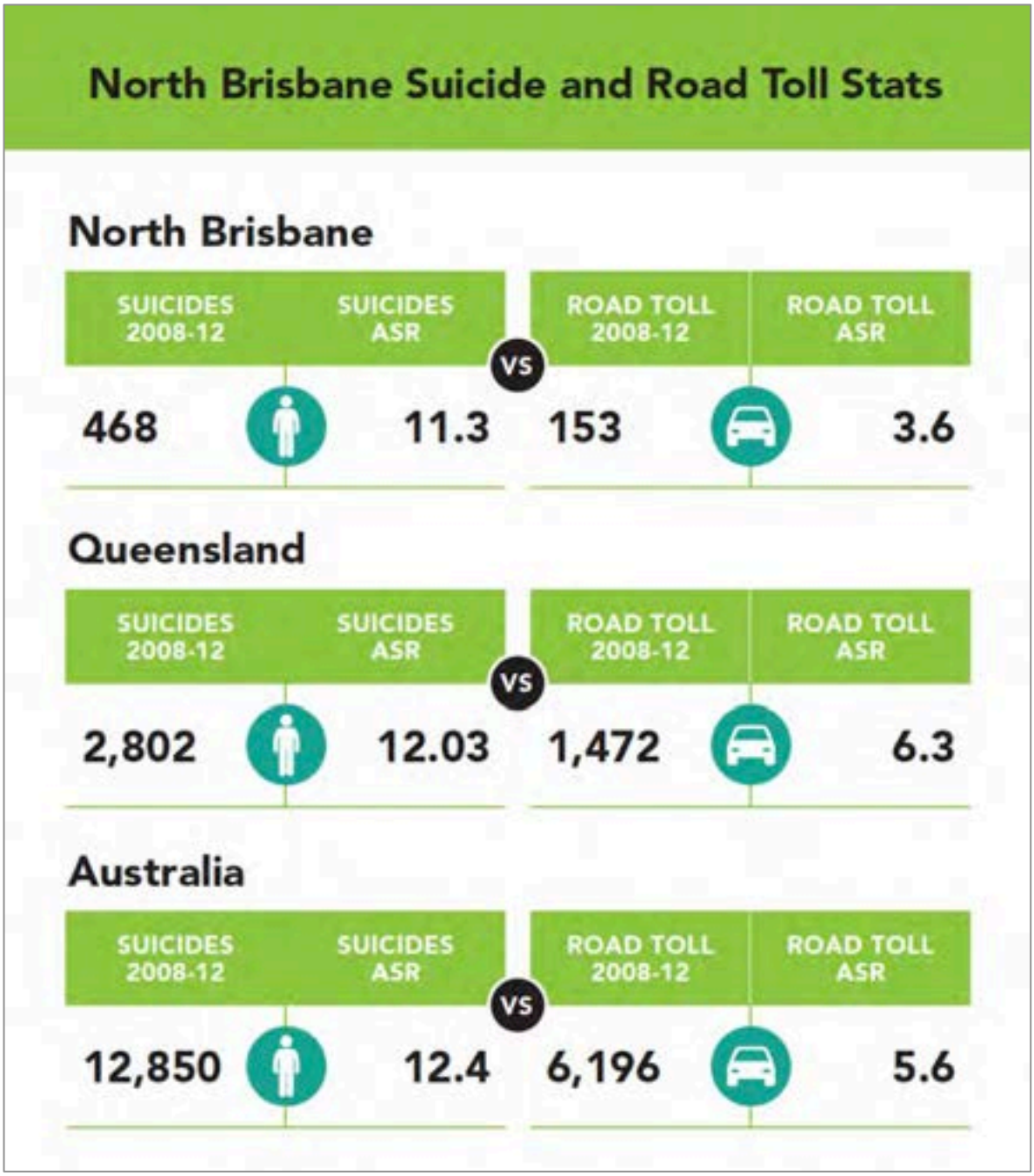
Hospital Area Socio-Demographics

	CATCHMENT AREA					
	Redcliffe Caboolture	Royal Brisbane Hospital	The Prince Charles Hospital	Total	QLD	Australia
Total population	215,128	282,228	358,139	855,495	4,656,803	21,507,717
>18 years old	161,024 74.8%	228,303 80.9%	270,167 75.4%	659,494 77.1%	3,424,122 73.5%	15,957,894 74.2%
Population density – inhabitants / Km²	55.99	795.82	394.85	167.61	2.6	3.0
Dependency ratio – number of dependents per 100 independents	61.98	37.50	51.46	48.90	50.29	49.86
Ageing ratio – elderly people per 100 children	71.67	61.91	55.32	61.63	68.58	72.69
Non-Australian Citizenship (%)	14.25	18.94	13.63	15.54	15.5	15.1
Aboriginal & Torres islanders (%)	2.79	0.86	1.72	1.71	4.25	2.54
Non-married (%)	52.61	59.23	50.69	54.00	52.1	51.27
Living alone (%)	8.41	9.97	7.67	8.61	10.3	8.78
Unemployment rate among working age adults (%)	7.48	5.01	4.79	5.44	6.2	5.6
Household incomes <600$wk (%)	27.58	15.99	17.55	19.49	21.5	21.2
People with a need for assistance (%)	6.37	2.99	4.07	4.29	4.4	4.6
Percentage of estimated population with psychological distress (%)	12.18	9.06	9.77	10.10	7.7%	7.9%

TABLE 2: KEY SOCIO-DEMOGRAPHIC & MORALITY DUE TO SUICIDE & ROAD TRAUMA BY ELECTORATE

Electorate	Total Population	Total in Labour force	Total Unemployment	Sample size for education	Total who completed year 10 or less	Suicide # 2008-12	Suicide ASR per 100,000	Road Toll # 2008-12	Road Toll ASR per 100,000
Dickson	144244	78754	3752	105882	38469	61		14	
		54.60%	4.76%		36.33%				
Longman	155197	71116	5168	110841	54740	162	n/a	68	n/a
		45.80%	7.27%		48.39%				
Petrie	174230	86369	5002	127242	52614	97	n/a	34	n/a
		49.57%	5.79%		41.35%				
Lilley	152252	81588	4048	115507	39018	88	n/a	15	n/a
		53.58%	4.96%		33.78%				
Brisbane	175668	106236	4872	138302	25807	132	n/a	17	n/a
(north of the river)		60.47%	4.59%		18.66%				
Brisbane North Total	**855495**		**0.0544**	**597,774**	**210,648**	**468**	**11.3**	**153**	**3.6**
					35.23%				
Queensland	4332739	2171076	131797	3160203	1264560		12.03		6.3
		50.10%	6.07%		40.01%				
Australia	21507719	10658460	600133	15897494	5952569		12.4		5.6
		49.55%	5.60%		37.40%				

FIGURE 10: NORTH BRISBANE SUICIDE AND ROAD TOLL DATA, 2008-12



Note: ASR is the rate per 100,000 people

TABLE 3: SUBURBS CODES

1	Albany Creek	63	Ferny Hills	125	Nudgee Beach
2	Albion	64	Fig Tree Pocket	126	Nundah
3	Alderley	65	Fitzgibbon	127	Ocean View
4	Anstead	66	Fortitude Valley	128	Paddington
5	Arana Hills	67	Gaythorne	129	Petrie
6	Armstrong Creek	68	Geebung	130	Petrie Terrace
7	Ascot	69	Godwin Beach	131	Pinjarra Hills
8	Ashgrove	70	Gordon Park	132	Pinkenba
9	Aspley	71	Grange	133	Pullenvale
10	Auchenflower	72	Griffin	134	Red Hill
11	Bald Hills	73	Hamilton	135	Redcliffe
12	Banksia Beach	74	Harlin	136	Rocksberg
13	Banyo	75	Hazeldean	137	Rothwell
14	Bardon	76	Hendra	138	Royston
15	Beachmere	77	Herston	139	Samford Valley
16	Bellara	78	Highvale	140	Samford Village
17	Bellbowrie	79	Indooroopilly	141	Samsonvale
18	Bellmere	80	Joyner	142	Sandgate
19	Bongaree	81	Kallangur	143	Sandstone Point
20	Boondall	82	Kedron	144	Sandy Creek
21	Booroobin	83	Kelvin Grove	145	Scarborough
22	Bowen Hills	84	Kenmore	146	Shorncliffe
23	Bracalba	85	Kenmore Hills	147	Spring Hill
24	Bracken Ridge	86	Keperra	148	St Lucia
25	Bray Park	87	Kilcoy	149	Stafford
26	Brendale	88	King Scrub	150	Stafford Heights
27	Bridgeman Downs	89	Kippa-Ring	151	Stanmore
28	Brighton	90	Kobble Creek	152	Stony Creek
29	Brisbane City	91	Kurwongbah	153	Strathpine
30	Brookfield	92	Laceys Creek	154	Taigum
31	Bunya	93	Lawnton	155	Taringa
32	Burpengary	94	Linville	156	Teneriffe
33	Burpengary East	95	Lutwyche	157	The Gap
34	Caboolture	96	Mango Hill	158	Toorbul
35	Caboolture South	97	Margate	159	Toowong
36	Camp Mountain	98	McDowall	160	Upper Brookfield
37	Carseldine	99	Meldale	161	Upper Caboolture
38	Cashmere	100	Milton	162	Upper Kedron
39	Cedar Creek	101	Mitchelton	163	Villeneuve
40	Chapel Hill	102	Moggill	164	Virginia
41	Chermside	103	Moodlu	165	Wamuran
42	Chermside West	104	Moorina	166	Warner
43	Clayfield	105	Morayfield	167	Wavell Heights
44	Clear Mountain	106	Mount Coot-tha	168	Welsby
45	Clontarf	107	Mount Delaney	169	White Patch
46	Closeburn	108	Mount Glorious	170	Whiteside
47	D'Aguilar	109	Mount Kilcoy	171	Wights Mountain
48	Dakabin	110	Mount Mee	172	Wilston
49	Dayboro	111	Mount Nebo	173	Windsor
50	Deagon	112	Mount Pleasant	174	Woodford
51	Deception Bay	113	Mount Samson	175	Woody Point
52	Delaneys Creek	114	Murrumba Downs	176	Wooloowin
53	Donnybrook	115	Narangba	177	Woorim
54	Draper	116	Neurum	178	Yugar
55	Eagle Farm	117	New Farm	179	Zillmere
56	Eatons Hill	118	Newmarket		
57	Elimbah	119	Newport		
58	Enoggera	120	Newstead		
59	Enoggera Reservoir	121	Ningi		
60	Everton Hills	122	North Lakes		
61	Everton Park	123	Northgate		
62	Ferny Grove	124	Nudgee		

FIGURE 11: BRISBANE NORTH – POPULATION BY SUBURB

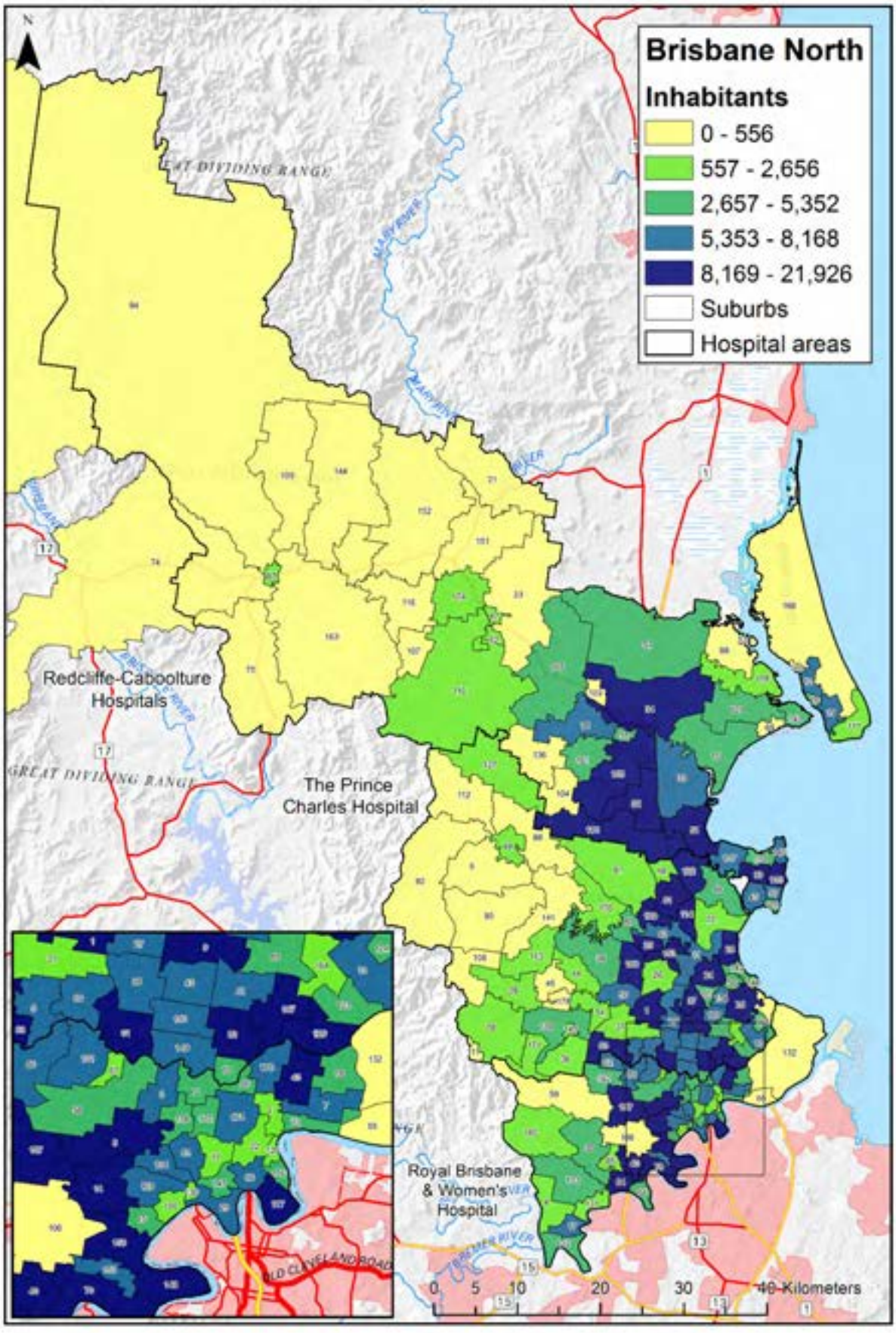


FIGURE 12: BRISBANE NORTH – POPULATION BY DENSITY

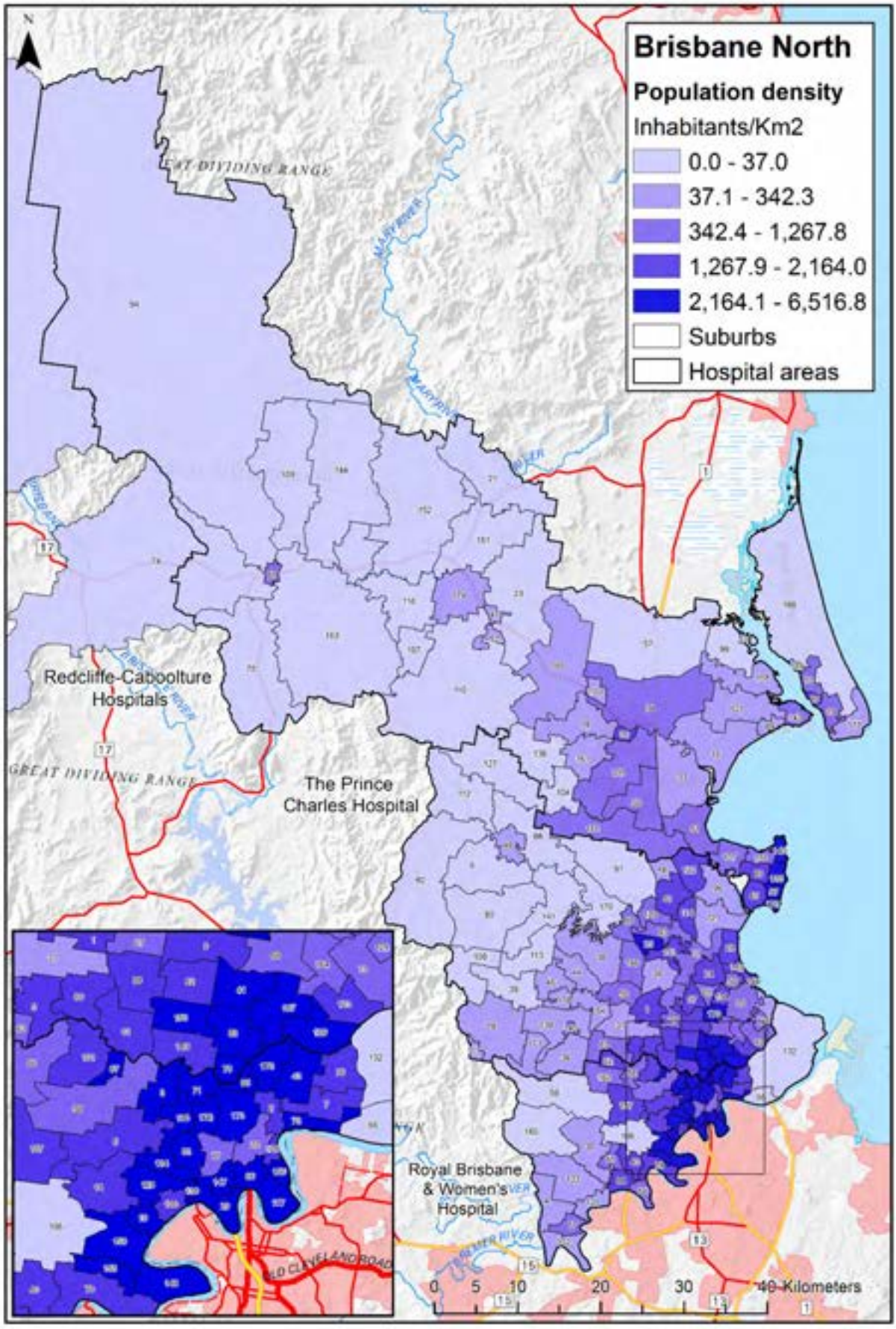


FIGURE 13: BRISBANE NORTH – PERCENTAGE OF ADULTS NON-MARRIED

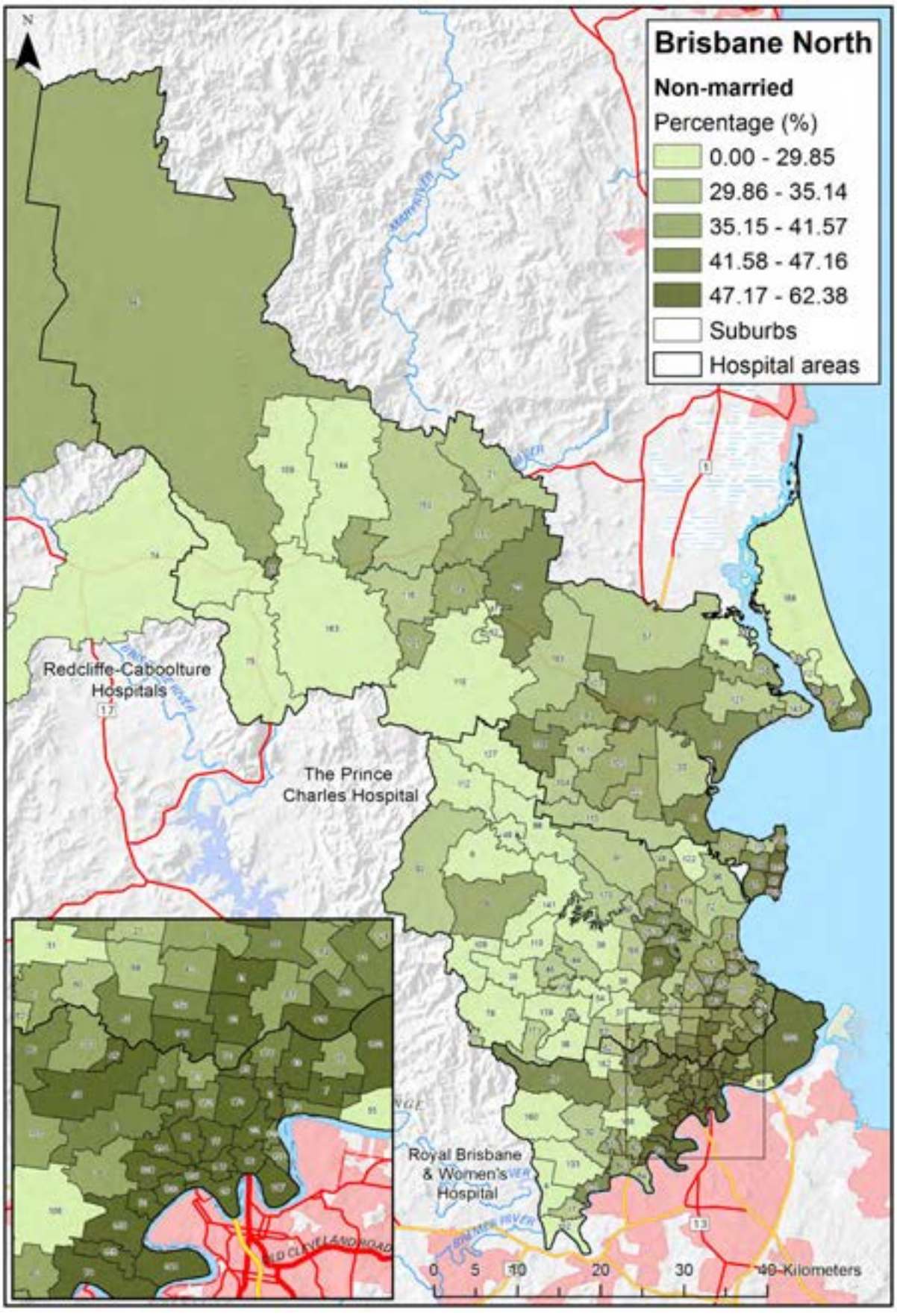


FIGURE 14: BRISBANE NORTH – AGEING RATIO – NUMBER OF ELDERLY PEOPLE PER 100 CHILDREN

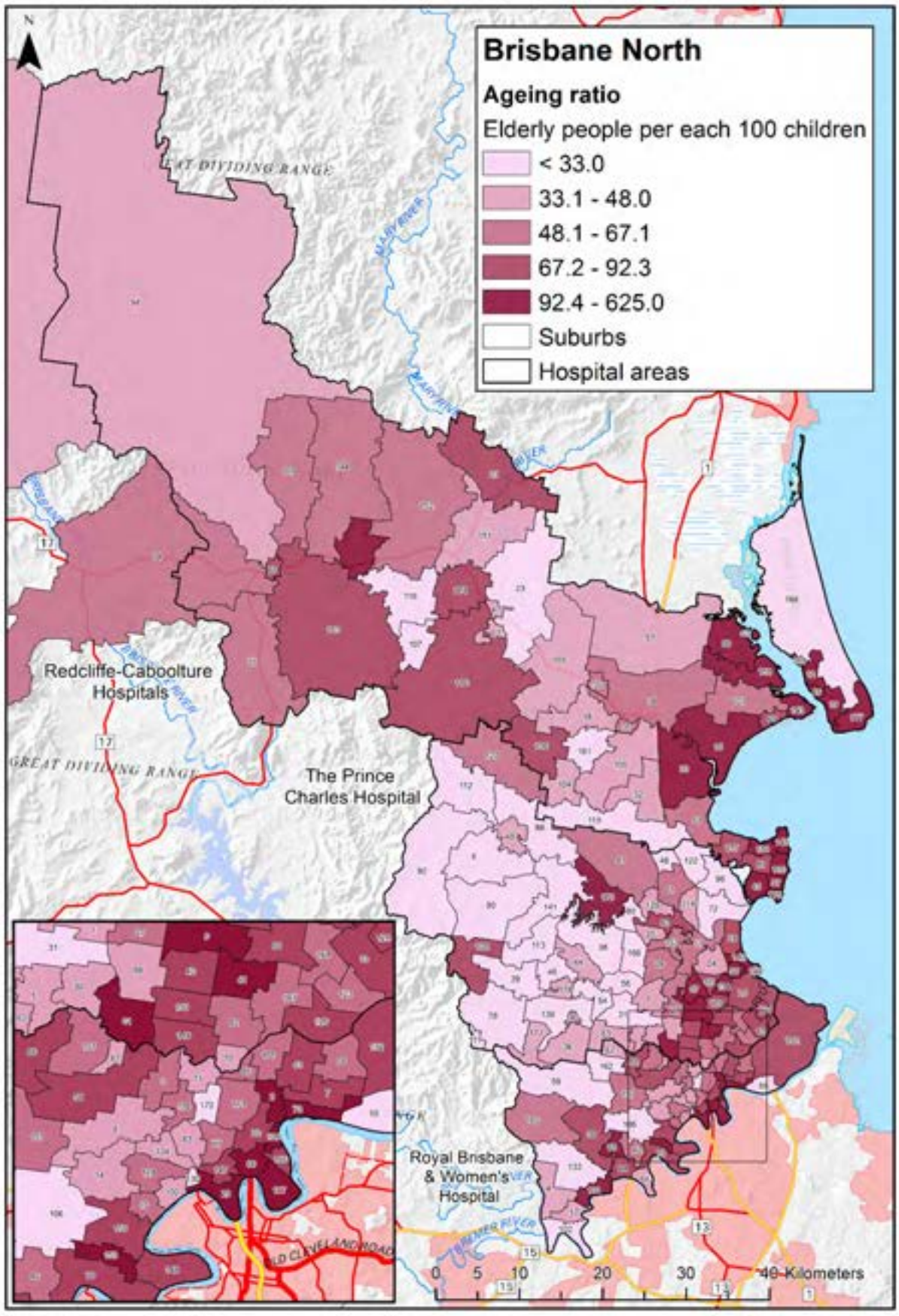


FIGURE 15: BRISBANE NORTH – DEPENDENCY RATIO – NUMBER OF DEPENDENT PER 100 INDEPENDENTS

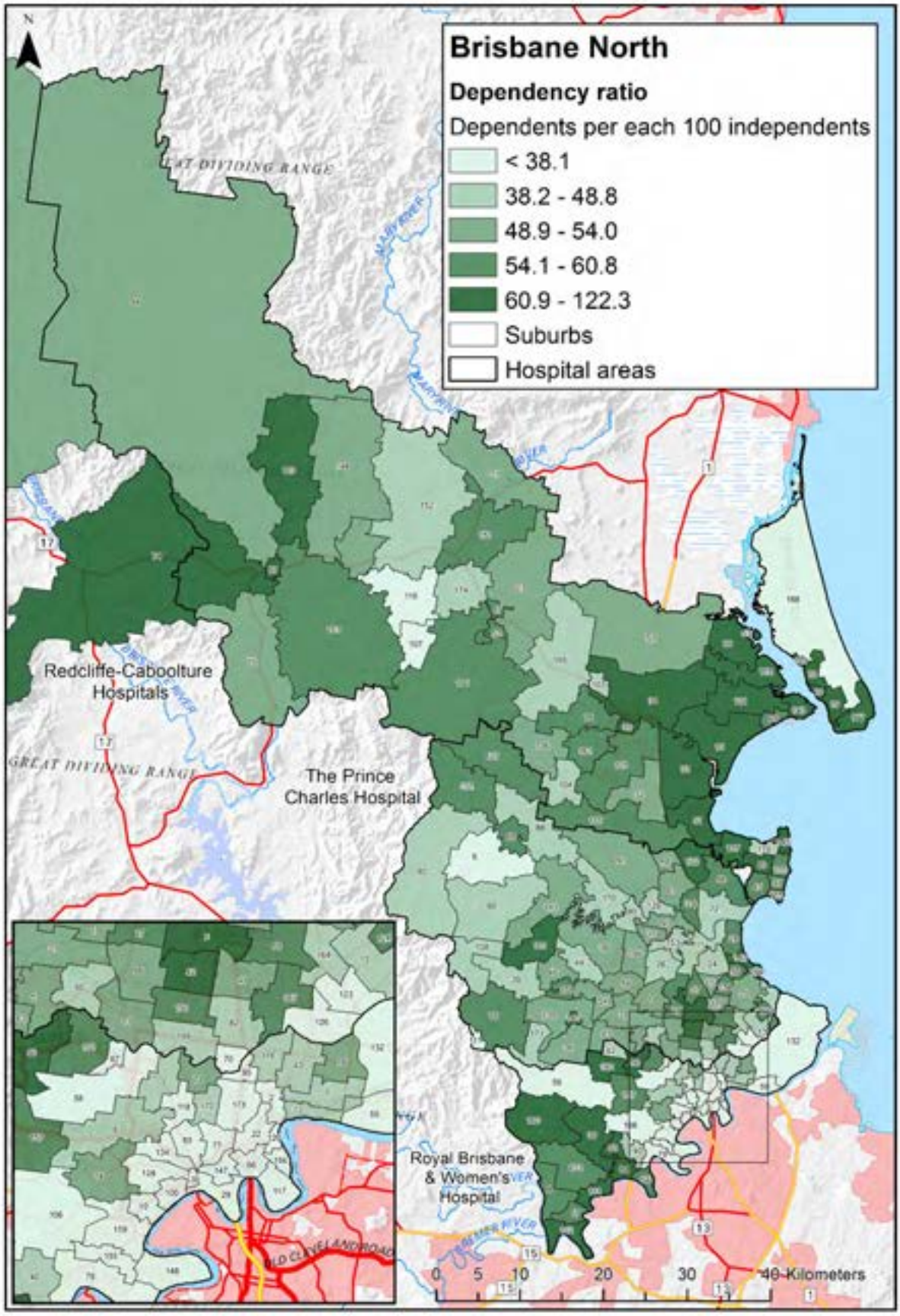


FIGURE 16: PERCENTAGE OF LONE PARENTS

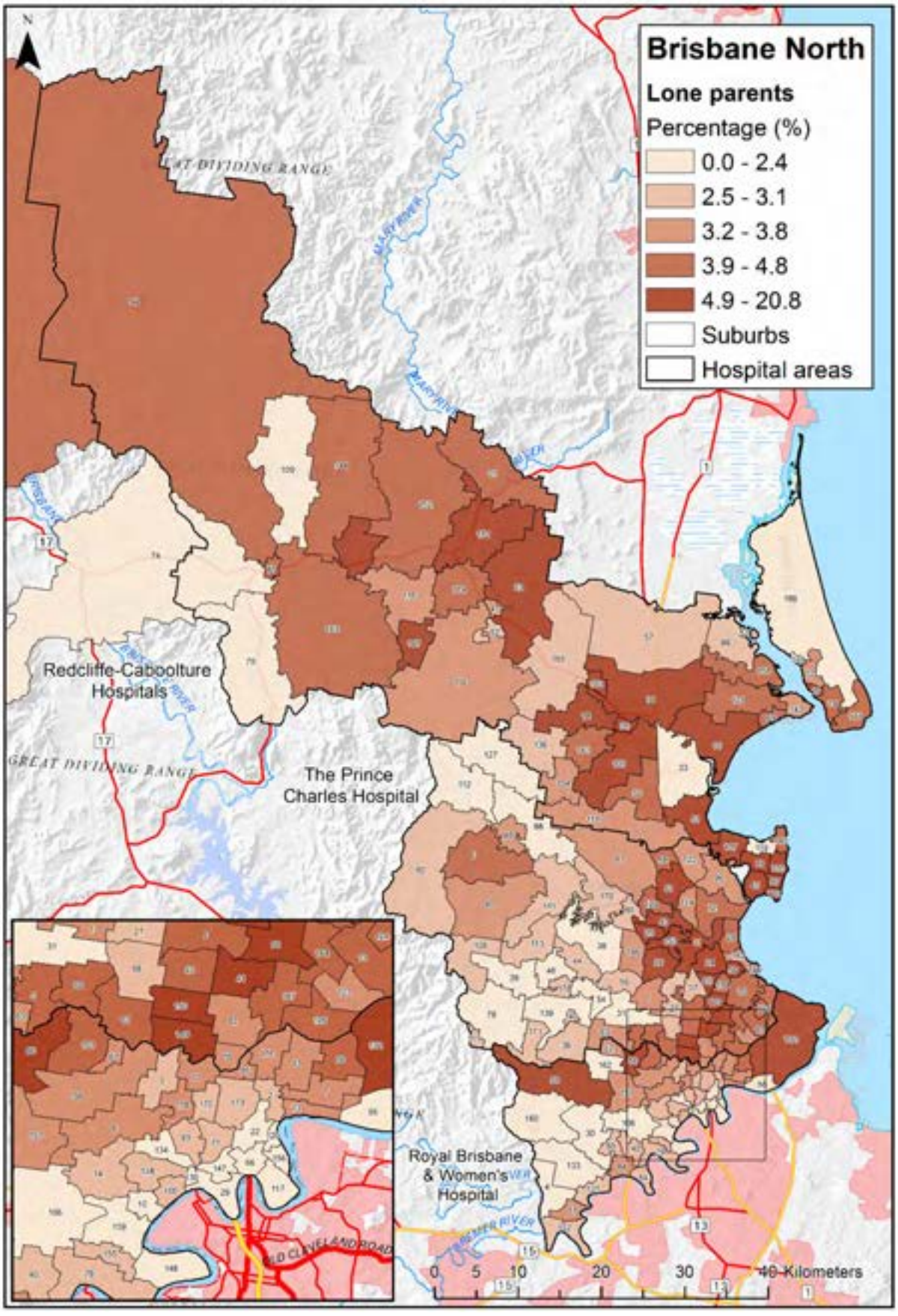


FIGURE 17: BRISBANE NORTH – PERCENTAGE OF PEOPLE LIVING ALONE

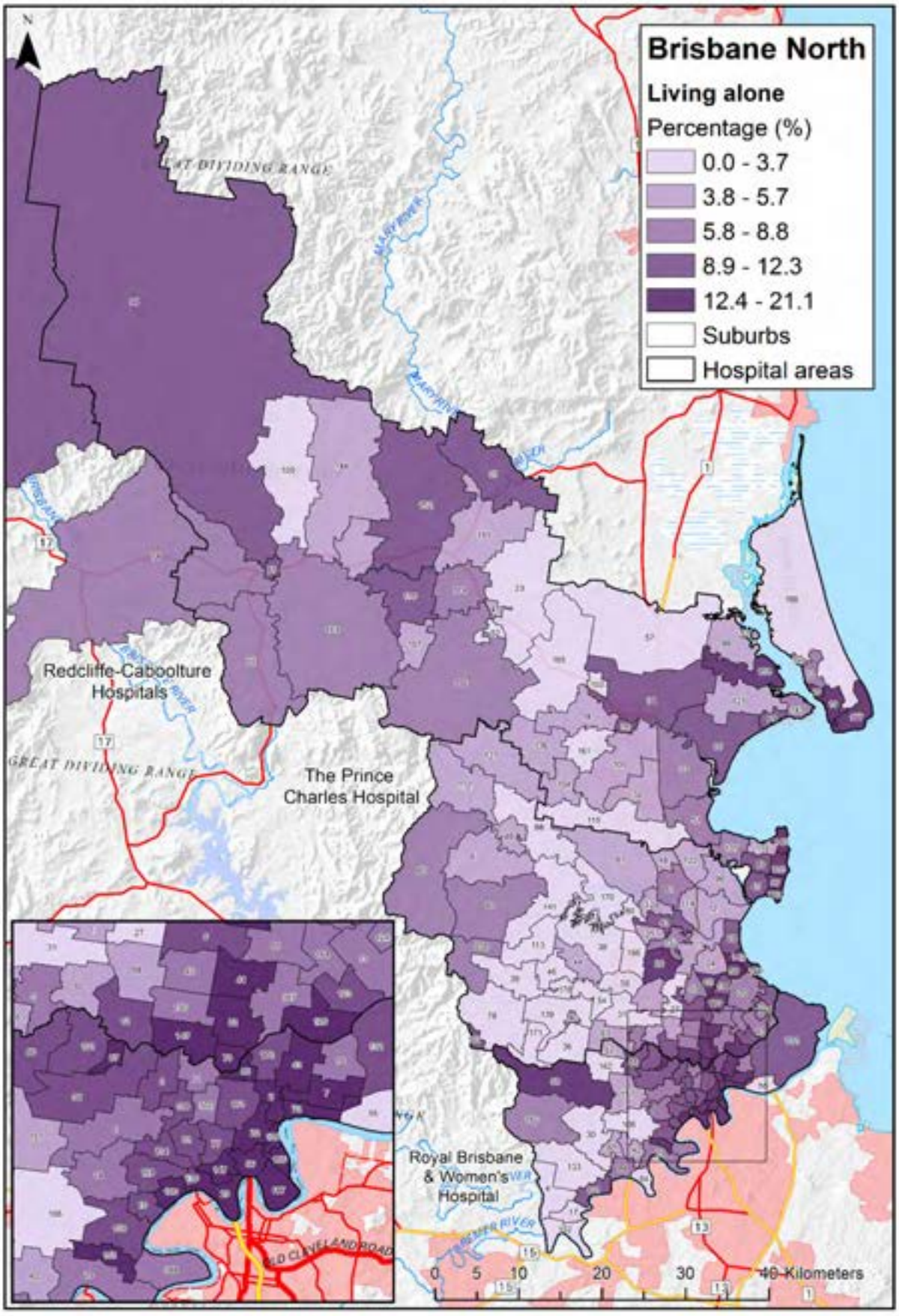


FIGURE 18: BRISBANE NORTH – PERCENTAGE OF PEOPLE WITH NON-AUSTRALIAN CITIZENSHIP

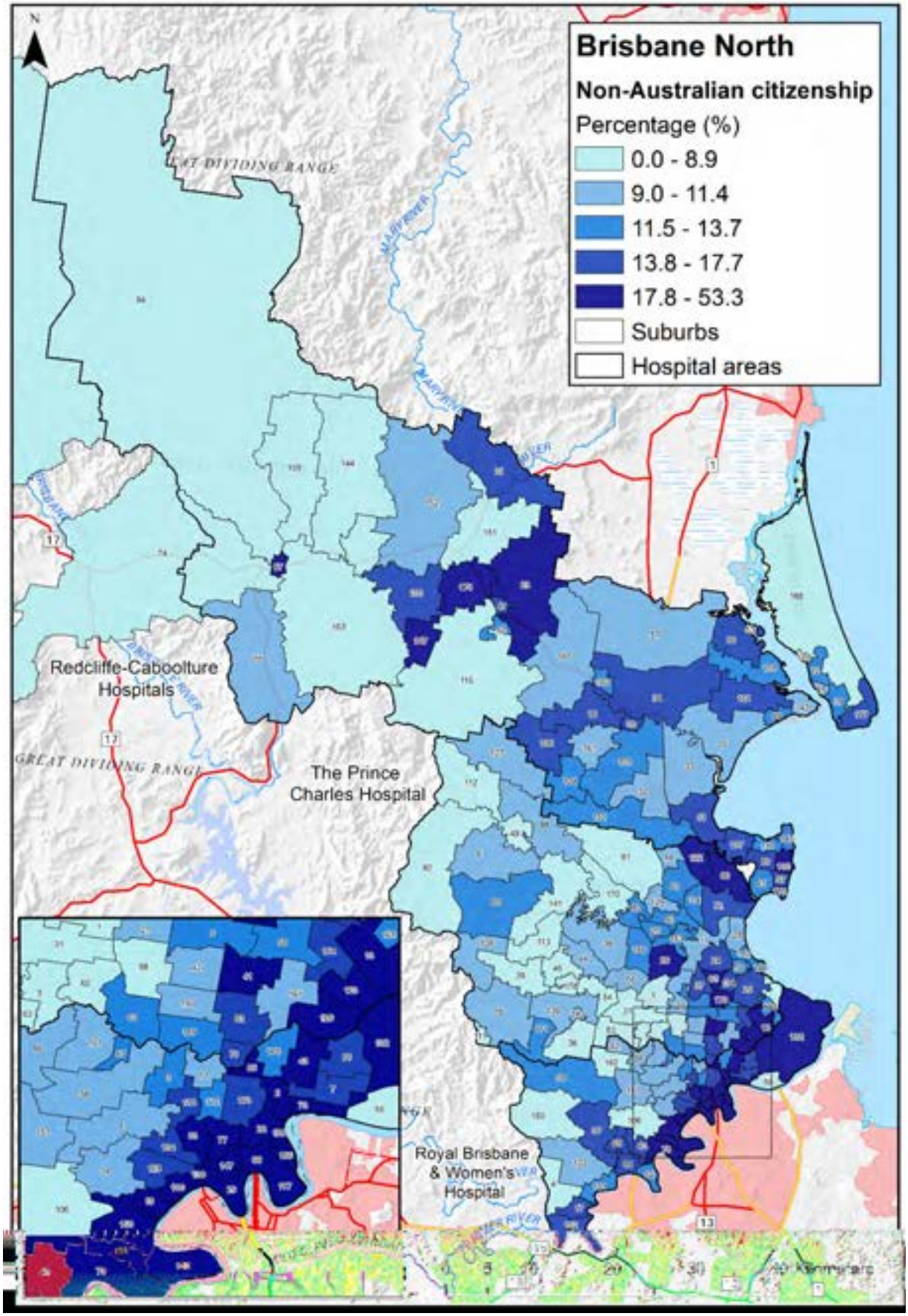


FIGURE 19: BRISBANE NORTH – PERCENTAGE OF ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

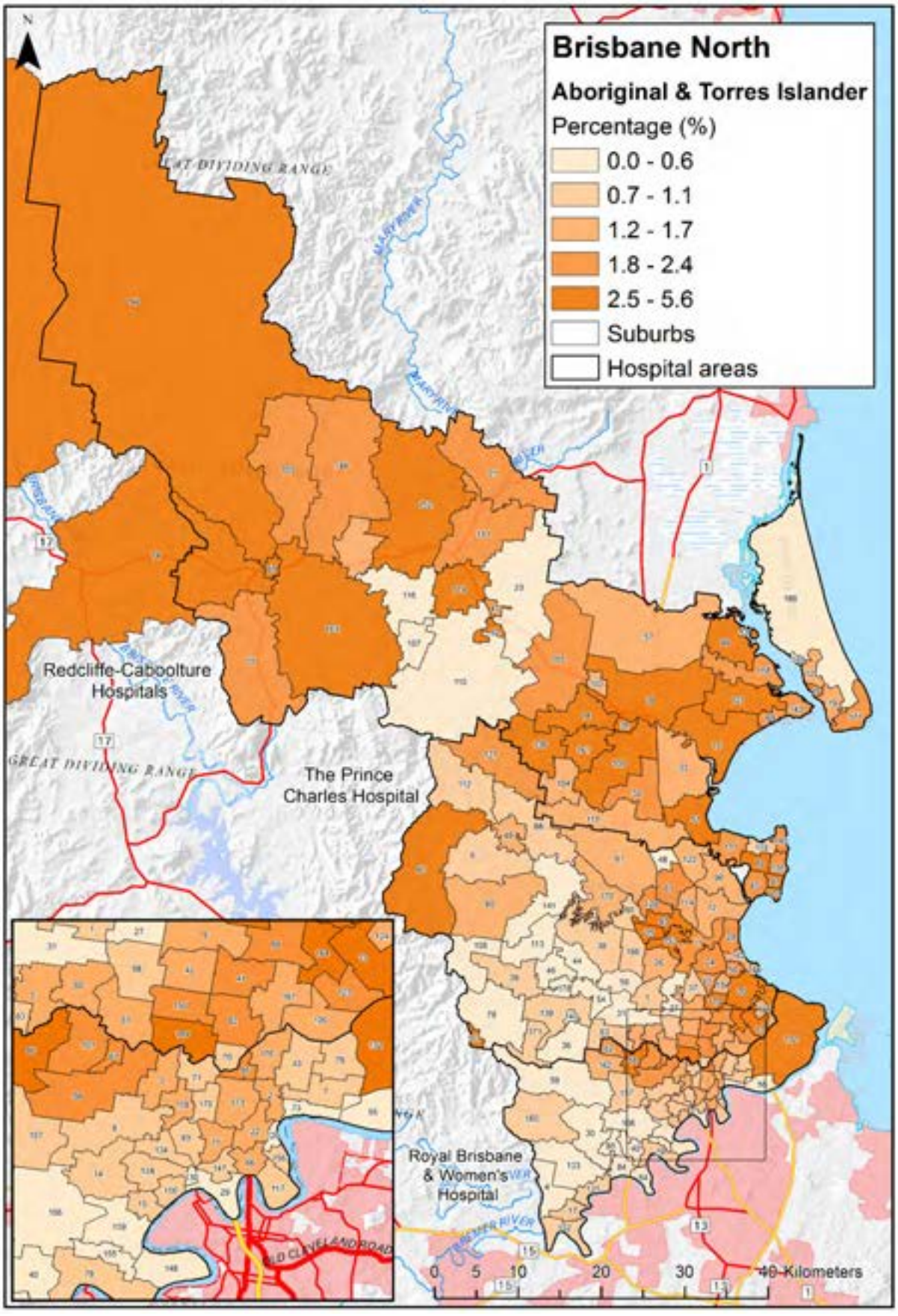


FIGURE 20: BRISBANE NORTH – PERCENTAGE OF PEOPLE WITH A NEED FOR ASSISTANCE WITH CORE ACTIVITIES

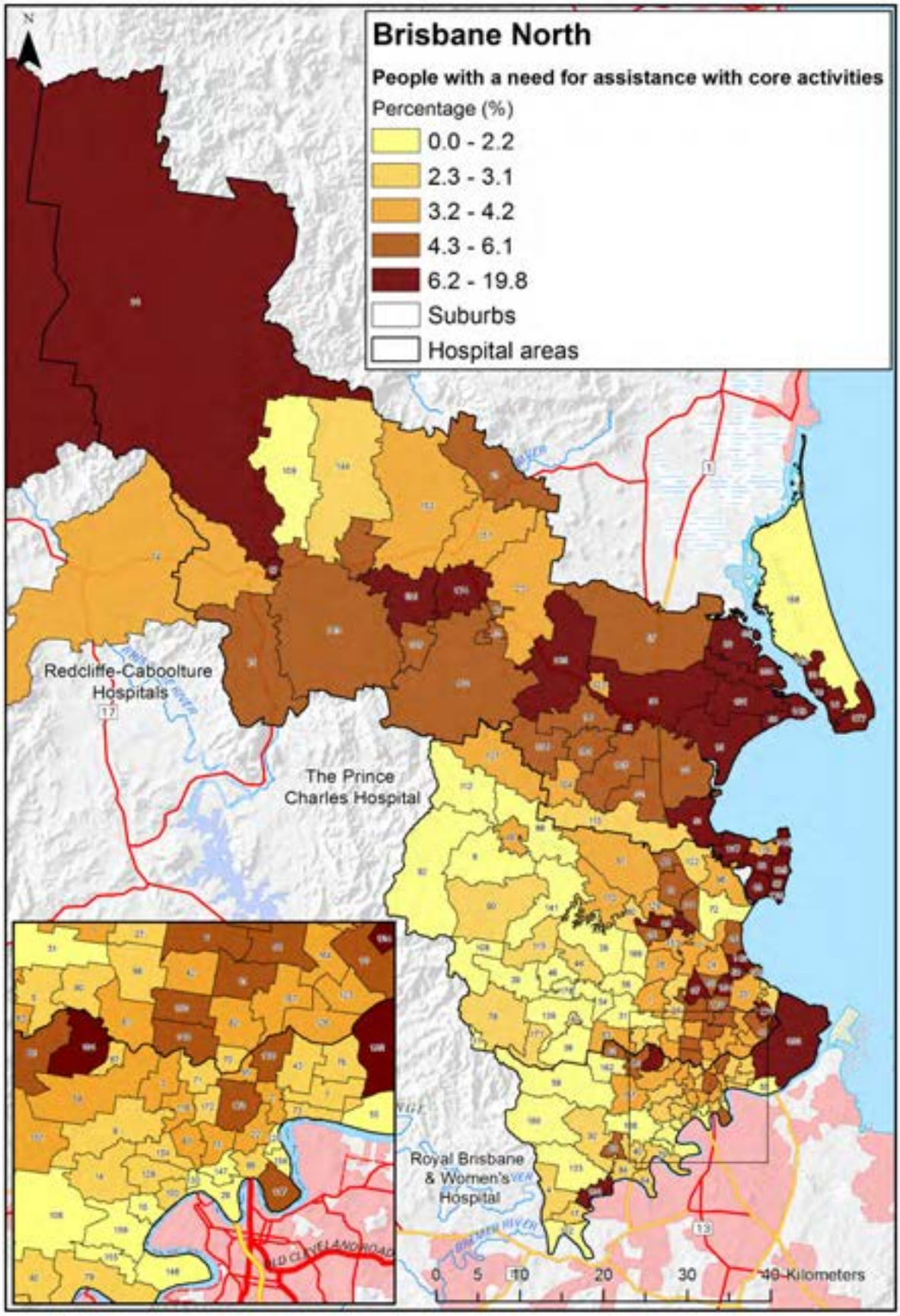


FIGURE 21: BRISBANE NORTH – PERCENTAGE OF HOUSEHOLDS WITH INCOME OF LESS THAN $600/WEEK

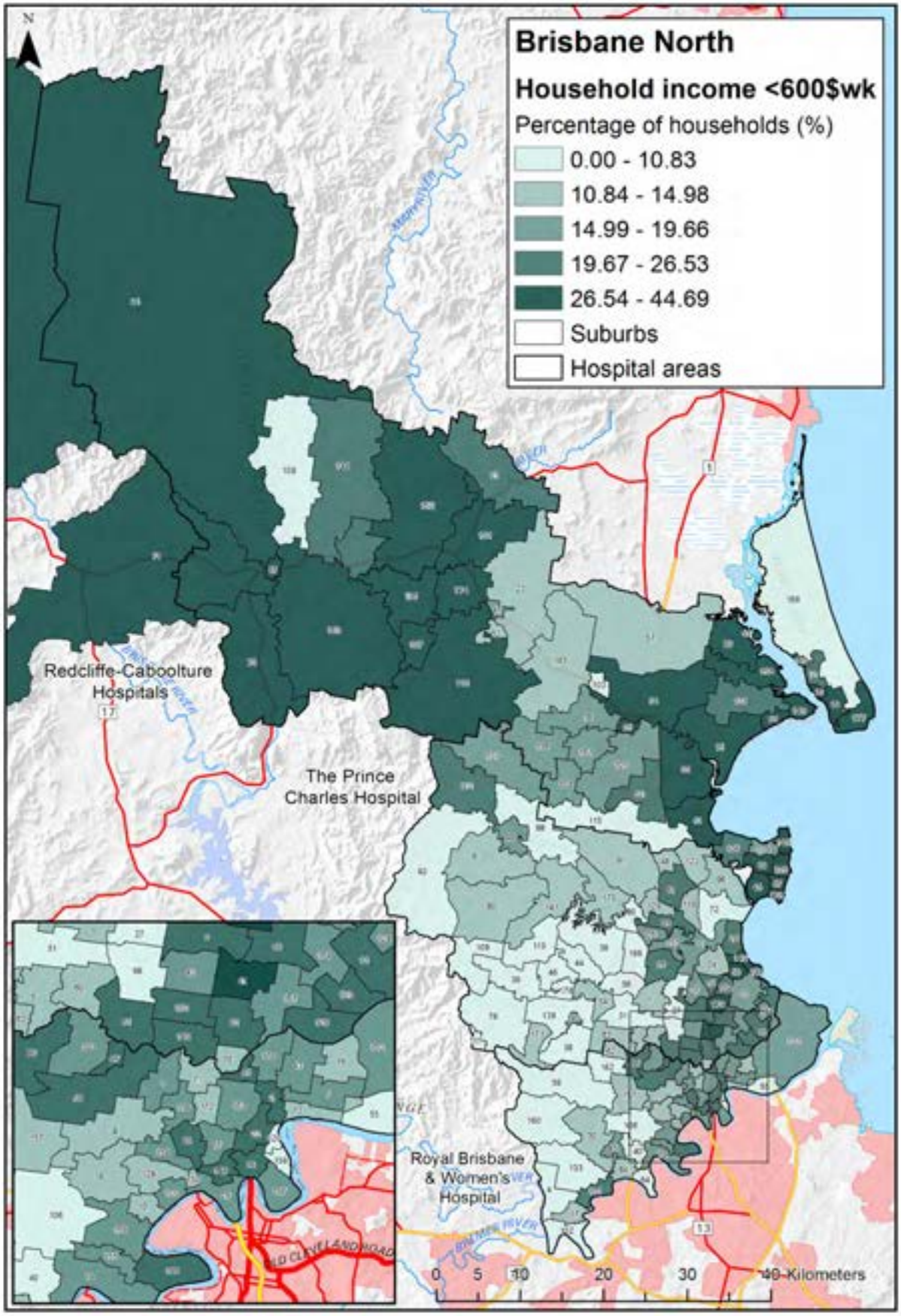


FIGURE 22: BRISBANE NORTH – PERCENTAGE OF PEOPLE OF WORKING AGE UNEMPLOYED

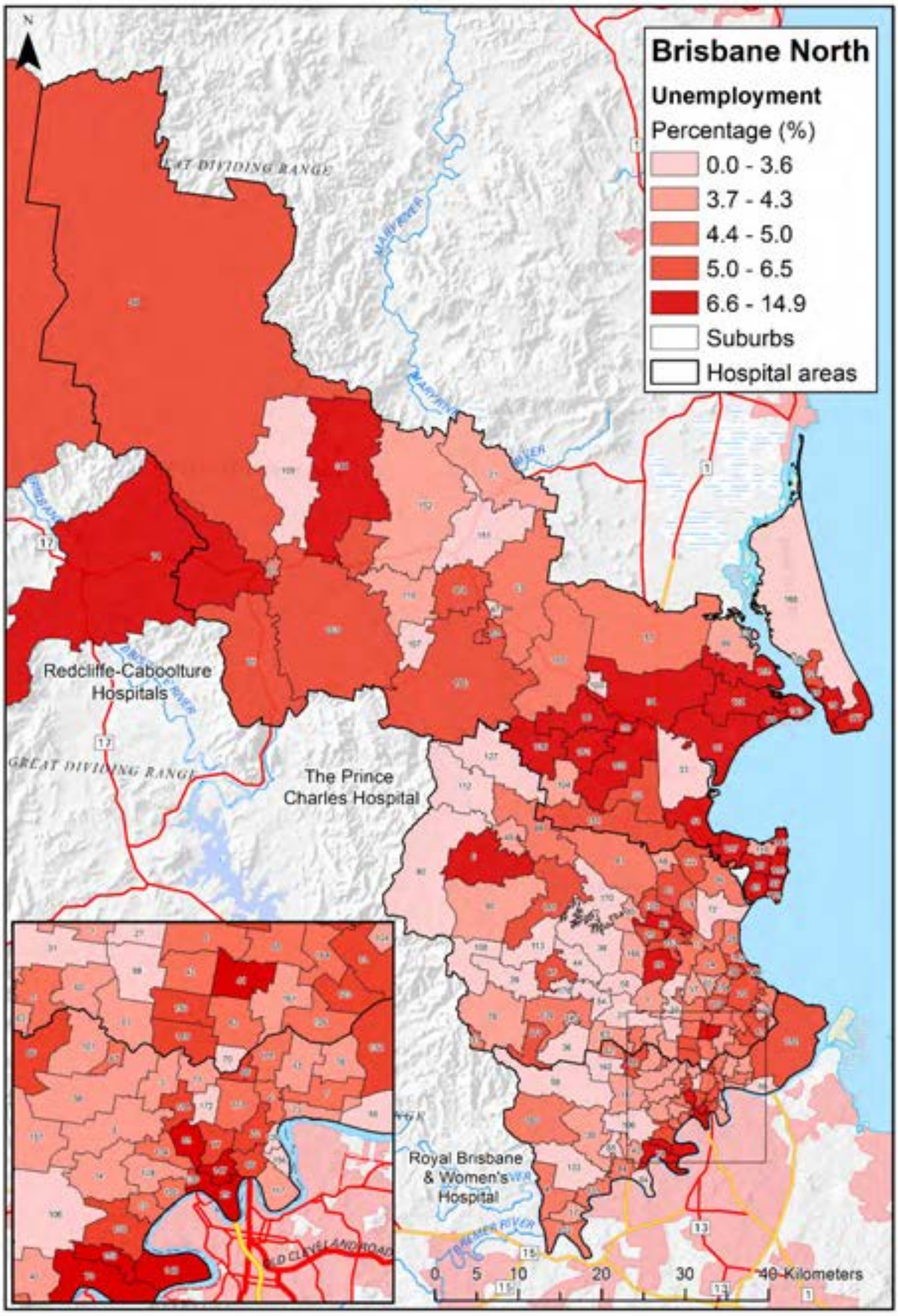
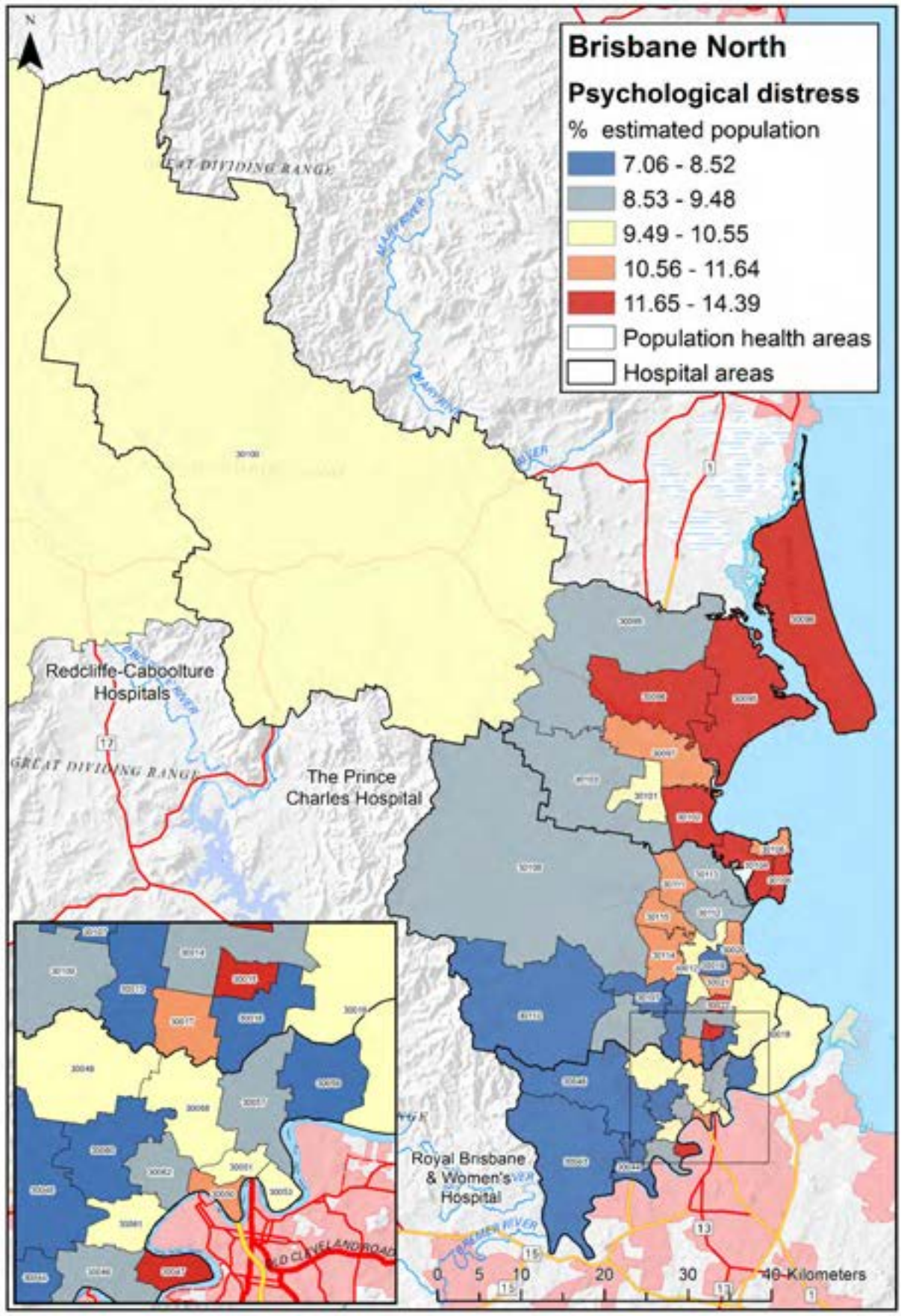


FIGURE 23: BRISBANE NORTH – PSYCHOLOGICAL DISTRESS – PERCENTAGE OF ESTIMATED POPULATION



4. Brisbane North Mental Health Data

Here we have included publicly available population mental health and mental health service data to help 'complete the picture' of the region. For comparative purposes, a brief overview of Australian and Queensland prevalence and service data is given.

Prevalence and Treatment Data for Australia and Queensland

The National Mental Health Commission report in 2014, estimated more than 3.6 million people aged 16-85 years) experience mental ill-health each year (2014). The most recent national survey of Australian children and adolescents (4-17 years) found 13.9% or 560,000 individuals, had a mental health disorder in the previous 12 months (Lawrence D, et al 2015). The NMHC report identifies some 625,000 Australian adults as experiencing "severe episodic or severe and persistent mental illness". A further 65,000 people are identified as having "severe and persistent illness with complex multi-agency needs". These two groups represent 3.1% of the adult population. For 4-17 years, 2.1% or approximately 82,000 children and young adults had a severe disorder (3.3% for 12-17 year olds).

A report to the Qld Mental Health Commission in 2013 estimated that approximately 900,000 Queenslanders experienced a mental or substance use disorder in the year 2011-2012. Nearly three-quarters (74.4%) of these were adults of working age (15-64 years), 15.4% were children aged 0-14 years, and the remaining 10.2% were older adults aged 65 years or more. There were reportedly some 156,000 Queenslanders with severe disorders, 249,000 with moderate disorders, and 492,000 with mild disorders (Diminic S, et al 2013).

With respect to clinical treatment services Diminic and colleagues (2013) estimated that 436,000 people, or 49% of all those with a mental or substance use disorder, received some treatment in Queensland in 2011-12. Theses were distributed as follows:

- Approximately 74,000 people (17%) were treated by public specialised services;
- 78,000 people (41%) were receiving Medicare subsidised treatment from psychiatrists and allied health professionals and
- 134,000 people (31%) received mental health care from a GP only.
- Small numbers of people were treated by other health services (37,000, or 8%) or under the DVA health service structure (13,000, or 3%).
- Community non-clinical support services were provided to an estimated 14% of adults with a severe disorder (Diminic S, et al 2013).

Indicative data suggest that treatment coverage varied considerably according to severity of disorder (94% for people with severe disorders, 64% for people with moderate

disorders, and 26% for those with mild disorder), however these estimates should be interpreted with caution given limitations to the available data.

Prevalence Estimates in Brisbane North

Using the data for Queensland (Diminic et al 2013) for Brisbane North, the estimated prevalence rates are as follows:

- A total of 181,720 people experienced a mental health disorder in the year 2013.
- For those people with severe disorders - 31,790 persons
- For those people with moderate disorders – 50,580 persons
- For those people with mild disorders – 99,350 persons.

Metro North Mental Health Services

Metro North Hospital and Health Service (MNHHS) serves an estimated population of 930,000 (2013). The catchment area covers from north of the Brisbane River to north of Kilcoy, an area of 4,157 square kilometres. This represents 19.95% of the Queensland population in 0.2% of the total area of Queensland. The MNHHS had a reported budget of $2.133 billion in 2012-13. The mental health budget was $134.5m or 6.3% (Source https://data.qld.gov.au/dataset/mental-health-establishments-collection-mhec-2013). This represents a per capita spend of approximately $145.00 on public mental health services.

The publicly available information of services provided is limited and more detailed analysis is beyond the scope of this report. However some data is included here but conclusions are difficult to draw without further data and analysis.

The MN MHS provided a total of 232,557 client contacts in 2012-13 and includes some 18,000 Emergency Department admissions. In 2014-15 the number of mental health client contacts is reported as rising to 352,406 (MN HHS Annual Report 2014–15).

Table 4 shows the number of clients in 2013-14 by gender and hospital catchment area.

Tables 5-7 show the service setting (Inpatient, Community/Ambulatory, Extended Campus Based and Non-Campus Based) by hospital catchment, age and gender. The definitions provided by Queensland Health are as follows:

- **Inpatient** - care provided to a consumer who is admitted for overnight care to an authorised acute MH inpatient unit in a public hospital.
- **Community/Ambulatory** - community based MHS and MHS to non-mental health inpatients. Includes consultation-liaison & assessment services to admitted patients in non-mental health & hospital emergency settings & MH treatment/care provided through a wide range of programs (e.g. acute care teams, day programs, psychiatric outpatient clinics provided by either hospital or community based services, child & adolescent outpatient & living skills programs etc.).

- **Extended-campus based** - care provided to a consumer with severe impairment who requires ongoing assessment, longer-term treatment & rehabilitation on an inpatient basis. Units are those located on a general hospital or psychiatric hospital campus.
- **Extended-non campus based** - a period of care provided to a consumer who requires ongoing assessment, longer-term treatment & rehabilitation on a 24 hour live-in basis, where a severe level of impairment exists. It include those units that are stand alone in the community or are co-located with nursing homes or other non-health institutions.

TABLE 4: CLIENTS BY HOSPITAL CATCHMENT AREA, AGE GROUP AND GENDER, METRO NORTH MENTAL HEALTH SERVICES, 2013-14.

	Redcliffe				RBWH				TPHC				Total			
Age groups	Female		Male	Red Total	Female		Male	RWBH Total	Female		Male	TPCH Total	Female		Male	Grand Total
5 to 9	43		98	141									43		98	141
10-14	210		157	367	80		15	95	15		3	18	305		175	480
15-19	429		224	660	509		231	740	297		197	494	1235		652	1894
20-24	258		372	630	377		405	782	359		602	962	994		1379	2374
25-29	281		381	662	313		583	896	379		521	900	973		1485	2458
30-34	291		374	665	305		634	939	543		564	1107	1139		1572	2711
35-39	325		521	846	346		664	1010	495		666	1161	1166		1851	3017
40-44	337		431	768	407		665	1072	523		633	1156	1267		1729	2996
45-49	331		384	715	263		475	738	440		466	906	1034		1325	2359
50-54	282		253	535	323		379	702	417		302	719	1022		934	1956
55-59	163		191	354	197		315	512	270		307	577	630		813	1443
60-64	168		151	319	192		203	395	283		162	445	643		516	1159
65-69	188		76	264	107		113	220	174		104	278	469		293	762
70-74	112		57	169	101		71	172	92		97	189	305		225	530
75-79	111		41	152	85		41	126	78		92	170	274		174	448
80-84	33		49	82	58		19	77	90		53	143	181		121	302
85-89	30		37	67	29		10	39	63		31	94	122		78	200
90 +	5		4	9	9		7	16	17		1	18	31		12	43
Total	3597		3801	7405	3701		4830	8531	4535		4801	9337	11833		13432	25273

Notes: 1. Redcliffe includes Caboolture Hospital. 2. A small number (N=8) of Intersex or persons of Undetermined sex attended services.

TABLE 5: CLIENTS BY SERVICE SETTINGS, REDCLIFFE-CABOOLTURE, 2013-14.

	Female					Males					**Total**
Age	Acute Inpatient	Community	Extended Campus Based	Extended Non-Campus Based	Total	Acute Inpatient	Community	Extended Campus Based	Extended Non-Campus Based	Total	
5-9		43			43		157			157	**200**
10-14		210			210	35	189			224	**434**
15-19	44	383		2	429	111	251	4	6	372	**808**
20-24	61	191		6	258	110	251	5	15	381	**639**
25-29	77	192		12	281	75	284	11	4	374	**655**
30-34	79	212			291	127	357	20	17	521	**812**
35-39	83	227	10	5	325	104	312	7	8	431	**756**
40-44	88	240	2	7	337	78	288	11	7	384	**721**
45-49	88	237		6	331		98			98	**429**
50-54	79	192	5	6	282	68	177	2	6	253	**535**
55-59	26	137			163	42	137	9	3	191	**354**
60-64	41	118		9	168	36	109	6		151	**319**
65-69	35	140		13	188	7	56		13	76	**264**
70-74	17	83		12	112	9	36		12	57	**169**
75-79	35	68		8	111	7	33		1	41	**152**
80-84	10	23			33	7	42			49	**82**
85-89	7	23			30	10	27			37	**67**
90 +		5			5		4			4	**9**
Total	**770**	**2724**	**17**	**86**	**3597**	**826**	**2808**	**75**	**92**	**3801**	**7405**

TABLE 6: CLIENTS BY SERVICE SETTINGS, THE PRINCE CHARLES HOSPITAL, 2013-14.

	Female					Males					**Total**
Age	Acute Inpatient	Community	Extended Campus Based	Extended Non-Campus Based	Total	Acute Inpatient	Community	Extended Campus Based	Extended Non-Campus Based	Total	
5-9											**0**
10-14		15			15		3			3	**18**
15-19	54	241		2	297	38	159			197	**494**
20-24	52	307			359	135	456	11		602	**962**
25-29	83	295		1	379	87	410	18	6	521	**900**
30-34	110	430		3	543	102	422	31	9	564	**1107**

35-39	97	390	3	5	495	119	506	16	25	666	**1161**
40-44	126	395	1	1	523	124	460	25	24	633	**1156**
45-49	96	339		5	440	108	344	9	5	466	**906**
50-54	98	316		3	417	58	220	12	12	302	**719**
55-59	54	209		7	270	59	238	6	4	307	**577**
60-64	58	219		6	283	24	132	5	1	162	**445**
65-69	32	135		7	174	19	85			104	**278**
70-74	16	76			92	22	75			97	**189**
75-79	6	72			78	14	78			92	**170**
80-84	10	80			90	6	46		1	53	**143**
85-89	10	53			63	2	29			31	**94**
90 +	1	16			17		1			1	**18**
Total	**903**	**3588**	**4**	**40**	**4535**	**1434**	**3343**	**133**	**53**	**4801**	**9337**

TABLE 7: CLIENTS BY SERVICE SETTINGS, ROYAL BRISBANE AND WOMEN'S HOSPITAL, 2013-14.

	Female					Males					**Total**
Age	Acute Inpatient	Community	Extended Campus Based	Extended Non-Campus Based	Total	Acute Inpatient	Community	Extended Campus Based	Extended Non-Campus Based	Total	
5-9										0	**0**
10-14	76	4			80	15				15	**95**
15-19	413	96			509	136	95			231	**740**
20-24	131	244		2	377	124	281			405	**782**
25-29	104	209			313	177	401		5	583	**896**
30-34	122	183			305	161	450		23	634	**939**
35-39	130	211		5	346	175	480		9	664	**1010**
40-44	111	296			407	196	463		6	665	**1072**
45-49	63	199		1	263	159	310		6	475	**738**
50-54	110	203		10	323	90	289		0	379	**702**
55-59	57	137		3	197	75	236		4	315	**512**
60-64	41	151			192	44	159			203	**395**
65-69	26	81			107	39	74			113	**220**
70-74	20	81			101	22	49			71	**172**
75-79	24	61			85	12	29			41	**126**
80-84	16	42			58	7	12			19	**77**
85-89	4	25			29	2	8			10	**39**
90 +	1	8			9	0	7	0		7	**16**
Total	**1449**	**2231**		**21**	**3701**	**1434**	**3343**	**0**	**53**	**4830**	**8531**

Across the region there were a total of 25,273 clients with 53.1% males, 46.8% females and 0.03% Intersex or Undetermined sex. Of the 25,273 clients, 6,302 (or 24.9%) were provided care as acute inpatients, 18,363 (or 72.6%) as community/ambulatory outpatients, 229 (or 0.9%) extended treatment campus based patients and 379 (or 1.5%) extended treatment non-campus based patients.

Clients and Mental Health Outcomes

Figure 24 shows the HoNOS scores for all clients across the three hospital catchments and the Metro North MHS totals.

The Health of Nations Outcomes Scales (HoNOS and HoNOS65+) was developed in the United Kingdom as a tool to be used by clinicians in their routine work to measure consumer outcomes. It was designed specifically for use with people with a mental illness and is best considered as a general measure of severity of mental health disorder.

The focus of the HoNOS is on health status and severity of symptoms. It consists of 12 items that cover the sorts of problems that may be experienced by people with a significant mental illness with each item rated by clinicians on a five point scale:

0 = no problem

1 = minor problem requiring no formal action

2 = mild problem

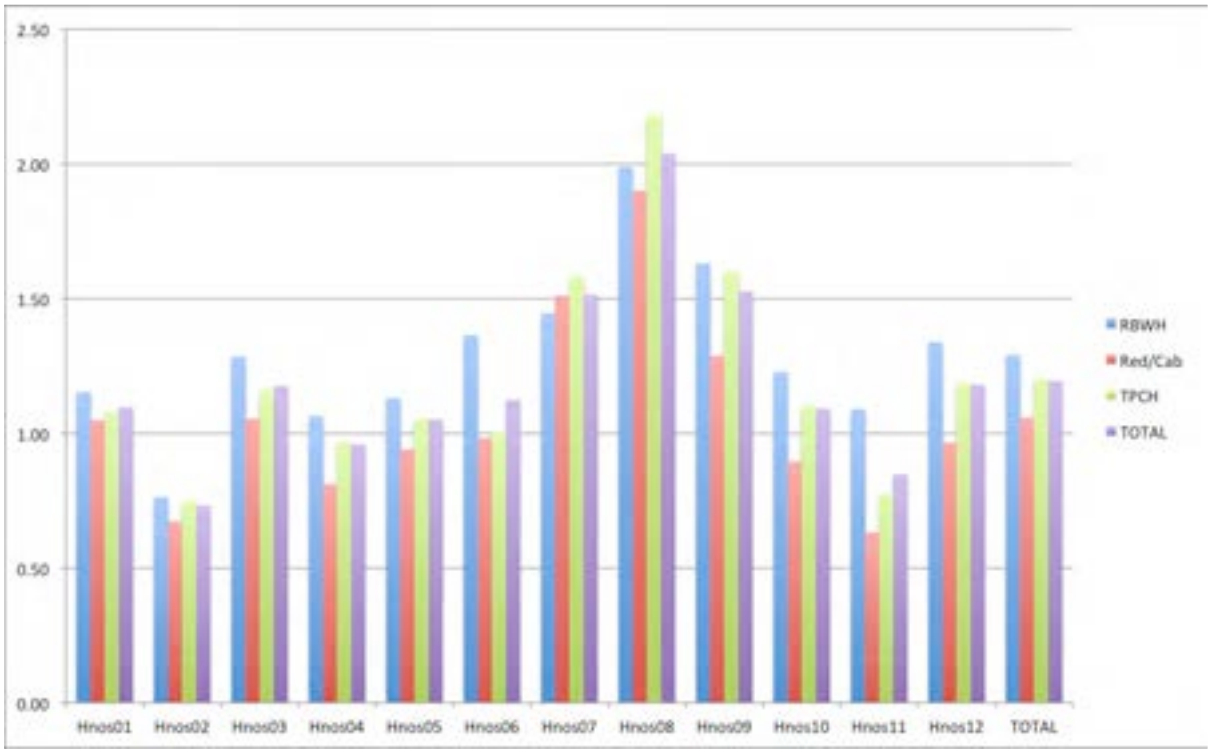
3 = problem of moderate severity

4 = severe to very severe problem

In assigning ratings, the clinician makes use of a glossary which details the meaning of each point on the scale for the item being rated. The clinician rates the consumer on each of the items in terms of their assessment of the person's situation over the recent period, usually defined as the previous two weeks.

The most significant variations in HoNOS ratings across the hospital catchments are seen in relation to Item 4 (Cognitive problems), Item 6 (Problems associated with hallucinations and delusions), Item 9 (Problems with relationships), Item 10 (Problems with activities of daily living), Item 11 (Problems with living conditions) and Item 12 (Problems with occupational activities).

FIGURE 24: HONOS PATIENT OUTCOMES BY HOSPITAL CATCHMENT, 2013-14.



Source: https://data.qld.gov.au/dataset/queensland-outcomes-collection-qoc/resource/0a16bc02-4e8d-4c18-9ac2-b94d9650c5cf

Figure 25 shows the results from consumer self-reported measures using the Mental Health Inventory (MHI-38) scale. The table shows the scores for each of the 38 items and the total aggregate score for each hospital catchment area. While the scores on all items are similar for consumers attending mental health services in the Redcliffe-Caboolture and TPCH areas, the scores for consumers attending services within the RBWH catchment are consistently and significantly higher.

The MHI is designed to measure general psychological distress and wellbeing. The measure includes positive aspects of wellbeing (e.g. cheerfulness, interest in and enjoyment of life) and negative aspects of mental health (e.g. anxiety and depression).

The MHI contains 38 items. Each item includes a description of a particular symptom or state of mind and the respondent indicates on a scale the degree to which they have experienced this in the past month, measured in terms of frequency or intensity. All of the scales, except two, questions nine and 28, are scored on a six-point scale.

A full description of the MHI-38 and all 38 items and sub-scores is available at http://amhocn.org/static/files/assets/8d6994c3/Mental_Health_Inventory.pdf.

The results from the mental health outcomes data should be examined further in the light of findings from the Mental Health Atlas of services in Brisbane North.

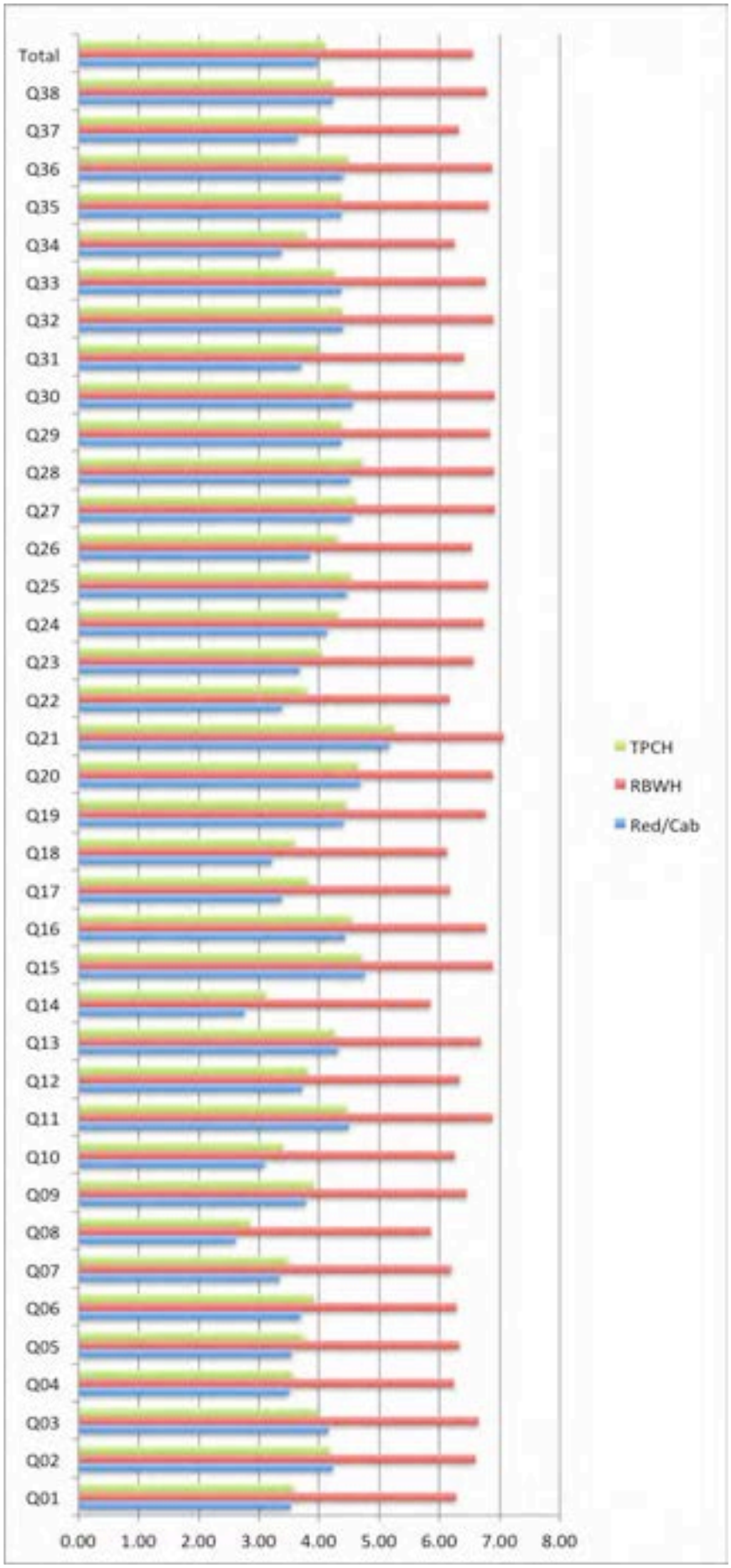


FIGURE 25: MENTAL HEALTH INVENTORY (MHI-38) AGGREGATED SCORES FOR CONSUMERS BY HOSPITAL CATCHMENT AREA, 2013-14.

Community Sector Services

Commonwealth and Queensland governments fund community sector services in the region. Diminic et al (2013) estimated that 15.6% of those people with a severe mental disorder accessed community non-clinical support services in 2011-12. This did not include the Partners in Recovery program. However, it was not clear from this analysis whether this was a 'unique individual count' as multiple services could be provided to the one person.

If this same rate of access to community services applied in Brisbane North, then approximately 1,000 people with a severe mental disorder would be accessing community support. However, this appears to be fewer than the actual numbers of individual clients accessing community support services based on the Mental Health Atlas work. For example, the PHaMs program alone provides support to some 300 individuals across the region. In addition, the PIR program as at the end of June 2015, had just fewer than 700 clients registered or having transitioned from the program and the majority of these clients would be accessing at least one community support service.

Medical Benefits or Medicare Funded Services

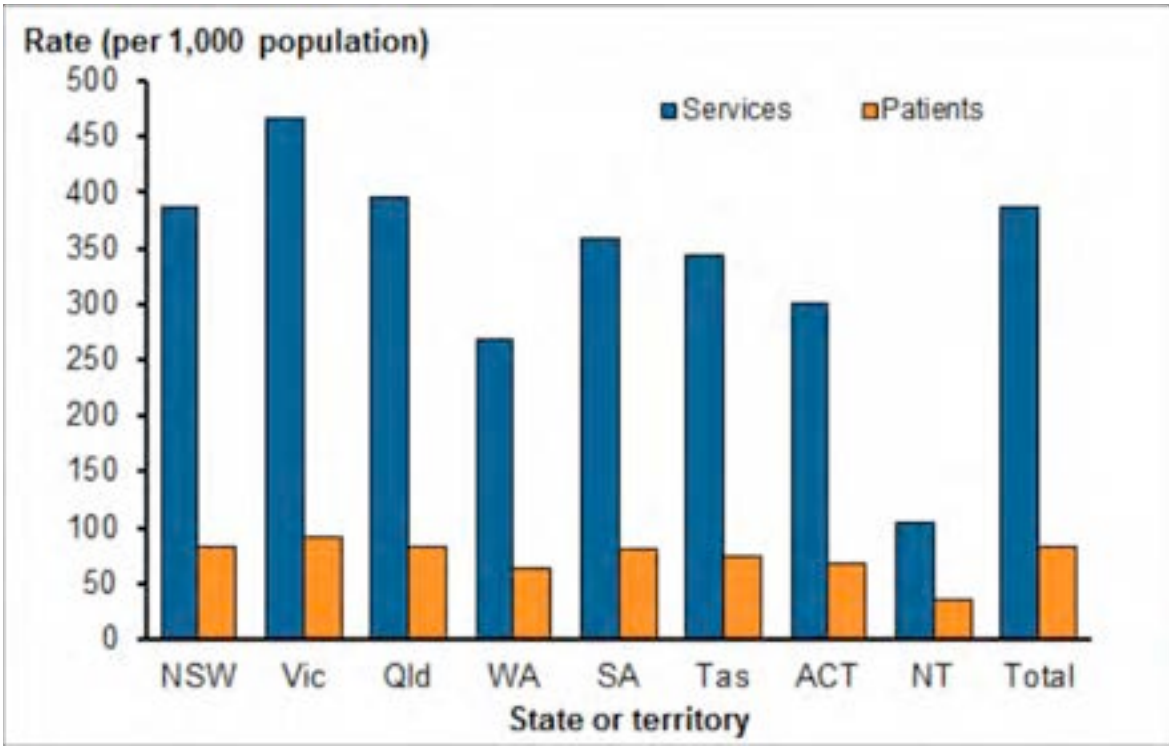
Medicare (or MBS) services are provided by the Commonwealth Government across Australia. Mental health related services are provided by GPs, psychologists, psychiatrists, and allied health practitioners.

In 2013-14 across Australia, there were 9,047,833 Medicare-subsidised mental health-related services provided for an estimated 1,909,713 patients at an average of 5 services per patient.

Victoria had the highest number of patients and services per 1,000 population (93 and 468 respectively), compared to the national average of 82 patients and 388 services per 1,000 population. Queensland was the second highest average and was close to the national averages (AIHW, 2015). These are shown in Figure 26.

In Queensland, a total of 1,851,136 MBS-subsidised mental health services were provided. Nearly 563,00 services were provided in Brisbane North or 30.4% of all MBS mental health services in Queensland.

FIGURE 26: MEDICARE SUBSIDISED MENTAL HEALTH RELATED SERVICES AND PATIENT RATES BY JURISDICTION 2013-14.



Source: AIHW, 2015.

Across Australia, the highest number of services were provided by GPs (2.652m or 29%) followed by psychiatrists (2.217m or 25%) and other psychologists (2.190m or 24%), while in Brisbane North GPs provided 22.24% of MBS mental health related services and psychiatrists 40.7% (see Figure 27 and Table 8).

Nearly 43% of the MBS subsidised psychiatrists in Queensland, provided services in the Brisbane North region. This equates to more than 25 psychiatrists per 100,000 or nearly 2.5 times the national average. The number of GPs providing mental health related MBS services was just over 20% of the state total.

Table 8 also summaries the MBS benefits paid for each category of mental health item. A total of $64.177m was paid to providers in MBS benefits or a per capita spend of $69.00. Nearly half of all benefits were paid to consultant psychiatrists at an average cost to Medicare of $140 per service. Out-of-pockets payments by patients are not available.

Data published earlier this year (Meadows et al, 2015) shows significant inequities in access to the MBS funded mental health items provided by GPs. People living in higher income regions of Sydney were found to have four times the rate of utilisation of the MBS GP mental health items to people living in the lowest income areas. The low rates of utilisation (or access) are a consequence of the mal-distribution of practitioners.

The same is probably true for those MBS-funded mental health services provided by psychologists and clinical psychologists. Further analysis of the MBS data on a regional level is warranted to ensure better planning and access to care.

FIGURE 27: MEDICARE SUBSIDISED MENTAL HEALTH RELATED PATIENTS AND SERVICES, BY PROVIDER TYPE 2013-14.

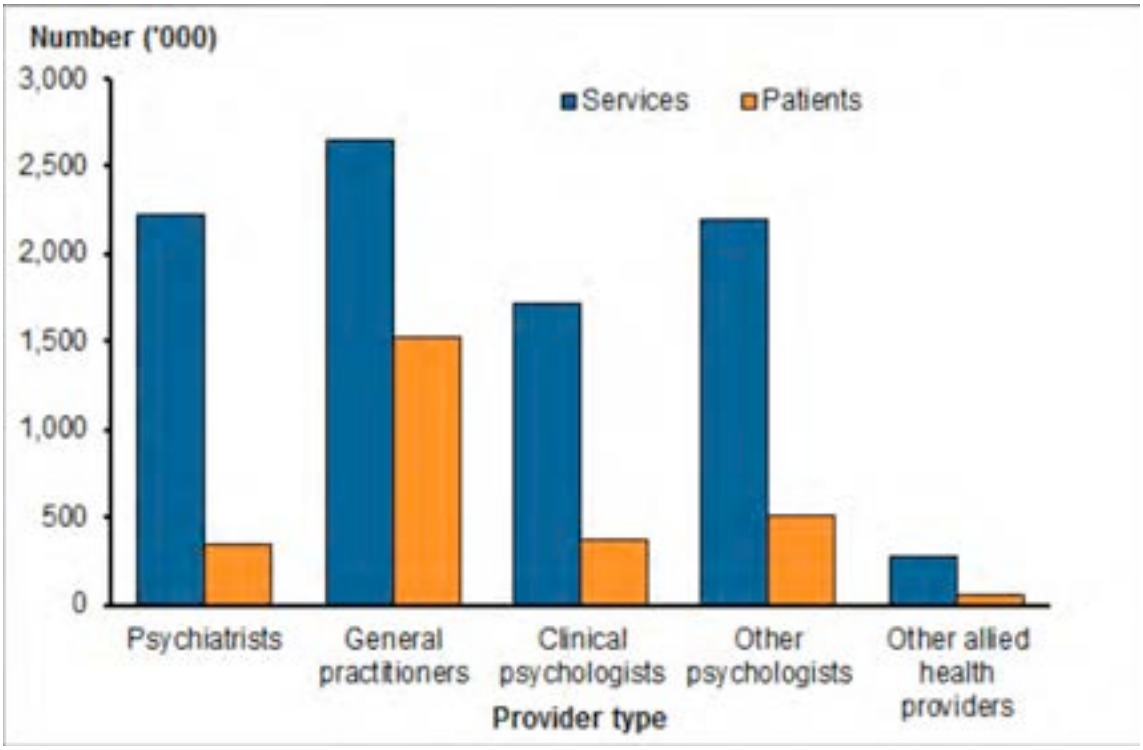


TABLE 8: BRISBANE NORTH PHN – MBS DATA

Item Category	Subgroups	Number of Services	Benefits Paid $	Number of Practitioners
GP Mental Health Treatment	GP Mental Health Care Plans	123,179	9,982,336	1,211
GP Mental Health Treatment	Focused Psychological Services	2,028	255,022	24
Consultant Psychiatrist	No subgroup	229,212	32,068,990	234
Psychological Therapy Services	No subgroup	85,279	10,957,082	262
Focused Psychological Strategies	No subgroup	123,279	10,913,663	564
TOTALS		**562,977**	**$64,177,093**	**2,271**

5. Describing The Services Providing Care For People With A Lived Experience Of Mental Ill-Health In Brisbane North

General Description

Data on services providing care for people with a lived experience of mental ill-health in Brisbane North was collected from mid-April to end of July. We received 18 on-line responses and undertook an additional 16 face-to-face interviews with large mental health provider organisations. These were from a list of 69 organisations provided by the Brisbane North Medical Local (later PHN). Requests for interviews were sent (four requests in some instances) to 21 organisations and survey invitations to 52 organisations.

We found a total of 119 Basic Stable Inputs of Care (BSICs - or stable public/universal access services) for people with a lived experience of mental health, ill-health or psychosocial problems. The total number of public and stable Main Types of Care (MTC) codes found was 105. In addition to this, we have included information on 7 services providing support facilitation under the Partners in Recovery program and 1 private organisation providing care for people with a lived experience of mental illness. These consisted of 5 MTCs on mental health services and 13 MTCs from the Alcohol and Drugs Services. The total number of MTC codes is 130. In addition we have included 131 ATAPS providers.

Table 9 depicts the distribution of the MTC by sector and population group.

With regard to the age distribution of clients provided for, 91% of the care provided is for adults, 6% of the services were devoted to young people (i.e. 16 to 25 years old) and only 3% of the care was specific to older people with mental health problems. State funded Child and Youth Mental Health Services (CYMHS) were not included as they provide services for children and youth 0-18 years of age.

Almost 52 % of the MTCs for people with mental health problems are provided by the NGO sector, with the public health sector accounting for 43%. In this Atlas, 3% of the codes were provided by the private sector, while 2% are related to forensic services. Within the public health sector, 50% of the MTCs provide inpatient services in a hospital setting.

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TABLE 9: THE DISTRIBUTION OF THE MAIN TYPES OF CARE (MTC) BY SECTOR AND POPULATION GROUP

		ADULTS					Transition to Adulthood				Older Adults				Alcohol and Other Drugs					Total				
MTC	Definition	H	P	NGO	F	T	H	P	NGO	F	H	P	NGO	F	H	P	NGO	F	T	H	P	NGO	F	T
RESIDENTIAL: Facilities that provide beds overnight for purposes related to the clinical and social management of their long term care																								
R1	Acute, 24 hours physician cover, hospital, high intensity	**7**				7				0				0					0	7	0	0	0	7
R2	Acute, 24 hours physician cover, hospital, medium intensity	**8**				8	1			1	1			1	1				1	11	0	0	0	11
R3	Acute, non-24 hour physician cover, hospital, high intensity		1							0				0					0					0
R4	Non- Acute, 24 hours physician cover, hospital, time limited	**2**				2				0				0					0	2	0	0	0	2
R6	Non- Acute, 24 hours physician cover, hospital, indefinite stay	**0**				0				0				0					0	0	0	0	0	0
R8.1	Non-acute, non-24 physician cover, time limited, 24-hours support, less than 24 hours			1		1				0				0					0	0	0	1	0	1
R8.2	Non-acute, non-24 physician cover, time limited, 24-hours support, over 4 weeks	**3**		1		4				0				0					0	3	0	1	0	4
R10.1	Non-Acute, non-24 physician cover, time limited, lower support, less than 4 weeks			1		1				0				0					0	0	0	1	0	1
R10.2	Non-Acute, non-24 physician cover, time limited, lower support, over 4 weeks					0				0				0					0	0	0	0	0	0
R11	Indefinite stay 24 hours support			2		2				0	1			1					0	1	0	2	0	3
R12	Indefinite stay daily support			1		1				0				0					0	0	0	1	0	1
R13	Indefinite stay lower support			8		8				0				0					0	0	0	8	0	8
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 stay at the facility beyond periods druing which they have face-to-face contact with staff																								
D2.1	Non-acute, work, high intensity, work related			1		1				0				0					*0*	0	0	1	0	1
D4.3	Non-acute, non-work structured care, high intensity, social and cultural related care			4		4			1	1				0					*0*	0	0	5	0	5
D8.3	Non-acute, non-work structured care, low intensity, social and cultural related care			5		5				0				0					*0*	0	0	5	0	5
OUTPATIENT: Facilities that involve contact between staff and users for some purpose related to management of their condition and its associated clinical and social dificulties																								

O1.1	Acute, home & mobile, 24 hours support, health relate care		1			1				0				0					0	0	1	0	0	1
O2.1	Acute, Home & Mobile, Limited Hours, Health related care	1				1				0				0					0	1	0	0	0	1
O3.1	Acute, non-mobile, 24-h, health related care*	3				3				0				0					0	3	0	0	0	3
O4.1	Acute, non-mobile, time limited, health related care	1				1				0				0	2				2	3	0	0	0	3
O5.1	Non-Acute, Home & Mobile, High Intensity	2	1	1		4				0				0					0	2	1	1	0	4
O6.1	Non-Acute, Home & Mobile, Medium Intensity (including 1 perinatal team and 1 homeless team)	12		1	1	14	1			1	2			2					0	15	0	1	1	17
O8.1	Non-Acute, non-mobile, High intensity, health related care		1		1	2			1	1				0	5				5	5	1	1	1	8
O9.1	Non-Acute, non-mobile, Medium intensity, health related care		1	1		2			3	3				0	2			1	3	2	1	4	0	7
O10.1	Non-acute, non-mobile, low intensity, health related care					0				0				0					0	0	0	0	0	0
O5.2	Non-Acute, Home & Mobile, High Intensity, other care			12		12				0				0					0	0	0	12	0	12
o6.2	Non-Acute, Home & Mobile, Medium Intensity, other care			8		8				0				0					0	0	0	8	0	8
O7.2	Non-Acute, Home & Mobile, low Intensity, other care					0				0				0					0	0	0	0	0	0
O8.2	Non-Acute, non-mobile, High intensity, other care			2		2				0				0					0	0	0	2	0	2
O9.2	Non-Acute, non-mobile, Medium intensity, other care			1		1				0				0					0	0	0	1	0	1
ACCESSIBILITY: Facilities which main aim is to provide accesibility aids for users wiwth long term care needs																								
A3	Personal Accompaniment by non-care professionals.			1		1				0				0					0	0	0	1	0	1
A4	Case Coordination			1		1				0				0			1		1	0	0	2	0	2
A5.1	Access to Health Services	1				1				0				0					0	1	0	0	0	1
A5.3	Access to Social & Cultural services			1		1				0				0					0	0	0	1	0	1
A5.4	Access to Employment			3		3				0				0					0	0	0	3	0	3
A5.5	Access to Housing					0				0				0					0	0	0	0	0	0
INFORMATION AND GUIDANCE: Facilities which 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																								

I1.1	Professional assessment and guidance related to health				**1**	**1**				**0**				**0**					**0**	**0**	**0**	**0**	**1**	**1**
I1.4	Professional assessment and guidance related to work			1		**1**				**0**				**0**					**0**	**0**	**0**	**1**	**0**	**1**
I2.1	Information provided through face to face			1		**1**				**0**				**0**					**0**	**0**	**0**	**1**	**0**	**1**
I2.2.	Information provided through information technologies or telephone			1		**1**				**0**				**0**					**0**	**0**	**0**	**1**	**0**	**1**
VOLUNTARY CARE: Facilities which main aim is to provide users with long term care needs with support, self-help or contact with un-pain staff that offers accessibility, information, day, outpatient and residential care (as described avobe), but the staff is non-paid																									
S1.3	Non-professional staff outpatient care			1		1				0				0			1		1	0	0	2	0	2
TOTAL		40	5	60	3	107	2	0	5	7	4	0	0	4	10	0	2	1	13	56	4	67	3	130

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 for target populations (i.e. young people, older people or cultural groups) is presented in an independent section.

Residential Care

Residential Care Provided by the Public Health Sector

Acute Inpatient Services

A total of 8 BSICs (or services) were identified which provide adult acute inpatient care in Brisbane North. In 6 of them, an additional code was required to describe a small high intensity unit with 3 beds. In addition, the East Wing at The Prince Charles Hospital also includes some perinatal beds, and the West Wing some beds for older people. The 5-bed acute unit at the Royal Brisbane and Women's Hospital is specific for eating disorders, and covers all the State of Queensland. The 10-bed acute unit at the same hospital is a female friendly ward.

The number of acute beds per 100,000 inhabitants is 25.32, ranging from 22.20 in the TPCH catchment area to 26.28 in the RBWH area. The number of BSICs providing acute care per 100,000 inhabitants is 1.21, oscillating from 1.48 in the TPCH area to 2.48 in Red-Cab.

Table 10: Acute Inpatient Care in Brisbane North: Service Availability & Placement Capacity

Provider	Name	Desde1	Desde2	Beds	Town	Area
The Prince Charles Hospital Metro North Mental Health Services	Acute Psychiatric Unit-East Wing	Ax[F00-F99]- R2	ax[F00-F99]- r1	R2=27; r1=3	Chermside	TPCH
The Prince Charles Hospital Metro North Mental Health Services	Acute Psychiatric Unit-West Wing	Ax[F00-F99]- R2	ax[F00-F99]- r1	R2=27; r1=3	Chermside	TPCH
Caboolture Hospital Metro North Mental Health Services	Acute Psychiatric Unit-Caboolture Hospital	Ax[F00-F99]- R2	ax[F00-F99]- r1	R2=19; r1=3	Caboolture	Red-Cab
Caboolture Hospital Metro North Mental Health Services	Acute Psychiatric Unit-Caboolture Hospital	Ax[F00-F99]- R2	ax[F00-F99]- r1	R2=16; r1=4	Caboolture	Red-Cab
RBWH Metro North Mental Health Services	Acute Psychiatric Unit-Southern Area	Ax[F00-F99]- R2	ax[F00-F99]- r1	R2=22; r1=3	Herston	RBWH
RBWH Metro North Mental Health Services	Acute Psychiatric Unit-Northern Area	Ax[F00-F99]- R2	ax[F00-F99]- r1	R2=22; r1=3	Herston	RBWH
RBWH Metro North Mental Health Services	Acute Psychiatric Unit	Ax[F50-F59]- R2s		5	Herston	State
RBWH Metro North Mental Health Services	Acute Psychiatric Unit	Ax[F00-F99]- R2		10	Herston	RBWH

Sub-acute Inpatient Services

A total of 2 BSICs were identified as providing sub-acute inpatient care in the area of Brisbane North: one in the area of The Prince Charles Hospital, and the other in Caboolture. We have not identified any service providing subacute care in the area of the Royal Brisbane and Women's Hospital.

The number of sub-acute beds per 100,000 inhabitants is 5.91, ranging from 7.40 in the TPCH catchment area to 11.80 in Red-cab.

The number of services providing sub-acute care per 100,000 inhabitants is 0.30., from 0.37 in the TPCH catchment area to 0.62 in Red-Cab.

Table 11: Sub-Acute Inpatient Care: Service Availability and Placement Capacity

Provider	Name	Desde1	Beds	Town	Area
The Prince Charles Hospital Metro North Mental Health Services	Extended Care Team-Secure	Ax[F00-F99]-R4	20	Chermside	TPCH
Caboolture Hospital Metro North Mental Health Services	Extended Care Team-Secure-Caboolture	Ax[F00-F99]-R4	19	Caboolture	Red-Cab

Long Term Stay Inpatient Services

No long-term stay inpatient services were identified at the Brisbane North hospitals.

Other Residential Care

A total of 3 BSICs providing support accommodation and managed by the public health sector were found in Brisbane North, one in each hospital area. These are facilities providing residential care with non-24h physician cover outside the hospital. However, in all three of the facilities the physician in available on-call.

The number of non-24h physician cover beds per 100,000 inhabitants is 9.10, ranging from 7.40 in TPCH to 12.42 in Red-Cab. The number of services providing sub-acute care per 100,000 inhabitants is 0.45, from 0.37 in the TPCH catchment Area to 0.62 in Red-Cab.

Table 12: Other Residential Care: Service Availability and Placement Capacity

Provider	Name	Desde1	beds	Town	Area
The Prince Charles Hospital Metro North Mental Health Services	Extended Care Team-Transition	Ax[F00-F99]-R8.2o	20	Strathpine	TPCH
Caboolture Metro North Mental Health Services	Extended treatment unit	Ax[F00-F99]-R8.2o	20	Caboolture	Red-Cab
RBWH Metro North Mental Health Services	Extended treatment unit	Ax[F00-F99]-R8.2o	20	Herston	NBRWH

Residential Care Provided By NGOs

A total of 3 **time-limited residential** BSICs provided by NGOs were found in Brisbane North. **ARAFMI** had a 5-beds respite unit where people with lived experience of mental

illness may stay for a short time, so their carers may have some free time. This facility provides 24-hour support, but there is not a physician in the facility. **Open Minds** provides residential care with 24-hour support (without physician) for mum and kids in a vulnerable psychosocial situation. They can stay for four months while transitioning to a new property. **Community Living Association** supports people with a lived experience with a residential facility where people can stay for less than 4 weeks and they receive low support (fewer than five days per week). It is a crisis home.

On the other hand, we have found 11 BSICs providing residential care with an **indefinite period of time**. **Open Minds** owns two of these facilities. They provide 24-hours support to their clients, who paid the rent with their HASP funds. The one in New Farm is for people with Brain Injury, who may or may not have mental disorders. **Help and QLD Health** owns a facility providing daily support for people with a mental health problem, while **Community Living Association** has 8 units where people with a lived experience of mental disorders may live permanently. All these properties have a tenancy manager who meets every 2 months with them to provide any type of support.

The number of services providing time limited residential care per 100,000 inhabitants is 0.45. There are 1.21 services per 100,000 inhabitants providing indefinite residential care in Brisbane North.

TABLE 13: RESIDENTIAL CARE PROVIDED BY NGOS: SERVICE AVAILABILITY & PLACEMENT CAPACITY

Provider	Name	Desde1	Beds	Town	Area of coverage
		Time-limited			
ARAFMI QLD Mental Health Carers	Respite Centre	Ax[F00-F99]-R8.1	5	*Lutwyche*	North Brisbane
Open Minds	Residential Redcliffe	Ax[Z56-Z65]-R8.2s	19	Redcliffe	North Brisbane
Community Living Association	Village Housing	Ax[F00-F99]-R10.1		Nundah	North Brisbane
Indefinite Stay					
Open Minds	Residential New Farm	Ax[S06]-R11	9	New Farm	North Brisbane
Open Minds	Residential Burpengary	Ax[F00-F99]-R11	2	Burpengary	North Brisbane
HELP & QLD Health	HELP	Gx[F00-F99]-R12		Nundah	North Brisbane
Community Living Association	Village Housing	Ax[F00-F99]-R13		Nundah	North Brisbane
Community Living Association	Village Housing	Ax[F00-F99]-R13		Nundah	North Brisbane
Community Living Association	Village Housing	Ax[F00-F99]-R13		Nundah	North Brisbane
Community Living Association	Village Housing	Ax[F00-F99]-R13		Nundah	North Brisbane
Community Living Association	Village Housing	Ax[F00-F99]-R13		Nundah	North Brisbane
Community Living	Village Housing	Ax[F00-F99]-		Nundah	North Brisbane

Association		R13		
Community Living Association	Village Housing	Ax[F00-F99]-R13	Nundah	North Brisbane
Community Living Association	Village Housing	Ax[F00-F99]-R13	Nundah	North Brisbane

Residential Care Provided By The Private Sector (Private Hospital)

In the Toowong Private Hospital we have identified a BSIC providing acute care without 24-hour physician. The physician, however, is on call. The code of this service is **Ax[F00-F99]-R3.0o**. It has 58 beds, 2 of them for high dependency.

Day Care

Day Care Provided by the Public Health Sector

We have not identified any service providing day care in the Public Health Sector.

Day Care Provided by NGOs.

Social and Cultural Related

We have identified 9 BSICs (or services) providing social and cultural related day care for people with mental health problems. These are facilities that enable social contacts in a structured way and that provide workshops in arts, crafts or other activities. Four of the BSICs (or services) identified (**139 Club Inc** MI Hub, by the **Mental Illness Fellowship of Queensland,** and the day programs by **Richmond Fellowship Queensland** in Caboolture and Redcliffe) are high intensity, meaning that they can be used more than the equivalent of four half days per week (code D4.3). The MI Hub is a service targeting people with psychosocial problems or difficulties, which can be assessed by any group population. On the other hand the other 5 BSICs (or service) provided by **Aftercare, Grow, ISIS, New Farm Neighbourhood Centre and Richmond Fellowship Queensland** provides the same type of care, but low intensity (code D8.3). The day care facility provided by ISIS is specifically for people with Eating Disorders. The CSS Day Program by Richmond Fellowship Queensland is a "mobile" day centre, as it changes its location across the area. People can meet once a week and do a different range of activities, from art and craft, to social activities. It is a low intensity program. Lastly, in the Day Care Centre provided by **Aftercare**, they also have a service providing personal accompaniment (code A3).

Some caution is warranted in interpreting the absence of place numbers for these services – only the Aftercare service stated a specific client number. Most services indicated they are flexible and the number of places depends on the number of clients who attend. A specific client number generally suggests a more structured and planned type of program (higher intensity); but without further analysis this is not able to be determine at this point.

The total number of BSICs (or services) providing cultural and social related day care in Brisbane North is 1.36 per 100,000 inhabitants.

TABLE 14: SERVICE AVAILABILITY AND PLACEMENT CAPACITY OF DAY CARE

Provider	Name	Desde1	Desde2	Places	Town	Area
139 Club Inc	139 Club Inc	Gx[Z56-Z65]-D4.3			Fortitude Valley	North Brisbane
Mental Illness Fellowship of Queensland	MI Hub	Ax[F00-F99]-D4.3			Herston	North Brisbane
Richmond Fellowship Queensland	Day Program-Caboolture	Ax[F00-F99]-D4.3			Caboolture	North Brisbane
Richmond Fellowship Queensland	Day Program-Redcliffe	Ax[F00-F99]-D4.3			Redcliffe	North Brisbane
Aftercare	Day Care Centre	Ax[F0-F99]-D8.3	Ax[F0-F99]-A3	60	Margate	North Brisbane
Grow	Programs of Mutual & Peer Support	Ax[F00-F99]-D8.3			Holland Park	North Brisbane
ISIS-The Eating Issues Centre Inc	Day Program	Ax[F50-F59]-D8.3			Highgate Hill	North Brisbane
New Farm Neighbourhood Centre	Day Program	Ax[F00-F99]-D8.3			New Farm	North Brisbane
Richmond Fellowship Queensland	CSS Day Program	Ax[F00-F99]-D8.3				Inner North Chermside

WORK RELATED

Only one BSIC (or service) providing work-related day care for people with experiencing mental ill-health was identified within the boundaries of Brisbane North. This day-care facility provides clients with the opportunity to work for pay. In this case, employees are paid at least the minimum wage for this form of work.

The total number of BSICs (or services) providing work related day care in Brisbane North is 0.15 per 100,000 inhabitants, with a total of 3.03 places per 100,000 inhabitants.

TABLE 15: SERVICE AVAILABILITY AND PLACEMENT CAPACITY OF DAY CARE- WORK RELATED

Provider	Name	Desde1	Places	Town	Area of Coverage
Community Living Association	Workers Cooperative	Ax[F00-F99]-D2.1	20	Nundah	North Brisbane

Outpatient Care

Outpatient Care Provided By The Public Mental Health Sector

Acute Outpatient Care (Emergency Care)

We identified a total of 5 BSICs (or services) providing emergency care for adults with mental health problems. The acute care team in the Royal Brisbane and Women's Hospital is completely mobile, with more than 50% of the contacts made outside the hospital, during limited hours. The after-hour service is covered by a non-mobile service (code O4.1e), which also provides telephone support. The other 2 acute care teams at TPCH and at the Red-Cab Hospital cannot be considered mobile as less than 50% of their contacts are made outside the centre. However, they have a high level of mobility. We have added the qualifier "d" to these codes to highlight this fact. These services are available 24 hours as part of the general emergency department at the hospital.

Lastly, in the Royal Brisbane and Women's Hospital there is the only specific emergency psychiatric facility in all Queensland. It is available 24-hours per day and provides care for all groups of ages. They also have 4 high intensity beds, in case the client needs to be admitted because of his/her mental health status from 1 to 3 nights.

The numbers of services providing acute outpatient care per 100,000 inhabitants is 0.76.

Table 16: Service Availability of Acute Outpatient Care

Provider	Name	Desde1	Desde2	Beds	Town	Area
Mobile Acute Care						
RBWH Metro North Mental Health Services	Acute Care team-Emergency	Ax[F00-F99]-O2.1			Herston	RBWH
Non Mobile Acute Care						
The Prince Charles Hospital Metro North Mental Health Services	Acute Care team-Emergency	Ax[F00-F99]-O3.1d			Chermside	TPCH
Red-Cab Area Metro North Mental Health Services	Acute Care team-Emergency	Ax[F00-F99]-O3.1d			Caboolture	Red-Cab
RBWH Metro North Mental Health Services	Psych-Emergency Centre	Gx[F00-F99]-O3.1	ax[F00-F99]- r1	4	Herston	RBWH
RBWH Metro North Mental Health Services	After-hours service (nurse)	Ax[F00-F99]-O4.1e			Herston	RBWH

Non-Acute Mobile Outpatient Care

A total of 12 BSICs (or services) providing non-acute, mobile, outpatient care were identified. Two of them are mobile intensive rehabilitation team, with the capacity to see clients according to their needs. They are covering the area of the Prince Charles Hospital and the Royal Brisbane and Women's Hospital.

The other 10 services are also providing non-acute, mobile, outpatient care, but the intensity of the contact is medium, meaning that they can see their clients at least in a

weekly basis, but not daily is required. There are 2 services in the area of the Prince Charles Hospital and the Royal Brisbane and Women's Hospital that provide early intervention for people with a psychotic disorder (Early Psychosis Teams) and 1 team providing care for people with Eating Disorders (EDOS). The EDOS team cover all the State of Queensland providing both direct care to patients and support to other services (i.e. in a consultancy capacity).

The numbers of BSICs (or services) providing non-acute mobile outpatient care per 100,000 inhabitants is 1.82.

TABLE 17: SERVICE AVAILABILITY OF NON-ACUTE MOBILE OUTPATIENT CARE

Provider	Name	Desde1	Town	Area
The Prince Charles Hospital Metro North Mental Health Services	Community Team-Pine Rivers	Ax[F00-F99]-O6.1	Strathpine	TPCH
The Prince Charles Hospital Metro North Mental Health Services	Community Team-Nundah	Ax[F00-F99]-O6.1	Nundah	TPCH
The Prince Charles Hospital Metro North Mental Health Services	Community Team-Chermside	Ax[F00-F99]-O6.1	Chermside	TPCH
The Prince Charles Hospital Metro North Mental Health Services	Mobile Intensive Rehabilitation Team	Ax[F00-F99]-O5.1	Aspley	TPCH
The Prince Charles Hospital Metro North Mental Health Services	Early Psychosis Team	Ax[F20-F29]-O6.1	Chermside	TPCH
Caboolture Hospital Metro North Mental Health Services	Case Manager-Redcliffe	Ax[F00-F99]-O6.1	Kippa-Ring	Red-Cab
Caboolture Hospital Metro North Mental Health Services	Case Manager-Caboolture	Ax[F00-F99]-O6.1	Kippa-Ring	Red-Cab
RBWH Metro North Mental Health Services	Outreach Service for Eating Disorder (EDOS)	Ax[F50-F59]- O6.1	Caboolture	STATE
RBWH Metro North Mental Health Services	Continuity of Care Team- North	Ax[F00-F99]-O6.1	Fortitude Valley	RBWH
RBWH Metro North Mental Health Services	Continuity of Care Team- South	Ax[F00-F99]-O6.1	Fortitude Valley	RBWH
RBWH Metro North Mental Health Services	Mobile Intensive Rehabilitation Team	Ax[F00-F99]-O5.1	Fortitude Valley	Both sides of the river
RBWH Metro North Mental Health Services	Early Psychosis Team	Ax[F20-F29]-O6.1	Fortitude Valley	RBWH

Lastly, at the Royal Brisbane and Women's Hospital there is also a perinatal team. It provides mobile outpatient care during the pre-birth and post birth period. It covers the whole Brisbane North region.

TABLE 18: AVAILABILITY OF MOBILE OUTPATIENT CARE - PERINATAL

Provider	Name	Desde1	Town	Area of Coverage
RBWH Metro North Mental Health Services	Community Team-Pine Rivers	Ax [e310][F00-F99]-O6.1	Herston	Brisbane North

Non-Acute Non-Mobile Outpatient Care

We identified 3 BSICs (or services) providing non-acute, non-mobile outpatient care. These teams provide face-to-face services to people with mental health problems who are admitted in the hospital, being liaison teams. They can visit the patient at least in a fortnightly basis.

The numbers of BSICs (or services) providing non- acute outpatient care per 100,000 inhabitants is 0.45

Table 19: Service Availability of Non-Acute Non-Mobile Outpatient Care

Provider	Name	Desde1	Town	Area
The Prince Charles Hospital- Metro North Mental Health Services	Consultation Liason Team	Ax[F00-F99]-O9.1l	Chermside	TPCH
RBWH Metro North Mental Health Services	Consultation Liason Team	Ax[F00-F99]-O9.1l	Herston	NBRWH
RBWH Metro North Mental Health Services	Consultation Liason Team	Ax[F00-F99]-O9.1l	Herston	NBRWH

In addition, there are around 131 private providers under the ATAPS program in the area of Brisbane North. The numbers of ATAPS providers providing non- acute outpatient care per 100,000 inhabitants is 19.86 in all the area, ranging from 14.81 in The Prince Charles Hospital Area, to 24.84 in the Caboolture-Redcliffe area. According to the DESDE LTC system, the ATAPS program will receive the code **Gx[F00-F99]-O9.1.**

Table 20: Availability of ATAPS Providers by Area

Area of the provider	Freq.	Pop >18 years old	Rate per 100000
Unknown	8	.	.
RBWH	43	228303	18.83
REDCAB	40	161024	24.84
TCPH	40	270167	14.81
Total	131	659494	19.86

Outpatient Care Provided by NGOs

Mobile Outpatient Care

We identified 15 BSICs (or services) providing non-acute mobile outpatient care for people with a lived experience of mental illness in Brisbane North. Two of them (the **Institute for Urban Indigenous Health and Mental Illness Fellowship of Queensland**) provide care related to the health needs of their clients. The Institute for Urban Indigenous Health is a specific service for Aboriginal and Torres Strait Islander People.

Open Minds has two teams providing the Personal Helpers and Mentors Services (PHaMs). This service provides practical assistance to people with severe mental illness to help them to achieve their goals, develop better social relationships and manage their day-to-day activities. **Opens Minds** also has three additional programs, 2 teams providing Lifestyles Support and one in the Choose Change Program, that can be classified under this code. The main difference with the PHaMS is that the Lifestyle Support and the

Choose Change Program have a higher frequency of contact (daily if needed). **Richmond Fellowship QLD and Community Living Association** also provide non-acute mobile care related to social needs with a high contact.

There are three outreach services (one provided by **NEAMI**, and two by **Richmond Fellowship** QLD)

The total number of BSICs (or services) from the NGO sector providing mobile outpatient care (non-acute) in Brisbane North is 2.28 per 100,000 inhabitants.

TABLE 21: SERVICE AVAILABILITY OF NON-ACUTE MOBILE OUTPATIENT CARE BY NGOS

Provider	Name	Desde1	Town	Area of coverage
Community Living Association	Community Living Team	Ax[F0-F99]-O5.2	Nundah	North Brisbane
Footprints	ARC	Ax[F00-F99]-O6.2	Newstead	North Brisbane
Institute for Urban Indigenous Health	ATSICHSMH	Ax[F00-F99]-O6.1s	Bowen Hills	Morayfield, Strathpine, Deception Bay
Mental Illness Fellowship of Queensland	MI Connections	Ax[F00-F99]-O5.1	Herston	North Brisbane
Neami	Outreach Team	Ax[F0-F99]-O6.2	Strathpine	TPCH catchment area
Open Minds	Personal Health and Mentors	Ax[F00-F99]-O6.2	Caboolture	Caboolture
Open Minds	Personal Health and Mentors	Ax[F00-F99]-O6.2	Woolloongabba	Inner North
Open Minds	Lifestyles support	Ax[F00-F99]-O5.2	Woolloongabba	RBWH
Open Minds	Lifestyles support	Ax[F00-F99]-O5.2	Caboolture	Red-Cab
Open Minds	Choose Change Progam	Ax[F00-F99]-O5.2	Woolloongabba	Inner North
Richmond Fellowship Queensland	Community Support team	Ax[F00-F99]-O5.2	Aspley	North Brisbane
Richmond Fellowship Queensland	Independent Living Team	Ax[F00-F99]-O6.2	Aspley	Region wide
Richmond Fellowship Queensland	RFQ Caboolture – Outreach program	Ax[F00-F99]-O6.2	Caboolture	Caboolture
Richmond Fellowship Queensland	RFQ Redcliffe – Outreach program	Ax[F00-F99]-O6.2	Redcliffe	Redcliffe
Richmond Fellowship Queensland	Personal Support Services	Ax[F00-F99]-O6.2	Aspley	Region

PARTNERS IN RECOVERY PROGRAM

We have identified 7 organisations involved in the PIR program providing support facilitation. The main objective of the PIR program is to increase the accessibility to a different range of services of people with a lived experience of mental illness. Interestingly, though, these providers are not just focused on the accessibility, but take a more holistic approach, providing also some of counselling or coaching. Theoretically, the code of the PIR program should be an A4, but it seems that they are providing more intensive direct day care. They can respond to the needs of the patient, with the capacity of meeting them on a daily basis, if needed if the first stage of the program. However, we still do not know if this program is going to be maintained beyond June 2016.

The total number of BSICs (or services) from the NGO sector providing a PIR-support facilitator program in Brisbane North is 1.21 per 100,000 inhabitants.

TABLE 22: AVAILABILITY OF PIR SUPPORT FACILITATORS BY AREA.

Name of the provider		DESDE CODE	TOWN	AREA
Neami	PIR team	Ax[F0-F99]-O5.2	Strathpine	The Prince Charles Hospital Area
Aftercare	PIR Team	Ax[F0-F99]-O5.2	Woolloongabba	Caboolture and Redcliffe
MIFQ	PIR Team	Ax[F0-F99]-O5.2	Herston	The Prince Charles Hospital Area
Institute for Urban Indigenous Health	PIR team	Ax[F0-F99]-O5.2	Bowen Hills	Caboolture and Redcliffe
Footprints	PIR team	Ax[F0-F99]-O5.2	Newstead	Royal Brisbane Women Hospital catchment area
Open Minds	PIR team	Ax[F0-F99]-O5.2	Caboolture	Caboolture and Redcliffe
Richmond Fellowship Queensland	PIR Team	Ax[F0-F99]-O5.2	Aspley	The Prince Charles Hospital Area
Mental Illness Fellowship of Queensland	PIR Team	Ax[F0-F99]-O5.2	Herston	Royal Brisbane Women Hospital catchment area

NON-MOBILE OUTPATIENT CARE

We have found 4 BSICs (or services) providing non-mobile outpatient care. The **ISIS-The Eating Issues Centre Inc** has a wellbeing program aiming to help participants with eating disorders to manage their social needs. Although it is mainly run by volunteers, there are also some paid staff. The **QLD Program of Assistance to Survivors of Torture and Trauma** provides clinical support for people with a post traumatic stress disorders.

On the other hand, **RichmondPRA** and **Open Minds** have two services targeting the social needs of people with a lived experience of mental illness, related to housing and employment, respectively. The **RichmondPRA** one has a high mobility (i.e. they can go to the house of their clients) while the service in **Open Minds** is 100% non-mobile (office based).

The total number of BSICs (or services) from the NGO sector providing outpatient non-mobile non-acute care in Brisbane North is 0.61 per 100,000 inhabitants.

TABLE 23: SERVICE AVAILABILITY OF NON-ACUTE NON-MOBILE OUTPATIENT CARE (NGOS)

Provider Name		Desde1	Town	Area of coverage
ISIS-The Eating Issues Centre Inc		Ax[F50-F59]-O9.2	Highgate Hill	Brisbane North
QLD Programs of Assistance to Survivors of Torture and Trauma		Ax[43.1]-O9.1	Woolloongabba	Brisbane North
RichmondPRA	Community Housing	Ax[F00-F99]-O8.2m	Caboolture	Brisbane North
Open Minds	Employment	Ax[F00-F99]-O8.2d	Caboolture	Caboolture

Outpatient Care Provided By The Private Sector

In addition to the private psychiatrists and psychologists that can provide care on a fee basis, the **Toowong Private Hospital** has a team that offers psychological therapies: tailored program; cognitive-behavioural therapy for mood disorders; and cognitive behavioural therapy for anxiety and panic disorders. This hospital also has a clinical service providing "hospital in the home" services. This is an outpatient mobile service, that provides 24-hours, health related care for acute cases. They also have a MH nurse mobile program. It is a mobile service for non-acute clients. Nurses go to the home of the client according to their needs (i.e. daily if needed). Finally, they also have a Day Program for clients with Port-Traumatic Stress Disorders (related to war-veterans-or other issues). Although this was described ay the staff at TPH as a Day Program, according to the DESDE system is a high intensity structured outpatient program.

Although this Hospital provides services to all the state, 85% of their clients are coming from North Brisbane.

Table 24: Service Availability of Outpatient Care by Private Hospitals

Provider	Name	Desde1	Town	Area
Toowong Private Hospital	Psychological Therapies	Ax[F00-F99]-O9.1	Toowong	State
Toowong Private Hospital	Hospital in the Home	Ax[F00-F99]-O1.1	Toowong	State
Toowong Private Hospital	MH nurse incentive program	Ax[F00-F99]-O5.1.1	Toowong	State
Toowong Private Hospital	Day Program	Ax[F00-F99]-O8.1	Toowong	State

Accessibility Services

Accessibility Services Provided by the Health Sector

Accessibility related services cover a wide range of domains. We have identified one service providing access to the primary care providers. This service is provided by the Royal Brisbane and Women's Hospital and its main aim is to ease the access of the person with mental health problems to the general practitioner.

Table 25: Availability of Accessibility Services Provided by Public Health Sector

Provider	Name	Desde1	Town	Area
RBWH – Metro North Mental Health Services	**Access to the GP Local Offices**	Ax[F00-F99]-A5.1	Herston	Brisbane North

Accessibility Services Provided by NGOs

We have found 5 BSICs or services facilitating access to different types of care. **Advanced Personal Managers, Help and QLD Health** and **Mental Illness Fellowship of Queensland** are focused on increasing accessibility to employment. **Mental Illness Fellowship of Queensland** has a partnership with **Ostra** and has other team providing accessibility to Education. Finally, the **Institute for Urban Indigenous Health** has a service coordinating the access to different types of services (similarly to PIR).

The total number of BSICs (or services) from the NGO sector providing accessibility related services is 0.76 per 100,000 inhabitants.

TABLE 26: AVAILABILITY OF ACCESSIBILITY TO CARE

Provider	Name	Desde1	Town	Area
Advanced Personal Managers	PHAMS-Employment	Ax[F00-F99]-A5.4	Mount Gravatt	Brisbane North
HELP & QLD Health	Employment	Ax[F00-F99]-A5.4	Nundah	Brisbane North
Institute for Urban Indigenous Health	IUIH Connect	Ax[F00-F99]-A4	Browen Hills	Morayfield, Strathpine, Deception Bay
Mental Illness Fellowship of Queensland	Ostra Partnership	Ax[F00-F99]-A5.4	Herston	Brisbane North
Mental Illness Fellowship of Queensland	Education	Ax[F00-F99]-A5.3	Herston	Brisbane North

Information and Guidance

INFORMATION AND GUIDANCE SERVICES PROVIDED BY NGOS

We have identified 3 BSICs (or services) providing information related to mental ill-health. The main characteristic of these services is that they do not entail subsequent follow up. **Commonwealth Respite and Carelink Centre** provide guidance and assessment related to work and financial mechanisms for people with mental health problems and their carers; **Carers Queensland** also provide information for carers through face to face consultations.

Lastly, the **Mental Illness Fellowship of Queensland** also has a team providing information related to mental health problems through telephone.

These three services are for all age group.

The total number of BSICs (or services) from the NGO sector providing information is 0.45 per 100,000 inhabitants.

TABLE 27: AVAILABILITY OF INFORMATION AND GUIDANCE SERVICES

Provider	Name	Desde1	Town	Area
Commonwealth Respite and Carelink Centre	Suncare Community Services	Gx(e310)[F00-F99]-i1.4	Toombul	Brisbane North
Mental Illness Fellowship of Queensland	MI Networks	Gx[F00-F99]-I2.1.2	Herston	Brisbane North
Carers Queensland		Gx [e310][F00-F99]-I2 1.1	Stafford	Brisbane North

Voluntary Care

Voluntary Care Provided by NGOs

The **Mental Illness Fellowship of Queensland** also has a Volunteer Group that support people with a lived experience of mental illness through face-to-face contacts and provide care related to their social needs.

Table 28: Availability of Voluntary Care by NGOs

Provider	Name	Desde1	Town	Area
Mental Illness Fellowship of Queensland	Volunteer Group	Gx[F00-F99]-S1.3	Herston	Region

Specific Populations

Transition to Adulthood

In this section we describe the availability and placement capacity of the BSICs (or services) providing care for young people (16-25 years old) with a lived experience of mental illness

Residential Care

Residential Care provided by the Public Health Sector

A total of 1 BSICs (or services) providing care for young people experiencing mental health problems were identified.

There is an acute mental health unit at the Royal Brisbane and Women's Hospital providing support for adolescents. This service has 12 beds and covers all the state

Table 29: Availability of Acute Residential Care- Children and Adolescents

Provider	Name	Desde1	Beds	Town	Area
RBWH Metro North MHS	Adolescent Acute Unit	Ca[F0-F99]-R2		Herston	State

We have not found other residential services for young people with a lived experience of mental illness in the NGO sector

Day Care

Day Care provided by the NGOs

We have only found 1 BSIC/services providing day care for young people with a lived experience of mental illness - **Footprints**. They provide day care related to social and cultural activities.

Table 30: Availability of Day Care Provided by NGOs - Children and Adolescents

Provider	Name	Desde1	Beds	Town	Area
Footprints	Centre based Activities	TA[F00-F99]-D4.3		Newstead	Brisbane North

Outpatient Care

Outpatient Care provided by the Public Health Sector

A total of 1 BSICs (or services) providing outpatient care for children and adolescents was found in the area of Redcliffe and Caboolture. It is a mobile service that has the capacity to see the clients on a weekly basis, if needed.

Table 31: Availability of Outpatient Care Provided by the Public Health Sector - Children and Adolescents

Provider	Name	Desde1	Beds	Town	Area
Caboolture - Metro North Mental Health Services	Child and Youth Team	Cx[F00-F99]-O6.1		Caboolture	Caboolture and Redcliffe

Outpatient Care provided by NGOs

Mobile Outpatient Services

Two services providing mobile outpatient care for young adults with psychosocial needs were identified. However, one of them is targeting people with Intellectual Disabilities, which may or may not have a comorbid mental illness. The two services are managed by **Community Living Association**.

Table 32: Availability of Non-Acute Mobile Outpatient for Young People (NGOs)

Provider	Name	Desde1	Town	Area
Community Living Association	Arros	TA-[F70-f79]-O5.2	Nundah	Brisbane North
Community Living Association	Community Connections	TA[Z56-Z65]-O5.2	Nundah	Brisbane North

Non-Mobile Outpatient Services

There are four services providing non-mobile outpatient support for young people with mental health problems. Three of them are focused on the heath related needs (Headspace managed by **Open Minds** and **Aftercare**). The other service is also targeting the health needs of children and adolescents with post-traumatic stress disorders

Table 33: Availability of Non-Acute Non-Mobile Outpatient for Young People (NGOs)

Provider	Name	Desde1	Town	Area
Open Minds	Headspace	TA[F0-F99]-O9.1b	Redcliffe	Brisbane North
	Headspace	TA[F0-F99]-O9.1b	Taringa	Brisbane North
Aftercare	Headspace	TA[F0-F99]-O8.1	Nundah	Brisbane North
QLD Programs of Assistance to survivors of torture and Trauma		Cx[F43.1]-O9.1	Woolloongabba	Brisbane North

Older People

In this section we describe the availability and placement capacity of the BSICs (or services) providing care for older people with mental health problems.

Residential Care

Residential Care provided by the Public Health Sector

We have identified a total of 2 BSICs providing residential care for older people with mental health problems.

The BSIC in the North Brisbane Royal Women Hospital provides **acute care** for older people with a lived experience of mental illness. The length of stay in this service is longer than in the other acute facilities (around 60 days) due to the special characteristics of the population.

There is another facility managed by the team at the Caboolture and Redcliffe catchment area that provides **non-acute residential care with 24-hour support**. There is not 24-hour physician cover but he/she is on call. It has indefinite stay capacity.

Table 34: Residential Care for Older People

Provider	Name	Desde1	Beds	Town	Area
RBWH Metro North Mental Health Services	Acute Unit	O[F0-F99]-R2	10	Kippa-Ring	RBWH
Redcliffe and Caboolture team- Metro North Mental Health Services	Psychogeriatric Unit	O[F0-F99]-R11o	20	Herston	Redcliffe and Caboolture

Day Care

We have not found any facility providing day care for older people with a lived experience of mental illness.

Outpatient Care

Outpatient Care provided by the Public Health Sector

We have identified 2 BSICs (or services) providing care for older people with mental health problems. They provided mobile health care, non-acute and medium intensity care.

Table 35: Outpatient Care for Older People

Provider	Name	Desde1	Town	Area
TPCH - Metro North Mental Health Services	Older person Team	Ox[F00-F99]-O6.2	Aspley	TPCH
RBWH - Metro North Mental Health Services	Older person team	Ox[F00-F99]-O6.2	Herston	Bris Nth

Other Specific Populations

Homeless

We have identified one team providing care for homeless people, with a special focus on their mental health needs. The team sits in the Royal Brisbane and Women's Hospital, in the Fortitude Valley Community Center. It is an outpatient mobile non-acute team. It covers both Brisbane North and Brisbane South.

TABLE 36: SERVICES FOR HOMELESS PERSONS

Provider	Name	Desde1	Town	Area of coverage
RBWH Metro North Mental Health Services	Homeless team	Ax[Z59.0][F00-F99]-O6.1	Fortitude Valley	Both sides of the river

Forensic Services

We have found 3 BSIC (or services) providing mental health care for forensic patients. One of them is providing just guidance and assessment of mental health problems, without entailing in any subsequent follow up. The second, is a liaison service: professionals provide mental health care to patients in forensic facilities. The third, is the Queensland Fixated Threat Assessment Centre (QFTAC). It is staffed by officers from the Security Operations Unit (SOU) and mental health clinicians. The SOU is a protective intelligence service for public office holders. The main aim of this team is to support people with mental health illness that have been identifying as a possible threat to a public figure or the national security. Most of the cases are referred by the police, law enforcement agencies, Ministerial and Electoral offices, embassies and mental health services.

TABLE 37: FORENSIC MENTAL HEALTH SERVICES

Provider	Name	Desde1	Town	Area
RBWH Metro North Mental Health Services	Forensic services for the state partnership	Ax [F00-F99]-I1.1J	Brisbane	State
RBWH Metro North Mental Health Services	Forensic liaison	Ax [F00-F99]-O6.1j	Brisbane	State
RBWH Metro North Mental Health Services	QFTAC	Ax [F00-F99]-O8.1j	Brisbane	State

Services for Alcohol and Other Drugs

We have identified 15 BSIC/teams providing care for people with Alcohol and other Drug problems. Twelve of the 15 are teams are from the Metro North Mental Health Service and 3 from **Drug ARM**.

Residential

We have only found 1 BSIC (o service) providing residential acute care for people with alcohol and other drugs problems. It has 16 beds and is located in the Royal Brisbane and Women's Hospital.

TABLE 38: RESIDENTIAL SERVICES FOR AOD CLIENTS

Provider	Name	Desde1	Beds	Town	Coverage Area
Alcohol and Drug Service- Metro North Mental Health Services	HADS Unit - NBRWH	Ax[F10-F19]-R2	16	Herston	North Brisbane

Outpatient Care

OUTPATIENT CARE PROVIDED BY THE PUBLIC HEALTH SECTOR

ACUTE NON-MOBILE CARE

We have found 2 BSIC (or services) that provide acute non-mobile care for people with Alcohol and other Drugs problems: the harm reduction team (at the Biala Centre, Brisbane) and the DABIT Team, at the Royal Brisbane and Women's Hospital. They provide acute care during business hours. Outside these hours, the emergency care can be provided by the HADS team at the Royal Brisbane and Women's Hospital.

NON-ACUTE CARE

Non-Mobile

There are 8 BSICs providing non-acute non-mobile care at the Alcohol and Drug Service. One of them is a consultation and liaison clinical services that deliver clinical services at the different hospitals and the Brisbane City Watchhouse for people with co-morbid substance use disorders. Another 2 are located at The Prince Charles Hospital. The psychosocial treatment team provides integrated bio-psychosocial clinical services to reduce health, social and emotional costs associated with drug use. There is also an Opioid Treatment Program that involves commencing and stabilising patients on opioid maintenances treatment.

The other 5 BSICs are located at the Biala Centre (Rome Street, Brisbane). In this centre we have found an ambulatory detox team, a team providing integrated psychosocial services , another one delivering the Opioid treatment program, the Alcohol and Drug Information Service (ADIS) and the Queensland Magistrate's Early Referral into Treatment (QMERIT). The ADIS service is a state-wide telephone services that offers information, advice, referral, intake, assessment and support (24-hours a day). They have the capacity to follow up the clients. Lastly, the QMERIT program is a pre-sentences diversion program for offenders at an early stage in the criminal justice process, who voluntary participated in a sustained program related to their alcohol and drugs problem prior to the sentence.

TABLE 39: OUTPATIENT SERVICES PROVIDED BY PUBLIC HEALTH SECTOR FOR AOD CLIENTS

Meso-organization (i)	Name	Desde1	Town	Catchment Area
Alcohol and Drug Service- Metro North Mental Health Services	Harm Reduction	Ax[F10-F19]-O4.1	Brisbane	Brisbane North
Alcohol and Drug Service- Metro North Mental Health Services	DABIT Team - RBWH Hospital	Ax[F10-F19]-O4.1	Herston	Brisbane North
Alcohol and Drug Service- Metro	Consultation Liaison	Ax[F10-F19]-	Brisbane	Brisbane

North Mental Health Services		O8.1l		North
Alcohol and Drug Service- Metro North Mental Health Services	Ambulatory Detox	Ax[F10-F19]-O8.1b	Brisbane	Brisbane North
Alcohol and Drug Service- Metro North Mental Health Services	Psychosocial Treatment Team-Biala	Ax[F10-F19]-O8.1b	Brisbane	Brisbane North
Alcohol and Drug Service- Metro North Mental Health Services	Alcohol and Drug Information Service (ADIS)	Ax[F10-F19]-O8.1e	Brisbane	State
Alcohol and Drug Service- Metro North Mental Health Services	Opioid Treatment Programs	Ax[F10-F19]-O9.1b	Brisbane	Brisbane North
Alcohol and Drug Service - Metro North Mental Health Services	Psychosocial Treatment Team-Prince Charles Hospital	Ax[F10-F19]-O8.1b	Chermside	Brisbane North
Alcohol and Drug Service - Metro North Mental Health Services	Opioid Treatment Programs - Maleuca-Prince Charles Hospital	Ax[F10-F19]-O9.1b	Chermside	State
Alcohol and Drug Service - Metro North Mental Health Services	Queensland Magistrate's Early Referral into Treatment (QMERIT)	Ax[F10-F19]-O9.1bj	Brisbane	State

Outpatient Care provided by the NGO sector

There are 2 additional outpatient services focused on the care of people with Alcohol and Drugs problems. One, the creation options program, is a mobile service that provides intensive case management, brief treatment interventions, counselling and appropriate supported referrals. It is a mobile service. The second, the Community and Family Support Service, is a 12-session program that provides assessment and support, brief treatment intervention and referrals. Although it is a non-mobile service, if the person cannot go the office, they can provide appointments in the person's home or other location.

Table 40: Outpatient Services Provided by NGOs for AOD Clients

Provider	Name	Desde1	Town	Area
Drug ARM	Creation Options Program	Ax[F10-F19]-O5.1	Annerley	All the region
Drug ARM	Community and Family Support Services	Ax[F10-F19]-O9.1m	Annerley	All the region

Accessibility

Drug ARM provides a service that aims to increase the accessibility to services of people with Alcohol and Drugs problems.

Table 41: Accessibility Services for AOD Clients

Provider	Name	Desde1	Town	Area
Drug ARM	Central Intake	Gx[F10-F19]-A4	Annerley	All the region

VOLUNTARY

At the Biala facility there is also an Alcoholic Anonymous group that is run in partnership with the Salvation Army.

TABLE 42: VOLUNTARY SERVICES FOR AOD CLIENTS

Provider	Name	Desde1	Town	Area
Alcohol and Drug Service - Metro North Mental Health Services & The Salvation Army	Alcoholic Anonymous	Ax[F10-F19]-S1.3	Brisbane	State

Workforce Capacity

In this section we present an overview of the workforce capacity in the Brisbane North area. These data has to be interpreted with caution as we did not get any response from 30% of the BSICs. In addition, data from the health sector is from the 2012/2013 financial year (https://data.qld.gov.au/dataset/mental-health-establishments-collection-mhec-2010-2011-2012-2013/resource/43126c58-b519-476d-a4e4-b12cff134458).

Consequently, we present the data in an aggregated way. The different terminology used by the providers makes it difficult for analysis. More research is needed in order to understand this. This has to be seen as a first approximation of the data.

The rate of professionals in the public health sector providing care for people with a lived experience of mental illness per 100,000 inhabitants in Brisbane North is 142.55. If we add the staff at the NGOs this rate is increase to more than 178 staff per 100,000 inhabitants.

In general, the RBWH is more staffed than the other areas and significantly higher in the number of psychiatrists, psychologists and registered nurses than the other catchment areas. This is partly explained by the specific and state-wide programs provided by this facility but does not fully account for the significantly higher rate of psychiatrists (approximately 13.0 at TPCH and RCH to 29.2 at RWBH).

As expected, the number of clinical professionals at the NGO sector is small, which may reduce their capacity to provide more intensive care.

TABLE 43: MENTAL HEALTH WORKFORCE BY CATCHMENT, SECTOR, PROFESSION

	HEALTH SECTOR								NGO sector		TOTAL	
	TPCH catchment area		Red-Cab catchment area		RBWH Catchment area		All Brisbane North					
	FTE	Rate	FTE	Rate	FTE	Rate	FTE	Rate	FTE	Rate	FTE	Rate
Psychiatrist*	35.6	13.2	21.0	13.0	66.7	29.2	123.2	18.7	0.3	0.04	123.4	18.7
Psychologist	18.4	6.8	23.4	14.5	24.6	10.8	66.4	10.1	9.0	1.4	75.4	11.4
Registered Nurses	161.9	59.9	122.2	75.9	205.0	89.8	489.1	74.2			489.1	74.2
Enrolled nurses	34.5	12.8	25.5	15.8	18.7	8.2	78.6	11.9			78.6	11.9
GP									0.4	0.1	0.4	0.1
Community Rehab									7.0	1.1	7.0	1.1
Peer Support									5.0	0.8	5.0	0.8
Volunteer									21.0	3.2	21.0	3.2
Support facilitators									30.7	4.7	30.7	4.7
Social workers	22.0	8.2	14.2	8.8	40.1	17.6	76.3	11.6	65.6	9.9	141.9	21.5
Case workers									51.6	7.8	51.6	7.8
INTAKE WORKERS									2.5	0.4	2.5	0.4
Occupational Therapists	16.9	6.3	6.4	4.0	17.2	7.5	40.5	6.2	1.0	0.2	41.5	6.3
MH Counsellor									2.0	0.3	2.0	0.3
MH workers					0.4	0.2	0.4	0.1	21.0	3.2	21.4	3.3
MH Consumer Workers					1.5	0.6	1.5	0.2			1.5	0.2
Other personal care**	30.3	11.2	19.5	12.1	14.3	6.3	64.1	9.7	21.5	3.3	85.6	13.0
TOTAL	319.6	118.3	232.1	144.2	388.4	170.1	940.1	142.5	238.5	36.2	1179	178.7

Note – the figures in this table are rounded to 1 decimal point.

6. Mapping of 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 the overall provision of mental health services as well as by the type of MTC provided: (i) Adult Residential; (ii) Adult Day Care; (iii) Adult Outpatient Care; (iv) alcohol and other drug services and (v) PIR and ATAPS services.

Figures 28 and 29 show the geo-location of adult residential services by sector and by age group and related to risk of psychological distress. Major roads are also shown.

Figures 30 and 31 map the day care services in relation to these same indicators.

Similarly, Figures 32 and 33 depict the mobile outpatient services and Figures 34 and 35 non-mobile outpatient services in relation to these indicators.

Figure 36 and 37 maps with the distribution of alcohol and other drug services by sector and age group.

Figures 38 and 40 show the distribution of PIR services and Figures 39, 41-44 the ATAPS services.

Overall, the maps show that the public funded services are well distributed across the region and have services located in areas of higher psychological distress.

The distribution of the ATAPS program and to a lesser extent PIR, complements the public mental health services and is focused on areas of higher psychological need and lower socio-demographic indicators.

Figures 45-47 show visually the accessibility of residential, day care and non-mobile outpatient services across the region.

FIGURE 28: BRISBANE NORTH – PLACEMENT OF RESIDENTIAL CARE SERVICES

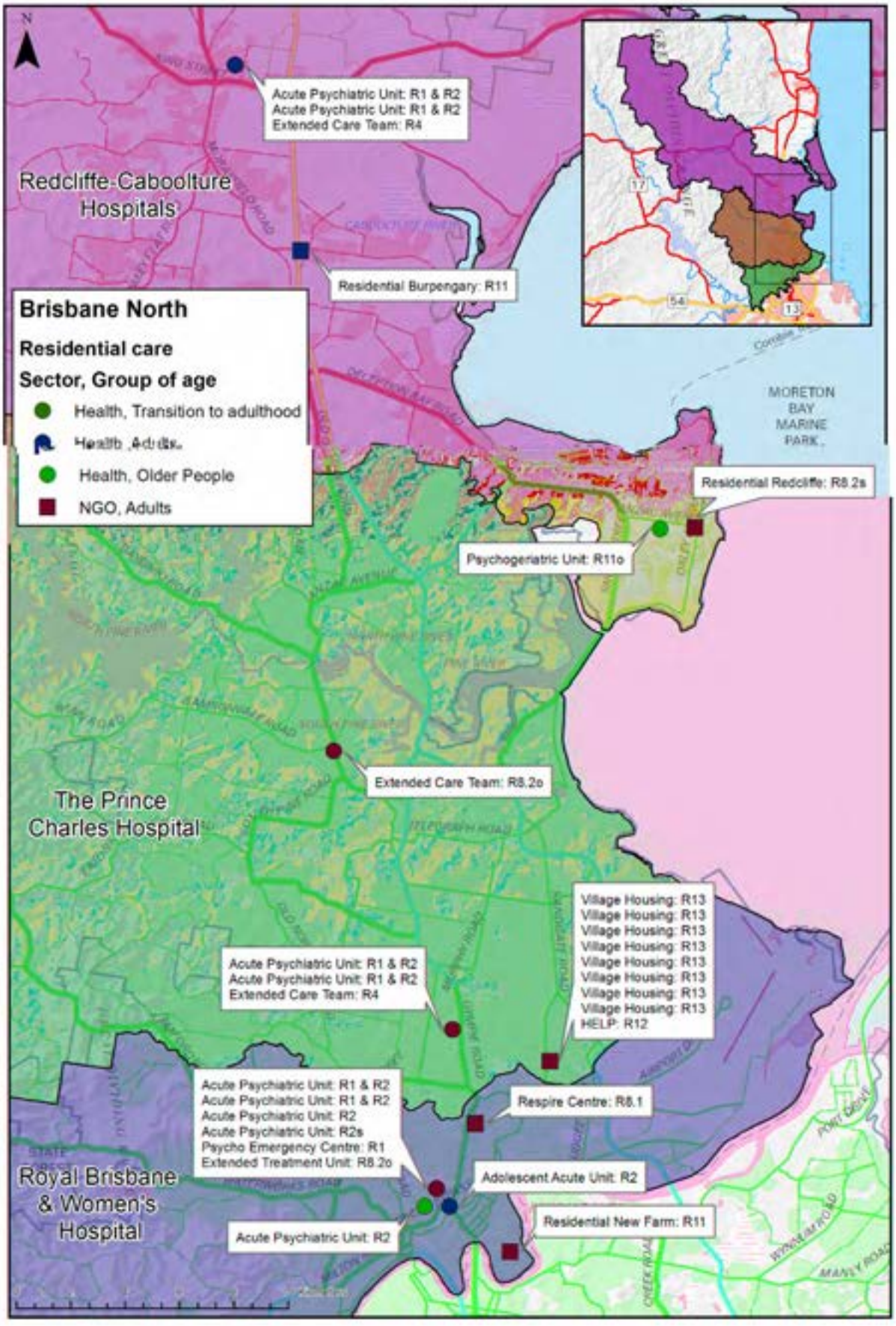


FIGURE 29: BRISBANE NORTH – PLACEMENT OF RESIDENTIAL CARE SERVICES AND ESTIMATED POPULATION OF PSYCHOLOGICAL DISTRESS

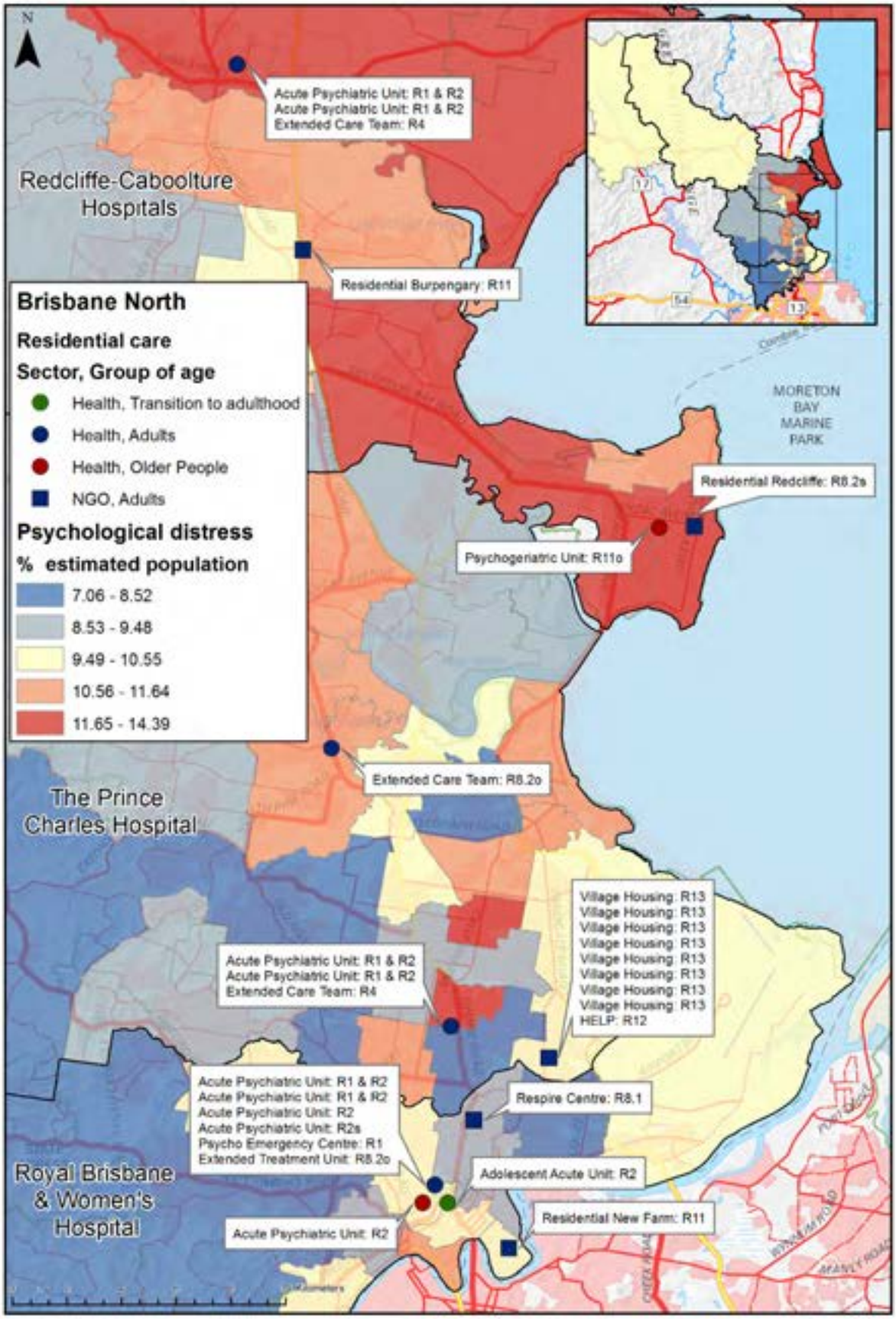


FIGURE 30: BRISBANE NORTH – PLACEMENT OF CARE SERVICES

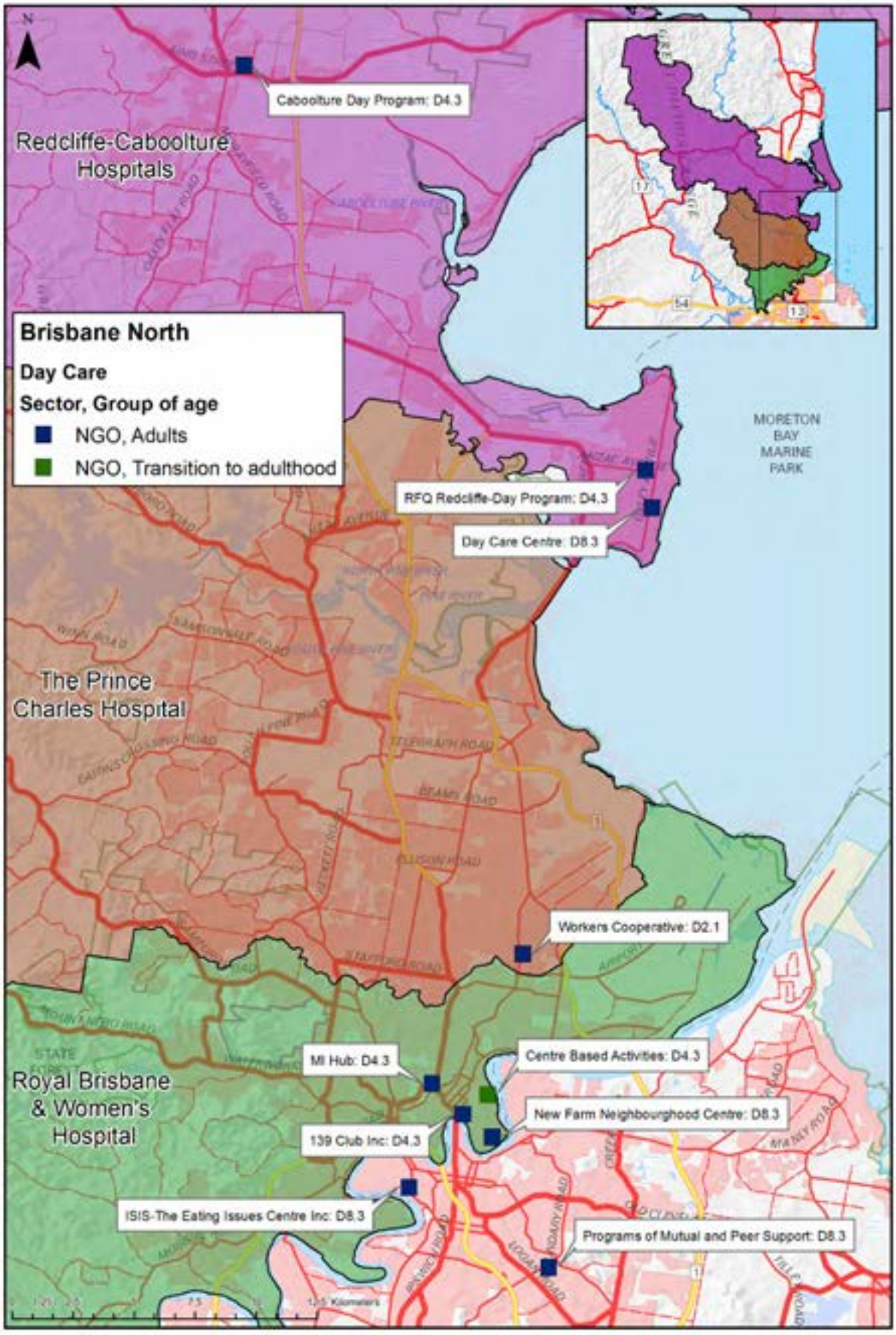


FIGURE 31: BRISBANE NORTH – PLACEMENT OF DAY CARE SERVICES AND ESTIMATED POPULATION OF PSYCHOLOGICAL DISTRESS

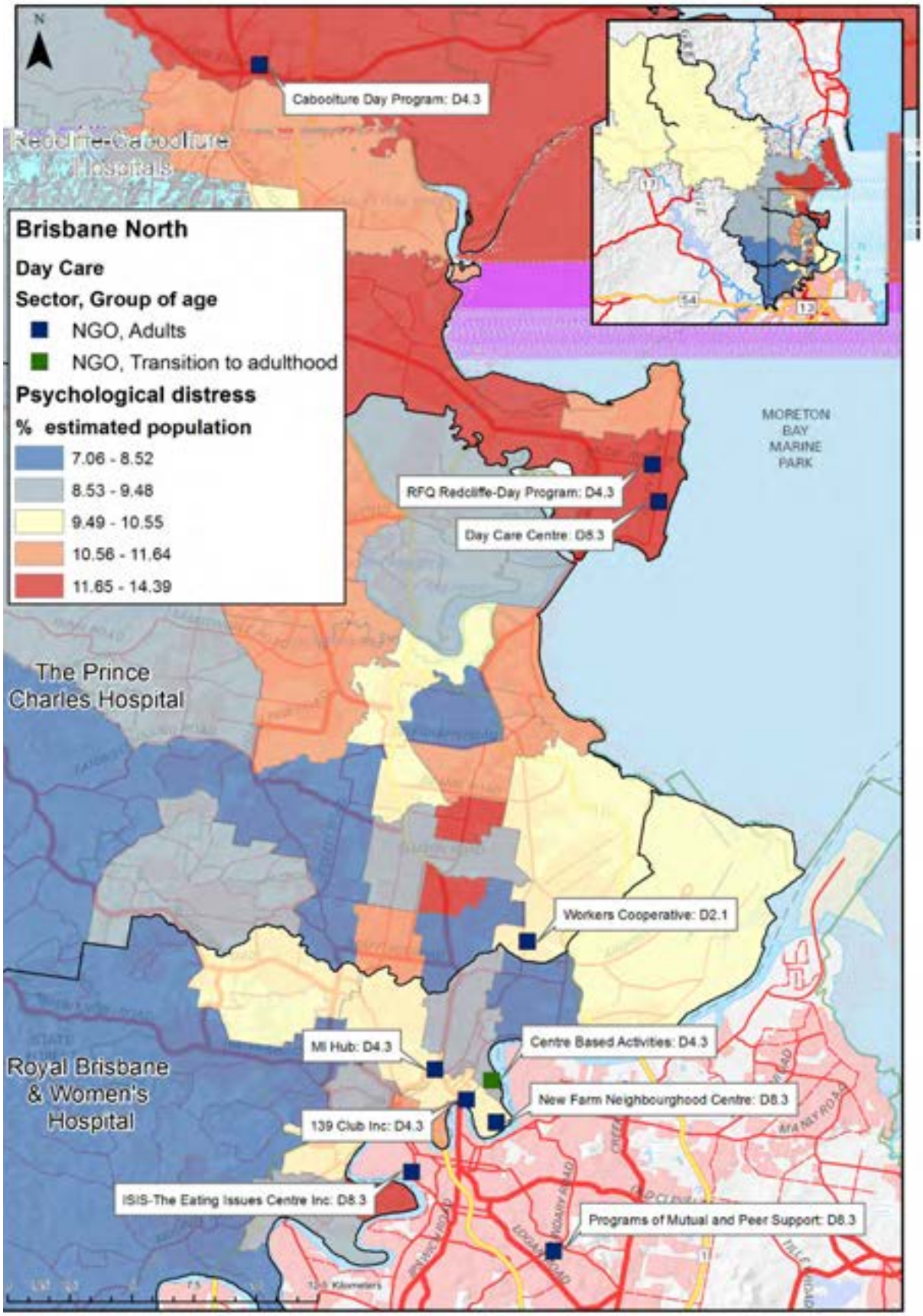


FIGURE 32: BRISBANE NORTH – PLACEMENT OF MOBILE OUTPATIENT CARE

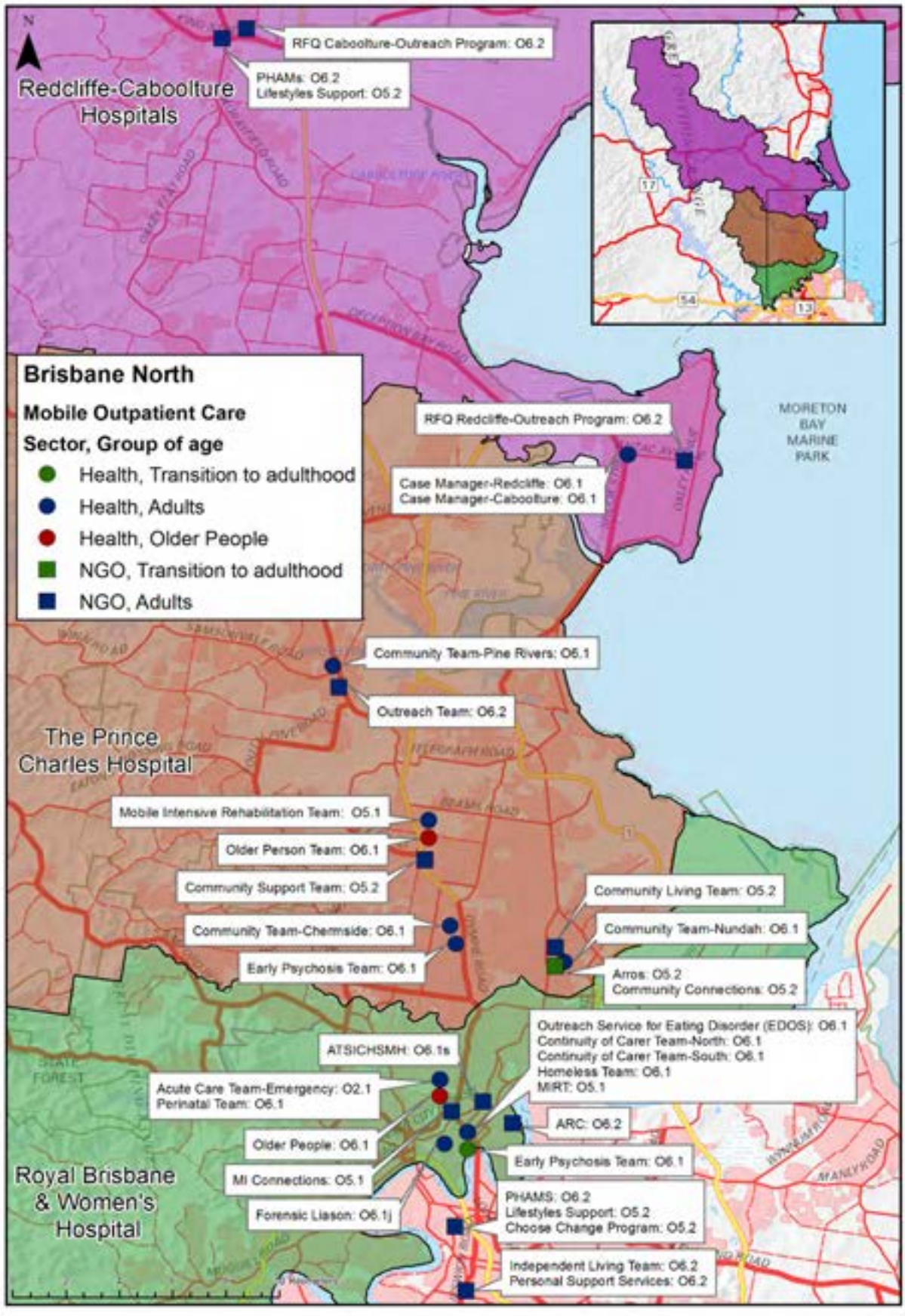


FIGURE 33: BRISBANE NORTH – PLACEMENT OF MOBILE OUTPATIENT CARE AND ESTIMATED POPULATION OF PSYCHOLOGICAL DISTRESS

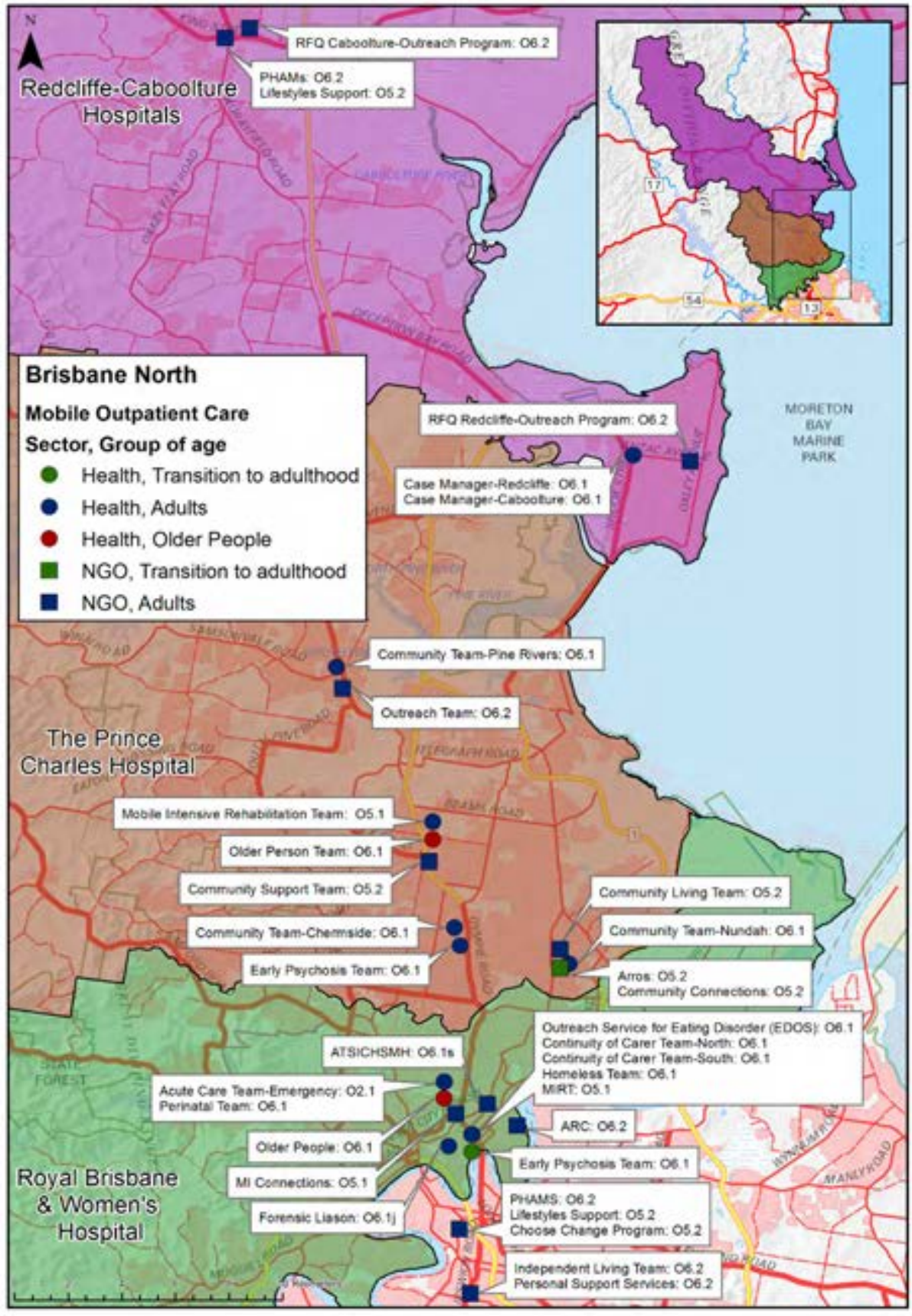


FIGURE 34: BRISBANE NORTH – PLACEMENT OF NON-MOBILE OUTPATIENT CARE

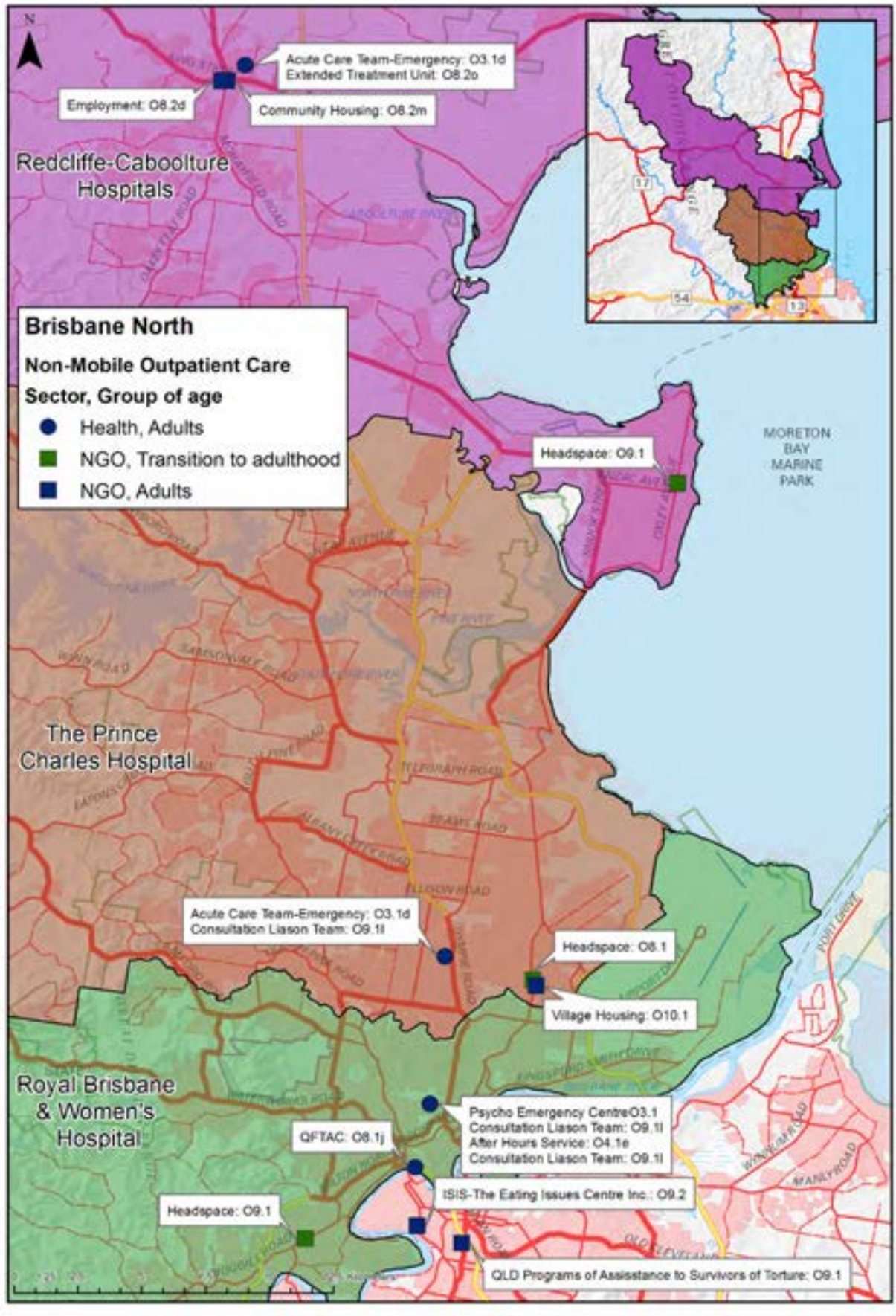


FIGURE 35: BRISBANE NORTH – PLACEMENT OF NON-MOBILE OUTPATIENT CARE AND ESTIMATED POPULATION OF PSYCHOLOGICAL SERVICES

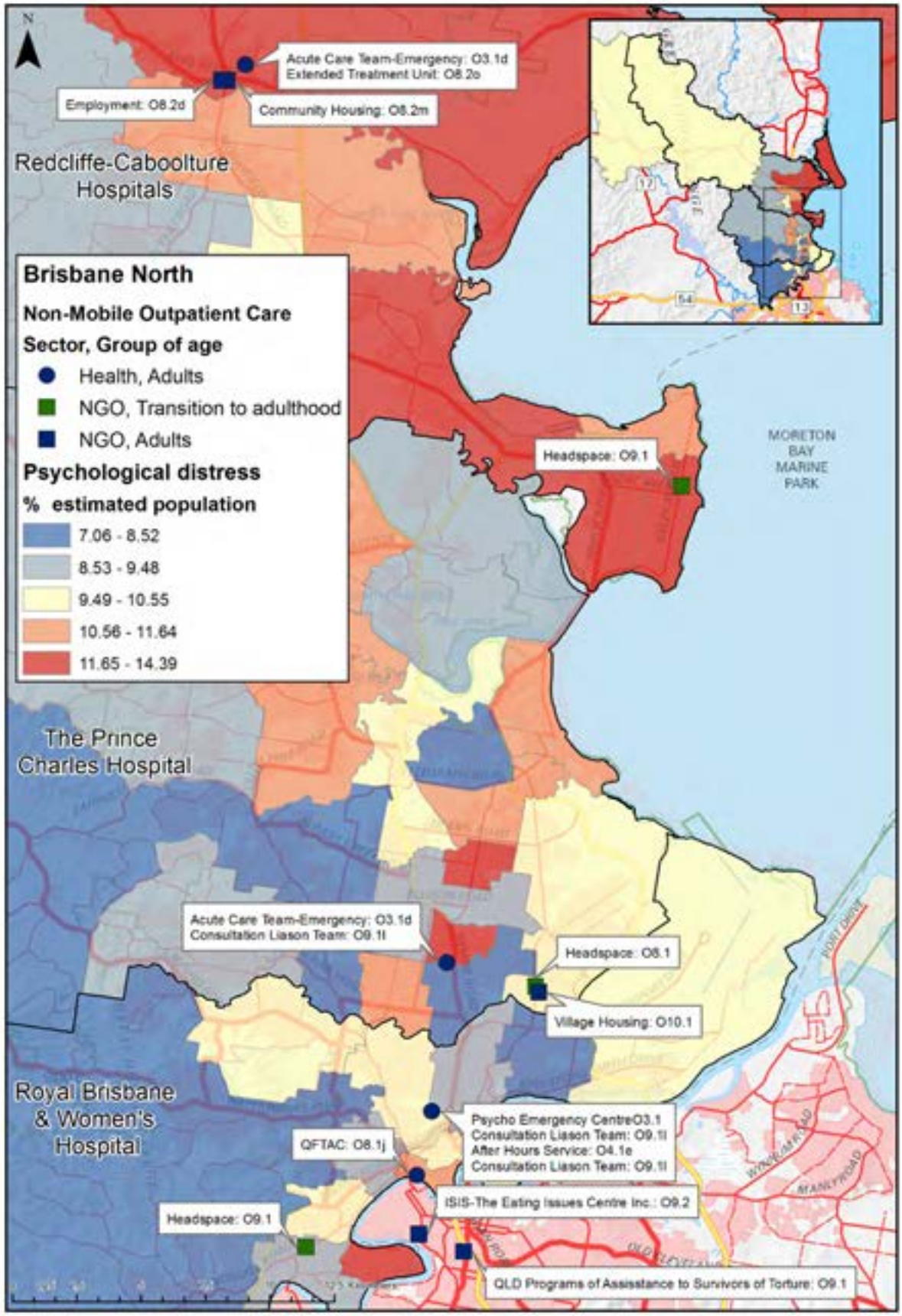


FIGURE 36: BRISBANE NORTH – PLACEMENT OF ALCOHOL AND OTHER DRUG SERVICES

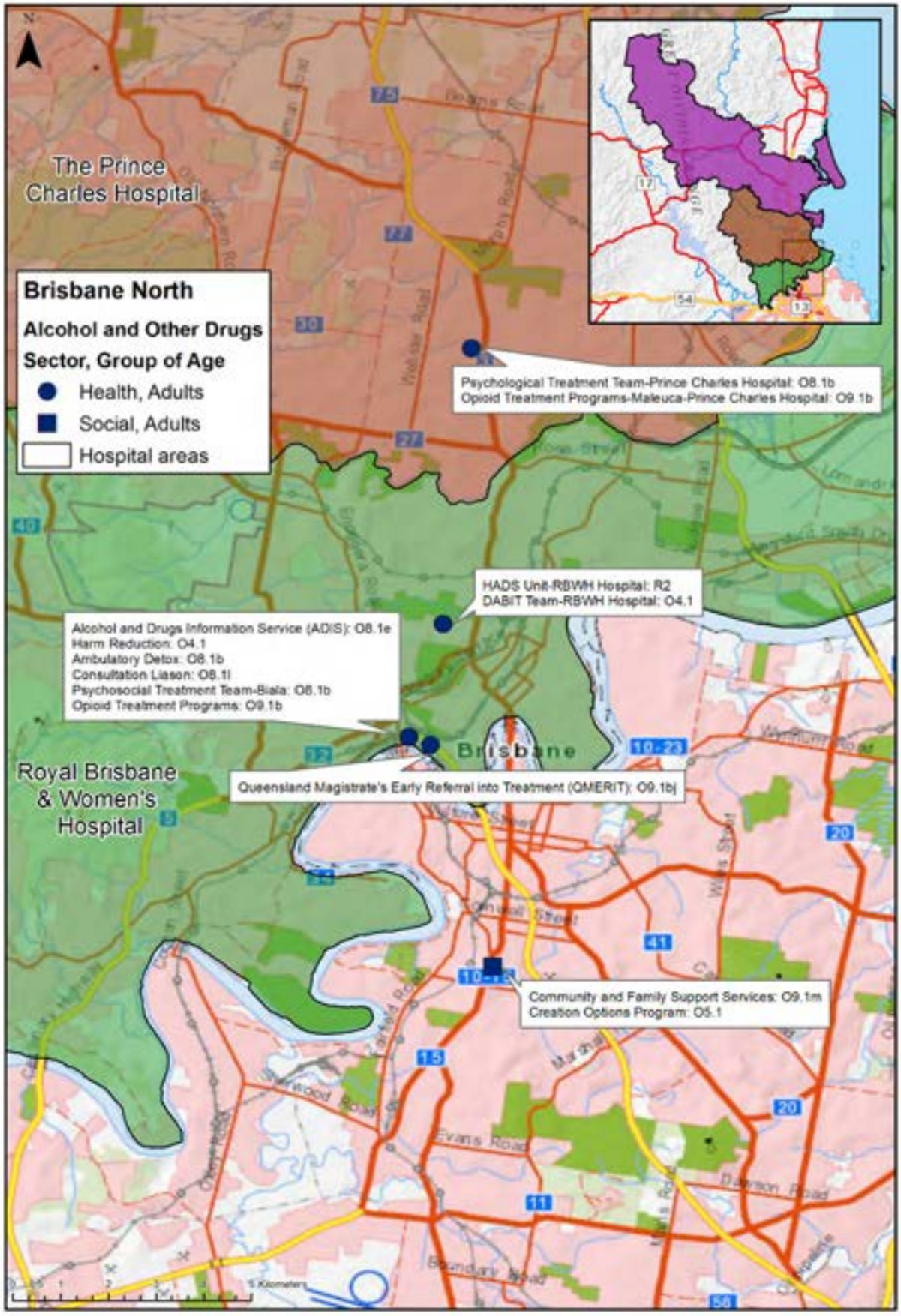


FIGURE 37: BRISBANE NORTH – PLACEMENT OF ALCOHOL AND OTHER DRUG SERVICES AND ESTIMATED POPULATION OF PSYCHOLOGICAL DISTRESS

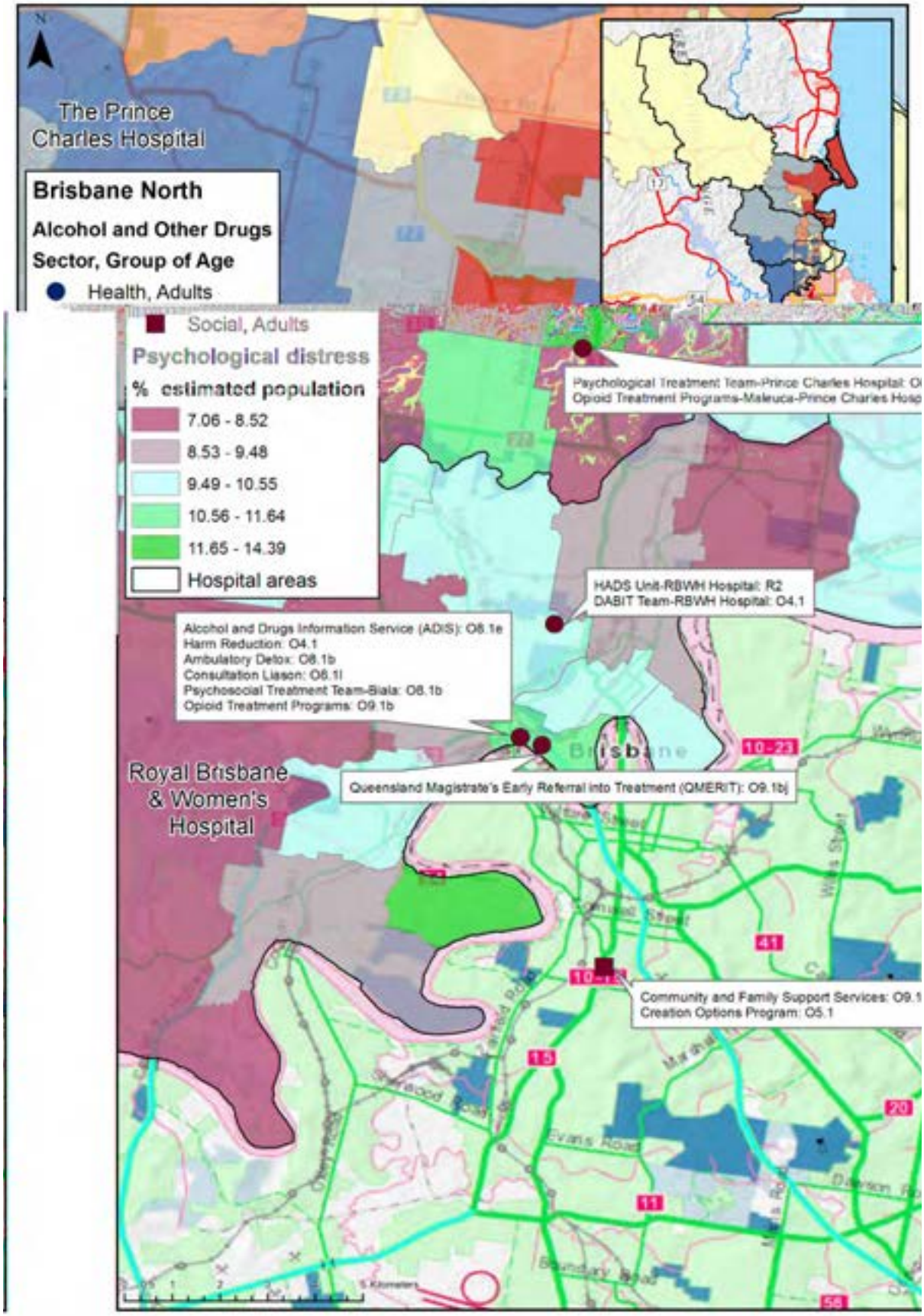


FIGURE 38: BRISBANE NORTH – PLACEMENT OF PARTNERS IN RECOVERY SERVICES

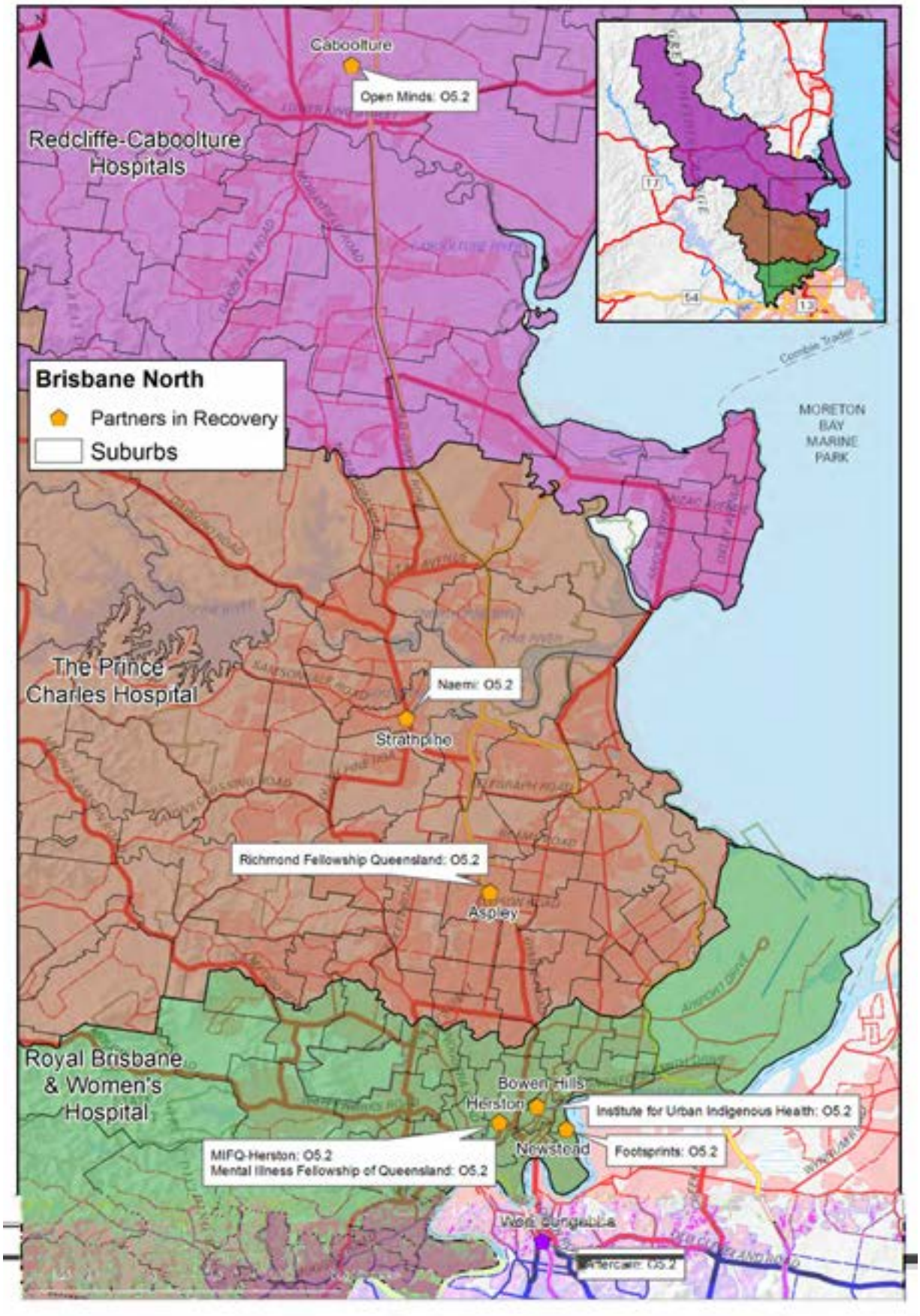
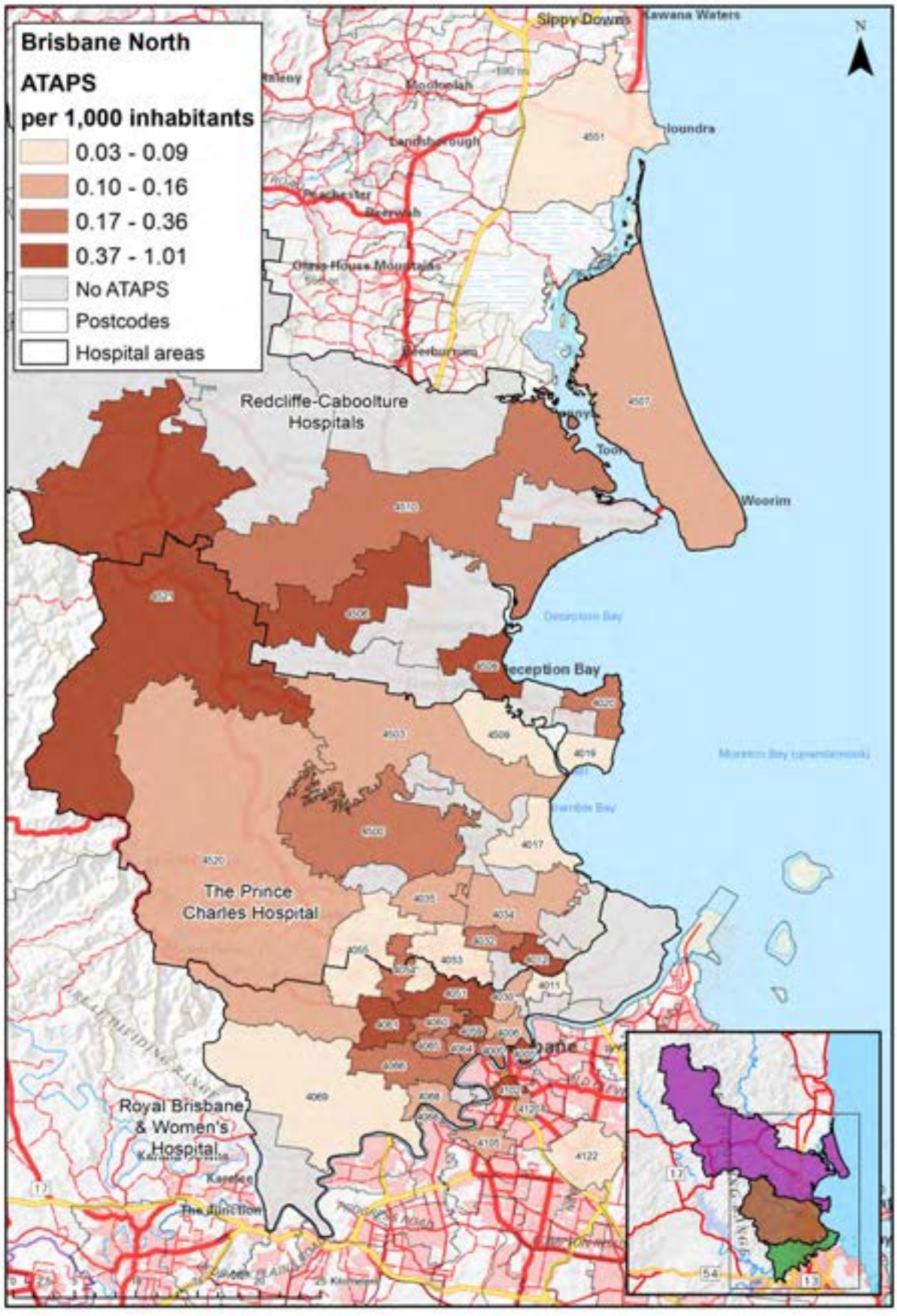


FIGURE 39: BRISBANE NORTH – DISTRIBUTION OF ATAPS PER 1,000 PERSONS



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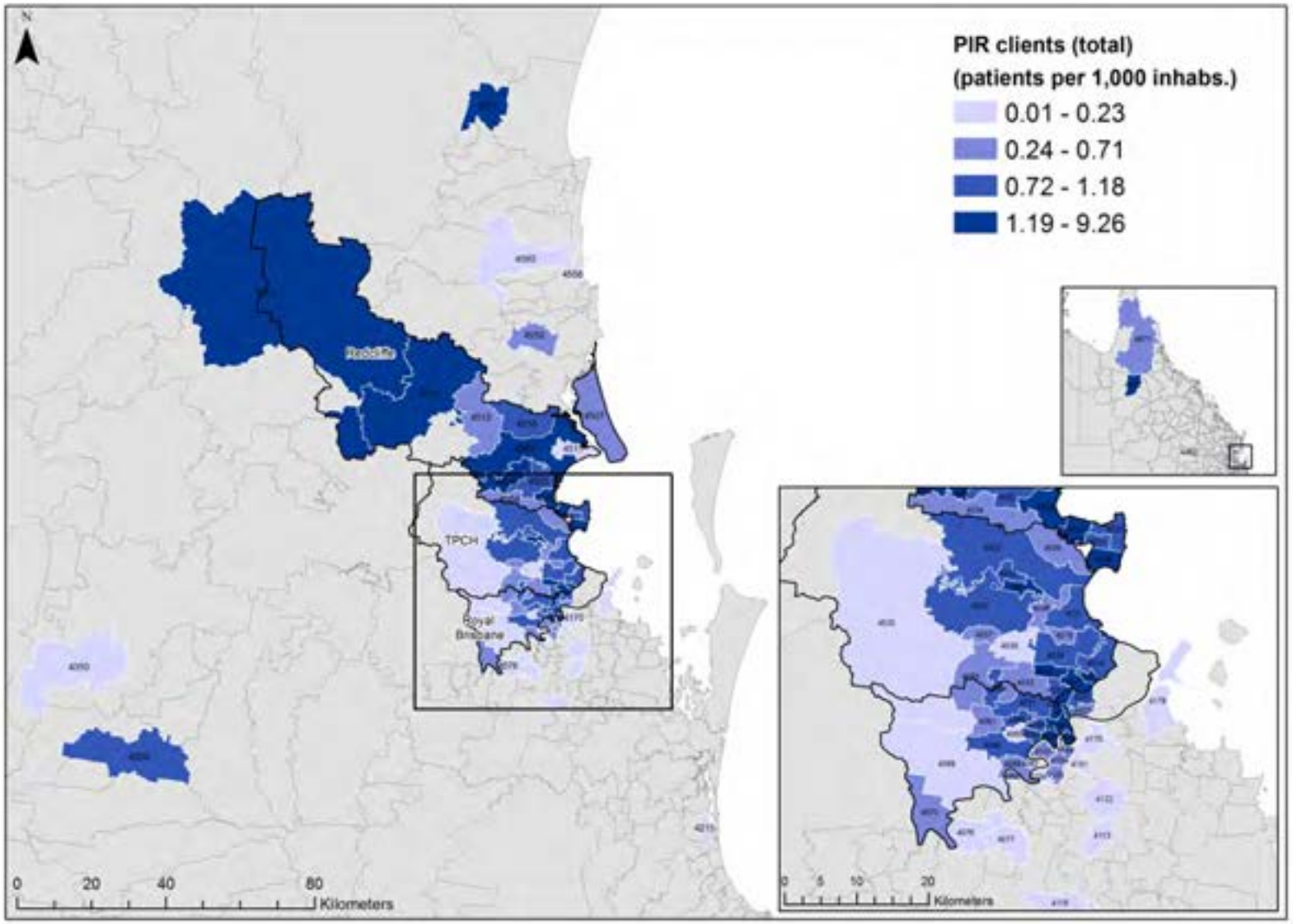

Figure 40: Brisbane North – Partners In Recovery Clients Per 1,000 Persons

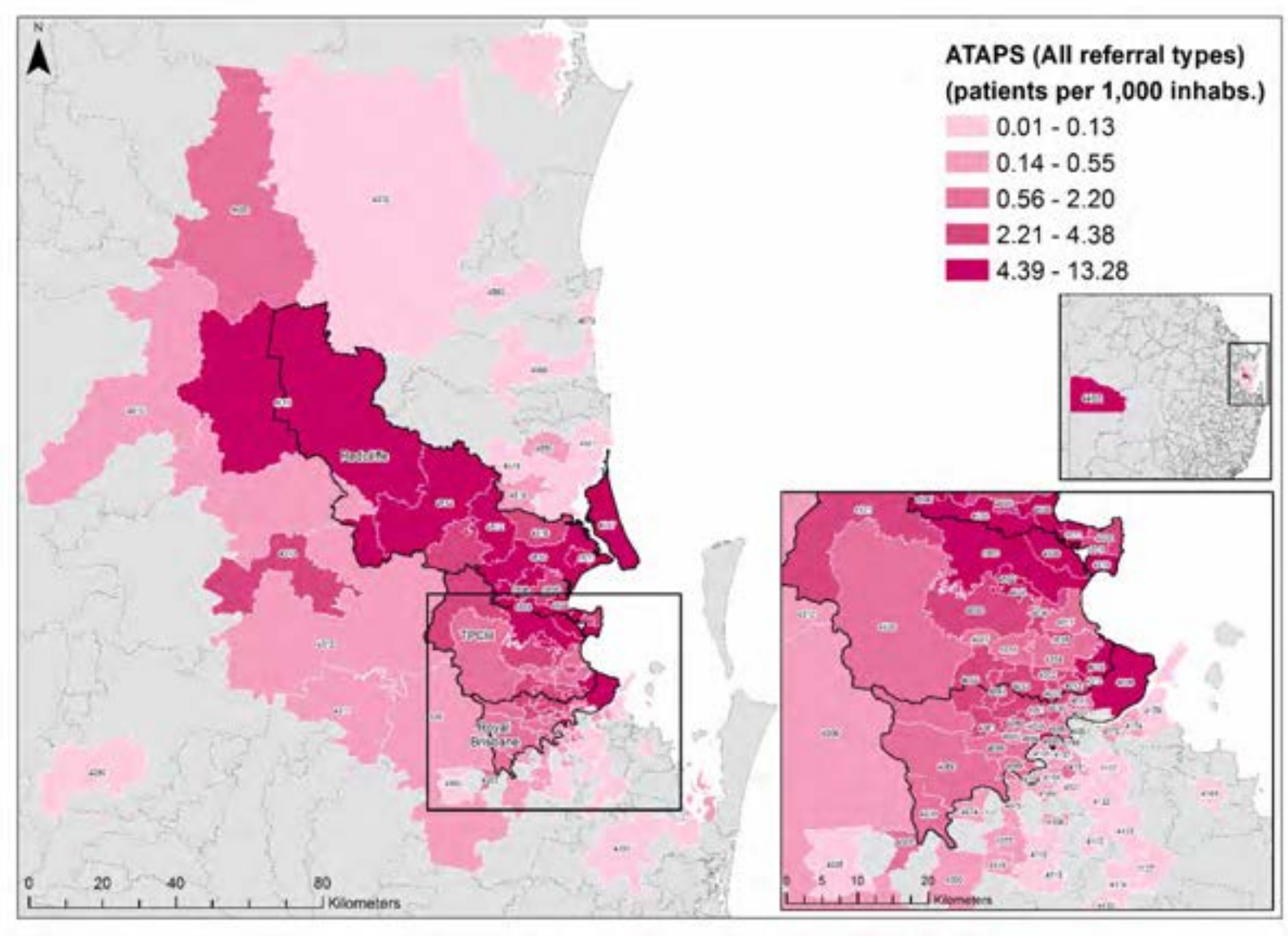

Figure 41: Brisbane North – ATAPS - All Referral Types, Patients Per 1000 Persons

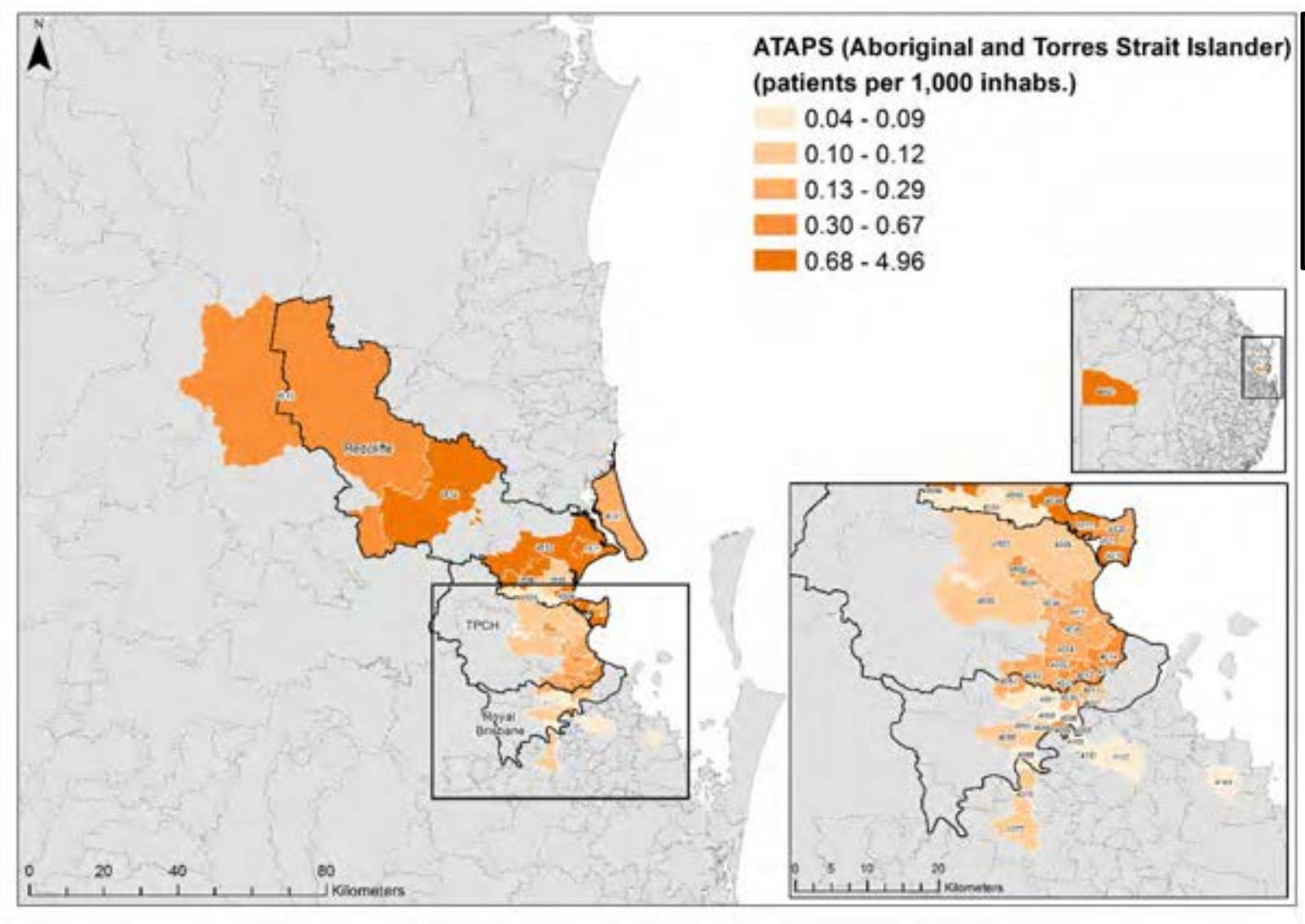

Figure 42: Brisbane North – ATAPS – Aboriginal And Torres Strait Islander Patients Per

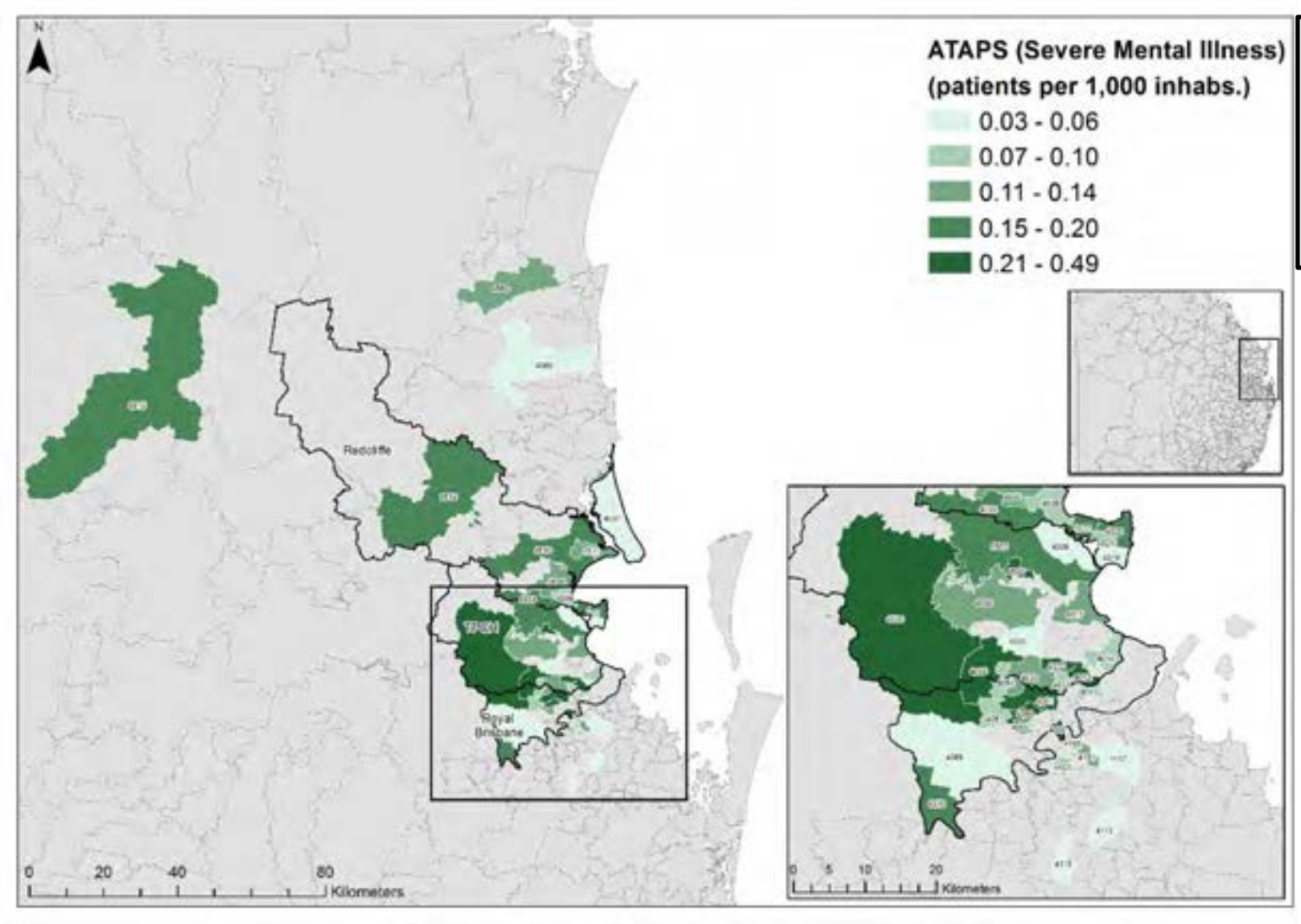

Figure 43: Brisbane North – ATAPS – Patients with Severe Mental Illness Per 1000 Persons

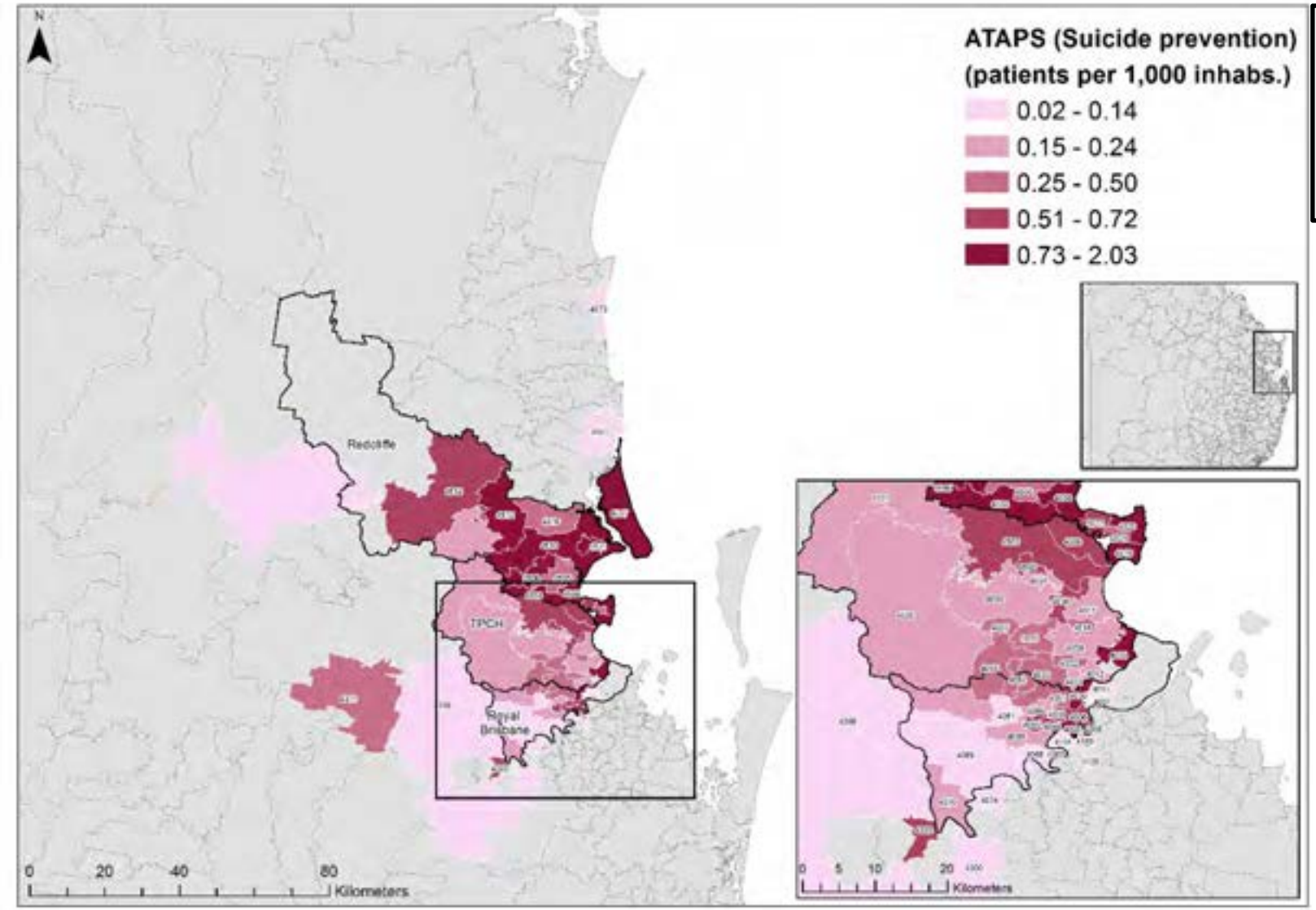

Figure 44: Brisbane North - ATAPS - Suicide Prevention Patients Per

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FIGURE 45: BRISBANE NORTH - ACCESSIBILITY - RESIDENTIAL CARE

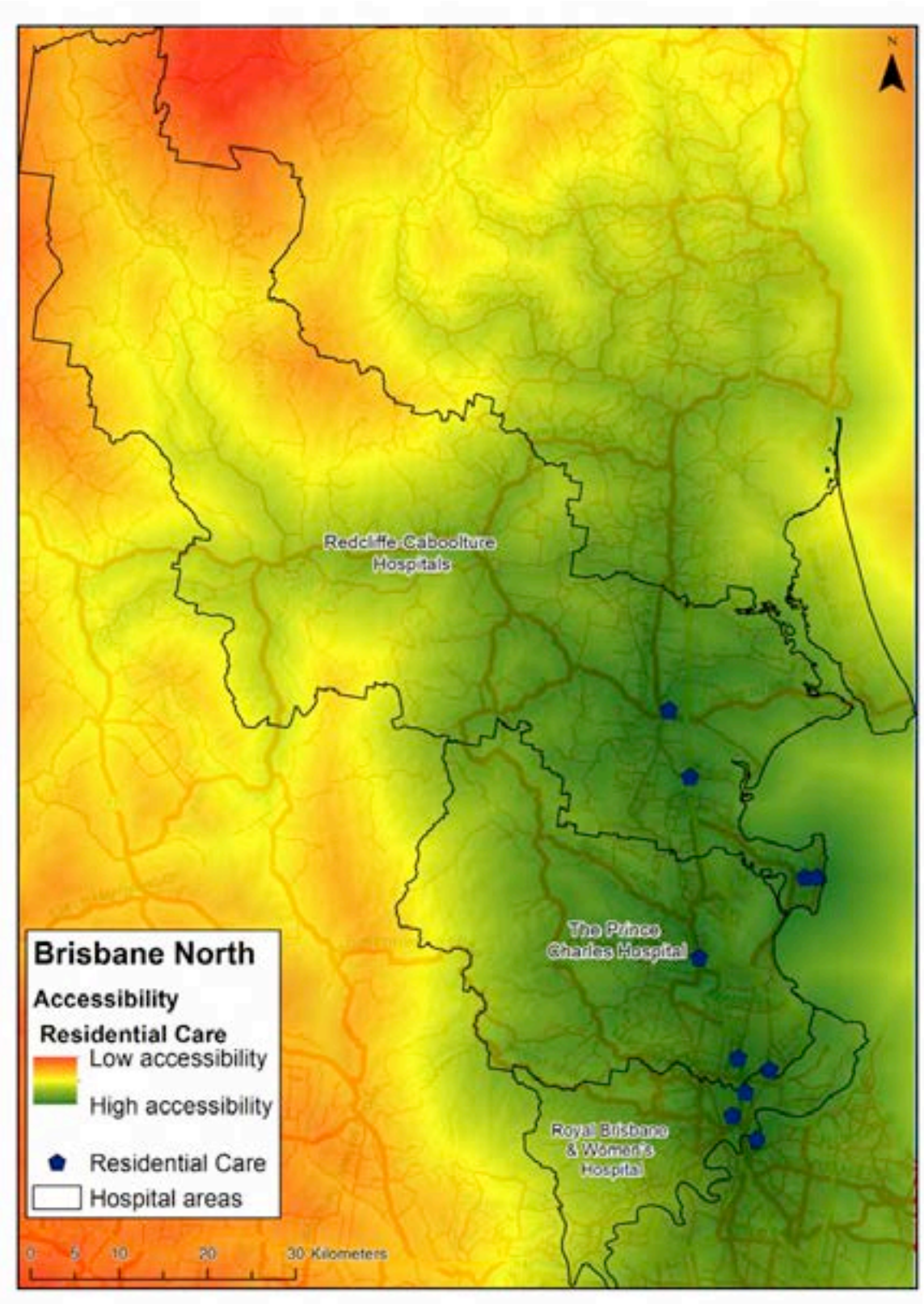


FIGURE 46: BRISBANE NORTH - ACCESSIBILITY - DAY CARE

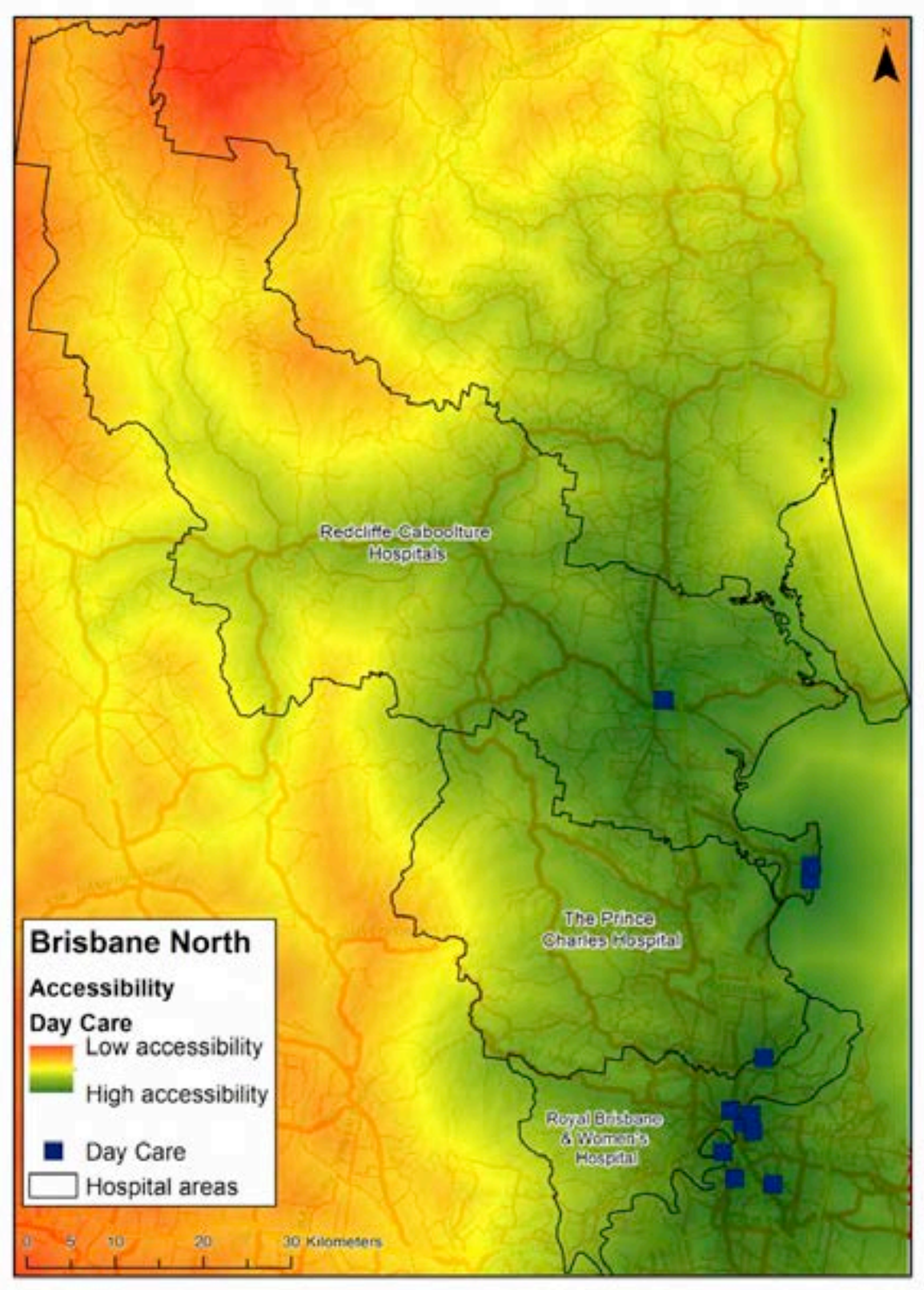
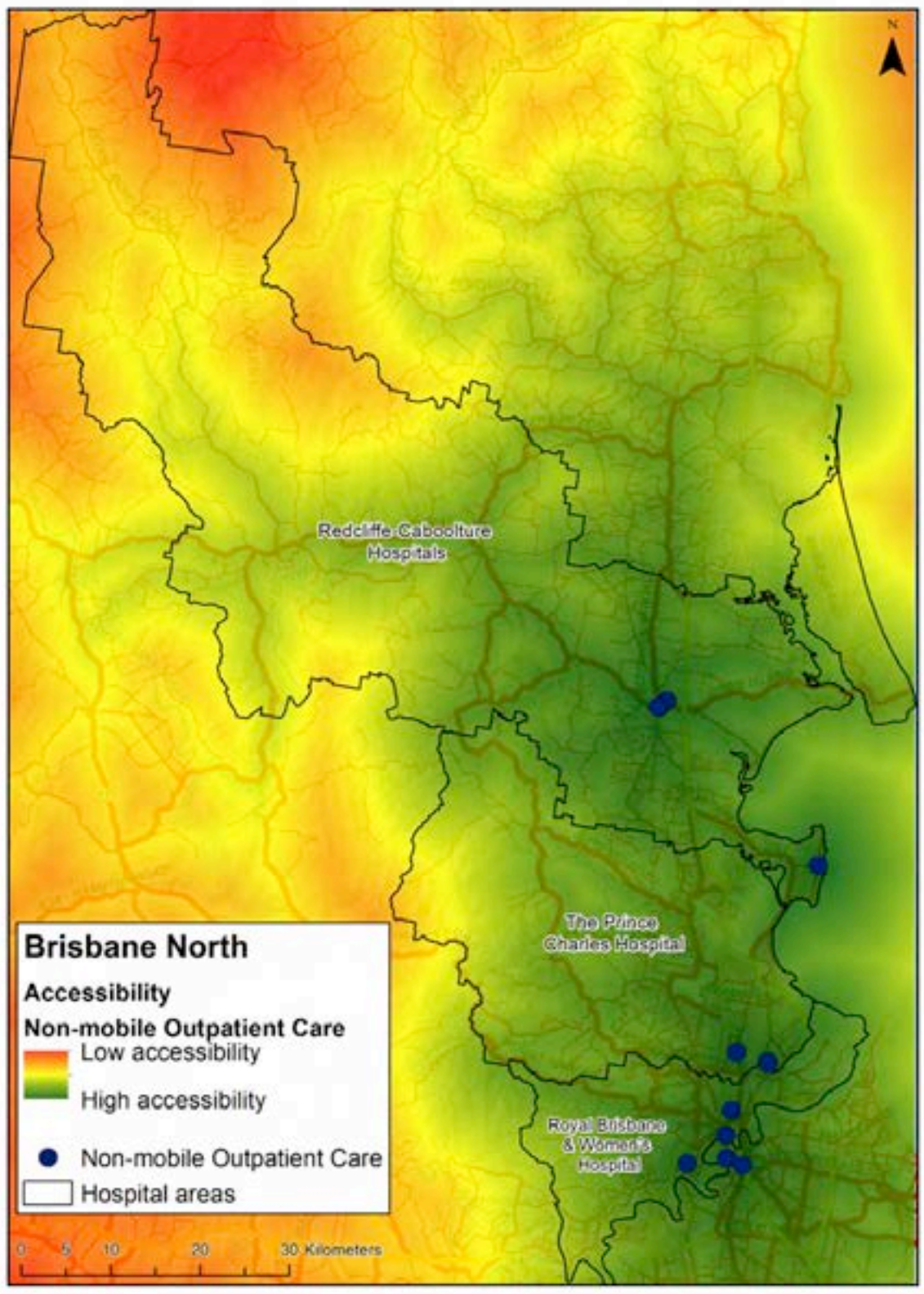


FIGURE 47: BRISBANE NORTH - ACCESSIBILITY - NON-MOBILE OUTPATIENT CARE



7. Describing the Pattern of Care in Brisbane North

Figure 48 depicts the pattern of mental health care in Brisbane North. In this figure, we have only included public services providing care for people with mental health issues. Consequently, Alcohol and Other Drugs services are excluded, as well as those services providing care for specific populations, such as young adults and older people. PIR, ATAPS providers and private services are not included in this figure.

The blue area refers to Residential Care, the orange area to Day Care, the green area to Outpatient Care and the yellow area, Accessibility.

The strengths in the mental health service system in Brisbane North, particularly with the addition of the PIR and ATAPS services, have been found to be:

1) An adequate number of acute care beds
2) A high degree of mobility for outpatient care
3) Relatively good alignment of services to the population areas of need, meaning an overall good level of accessibility.

This last point does have a caveat. The ATAPS program, in particular, and PIR, are at present focussed on the areas in the Redcliffe-Caboolture catchment and some of the inner areas where access to public mental health services and fee-for-service Medicare services are less available and where community needs are concentrated.

However there are major deficiencies or gaps in both the spectrum of care available and the capacity relative to population needs in Brisbane North. We have found four major gaps in the provision of services in the Brisbane North region:

- Hospital sub-acute care
- Non-hospital acute and sub-acute care
- Acute and non-acute health care day-related
- Low availability of day care centres related to employment

The first gap is related to the low availability of sub-acute care units within the Metro North Mental Health Services. The second gap is related to an absence of services staffed with psychiatrists, psychologists and nurses, who provide care for people with lived experience of mental illness who are experiencing a crisis. They provide the same type of care as the hospital (in an inpatient unit) but are embedded into the community. They are generally small units, with a strong focus on recovery (e.g. home crisis).

The third gap is related to a lack of day care related to health. Acute day care related to health includes Day Hospital, which provide an alternative to hospitalisation. People living a mental health crisis are not admitted in a hospital, but treated in the community. They spend all the day (between the hours 8.30am-5.00pm) at the facility, but they sleep at home. Non-acute day care includes day care centres staffed with at least 20% of mental

health high skill 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 found a low availability of day care centres providing care related to work (e.g. social firms or supported employment centres where people with lived experience of mental illness work and are paid).

Public Housing is not included as it is not a specific service for people with a lived experience of mental illness.

Figure 49 includes the PIR program, the ATAPS providers, and the private services. Although the gaps remain the same, there is an increase in the capacity of the system to provide outpatient non-mobile care (e.g. psychological treatment). Note, that the rate or number of MTCs per 100,000 inhabitants for Non-acute, Non-mobile services is 20.62.

Figure 50 illustrates the pattern of alcohol and drug care in Brisbane North. The main type of care is non-mobile non acute care provided at a number of locations.

TABLE 44: MAIN TYPES OF CARE

Main Type of Care	Description
Residential care	Facilities which provide beds overnight for clients for a purpose related to the clinical and social management of their health condition. Residential care can be divided in Acute & Non-Acute branches.
Day Care	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; & (iv) expect clients to stay at the facility beyond the periods during which they have face to face contact with staff.
Outpatient Care	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 & (ii) are not provided as a part of delivery of residential or day services
Accessibility to Care	Facilities whose main aim is to facilitate accessibility to care for clients with long-term care needs. These services do not provide any therapeutic care
Information for Care	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
Self-help & Voluntary Care	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)

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FIGURE 48: PATTERN OF ADULT MENTAL HEALTH CARE IN BRISBANE NORTH

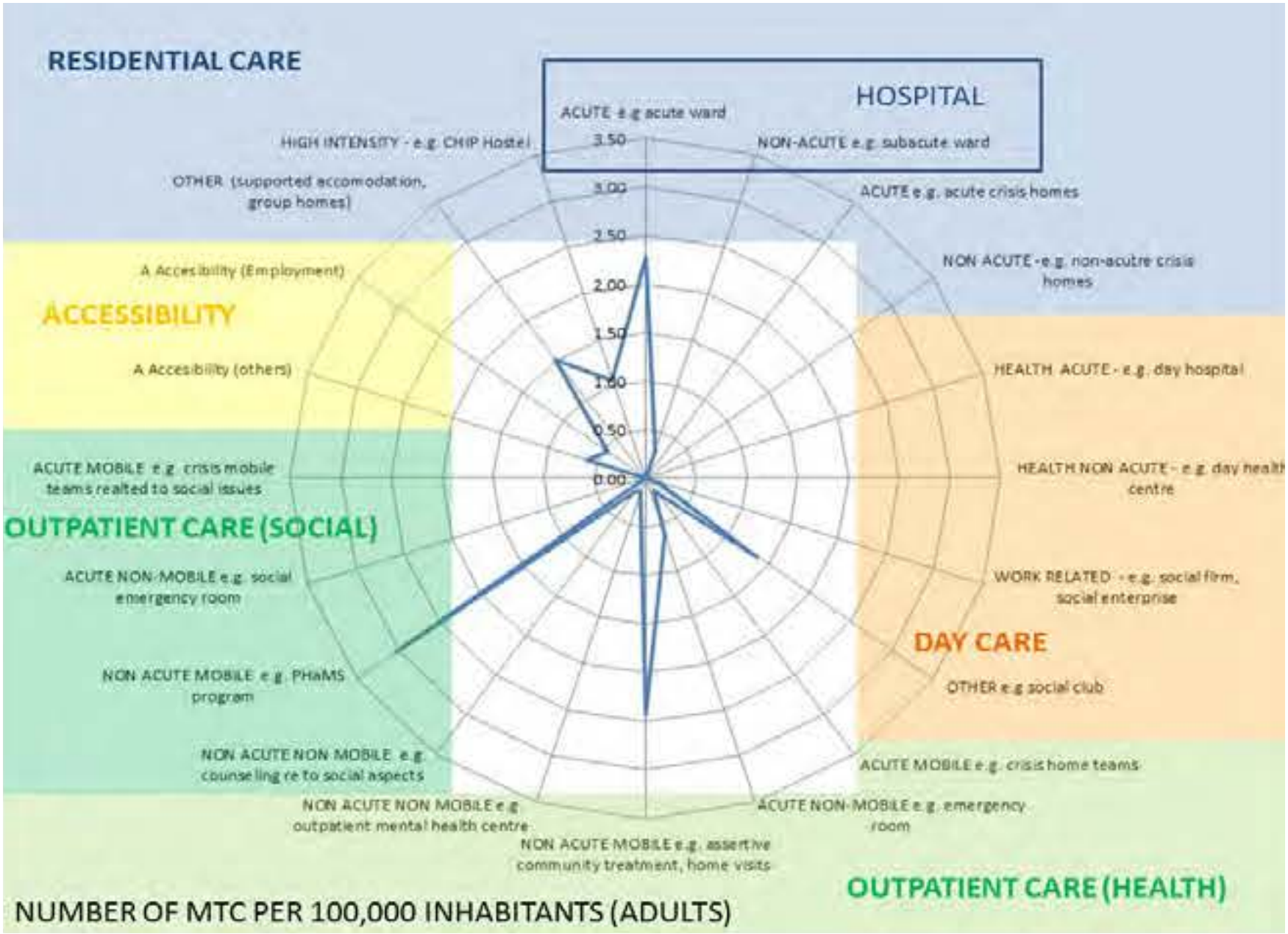


FIGURE 49: PATTERN OF ADULT MENTAL HEALTH CARE IN BRISBANE NORTH INCLUDING PIR, ATAPS & PRIVATE SERVICES

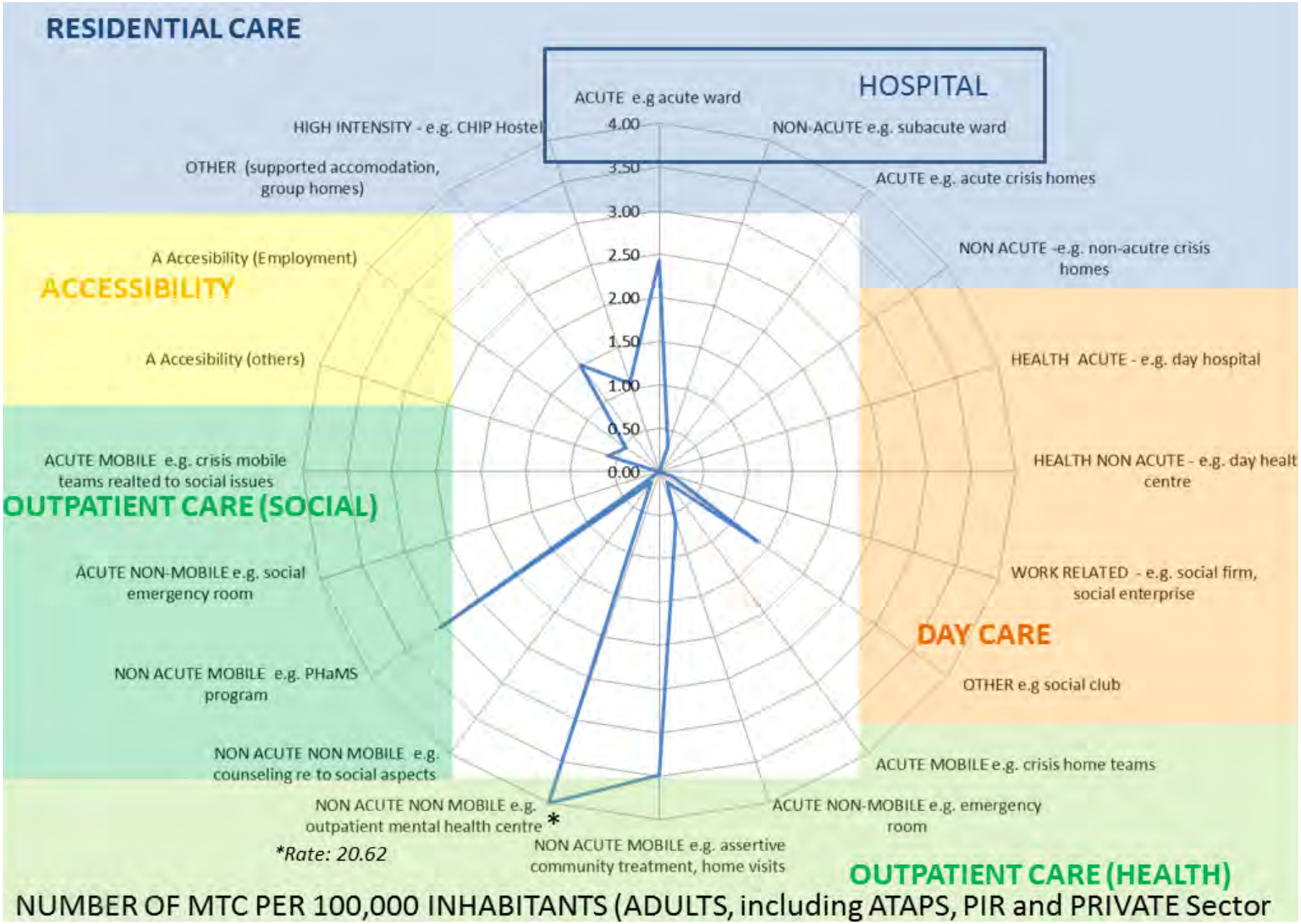
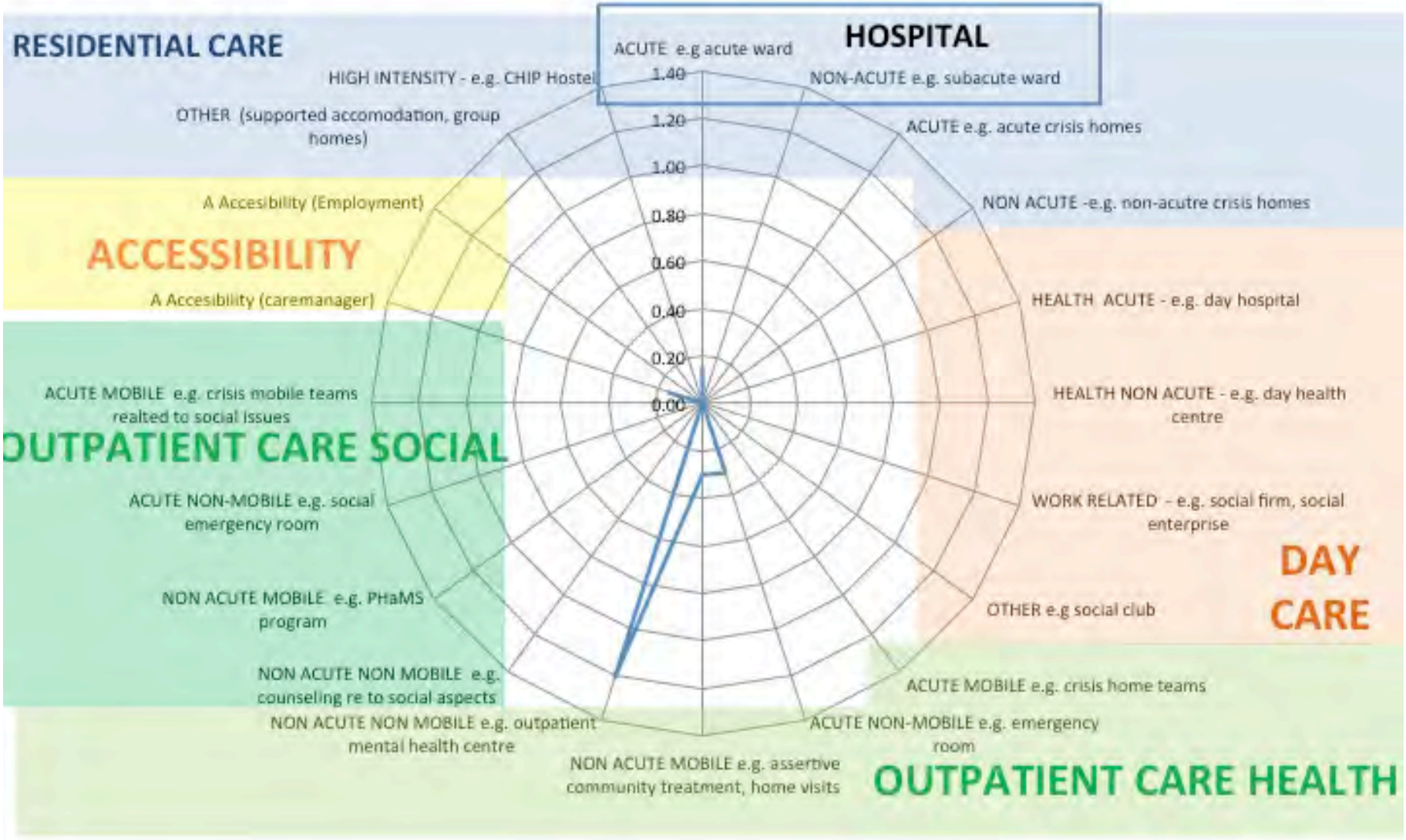


FIGURE 50: PATTERN OF ALCOHOL AND OTHER DRUG CARE IN BRISBANE NORTH



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8. National And International Comparisons

National and international comparisons are useful for: 1) learning about national systems and policies; 2) understanding why those systems take the forms they do; and 3) learning lessons from other countries for application elsewhere (Cacace, 2013).

However, in order to conduct meaningful comparisons, it is important to use a standardised tool that goes beyond terminological variability. Members of this project team have mapped the pattern of Mental Health in different European areas using the 'Description and Evaluation of Services and Directories – Long Term Care' (DESDE-LTC). The use of a common language allows us to compare Brisbane North with different community care models in Europe and now in NSW. The information on the European Countries has been presented as part of the The Refinement Research Project (2013) funded by the European Commission. Table 45 describes the areas selected.

Note that in Figures 51-56 the scale on each spider diagram varies.

Table 45: Description of the European Areas (Refinement Project, 2013)

	Sør-Trøndelag (NORWAY)	Helsinki & Uusimaa (FINLAND)	Verona (ITALY)	Girona (SPAIN)	Hampshire^ (ENGLAND)
Population (>18 yrs old)	225,081 (2010)	1,206,446 (2010)	393,402 (2010)	599,473 (2010)	1,364,799 (2010)
Land Area (km²)	18,856	8,751	1,061	5,585	3,769
Population density	15.60	176.56	416.85	132.61	459.45
Ageing Index (>65/<15x100)	81.42 (2012)	82.17 (2010)	144.1 (2010)	98.29 (2010)	100.6 (2011)
Dependency ratio	49.55 (2012)	44.82 (2010)	53.51 (2010)	46.20 (2010)	52.43 (2011)
People living alone (%)	40.78 (2011)	41.37 (2011)	29.16 (2001)	17.94 (2007)	27.73 (2001)
Average of people/household	2.21 (2011)	2.07 (2011)	2.44 (2001)	2.62 (2007)	2.37 (2011)
Immigrants (%)	6.64 (2012)	6.14 (2011)	12.24 (2010)	21.60 (2010)	-
Unemployment rate (%)	2.79 (2010)	7.35 (2010)	4.21 (2001)	18.28 (2010)	5.8 (2011)
Total health care expenditure per capite Purchasing Power Parity (in Euros) (2010)	€4156	€ 2504	€ 2282	€ 2345	€2626
Total healthcare expenditure as a share of GDP	9.4%	8.9%	9.3%	9.6%	9.6%

^ - Hampshire - this includes Portsmouth and Southampton Unitary Authorities

Northern Europe Community Mental Care Model

Figure 51 compares Brisbane North with an area in Norway (Sør-Trøndelag) while Figure 52 compares Brisbane North with an area in Finland (Helsinki and Uusimaa).

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

The provision of mental health services in Norway is organised within Health Authorities (HF), each one including several institutions/hospitals. The Sør-Trøndelag area in Norway 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 has a low population density (15.6 inhabitants/km^2). It also has a very low unemployment index.

The most significant differences with Brisbane North are related to the higher availability of mobile services and day care related to employment. In addition, Norwegian region also presents more sub-acute facilities than Brisbane North. On the other hand, the availability of non-mobile non-acute outpatient care (including the ATAPS providers in Brisbane North) is lower than in Norway. These services rely on single providers (generally private practitioners) to deliver this type of care.

The Finnish area (Helsinki and Uusimaa Hospital District) is owned and governed by 26 municipalities. Each municipality is free to provide the public services as a municipal activity, or to purchase the services from an external provider. Primary care is organised by the municipalities, and represents the main access point for people with mental health problems while specialised care is organised by the hospital districts.

More than 40% of the households of the area of Helsinki and Uusimaa are occupied by just one person.

When comparing Brisbane North and the Finnish area the main contrast is the high number of residential and day care services in Finland, together with the higher rate of non-acute teams. Brisbane North, however, shows higher rates of mobile non-acute care.

Southern Europe Model of Mental Health Care

Figure 53 compares Brisbane North with Italy (Veneto Region) and Figure 54 compares Brisbane North with Spain (Girona). Mental Health in Southern Europe is characterised 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 Italy, the Local Health Authorities, which are the local branches of the Regional National Health System, are the purchasers of health care services. They also finance social care

services together with the municipalities. There are 21 Local Health Authorities in the Veneto Region. Each Local Health Authority has assigned a Mental Health Department, which is is in charge of the planning and management of all medical and social resources related to prevention, treatment, and rehabilitation in mental health within the area.

Socio and economic indicators from the area are derived from data from 2001, which would have changed. However, this area registers high ageing index and population density.

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. In the area of Girona the mental health system is organised according to two different levels, Hospitalisation and Community Care. Hospitalisation is located in the "Marti i Julia Hospital Park" in Salt that belongs to Institut d'Assistència Sanitària (IAS). The Community Mental Health care is organised 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.

The area depicts high levels of unemployment, as well as high immigration rates.

Both in Italy and Spain, the availability of acute care is lower than in Brisbane North, while day care, specifically health related day care, is higher. Mobile non-acute care is more developed in Brisbane North, while acute mobile care is more developed in Italy.

English System

Figure 55 compares Brisbane North with an area in England (Hampshire). England raises funds mainly from general taxes. There is one purchaser organisation for most health care services. Since 2013 this function is held by the Clinical Commission Groups (CCGs). Local Health authorities are involved in the funding social care services. Local government authorities and the state also contribute to funding social care services. CCGs tend to contract one local Mental Health Trust, an organisation that will be responsible for providing most mental health services for a locality. These Trusts may also subcontract to others.

With regard to the socioeconomic characteristics, Hampshire shows a high population density; with relatively low unemployment figures. It is also an aged population

One of the main characteristics of the English model is the high availability of mobile care related to health, and the lack of day care related to health, similarly to Brisbane. Another common aspect, is the low availability of non-acute residential care provided at the hospital.

However, the two systems differ in the higher availability of non-mobile care in Brisbane North (mainly because of the addition of the ATAPS providers) and higher availability of acute mobile care in Hampshire.

Western Sydney

Figure 56 compares Brisbane North with Western Sydney (the area being the boundaries of the former WentWest Medicare Local). Data on services providing care for people with a lived experience of mental ill-health in Western Sydney was collected between mid-October 2014 to the end of February 2015 by members of the project team (Salvador-Carulla, et al 2015).

The area included in this study included Parramatta, Blacktown and Mt Druitt.

There were 3 major gaps in the provision of services in Western Sydney:

1) Non-hospital acute and sub-acute care
2) Acute and non-acute health care day-related
3) Low availability of day-care centres related to employment.

Figure 56 compares Brisbane North with the area of Western Sydney, in New South Wales (excluding the ATAPS providers, as this information was not available in Western Sydney). Western Sydney (WS) Local Health District (LHD) is a large region with a population of over 800,000 inhabitants and with a younger age structure than the Australian average. It is one of Australia's fastest growing and most multicultural urban populations, with a diverse ethnic mix, ranging from long-established immigrant communities to recent arrivals. Unfortunately, it also has areas of extreme social and economic disadvantage, characterised by high unemployment, low education attainment rates, and poor physical health.

The pattern of adult mental health care in the two Australian areas is quite similar, with a lack of day care and alternatives to hospitalisation in the community. However, in Brisbane North the outpatient/ambulatory care is more mobile than in Western Sydney, while in Western Sydney there is more availability of sub-acute care provided at the hospital, which is partially explained by the presence of the Cumberland Hospital, a large Mental Health facility. More services providing care related to the social needs of the population were also found in Brisbane North.

Alcohol and other drug, ATAPS and PIR services were not included in the Western Sydney atlases. Hence these services are not included in any of the comparison diagrams that follow.

FIGURE 51: PATTERN OF MENTAL HEALTH CARE IN BRISBANE NORTH (BLUE LINE) AND SØR-TRØNDELAG, NORWAY (RED LINE).

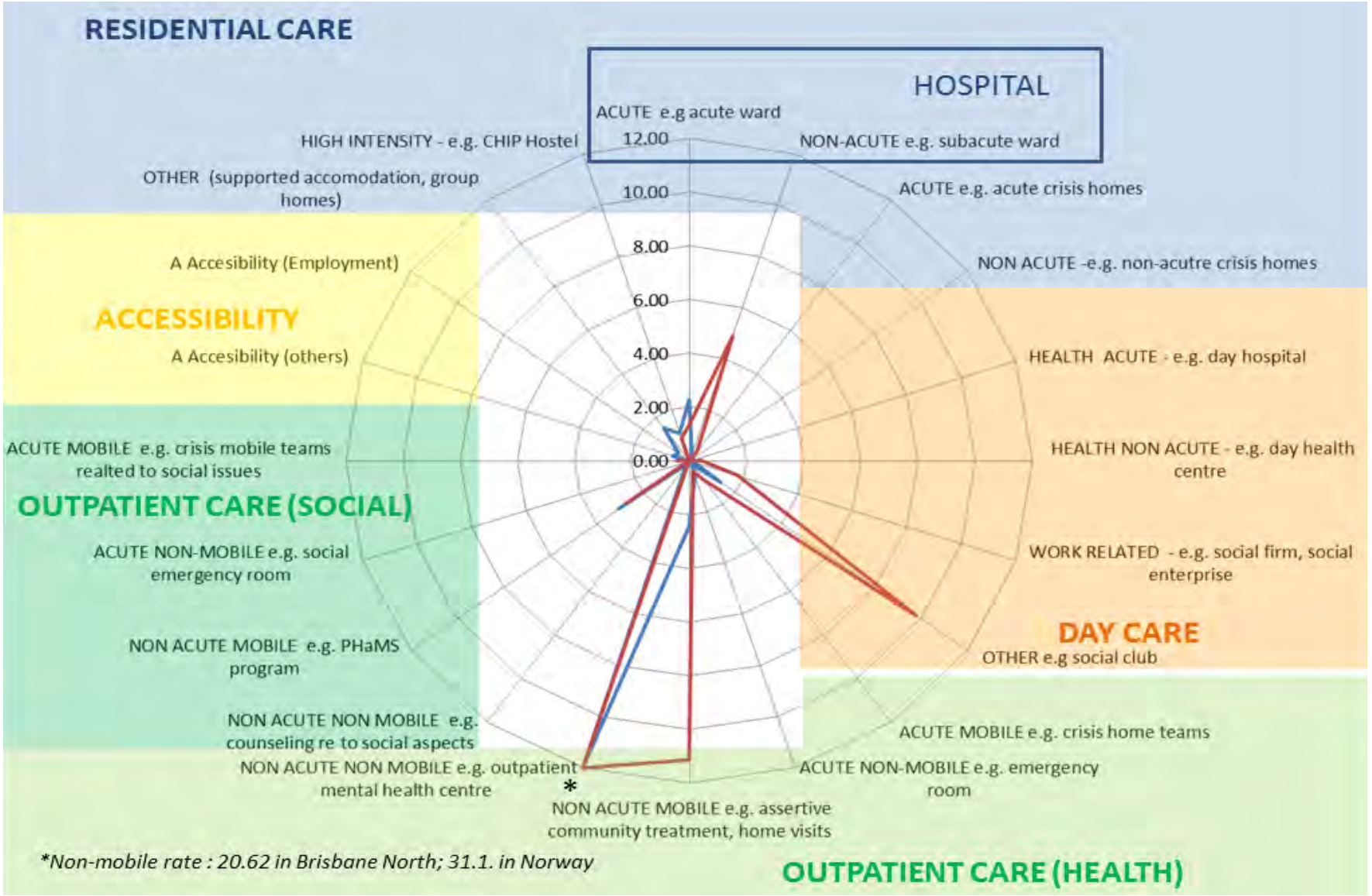


FIGURE 52: PATTERN OF MENTAL HEALTH CARE IN BRISBANE NORTH (BLUE LINE) AND HELSINKI AND USAIMA, FINLAND (RED LINE)

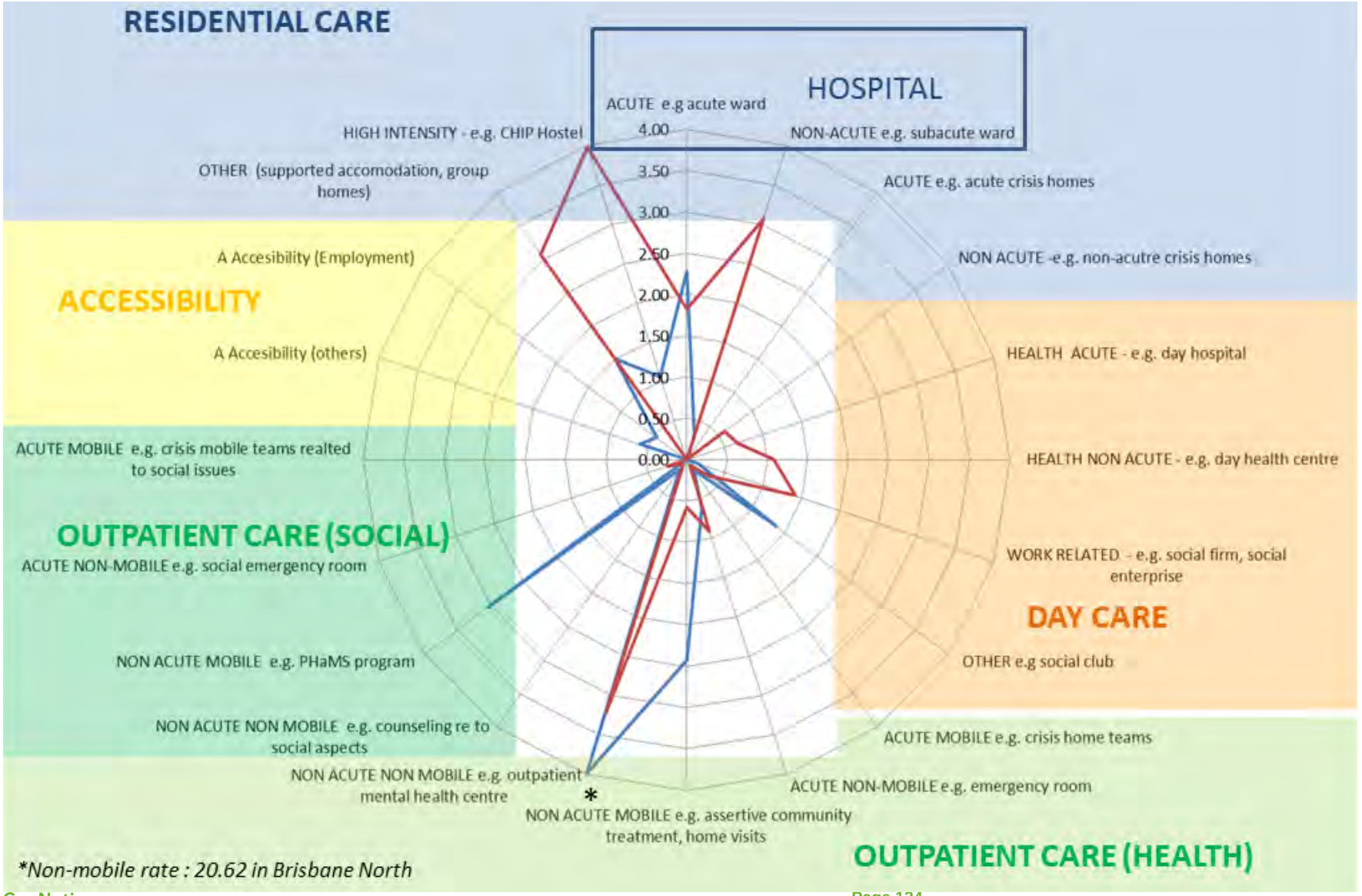


FIGURE 53: PATTERN OF MENTAL HEALTH CARE IN BRISBANE NORTH (BLUE LINE) AND VENETO, ITALY (BROWN LINE).

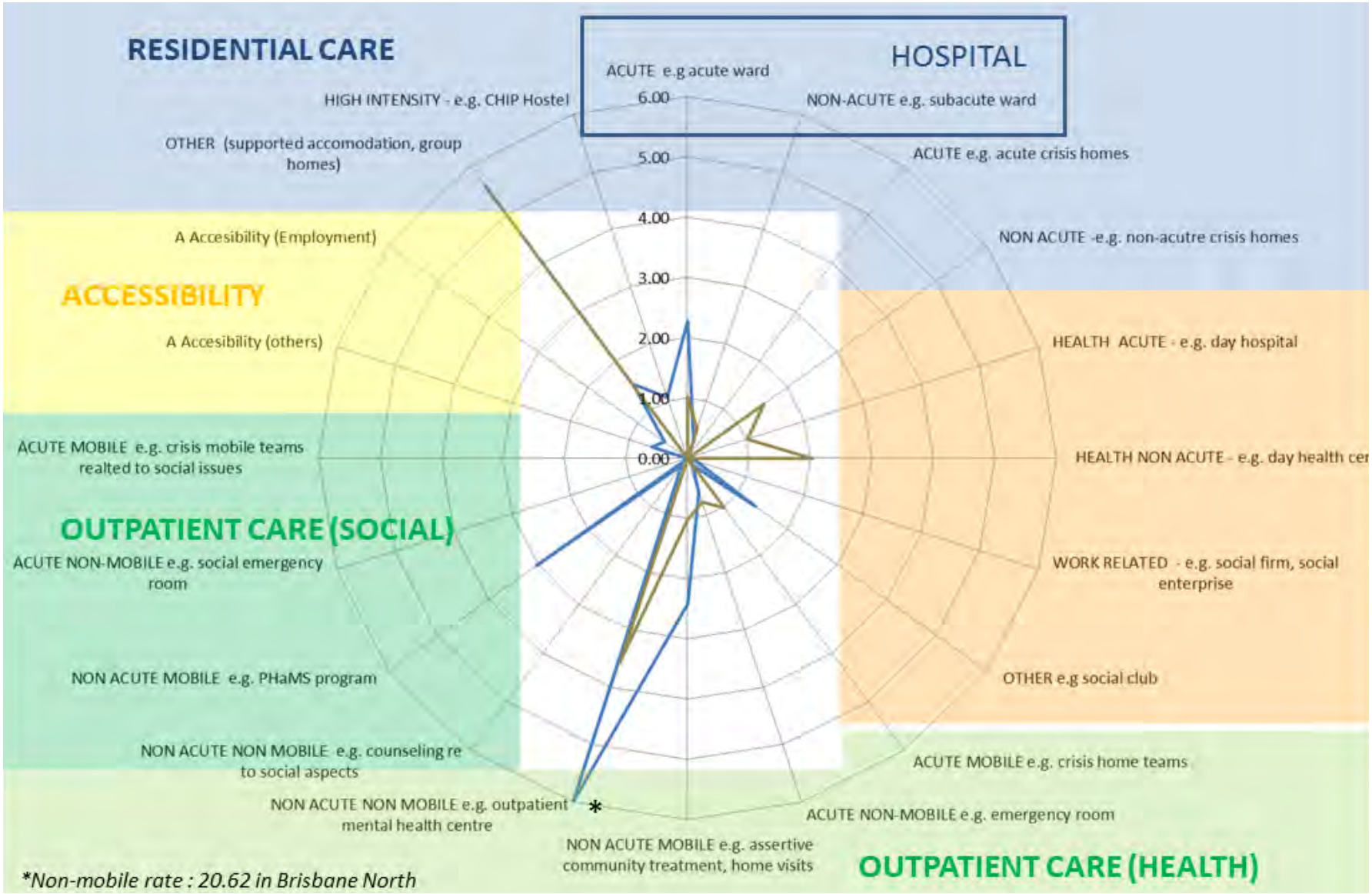


FIGURE 54: PATTERN OF MENTAL HEALTH CARE IN BRISBANE NORTH (BLUE LINE) AND GIRONA, SPAIN (DARK BLUE DOTTED LINE).

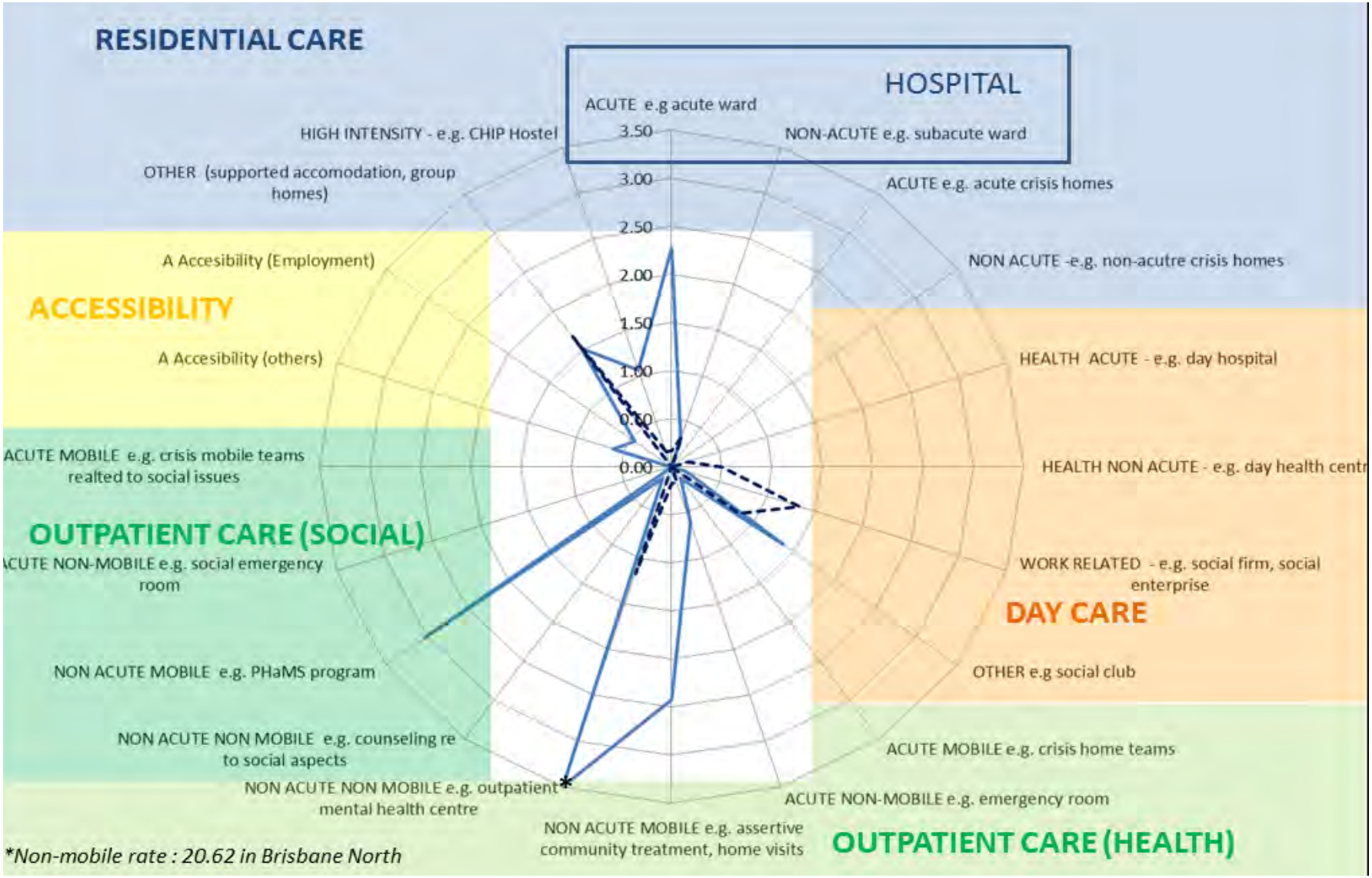


FIGURE 55: PATTERN OF MENTAL HEALTH CARE IN BRISBANE NORTH (BLUE LINE) AND HAMPSHIRE, ENGLAND (ORANGE LINE).

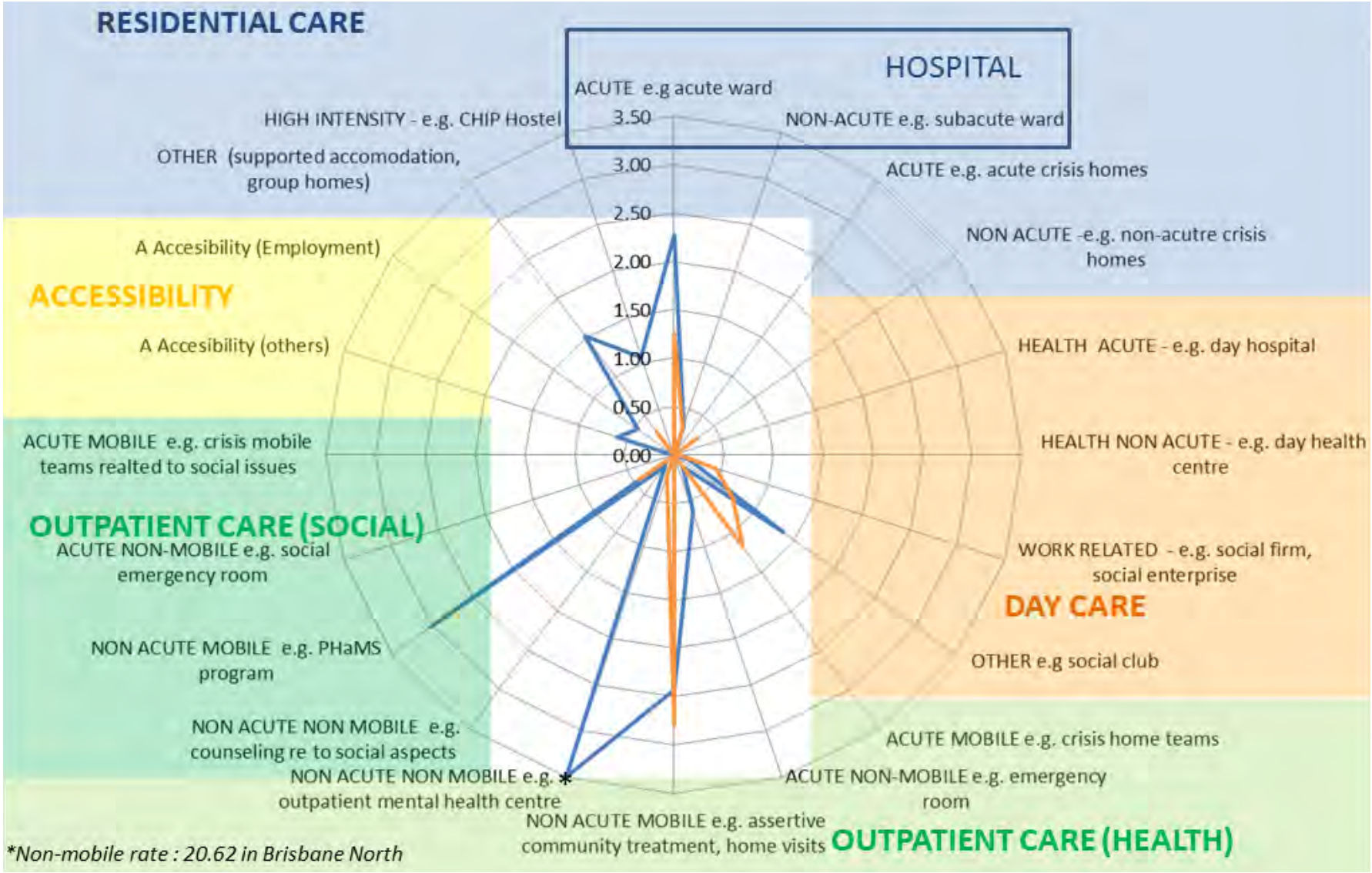
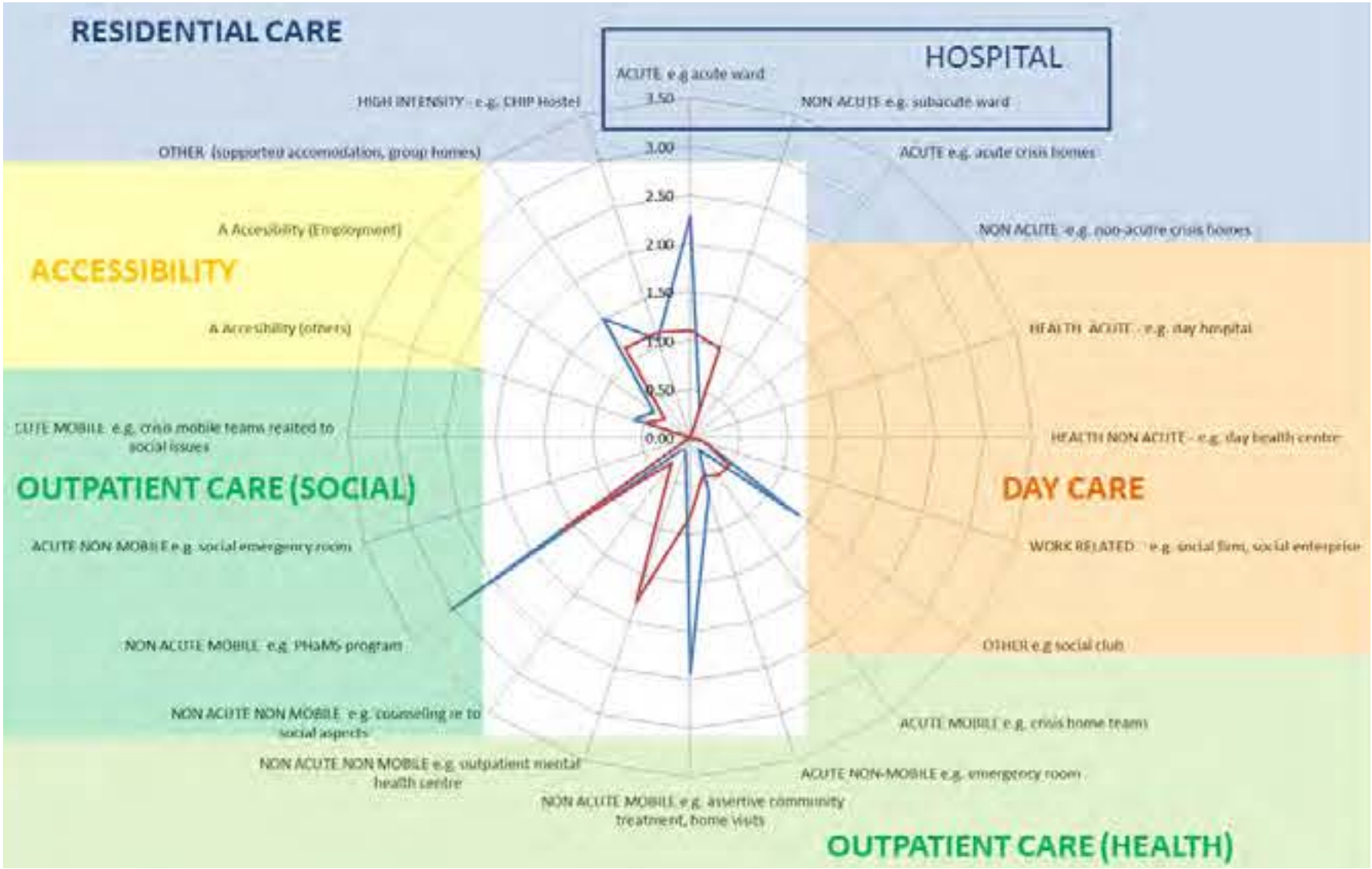


FIGURE 56: PATTERN OF MENTAL HEALTH CARE IN BRISBANE NORTH (BLUE LINE) AND WESTERN SYDNEY (RED LINE)



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Placement Capacity - Cross-national Comparisons

Residential Care

There are large differences across countries related to the availability of beds per 100,000 inhabitants. These rates mirror the different models of mental health care and the overall investment in mental health care. Although the availability of acute teams were higher in Brisbane North than in the other areas, the rate of beds per 100,000 inhabitants is slightly lower than in Norway, Finland, and England, suggesting that Brisbane North has smaller acute units; although it is still higher than in Italy or Spain, which have community mental health models. With regard to the non-acute beds at the hospital, the rate is smaller than in the other countries, with the exception of England, that has a similar rate but is significantly lower than the sub-acute bed rate in Western Sydney. The number of non-hospital high intensity beds is higher than in the countries used as comparator, but lower than in Finland, where this type of care is highly developed.

The key point here is about the spectrum of residential care and the overall balance of resources.

TABLE 46: CROSS-NATIONAL COMPARISONS. PLACEMENT CAPACITY: BEDS PER 100,000 INHABITANTS ACCORDING TO TYPE OF RESIDENTIAL CARE

GROUPS	Brisbane North	Western Sydney	Sør-Trøndelag (Norway)	Helsinki & Uusimaa (Finland)	Verona (Italy)	Girona (Spain)	Hampshire (England)
ACUTE HOSPITAL CARE: R1 - R2 - R3.0	25.32	20.59	28.43	26.86	13.98	7.01	26.38
NON ACUTE HOSPITAL: R4 – R6	4.39	16.83	75.08	52.22	11.95	15.35	4.84
ACUTE NON HOSPITAL: R0 R3.1.1	0	0	64.42	0	0	0	0
NON ACUTE NON-HOSPITAL: R5-R7	0	0	0	12.27	16.52	0	2.49
NON HOSPITAL HIGH INTENSITY: R8 R11	14.40	6.31	8.89	113.64	0	9.68	0
OTHER R9,R10,R12,R13,R14	1.34	5.66	0	58.6	35.84	12.01	7.47
TOTAL	45.45	**49.39**	**176.82**	**263.59**	**78.29**	**44.05**	**41.18**

Day Care

Some of the most advanced models, such as the Finnish one, are characterised 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. We do not have enough information related to the number of places on the other day care centres.

TABLE 47: CROSS-NATIONAL COMPARISONS. PLACEMENT CAPACITY: BEDS PER 100,000 INHABITANTS ACCORDING TO TYPE OF DAY CARE

GROUPS	Brisbane North	Western Sydney	Sør-Trøndelag (Norway)	Helsinki & Uusimaa (Finland)	Verona (Italy)	Girona (Spain)	Hampshire (England)
HEALTH ACUTE	0	0	0	9.62	3.05	4.17	0
HEALTH NON ACUTE	0	0	0	17.99	40.67	12.51	0
WORK RELATED	3.03	5.34	8	18.15	0	32.53	0
OTHER	-	5.66	0	12.35	0	27.52	0
TOTAL	3.03	11.0	8.00	58.11	43.72	76.73	0

9. Discussion

The Integrated Atlas of Brisbane North has identified some important systemic gaps that can be used to focus discussion on the planning of an equitable, efficient and integrated mental health system. The systemic gaps relate to: the absence of alternatives to hospitalisation; the relative lack of sub-acute units across the region; and the dismantling of the day care system. The population mapping of needs further highlights some mal-distribution of resources across the region.

This is the first Integrated Mental Health Atlas produced according to the DESDE-LTC system in Queensland. There are other Atlases of Mental Health describing different local health districts in New South Wales. However, up to this moment, the only atlas publicly available is the one covering Western Sydney (based on the former WentWest Medical Local boundary).

The systemic gaps in services found in the Brisbane North and Western Sydney are quite similar, suggesting a broader structural problem in the Australian context. However, as can be seen in Figure 56, Brisbane North also lacks sub-acute care provided at the hospital level. The availability of sub-acute beds (placement capacity) is also surprisingly low, with only 4.39 beds per 100,000 inhabitants (the rate in Western Sydney 16.83 bed per 100,000 inhabitants). However, this is not unique to the Australian context - the closing of sub-acute wards is also happening in England. This can be related to the desire of moving the non-acute residential mental health care to the community; a more inclusive strategy. However, it is not efficient to close the sub-acute wards without having an improved availability of non-acute residential care in the community.

There is also some data to suggest that the systemic gaps in Brisbane North contribute to a relatively high number of Emergency Department presentations and presentations from the Police and Ambulance services (these total over 42% of all referrals to MN MHS)[2]. A more systemic analysis of the referral and separation data, with cross-jurisdiction comparisons would be beneficial for planning purposes.

The results from this Atlas mapping aligns with some key recommendations made by the *National Review of Mental Health Programmes and Services* by the National Mental Health Commission (NMHC, 2014). The NMHC report draws attention to the local level of mental health 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.

The NMHC report recommends: "Mental Health Networks, in partnership with Local Health Networks, should conduct comprehensive mapping of mental health services,

[2] From data provided in confidence by MN HHS.

programmes and supports available in regional, rural and remote areas through Commonwealth, state and territory and local governments, private and not-for-profit sectors".

There is a consensus on the need to base the mental health care of high income countries on a strong primary mental health sub-system together with a core tertiary care for severe and persistent and acute cases. However there are some relevant information gaps concerning the constitution of secondary care in community-oriented specialised mental health services.

According to a number international models (Cacace et al, 2013; UK Department of Health, 1999), including that most recently promoted by Thornicroft and Tansella (2013 & 2014), specialised mental health services should include the following: (i) Specialised outpatient/ambulatory clinics; (ii) Assertive community treatment teams; (iii) Early intervention teams; (iv) Alternatives to acute in-patient care, such as high intensity day care, crisis homes; and other alternatives to acute hospitalisation; (v) Alternative types of long-stay community residential care; and (vi) Specialised forms of work and occupation.

Lack of Sub-Acute Care

While a commitment to a step-up/step-down facility in Brisbane North has been made, the lack of sub-acute inpatient care was surprisingly, as it is one of the core components in tertiary mental health care. Indeed the addition of three 16-bed such facilities would still see the number of sub-acute beds in the region at half the rate of Western Sydney and just 11% of the rate in the Norwegian district.

Sub-acute care facilitates the transition from the acute ward to the community services for people with a severe mental illness. The consequences of this lack of sub-acute services may include an increase in the length of stay in the acute inpatient units and hence greater pressure on these resources and an increase in the rates of readmissions with consumers discharged before it is optimal for recovery.

The absences of alternatives to hospitalisation, such as day hospitals, or residential inpatient acute and sub-acute units in Brisbane North complicates the picture and again is likely to add to pressures on acute care resources. With more crisis presentations at the ED door – something again reflected in the referral data.

Specialised Outpatient/Ambulatory Clinics

We have found a good number of facilities providing specialised mental health in the community. All of them are highly mobile, that may provide better accessibility. The ATAPS program also helps to complement this type of care, providing short-psychological treatment. However, it should be noted that the ATAPS program is not 100% free but it does appear to be focussed in areas with higher psychological distress, low household incomes and other relevant socio-demographic factors. Like PIR, ATAPS is

vulnerable to policy changes which have occurred almost every year since the inception of ATAPS in 2001-2.

Assertive Community Treatment Teams

Assertive Community Treatment (ACT) is a type of intervention that can be provided by the ambulatory teams. ACT is not a service. Consequently, it has not been mapped in this atlas. However, the availability of high mobile intensive multidisciplinary rehabilitation teams (MIRT) both in the area of TPCH and RBWH suggests that they have the capacity to provide this type of intervention. There is good quality evidence on the effectiveness of ACT (Marshall and Lockwood, 2000). These services could be further developed in Brisbane North.

Early Intervention Teams

We have found two teams providing early intervention care, both in the area of TPCH and the RBWH. Unfortunately, there is not guidance to inform how many of these services may be needed.

The region's *headspace* centres may also provide some capacity for early intervention services for people aged 12-25 years, although the number of clients accessing each centre is approximately only 1,000 per annum. Another centre is due to open in Caboolture in early 2016. However, the evidence surrounding the effectiveness of *headspace* remains in contention with nearly 50% of all young people attending a centre service not having a mental health disorder (NMHC, 2014; Rickwood et al 2015; Mitchell, 2015).

Alternatives to Acute In-Patient Care

Two major service gaps we located in Brisbane North were in residential acute and non-acute care outside the hospital (i.e. in the community) and acute day care.

Lack Of Acute And Sub-Acute Community Residential Care

Even though the NMHC Review has recommended the reallocation of a minimum of $1 billion in Commonwealth acute hospital growth funding into more community-based psychosocial, primary and community mental health services, there is still a debate in the Australian literature on the need to invest in community beds at the expense of hospital beds (Allison et al 2014).

Although acute beds within hospitals are a key component of an integrated mental health care system, it is also important to implement residential alternatives in the community. More studies are needed on the efficiency of these types of services. Some authors suggest that acute residential care in the community may be more cost-effective than hospital admission (Thornicroft and Tansella, 2013). A recent quasi-experimental study

carried out in Brisbane evaluating "crisis houses" showed that this community alternative provides a cost-saving for mental health services (Siskind et al 2013).

These services can also function as a 'step-down' from a period of acute psychiatric hospitalisation, to facilitate transition from hospital. The key characteristic of these services is that they are staffed with highly-skilled mental health professionals. The development of these types of services in Brisbane North will fill a gap in the provision of mental health care services, and would be especially important due to the low availability of subacute beds.

Absence Of Services Providing Day Care (Acute And Non-Acute) By High Skilled Professionals

Day care for people with a lived experience of mental ill-health has been considered a key component of psychiatric reform since the early 60s (Vazquez-Bourgon et al 2012; Duncan, 1994).

"Day care" (or partial hospitalisation) refers to all services where the consumer stays for part of the day but not overnight or just for a single face-to-face contact. There is a whole array of different types of day services according to the phase and the severity of the mental illness: from acute care (i.e. day hospitals/partial hospitalisation), to non-acute care (i.e. day centres) and recovery-oriented programs (i.e. peer support, respite, social clubs, or work-related approaches), just to mention a few. These services should be integrated in a local acute care subsystem that also incorporates mobile care alternatives for crisis intervention at home (crisis resolution teams, medical homes), together with non-mobile emergency services and high-intensity coordination/case-management as in Assertive Community Treatment (Vazquez-Bourgon, et al 2012).

In Brisbane North we identified some services which provide recovery-oriented social day care, but none related to acute or non-acute health-related care which are usually staffed with highly skilled mental health clinicians, such as psychiatrists, clinical psychologists or mental health nurses.

Acute Day Care:

Acute day care (ADC) is a less restrictive alternative to inpatient admission for people who are acutely and severely mentally ill. Its objective is to deliver personalised, intensive and structured health care interventions in non-residential service locations (Vazquez-Bourgon et al 2012). (Day hospitals or partial hospitalisation services combine the close supervision of a standard inpatient unit, with the maintenance of patients in the community. They also follow a multidisciplinary and multimodal approach.

Recent systematic reviews on the efficiency of acute day care alternatives to hospitalisation include the reviews made by the Cochrane Library (Marshall et al 2011) and by the US Agency for Healthcare Research and Quality (AfHRQ, 2014). The Cochrane

review concluded that ADC is at least as effective as traditional methods, and they are suitable options in situations where demand for inpatient care is high and facilities exist that can be converted to these uses. However, they are a less attractive option in situations where the demand for inpatient care is low and can be covered by other options.

The two major advantages of day hospitals are that they: 1) strengthen the patient's autonomy and links with the community; and 2) reduce the risk of institutionalisation and the stigma associated with it. In addition, it is estimated that day hospitals can save around 5% of the cost of acute psychiatric inpatient care. However, these systematic reviews also indicate that studies on ADC do not follow a systematic approach and are limited to only two components of the local system (i.e. acute hospital vs. day hospital) without taking into account their overall impact on the system.

The US AHRQ draft acknowledges that a decrease in number of psychiatric admissions is a key priority for providers and insurers, and provides an analysis of alternatives to psychiatric hospitalisation (e.g., day hospital, short-term crisis unit, various forms of supported housing, assertive community treatment services). This review calls for more research into ADC.

Another relevant source of information is the European Day Hospital Evaluation Study in Europe (EDEN) (Priebe et al, 2011). This is a multicentre randomised controlled trial comparing acute treatment in day hospitals and conventional wards in five European cities with different models of community care: Prague (Czech Republic); Dresden (Germany); Wroclaw (Poland); Michalovce (Slovakia); and London (UK). The study indicated that day hospitals are an extended care type in Europe which is more useful for female, educated patients with moderate to severe symptoms rather than those with highest levels of severity which may benefit from acute hospital care.

Despite the results of these studies, the overall number of studies on ADC is surprisingly low and we lack comparisons of the relative efficiency of local systems with and without day hospitals.

Due to the high demand for beds in Brisbane North, the lack of alternatives for moderate-severe patients in crisis, Acute Day Care (i.e. day hospitals) could be a beneficial addition to Brisbane North services.

Non-Acute Day Care Related To Health Or "Day Centres":

Non-acute high-intensity day care ("Day Centres") is another key component of a community mental health system that is missing in Brisbane North, and in general, in Australia. Day Centres staffed with at least 20% highly skilled mental health professionals, such as psychologists, neuropsychologists or mental health nurses, can provide a more intensive treatment than Day Centres staffed with non-health professionals and therefore

provide a better focus on tertiary prevention and clinical improvement (e.g. by better training in daily living, problem solving, stress management, social skills or cognitive rehabilitation). This type of centre can improve socialisation and assist individuals to learn new skills according to their needs. They also include occupational therapy tailored to the patient's needs. They should be provided in a recovery-oriented format that promotes peer-support.

It is important to note that Day Hospitals and Day Care Centres were available in Brisbane North some years ago. The reasons for their disappearance are complex and an analysis of these factors goes beyond the scope of this report. However, policy remedies must be built of an understanding of how this occurred. It could be the case that the absence of high-intensity day care in Australia is partly a by-product of a shift in the service model from acute to community care and from a provision-guided system to a more choice-oriented system which focuses on personalisation.

Some public funding of mental health services have moved from services provided in the public sector - including the more institutional modes provided by the LHD - to community-based services provided by the NGO sector. This shift has been a significant aspect of deinstitutionalisation, emerging with the closure of psychiatric hospitals across the system. It appears that Day Hospitals and Day Centres have been unintended victims of this necessary shift in the model of care.

NGO-managed services have been focused on the less clinical (and expensive) end of day care, focusing on cultural or respite services. Reduced budgets mean the staff that can be contracted are lower skilled or lack the specific skills needed for more intensive services. Although these types of services are absolutely necessary, more intensive health related day services appear to have been neglected over time.

The disappearance of Day Hospitals and Day Centres in the public sector could also be attributed to the shift to personalisation of care. Individual care based on individual preferences and choices, tends to prioritise individual face-to-face programs and home-based treatments rather than group interventions. Crisis resolution or home treatment teams are an effective community intervention to manage psychiatric crises, but they should not be seen as the only alternative to acute inpatient care. A recent systematic review (Wheeler et al 2015) did not find a significant effect in hospitalisation rates for the implementation of crisis resolution services; and observational studies have shown disparate effects in Norway (Hasselberg et al 2011) and in England (Johnson, 2014). It has been suggested that a strategy that combines "crisis resolution/ home treatment" and "day hospitals" is a good option to treat patients in the community (Vazquez-Bourgon, et al 2012).

We may also keep in mind that models that prioritise individual care may have unintended adverse effects if critical services in a community care model are missing from

the local system. Likewise and although this requires further evaluation, the value of choice in recovery oriented systems may be limited by the availability of core services in the system. In order to take useful choices to meet an individual's needs, a whole array of service alternatives should be available at the local care system. Strikingly, the lack of high-intensity day care (e.g. Day Hospitals and Day Centres related to health) has not been mentioned as a critical system gap in previous policy documents. Other authors have documented the dismantling of the Australian community mental health system in recent years, but without specific mention of the disappearance of day care (Rosen et al 2010; Rosen et al 2012).

A central lesson of this mapping model is that mental health care needs to be treated as a complete system. Services providing intensive day care-such as Day Hospitals or Day Centres - as well as other components of the system should be included in a system when they are necessary. We need to create a system which fits with community needs, not one based merely on a policy trend or institutional imperatives.

This report and the concurrent report, *One System, One Team* report on hospital transition pathways completed for BN PIR, provide the a stronger basis for moving to a whole-of-system approach.

The reduction or disappearance of health staffed day care has also been observed in other health systems that are shifting to a competitive market based on personalisation, such as in England. Although this shift has been described in the disability sector (Ferguson, 2012; Duffy, 2011; Barnes, 2011), an understanding the impact of this reform in the overall efficiency of the care system is still missing. The early evidence from the UK in relation to personalised care for mental health consumers, is not encouraging, and requires further evaluation in the Australian context before any wholesale policy shift (Slasberg et al, 2013; Slasberg et al 2014). Therefore it is an urgent need to assess the effects of this silent reform on key performance indicators of the system and on the outcomes. This need is made particularly urgent in the context of NDIS, which has a strong emphasis on individualisation (Mendoza et al 2014).

Lack Of Comprehensive Information About Long Term Accommodation

Supported housing is another key component of a community mental health system. However it has not been possible to obtain comprehensive information on the Public and Community Housing properties assigned to people with a lived experience of mental ill-health. More intensive research is needed related to this issue.

Employment-Related Services

It is also worthwhile highlighting the low diversity of services providing employment which plays a critical role in promoting recovery (Walsh and Tickle, 2013). We identified some organisations that aim to increase the accessibility of people with a lived experience of mental ill-health to work in jobs that pay competitive wages in integrated settings in the

community. "Disability Employment" also provides this type of intervention. However this is a generic service for people with all types of disabilities. There is a need to fund more long-term specific services supporting employment for people with lived experience of mental illness.

As with other areas of day care, it is important to have a broad availability of different employment alternatives for people with a lived experience of mental ill-health in addition to supported employment. The number of people with a lived experience of severe mental ill-health in ordinary employment is very low (around 10% for those with schizophrenia) and it may be the case that ordinary employment cannot be provided to all persons with a severe mental health problem. The opportunity costs of promoting ordinary employment for all the population with a severe mental problem may not be a feasible and it could be the case that not all of the people would be able to work in the ordinary employment, but they have still the right to work. Therefore it is important to guarantee that there are other options available for people that may have other abilities and may require more support. Some of these alternative services may be classified as 'social firms' which are market-oriented businesses (Hopkins et al 2013) that employ people with disabilities; or 'social enterprises' which are primarily focused on training and rehabilitation (Grove, 1999). The availability of these other options may also allow a smoother transition to ordinary employment.

Further Findings

An additional issue that emerged in this study related to the lack of robustness or the fragility of the system brought by short-term programs lacking recurrent funding bases. These time-limited, non-stable services are usually highly specialised, targeting specific populations or disorders, or pilot programs. The Partners in Recovery program itself is one such program. ATAPS, whilst more mature, is subject to endless policy changes and short-term funding arrangements.

The common three-year time frame is an insufficient period to test their benefits nor establish stable pathways of care between services or system elements. Service leaders, quite understandably, are reticent to invest resources in working with other services to develop shared care models where the funding is uncertain. This type of problem is typical of high income countries where decision makers/policy planners (the advocates for a new service) take a 'component view' rather than a public health orientation, which takes a 'system view' of the whole pattern of care at the local level and how the different components are related (Thornicroft and Tansella, 2013).

The problem of this component approach is that it results in a highly inefficient use of scarce resources, as investment is made in new services, whilst the core services are absent or not appropriately resourced. This leads to a "reactive" system, rather than a "proactive" system based on long-term planning informed by local evidence. In addition,

most of these programs are community-based, which means that the community mental health system in Brisbane North, as in other areas of Australia, remains "fragile" some three decades after de-institutionalisation was in full swing.

All of the problems described in this discussion are related to the concept of the "missing middle" of care, that has been also highlighted in the review made by the National Mental Health Commission. When analysing the information, the type of services provided in Brisbane North may cover the needs of the two extremes of the lived experience of mental illness: on the one hand, those people with mental health problems who are relatively well, have good support, and only need low-level support, and on the other hand, those who are in a severe crisis situation that require acute care in a hospital setting. In the middle we have a significant proportion of people with a lived experience of chronic and moderate to severe mental illness who need more community-based options. In this sense, a balanced care system requires the active implication of the health sector in the provision of community care, together with the social sector.

It is important to note that the unbalanced resource allocation and priority planning towards promotion and primary prevention with a disregard of the unmet need of those with moderate to severe mental illness has been recently highlighted as a concern in Western Countries (Mehta et al 2015; Ormel, et al, 2008). As stated by Hopopf and colleagues "New proposals must be judged against a background whereby clinical commissioning groups in England spend a small and decreasing proportion of their budgets on mental health, despite between only a quarter and a third of people with common mental disorders receiving any treatment (Hotopf et al, 2015)".

The gap in high intensity day care and sub-acute inpatient care may hinder tertiary prevention or rehabilitation. As the National Mental Health Commission has also pointed out in its report, it is a system that responds too late (NMHC, 2014, pg 31).

In spite of this, the main strength of the Mental Health System of Brisbane North is the high availability of mobile outpatient services and the geo-location of the services. Services are largely in the areas with higher needs and the overall geographical accessibility is good. The exception to this is in some areas of the North West of Redcliffe Caboolture catchment area and the capacity in the Caboolture area more generally due to high population growth and high needs.

The flip side or cost of the high mobility in outpatient care, is the lower numbers of clients that can be seen.

In the low density populated areas, consideration needs to be given to alternatives to mobile outpatient services including e-mental health technologies.

Another strength is the availability of specific services for people with alcohol and drugs problems.

Study Limitations

The results presented here should be seen in the light of several limitations. The first one is related to the voluntary participation of the providers in this research. Some core services may be missing because we did not reach them. Services which declined to participate in this study may have contributed to an under-representation in some care types.

In order to address this limitation we presented and discussed services included and coded in the study to the Steering Committee of Partners in Recovery Brisbane North and, after different iterative reviews, it was agreed that the majority of the services providing care for people with a lived experience of mental ill-health 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.

A further issue is the role in the local system of private providers. We have only included 1 private mental health hospital in the Atlas and no private single providers (such as psychiatrists or psychologists), with the exception of those engaged through the ATAPS program. A more intensive research focused on the private services may complement these results. In addition, data related to the staffing (full time equivalents) should be considered with caution, as more than 30% of the information was missing, and, in the case of the Mental Health Services, the available data relates to 2012-2013.

While the available prevalence data and the numbers of clients accessing care would suggest a significant gap overall in capacity, this data needs to be developed and subject to further analysis.

It must be stressed that conclusions cannot be drawn from the available data on mental health outcomes for patients from the MN MHS.

Finally, we have only included services within the boundaries of Brisbane North. We acknowledge that some of the inhabitants in this area may use services from other areas. A complete Atlas of Queensland would eventually solve this problem.

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. We have also used publicly available socio-demographic information on the Brisbane North population. However, to have a complete picture of the situation, the results of this Atlas should be completed by mapping and analysing the:

(viii) **Mapping the modalities of care provided by service providers:** using the International Classification of Mental Health Care

(ix) **Needs of the primary care physicians and other providers related to the provision of mental health:** General practitioners or family physicians 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. Nationally, around one in ten or 12 million GP consultations relate to a mental health issue. Data published earlier this year (Meadows et al, 2015) shows significant inequities in access to the MBS funded mental health items provided by GPs. On the available information for this report, there are inequities evident in access in MBS-subsidised mental health related services. The same is probably true for those MBS-funded mental health services provided by psychologists and clinical psychologists. It is therefore crucial to understand and meet the needs of these professionals.

(x) **Rates of other chronic diseases relevant to people with mental ill-health:** the rates of a number of other chronic health conditions including cardio-vascular disease, Type 2 Diabetes, obesity and musclo-skeletal conditions should be added to future maps.

(xi) **Rates of utilisation of the health care services**, by MTC, using the information provided in the administrative databases: the analysis of service utilisation will detect 'hot' and 'cold' spots and areas of improvement.

(xii) **Rates of utilisation of the other relevant services:** the rates of and distributions of services such as Ambulance, Police, Domestic Violence and child protection.

(xiii) Financing mechanisms and financing flows: This will allow us to delve into important areas such as the *Better Access Program*, community mental health services provided by NGOs and housing.

(xiv) 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.

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

Staff of PIR: The data in this Atlas could facilitate a better understanding of the landscape in which they 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 (Fernandez et al, 2014).

This can be easily done by introducing the classification system (DESDE) into an on-line program that automates 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 to consumers system navigation, location of services and increase their local knowledge on service availability and capacity. This could be developed on the new PHN mental health site for Brisbane North.

10. CONCLUSIONS

The conclusions we have drawn from this Atlas are consistent with the recent report of the National Mental Health Commission's *National Review of Mental Health Programmes and Services*, which included recommendations addressing: 1) the development of *more community-based psychosocial, primary and community mental health services,* as alternatives to acute hospital care; and 2) boosting of *the role and capacity of NGOs and other services providers to provide more comprehensive, integrated and higher-level mental health services.*

The critical areas for progress listed here, complement the recommendations and action steps set out in the hospital transitions pathways report, *One System, One Team* provided by ConNetica to BN PIR in August 2015 (Mendoza et al, 2015).

To sum up, the critical areas of progress are to:

A. Increase the number of sub-acute beds, specially due to the lack of alternatives to hospitalisation
B. Develop alternatives to hospitalisation, such as day hospitals, and residential facilities in the community, such as crisis houses.
C. Develop day care centres related to health staffed with high skilled mental health clinicians and other professionals that can focus on rehabilitation.
D. Develop day care centres related to employment ('social firms' or 'social enterprises') for people with a lived experience of mental ill-health to promote their recovery.
E. Change from a reactive system to a proactive system, to increase the robustness of the system, particularly in the social sector. This implies the provision of long-term funding for the NGO sector, which stabilises operations and allows for long-term planning.
F. Incorporate system thinking into policy and planning. This will ease the development of an integrated mental health model of care.

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