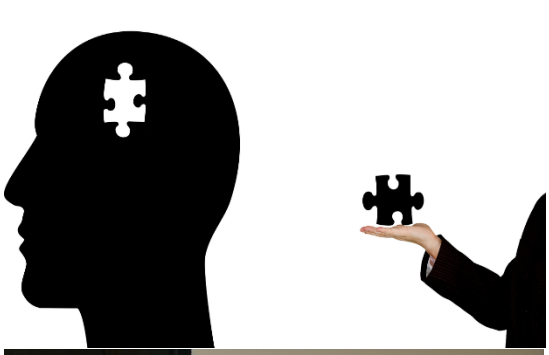

THE ROLE OF PRIMARY CARE MENTAL HEALTH NURSE PRACTITIONERS IN AUSTRALIA

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DOI: https://doi.org/10.25955/346a-j124
e-version ISBN: 978-0-908026-84-5

EXECUTIVE SUMMARY

The Tristar Medical Group use Mental Health Nurse Practitioners (MHNPs) to both provide and co-ordinate care. Completion rates of entire 90-day cycles of care and review of GPMHCPs sits at approximately 70%, which is significantly better than the National average of 42% since the introduction of the MBS 2712 billing item. This item itself is integral in demonstrating effectiveness in reviewing planned care. The role of the MHNP has been vital to achieving excellent patient care outcomes in this domain.

MHNPs value add into Primary Care and General Practice by:

- Advanced assessment and diagnosis of Mental Health Issues
- Monitoring physical health,
- Ordering and analysing tests
- Prescribing medications,
- Providing psychoeducation for medication adherence
- Psychotherapy / Psychological Interventions
- Monitoring and reporting all aspects of care to the Treating Team

Participants in this evaluation believe that Mental Health Nurse Practitioners (MHNP) provide the maximum value for clinical care across the entire biopsychosocial Model. Clients receiving treatment and support by MHNPs experienced improved outcomes through increased continuity of care-including through home visits, follow up and care co-ordination, access to support and greater compliance with their treatment plans.

Care provided by MHNPs demonstrated evidence of an overall reduction in hospital admission rates and lengths of stay in hospital where admission occurred; increased levels of employment; improved family and community connections; and positive impacts on GP workloads.

Evidence of effectiveness of the MHNP model of service delivery whereby MHNs were actively providing clinical interventions and co-ordinating care for patients is well supported by the results of this evaluation.

If the business model and funding changed, more MHNPs could be recruited, especially given the scarcity of other mental health clinical discipline in rural communities. Current funding for MHNPs has been restricted to those who receive PHN subsidy under the stepped care model. This limits the opportunity to provide the full range of care that MHNPs are capable of delivering compared to other clinical disciplines. Submissions to government to facilitate greater access to MBS items for their services is recommended.

BACKGROUND

The prevalence of mental Illness in an Australia is growing with many studies reflecting significant rates of morbidity. The Australian Institute of Health and Welfare (AIHW, 2016) indicated that around 2–3% of Australians (approximately 730,000) have severe mental disorders, determined through diagnosis, intensity and duration of symptoms and degree of disability (not limited to severe psychotic disorders). In addition, 4–6% of the Australian population (approximately 1.5 million) have moderate disorders, and 9–12% (approximately 2.9 million) have mild disorders. These figures suggest that approximately 21% (1 in 5) Australians are affected by mental disorders to varying degrees.

Specialist Mental health care in an Australian context is in high demand, far outstripping the capacity to supply timely specialist interventions. In rural and regional centres in particular, wait times to access a psychiatrist can extend into many months and with significant cost to patients (financial and burden of illness) and the Australian Taxpayer who pays for the Medicare Benefits Scheme.

The AIHW reported that approximately 2.4 million people received Medicare-subsidized mental health services in 2016–17. A significant number of these services occurred in General Practice settings. The majority of people receiving services reside in major cities with the numbers of people receiving services declining with increasing remoteness.

Tristar Medical Group specialises in General Practice and ancillary health care, with predominant sites based in regional and rural locations. Tristar has implemented a model of care using specialist Mental Health Nurse Practitioners (MHNP) to buffer these systemic challenges. This model of care has commenced operations and has had seven MHNPs. With a focus on providing timely assistance to General Practitioners (GPs), to achieve a reliable diagnosis and appropriate treatment planning across the biopsychosocial continuum of care, it is anticipated that the model fills current specialist workforce gaps in a responsive consumer focused and cost effective manner. The evolution of the nurse practitioner role has been significant for the nursing profession recognising nurses for their specialist skillsets and their contribution to health care. Generally, NPs work in the tertiary health sector.

GPs are often the first point of access for people seeking help with a mental illness. However, many GPs have generalist knowledge about mental Illness but not specialist knowledge. Many report that they find mental healthcare challenging.

Tristar and Primary Health Networks recognise the difficulties recruiting and retaining specialist mental health professionals across all disciplines, exacerbated with distance from major cities. Many Tristar clinics are located in regional and remote settings where accessing specialist mental health professionals and services is challenging.

The aim if this evaluation was to determine the efficacy of the model of care with regard to acceptability, clinical outcomes, efficacy and cost effectiveness.

LITERATURE REVIEW

This report presents a narrative review of literature. We explore the policy and practice through which community-based mental healthcare services are delivered in Australia, with a focus on the role of mental health nurse practitioners who work in primary care settings. Our key findings are:

- The ***nurse practitioner*** (NP) is a nurse with advanced nursing education, who, in Australia, is registered and able to practice independently and is eligible for limited medication prescribing rights under the Pharmaceutial Benefits Scheme (PBS).

- The ***mental health nurse practitioner*** (MH-NP) is a NP who specializes in mental health care. MH-NPs can be registered by Medicare with a provider number to enable patient consultations to have fees direct billed or reimbursed under the Medicare Benefits Schedule (MBS) subsidized by the Australian government.

- The ***mental health nurse practitioner*** role in general practice has been found a valuable adjunct to help facilitate mental health clients' General Practice Mental Health Care Plans, through clinical care, psychosocial support and education.

- Research has shown that mental health clients have high mortality because of elevated risk of chronic disease. GPs as primary care co-ordinators need to address mental health clients' physical health risks together with the mental health condition. A holistic approach is also applicable to MH-NPs and other practitioner disciplines.

- This study describes research of nurse practitioner roles and mental health service delivery in Australian primary care GP practices. In this regard there is **a scarcity of current research** that identifies patient engagement and patient outcomes.

We conclude that further evaluation of mental health care in general practice is required to gain an understanding of patient and carer engagement, teamwork and collaboration, mental health patient outcomes and value for money.

INTRODUCTION

In Australia, the increasing incidence of mental illness in the community over the last decade is of great concern. In 2006–2007 the estimated population-based treatment rate for mental health disorders was 37% and this increased to 46% in 2009–2010 (AIHW, 2016).

Various descriptive estimates of patient demographics have been produced. The Australian Institute of Health and Welfare (AIHW, 2016) indicated that around 2–3% of Australians (approximately 730,000) have severe mental disorders, as judged by diagnosis, intensity of symptoms, duration of symptoms, and degree of disability (not limited to severe psychotic disorders) (DoHA, 2013). In addition, 4–6% of the Australian population (approximately 1.5 million) have moderate disorders, and

9–12% (approximately 2.9 million) have mild disorders. In 2014-2015, around one in nine (11.7%) Australians aged 18 years and over experienced high or very high levels of psychological distress, indicative of a probable mental health condition.

The escalation in mental health conditions places a substantial burden on health care and treatment services across states and territories. Many consultative services are provided as fee-free or nearly fee-free with care plans and consultations being subsidized under the national health insurance scheme (Medicare). In 2016-2017, approximately 2.4 million people received Medicare-subsidized mental health-specific services (AIHW, 2016), mostly provided in general practice settings. Notably, the majority of those receiving services reside in major cities (>1,75 million, 73.1% of consumers), while the number of individuals who receive services declines as area remoteness increases.

The mental health clinical workforce comprises various health-care professionals, including general medical practitioners (GPs), psychiatrists, psychologists, nurses, nurse practitioners, social workers and occupational therapists.

The evolution of the nurse practitioner (NP) role globally and in Australia has been a significant advance for the nursing profession. Harvey (2011) described the contentious history and evolution of the role in Australia. Advanced Practice or NP roles allow post-graduate trained nurses to be recognised for their specialist skill sets and patient management capabilities. Although the NP role was instituted in some domains in several Australian states between 1992 and 2004 (Appel & Malcolm, 1999, 2002; Quinn & Hudson, 2014), national nursing legislation in 2007 allowed equivalent role establishment across all states. Registered nurses with an appropriate postgraduate masters degree and relevant clinical experience in advanced nursing could apply for endorsed nurse registration. Endorsement of their registered-nurse status by the registering authority, the Australian Health Practitioner Regulatory Agency, allowed nurses in this specialist nursing role to practice independently (Nursing and Midwifery Board of Australia, 2012).

In this paper we explore the policy and practice through which mental health services are delivered in Australia, giving specific attention to the role of mental health nurse practitioners who work in primary care.

METHODS

We searched for literature published in English over the last two decades, from 1998 to 2019, in order to develop a narrative regarding nurse practitioner roles. The inclusion criteria were nurse practitioner training and models of nurse practitioner practice, models of mental healthcare delivery, mental health policy and mental health statistics. Preference was given to studies conducted in Australia.

PubMed and Google Scholar were the key databases searched. An exhaustive web-based Google search was made of government and peak body websites and those of other relevant organisations, together with industry briefing reports, statistics and fact sheets, which all added to this review. The terms ‘client’ and ‘patient’ are used interchangeably.

We identified more than 100 relevant articles from the last 20 years. These revealed the formative stages of development of the NP roles and the contexts of MH-NP work in 2019. Our reference list and bibliography illustrate the wide range of evidence sources.

THE CONTEXT OF MENTAL ILLNESS IN AUSTRALIA

Prevalence

The most recent nationwide Australian statistics of the Australian Institute of Health and Welfare (2019) suggest that 7.3 million (45%) of Australians aged 16 to 85 will experience a common mental health disorder (such as depression, anxiety or a substance use disorder) during their lifetime.

The prevalence of mental Illness in Australia is increasing, with many studies reflecting significant rates of morbidity. Recent national data from the AIHW (2016) reveals further details. Almost 64,000 people have a psychotic illness and are in contact with specialised public mental health services each year. Over 560,000 children and adolescents aged 4 to 17 (about 14%) experienced mental health disorders in 2012–2013. The Australian Institute of Health (AIHW, 2016) indicated that around 2–3% of Australians (approximately 730,000) have severe mental disorders, as judged by diagnosis, intensity of symptoms, duration of symptoms, and degree of disability (not limited to severe psychotic disorders) (DoHA 2013). In addition, 4–6% of the Australian population (approximately 1.5 million) have moderate disorders, and 9–12% (approximately 2.9 million) have mild disorders. These figures suggest that 21% (1 in 5) Australians are affected to some degree by mental disorders.

Other data in the form of statistics provided by Beyond Blue (2019) (a State and Federal Government funded organisation specialising in research and treatment of affective disorders) describes additional measures. One of every seven Australians will experience depression in their lifetime and 15.0% of Australians aged 16 to 85 having already experienced an affective disorder. This is defined as one or more of the following: depressive episode, dysthymia and bipolar affective disorder) (Australian Bureau of Statistics ABS, 2018]. In addition, one quarter of Australians will experience an anxiety condition in their lifetime, with 26.3% of Australians aged 16 to 85 already having experienced an anxiety disorder. Further, one in 16 Australians is currently experiencing depression with 6.2% of Australians aged 16 to 85 having experienced an affective disorder in the last 12 months. One in seven Australians is currently experiencing an anxiety condition with 14.4% of Australians aged 16 to 85 having already experienced an anxiety disorder in the last 12 months. One in six Australians are currently experiencing depression or anxiety, or both. Australians' propensity to seek support for mental illness appears to be growing at a rapid rate, with around half of all individuals with a condition now undergoing treatment.

GPs are often the first point of access for people who seek help with a mental illness. The majority of GPs have a generalist knowledge of mental Illness rather than specialist knowledge and many have reported that they find mental health care to be challenging (Britt et al, 2016). Managing patients with acute medical risks as well as mental health issues within consultation time constraints can make workloads problematic.

THE STATE OF AUSTRALIAN PROGRAM FUNDING MODELS

Although much of the mental health care for individuals is provided under Medicare, there is still a substantial need for program-wide funding. Contemporary national data estimates that around AU$8.5 billion per annum is spent on mental health-related services across Australia (AIHW, 2019). Service provision includes residential and community services, hospital-based services (both inpatient and outpatient) and consultation with specialists and general practitioners, together with the multiple disciplines mentioned earlier.

The 5th National Mental Health and Suicide Prevention Plan released in 2017 by the Australian National Mental Health Commission, estimated that the total annual cost of direct health and non-health

expenditure to support those experiencing mental illness is much greater than that reported above: AU$28.6 billion, or 2.2 percent of Australia's Gross Domestic Product.

Despite this, it is generally acknowledged that there are significant deficits in the volume of mental health funding. In 2014-2015, mental health received around 5.25% of the overall health budget while representing 12% of the total burden of disease (Rosenberg, 2017). Non-government organisations that support people with mental illness and their carers also face chronic under-resourcing and lack of sustainable funding according to the AMA (2018).

There have been recent changes to mental health funding that impacts community-based services. For example, In the last 12-18 months we have witnessed a significant change to funding pools with the end of 'Partners in Recovery' and 'Personal Helpers and Mentors' programs. The Mental Health Nurse Incentive Program (MHNIP) and other associated funding has been cut from the Primary Health Network programs. We have seen the introduction of the National Disability Support scheme (NDIS) however this has a limited investment in psychosocial rehabilitation and mental health care. While we can attest to funding still being available, a significant deficit is still obvious.

There is also a serious and continuing problem in the inability to link and integrate mental health care provided to patients in primary care with the crisis or acute care they receive as hospital in-patients. (AMA 2018). A disconnectedness between systems continues to plague services. Often, reporting systems rely on paper-based reports without integrated patient records. Acute care discharge reports may not be received by GP's in a timely fashion to allow for an effective transition of care. In many cases, the GP and primary care teams are not included in the decision-making processes despite holding the key status of an onward referral point. The above two points where clearly highlighted in recent coronial findings in the Northern Territory and also in Victoria. Beyond this, cases are known whereby ineffective treatments are being duplicated and/or are repeated, thus delaying a client's recovery. Shared care opportunities are not being fully embraced and therefore the cost of care may be artificially increased. These issues need to be addressed.

The Mental health Workforce in Australia

The mental health clinical workforce comprises multiple disciplines: GPs, psychiatrists, psychologists, nurses, nurse practitioners, social workers, occupational therapists and others. These clinicians provide services across six states and two territories with vastly differing geographic and demographic characteristics. As stated earlier, the majority of individuals who receive mental health services reside in major cities while service numbers decline as area remoteness increases. Some characteristics of the mental health workforce are described below.

General Practitioners (GPs): There are approximately 36,000 General Practitioners (GPs) working within an Australian context. GPs are the 'gatekeeper' for mental health delivery in community settings. They are often the first point of patient access and they bear overall responsibility for co-ordinating the care of patients (RACGP, 2016). They provide a variety of services including assessment and referral of patients on to specialised and/or ancillary type services across the entire primary care sector. Further description of the GP role in mental health service delivery is seen in the following section.

Psychiatrists are a key discipline. Specific workforce demographics indicate that more than 3,200 psychiatrists, or 13.0 full-time-equivalent (FTE) psychiatrists per 100,000 population were working in Australia in 2016 (AIHW, 2018). When considering time spent as a clinician, there were 10.8 clinical FTE psychiatrists per 100,000 population, with inequity between geographic regions. Rates ranged

from 6.8 in the Northern Territory to 12.5 in South Australia. The majority of clinical FTE psychiatrists were in major cities (13.2 FTE per 100,000 population), while very remote areas had the lowest rate (3.3 FTE per 100,000 population) (AIHW 2018). In 2016 psychiatrists worked an average 32.2 clinical hours per week, with males averaging more hours per week than females (AIHW 2018).

Nurses are another key discipline. Nationally, around 21,500 nurses (6.8% of all nurses) were working principally in mental health in 2016 (AIHW, 2018). This equates to 85.1 FTE mental health nurses per 100,000 population, but it includes overall workforce data including hospital inpatient or clinic services and does not specify private services or primary care numbers. The national rate of clinical FTE mental health nurses was 78.1 per 100,000 population, ranging from 58.2 in the Australian Capital Territory to 90.5 in Western Australia (AIHW 2018). More than three-quarters of FTE mental health nurses (76.2% or 90.8 per 100,000 population) worked in major cities. Rates mostly decrease with increasing remoteness, with 31.1 FTE mental health nurses per 100,000 population working in very remote areas. Mental health nurses worked an average of 36.3 total hours, and 33.3 clinical hours, per week (AIHW 2018).

Mental Health Nurse Practitioners: There were 131 NPs who indicated they worked as MH-NPs in 2017 (Dept of Health, 2019). This amounts to 9% of all employed NPs. In Australia the total NP numbers are small (n=1461 in 2017) (DoH, 2019) and only one-quarter work in the private sector (such as in primary care or private hospitals) as opposed to the majority who work in the public sector (e.g., public hospitals, outpatient clinics). Of significance for this study is that 1258 are either working in major cities (991) and or inner regional areas (267). Thus only 204 are working in outer regional (138), remote (27) and very remote (39) and on average (9%) we could expect that approximately 19 would hold a Mental Health speciality. The main settings for Mental Health Nurse Practitioners for this study are situated in the outer regional areas. With seven Mental Health Nurse Practitioners included.

Further description of the MH-NP role in mental health services is provided in the following sections.

Clinical psychologists: There are more than 24,500 registered clinical psychologists working in Australia (2015), equating to 88.1 FTE registered psychologists per 100,000 population. All are eligible to work in mental health. However, it is not known how many are engaged specifically in mental health work. When considering time spent as a clinician, there were 63.9 clinical FTE psychologists per 100,000. More than 8 in 10 FTE psychologists (82.7%) worked in major cities. Rates decreased with increasing remoteness, with 23.2 FTE per 100,000 population working in very remote areas. Registered psychologists worked an average of 32.4 total hours, and 23.5 clinical hours per week. (AIHW 2018).

Social workers: There are 2,260 social workers, who indicate that they are working in mental health (2015). The pattern of decreasing clinician access as area remoteness increases is likely to apply to all mental healthcare disciplines.

A Mental Health Services in Australia report authored by the Australian Institute of Health and Welfare (AIHW, 2018) provides a picture of the national response of the health and welfare service system to the mental health care needs of Australians, as described below.

MENTAL HEALTH SERVICES DELIVERY

Australia has a multi-sector public and private mental health system, supported by major funding from governments. The national program is summarized in Table 1.

Table 1 Australia's mental health system

The roles and responsibilities within Australia's mental health system vary. Services are delivered and/or funded by the Australian Government, state and territory governments and the private and non-government sectors.

- Severe mental illness: State and territory governments fund and deliver public sector mental health services that provide specialist care for people with severe mental illness. These include specialised mental health care delivered in public acute and psychiatric hospital settings, state and territory specialised community mental health care services, and state and territory specialised residential mental health care services. In addition, states and territories provide other mental health-specific services in community settings such as supported accommodation and social housing programs.
- Primary care settings: The Australian Government funds a range of mental health-related services through the Medicare Benefits Schedule (MBS), and the Pharmaceutical Benefits Scheme (PBS)/Repatriation Pharmaceutical Benefits Scheme (RPBS). [available to primary care patients] The Australian Government also funds a range of mainstream programs and services which provide essential support for people with mental illness. These include income support, social and community support, disability services, workforce participation programs, and housing assistance.
- Private sector services include admitted patient care in a private psychiatric hospital and private services provided by psychiatrists, psychologists and other allied health professionals. Private health insurance funds the treatment costs in private hospitals, public hospitals and out of hospital services provided by health professionals.
- Mental health non-government organisations are private organisations (both not-for-profit and for-profit) that receive government and/or private funding. Generally, these services focus on providing well-being, support and assistance to people who live with a mental illness rather than the assessment, diagnostic and treatment tasks undertaken by clinically focused services.

Source: Mental Health Services in Australia, 2019. Homepage on the Internet: https://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/report-contents/summary-of-mental-health-services-in-australia/overview-of-mental-health-services-in-australia

Mental health service delivery in Primary care

As GPs are often the first port of call for people seeking help with a mental illness, the overall volume of patients receiving mental health services through their GP is a strong indicator of service demands. The 'Bettering the Evaluation and Care of Health' (BEACH) survey (Britt et al. 2016) of general practice activity, which provides detailed information about GP encounters based on data collected from a sample of GPs, is one source of reliable information that informs about the burden of disease and apportioning of funding. Analysis of mental health-related Medicare Benefits Schedule (MBS) items by GP providers (via Medicare-subsidised mental health-specific services statistics), are another source of information to draw upon to understand service trends and community needs. These two data sources provide complementary insights into mental health-related GP care.

Not all mental health-related GP encounters are billed using mental health-specific Medicare Benefits Schedule (MBS) item numbers (they may be billed as a standard consultation, for example). Consequently, the number of estimated GP encounters from the BEACH survey deemed to be mental health-related is greater than the number of Medicare-subsidised mental health-specific services in the national statistics database.

According to the BEACH data, just under 18 million GP encounters were mental health related in 2015–2016, equating to 12.4% of all GP encounters. There has been an annual average increase of 4.7% in the number of estimated GP encounters that are mental health-related since 2011–2012. *Depression* was the most commonly managed problem (about one-third, or 32.1%). The most common management of mental health-related problems was for the GP to prescribe, supply or recommend medication (61.6 per 100 mental health-related problems managed). According to the MBS data, there were about 3.2 million Medicare-subsidised mental health specific services provided by GPs in 2015–2016.

When one looks at the current workforce demographics obtained via the Australian Bureau of Statistics and the Australian Health Practitioner Regulation Authority, there is a significant disparity between supply of clinicians versus the demand. Thus, it is easy to accept that access to specialist services may not be as timely as desired.

Of particular note, GPs delivered 1,348,214 General Practice Mental Health Care Plans (GPMHCP) in the last financial year 2018/19 and have completed comparative numbers since 2010. GPs identified themselves in studies to possess basic knowledge of mental health and its management. However, it was noted that compliance with follow-up consultations for review of patients' treatment plan is low; a 42% review rate nationally since 2010 (MBS datasets DOH, 2019). This means that GPs have assessed patients for underlying mental illness at a first visit, have developed and commenced a plan of care and yet a minority of plans have ever been reviewed at a subsequent visit via the MBS related framework, to assess patient outcomes. Each of these steps results in a fee rebate for clinical care from Medicare for a GP, when directly billed.

A patient's failure to attend could be one reason that plans are not reviewed or are redundant, although multiple reasons for a lack of engagement have been advanced. A significant proportion of consumers with a serious mental illness state they do not have a regular GP. Barriers to engagement may include the cost of attending a GP who does not bulk bill (discount) fees, difficulty in identifying a GP with an interest and training in mental health care, communication difficulties between the consumer and GP, problems associated with travel to a GP, and the stigma and discrimination perceived to surround mental illness (NSW Health 2017).

However, low cost options do exist. Funding models can include Medicare payments for the provision of patient consultations in primary care settings for both GPs, NPs and other Medicare-registered disciplines. If discounted patient fees are applied (i.e., directly 'bulk-billed' by charging to Medicare) then there may be a fee-free service provided for patients. Nurse practitioners are eligible Medicare providers for patients when they provide a Medicare rebateable service in a collaborative arrangement with one or more medical practitioners.

Mental health nurses and mental health nurse practitioners can value add into the completion of General Practice Mental Health Care Plans through facilitation of individual client's care. The main evidence of this contribution to mental health care is seen in the evaluation of the Mental Health Nurse Incentive Program that was evaluated in multiple reports at the level of clients, providers and GPs, when functioning in 2010 to 2013 (Happell & Platania-Phung, 2017). This is a successful program model that increased access to primary mental health care for people with serious mental health conditions and it received positive feedback from stakeholders and clients. MH-NPs worked collaboratively with GPs and psychiatrists in provision of clinical nursing services and coordination of clinical services. Patient outcomes were seen to be improved, including a reduction in patient

hospitalizations. The multiple skills sets of the MH-NPs and the impact of facilitation on patients were well described in the program's reports (Healthcare Management Advisors, 2012; Happell, & Platania-Phung, 2017). Subsequently, program funding was redesigned under the auspices of Primary Health Networks (ACMHN, 2018), with outcomes nationally not known.

The level of mental health program funding has been a recurring issue because of uncertainty and short-term government funding commitments. There has also been a long-held debate about the level of MBS remuneration of nurse practitioners versus other allied health providers (e.g. psychologists and social workers), with the argument that nurse practitioners are remunerated at an inferior rate to their clinical allied health peers, yet provide a more comprehensive application of care across the biopsychosocial continuum. One positive for nurse practitioners is that their services have no yearly Medicare cap, as opposed to their allied health counterparts who are capped at 10 consultation sessions per patient in each calendar year.

Further, however, a recent survey of 73 NPs in private practice in Australia who are remunerated through Medicare (often via direct bulk-billing), revealed that the funding model has practice constraints (Currie, Chiarella, & Buckley, 2019). Two key issues identified were a duplication in services and the level of reimbursement. The authors concluded that there were aspects of care delivery not adequately described and compensated by the current nurse practitioner (NP) MBS item numbers and the level of remuneration, restricted nurses from providing complete episodes of patient care.

The nurse practitioner

Nurses with a university Masters degree and appropriate advanced clinical experience can apply for endorsement of their registered-nurse status to practice independently as a nurse practitioner (NP) (Nursing and Midwifery Board of Australia, 2012).

A scan of NP research shows that roles are classified into three main work domains:

1. Hospital employment across one ward or unit, such as Emergency Department NP, Oncology NP, Peri-operative NP; or by disease classification, such as Gerontology NP management of delirium, Pressure Ulcer Prevention NP;
2. Outpatient clinic NPs (such as Nephrology NP or Pain Management Clinic NP) or
3. Community-based NP, such as Palliative care NP, Aged care NP; Community Pharmacy NP (WA); Mental Health NP; Residential Aged Care Service NP.

However, a recent snapshot of the NP workforce in Australia in 2017 (Dept of Health, 2018) provided further, more detailed analysis. The employed NP workforce numbered 1,462. The report showed that ten principal areas of practice in 2017 accounted for 81.3% of the NP workforce, mostly in hospitals (n=479 NPs) while only 57 worked in general practitioner practices. (see: https://hwd.health.gov.au/webapi/customer/documents/factsheets/2017/Nurse%20Practitioners%202017%20-%20NHWDS%20factsheet.pdf)

Harvey (2011) has described the history of the Nurse Practitioner role in Australia and its evolution against significant negative pressures exerted by some areas of the medical profession. Against this backdrop, research has produced evidence that NPs provide effective care.

Taking the ED NP role as an example (some of whom may work as a mental health NP), the various iterations of the Emergency Department NP have been documented in more than ten studies since 2006 (Bragg, 2009; Dinh, Walker, Parameswaran, & Enright, 2012; Jennings, Clifford, Fox, O'Connell, & Gardner, 2015; Jennings, Gardner, O'Reilly, & Mitra; Jennings et al., 2008; Li, Westbrook, Callen,

Georgiou, & Braithwaite; Lowe & Plummer, 2013; O'Connell, Gardner, & Coyer, 2014; Wand, White, Patching, Dixon, & Green, 2011, 2012).

The ED NP role includes various modes of work and can include patients at all levels of acuity. In the state of Victoria, the role first emerged in 2004, hence has accrued time for practices and protocols to be developed, evaluated and embedded. The ED NP roles have been implemented in relation to faster patient throughput with the strategy that NPs manage lower acuity level 4 and 5 patients who may require less treatment and less invasive care.

Acceptance of ED NP care has been characterised as positive, with high patient satisfaction with acute care in an ED in Melbourne (Jennings, Lee, Chao, & Keating, 2009) and faster time to analgesia in ED compared with the treating team (Jennings, Clifford, Fox, O'Connell, & Gardner, 2015). There is still uncertainty around how ED NP roles will expand (Lowe, 2010) or be acceptable to all ED staff (Li, Westbrook, Callen, Georgiou, & Braithwaite, 2014) as the roles are ambiguous. There is often overlap between ED NPs and medical staff. Studies have mainly explored NP roles in ED in the main states of NSW and in Victoria. Although funding of advanced nurse (NP) roles in hospitals faces the barrier of a lack of precedence for advanced practice nurse salaries, the roles continue to evolve.

In 2014, new 'Nurse Practitioner Standards of Practice Australia' came into force (Cashin et al., 2013), including competencies in nursing practice, research, education, and leadership. These enumerated the NP roles and were generalist in line with NP work domains which could vary from working in acute hospital medical teams (Jennings, Clifford, Fox, O'Connell, & Gardner, 2015), to sole practitioner in more geographically remote primary care settings (Harvey, 2011). Of the national statistics that reported workforce demographics for 1,556 registered NPs in Australia in 2017, the largest 'employed' NP numbers were in Emergency (318), 142 were in medical care, and 131 in mental health settings (Dept of Health, 2018). The workforce is increasing annually.

THE MENTAL HEALTH NURSE PRACTITIONER

The *mental health* nurse practitioner (MH-NP) is a relatively recent specialist nurse phenomenon in Australia. The MH-NP role is one of the most commonly studied of any NP roles, however. This role is in response to increased mental health-related presentations and concerns over waiting times, co-ordination of care and therapeutic intervention, with mental health identified as a priority area for NPs in NSW as early as 2005 (Fisher, 2005). The operational models include ED-based specialist MH-NP as well as outpatient clinic-based MH-NP (with or without 24-hour on-call service), and primary care-based MH-NP. We focus here on the role in primary healthcare in a community setting that aims to provide consultative services to primary care patients.

This specialised MH-NP field of nursing focuses on working with patients to meet their recovery goals (Australian College of Mental Health Nurses (ACMHN), 2019). Mental health nurses consider the person's physical, psychological, social and spiritual needs, within the context of the individual's lived experience and in partnership with their family, significant other/s and the broader community.

In more detail, according to ACMHN, the mental health nurse role includes:

- Coordination of mental health care (e.g., in GP practices, to facilitate GP Mental Health Plans)
- Liaison with a range of healthcare providers about a patient's treatment
- Provide talking therapy

- Provide support for consumers and their families during a life crisis and in transition periods
- Provide information and education on mental health maintenance and restoration.

Some nurses who work in mental health are registered nurses, but not all are postgraduate qualified nurse practitioners. Mental health nurse practitioners (MH-NPs) in Australia are a small workforce. Available data, as previously stated, shows that in 2017, 131 NPs worked in in mental health settings nationally (Dept of Health, 2018) with an unknown proportion of these employed in private practices. Alternatively, there were 57 NPs working in general practitioner (GP) practices, but the proportion of NPs in this group who manage mental health referrals is not known. There were an additional 30 NPs employed in drug and alcohol services nationally, in 2017.

It is timely to examine research on the development of these MH-NP roles within the last decade, particularly those roles established in primary healthcare, in GP practices.

There has been significant reticence among some areas of the medical profession towards independent practice by NPs and practice in the community by NPs. In 2016 the Royal Australian College of General Practitioners published a position statement on the role of nurse practitioners in primary care (RACGP, 2016). This stated the RACGP support for the role of nurse practitioners within GP-led general practice teams, either co-located or external to the general practice location, however they do not support nurse practitioners working autonomously in the primary healthcare sector. Further, clinical roles, responsibilities and accountabilities within a GP-led general practice team should be assigned according to each health professional's level of education, training, supervision and clinical expertise. Ultimate responsibility and oversight of patient care when provided as part of a GP-led general practice team should rest with GPs. This suggests that policy and roles of NPs working in community settings and in primary care is still at an early stage.

The results of program evaluation research of MH-NP roles have generally been positive, both from the patients' and from organisational viewpoints. Wand et al. (2012) found that patients of an ED-based mental health NP outpatient clinic in NSW were highly satisfied by its accessibility, immediacy, flexibility and therapeutic benefits. Patients were followed up after ED discharge. The Emergency staff (n= 20) considered the outpatient service enhanced service provision and facilitated access to this patient population.

Research of primary care MH-NPs roles in general practices is less well known. In rural NSW, in a multi-method evaluation of the impact of a primary healthcare NP-led mental health service (Barraclough, 2016), likewise, 21 stakeholders regarded the service highly. Results indicated it addressed the drug/alcohol and mental health needs of a vulnerable rural community, as proposed by the local community and supported by a steering committee and a Partnership Agreement. There were, however, challenges in integrating the service with the acute mental health services.

As described earlier, comprehensive evaluations of the MH-NP roles in the *Mental Health Nurse Incentive Program* conducted in Australian states confirmed positive patient outcomes linked to the therapeutic relationships established with clients by MH-NPs (Happell, et al., 2017).

In all, more than 12 studies have reported that the MH-NP role was feasible, although still evolving, with a need for further evaluation. Some description of operational models of MH-NP roles in primary healthcare were described in the earlier section: Mental Health Service Delivery in Primary Care.

Nurse Prescribing

Nurse practitioners are registered advanced nursing specialists who can practice independently and be registered as Medicare providers, with access to limited prescribing rights under the Pharmaceutical Benefits Scheme. Those working in mental health form part of this workforce. Notably, concern relating to nurses prescribing of pharmacological medications has been a key point of contention in the medical field, despite NP graduates having completed authorised and endorsed training in pharmacology and advanced diagnostics. The early literature focussed on this aspect of the role both in Australia and abroad (Apel & Malcolm, 1999, 2002; Elsom & Happell, 2005; Carryer et al 2007; Turner et al.; 2007). Contemporary studies, however, have consistently reported valid nurse practitioner prescribing practices.

Hemingway (2009) showed that Mental Health Nurses (MHN) with prescribing authority were competent in prescribing when compared to psychiatrists and they concluded that, despite organisational barriers and educational concerns, MHN prescribing was becoming routine in the UK. These findings were supported by Elsom and Happell (2009) in Australia, Forchuk (2009) in Canada and Lockwood 2008 in Ireland. Norman et al. (2010) found that Mental Health Nurse supplementary prescribers deliver similar health benefits to patients as consultant psychiatrists without any significant difference in patients' service utilisation costs.

Further to this, Gielen et al. (2014) completed an analysis of international comparative studies conducted between 2005 –2012 to appraise the evidence on the effects of nurse prescribing, when compared to physician prescribing and, specifically, on the quantity and types of medication prescribed and patient outcomes. The findings of this study of 35 articles indicated that nurses prescribe in comparable ways to physicians. They prescribe for equal numbers of patients and prescribe comparable types and doses of medicines and with few differences in patient health outcomes. Of additional note, in the realms of clinical parameters such as perceived quality of care and patient satisfaction, the nurses were rated at least the same (or better) than physicians. These findings were similar to a like study completed by Latter and Courtenay in 2004 who also reported that nurse prescribing has been evaluated positively.

Dobel-Ober and Brimblecombe (2016) also provide positive evidence for nurse prescribing. In results from a UK national survey they reported that nurse prescribing is as safe as prescribing by doctors and that service users typically find nurse prescribing acceptable. Ross (2015) in a survey in one region of UK also reported that nurse prescribing was well received by those who had experienced it, further adding that clients found nurses easier to talk to than doctors. In addition, medications no longer required were more likely to be reduced or ceased by nurses and concordance and trust were enhanced within the nurse and client relationship. In Holland, Rookhuizen et al. (2017) concluded in a mixed methods exploratory study that nurses' prescribing of psychotropic medications was viewed in a positive light by patients, psychiatrists and nurse practitioners alike.
Further impact of nurse prescribing based on the literature highlights that gross benefits can be achieved. These include timely access to medications (Bradley & Nolan, 2007; Goswell & Siefers, 2009; Cleary et al., 2017), complementing the nursing role by creating a more holistic approach to patient care (Jones et al., 2007) and increased job satisfaction for nurses (Bradley & Nolan, 2007).

In summary, with contentions (mainly advanced by the medical profession) casting a shadow over the NP role in the formative stages, the outcomes achieved by Mental Health Nurse Practitioners, Nurse

Practitioners in general and Advanced Practice Nurses across the realms of prescribing and health diagnostics have been positive. Research and academic interest shown in studies presented across Australia, New Zealand, the USA, the UK and Europe, have helped to diminish some concerns. While many former studies were interested in understanding and informing the basic knowledge required by these nurses to be deemed safe and effective practitioners, others have focussed on highlighting that strong policy guidelines, role clarity and collegial supervision that is required are likely to also ameliorate concerns.

Of note, the more recent studies that were previously highlighted have been centered around showcasing the measurable *positive impacts* that advanced nurses and nurse practitioners have delivered.

Achieving holistic care for mental health clients: Addressing their Physical Health needs

The physical health needs of those Australians afflicted with mental illness has been recently cast into the spotlight as a key area of focus for the National Mental Health Commissions 5th National Mental Health and Suicide Prevention Plan (NMHC 2018).

For each person living with a long-term physical health condition and a mental illness, the interaction between conditions substantially raises the cost of health care (Naylor et al., 2016). Statistics show that 13.3 per cent of people living with mental illness have an additional two or more medical conditions (Australian Bureau of Statistics, 2016). Multiple illnesses increase the cost of health care, yet much of this cost is avoidable. Improved systems, screening and care pathways could have a substantial impact on reducing costs. Furthermore, increased morbidity and mortality confirm a higher risk of chronic health disease in mental health patients.

Mortality

Studies indicate that people living with mental illness are more likely to die early (Thornicroft, 2013; Lawrence et al., 2013). Their life expectancy can be shortened by up to 30 per cent. (RANZCP, 2015). Most of the causes of early death relate to physical illnesses such as cardiovascular disease, respiratory disease, diabetes and cancer. Compared with the general population, people living with mental illness are twice as likely to have cardiovascular disease, twice as likely to have respiratory disease or diabetes, twice as likely to have metabolic syndrome, twice as likely to have osteoporosis, 50% more likely to have cancer, 65 per cent more likely to smoke, and six times more likely to have a dental health issue. The presence of serious physical conditions is known to affect quality of life and impede recovery from mental illness (NMHC, 2016).

The 5th National Mental Health and Suicide Prevention Plan (NMHC, 2018) purports under Action 15, action to improve the physical health of people living with mental illness by developing or updating guidelines and other resources for use by health services and health professionals. Implementation of the guidelines and resources including physical health checks will be monitored and reported. In addition, government will provide advice on screening, detection, treatment and early medical intervention for individuals known to be at high risk of physical ill-health. The Plan states that the roles of GPs, other primary care providers and specialist healthcare providers in supporting integrated physical and mental health care must be better defined (NHMC, 2018). Of those professions listed previously in this paper under the mental health workforce section, GPs, psychiatrists and mental

health nurses including mental health nurse practitioners are best placed to deliver tangible outcomes in managing the physical health care needs of this cohort.

The Royal Australian and New Zealand College of Psychiatrists (RANZCP, 2016) suggest that they, too, are concerned that the gap between life expectancy in patients with a mental illness and the general population has widened since 1985. They noted that individuals with serious mental illness typically live between 10 and 32 years less than the general population and around 80% of this higher mortality can be attributed to higher rates of physical illness, such as cardiovascular and respiratory diseases and cancer.

The co-morbidities that impact holistic care

The RANZCP has been aware for some time that mental illness in interaction with other chronic diseases is one of the biggest challenges to public health systems in Australia and New Zealand. Higher mortality amongst people with severe and persistent mental illness is a consistent finding amongst a range of international studies, indicating that this is a global phenomenon. A recent editorial in The Lancet (2013, p. 1154) posed the question 'Why are patients with mental health problems being denied such important care?' The editors concluded that a lack of confidence amongst physical health teams in helping people with serious mental illness in both primary care and acute hospital settings, combined with mental health staff not feeling confident in providing physical health care, is a major part of the answer to this question.

Kritharides et al. (2017) supported the RANZCP findings but suggested that Australians living with schizophrenia die 25 years earlier than the general population, mainly due to poor heart health. Piatt et al. (2010) advised that some estimates suggest that the lives of both men and women with serious mental illness are up to 30% shorter than those of the general population. Australian research indicates that the gap is increasing rather than diminishing (Lawrence et al., 2013); the evidence demonstrates that just under 80% of excess deaths of people with serious mental illness are the result of physical health conditions rather than their mental illness. Many large national and international studies have highlighted these disparities.

According to the 2010 National Survey of People Living with Psychotic Illness in Australia, over one-quarter (26.8%) of survey participants had heart or circulatory conditions and one-fifth (20.5%) had diabetes. The prevalence of diabetes found in the survey was more than three times the rate seen in the general population. Other comorbidities included epilepsy (7.3% compared with 0.8% in the general population) and serious headaches/migraines (25.4% compared with 8.9% in the general population) (Begg et al., 2007; Morgan et al., 2011).

Similarly, in New Zealand, the New Zealand Mental Health Survey (Cunningham et al., 2014) indicates that people with any mental disorder have a higher prevalence of severe chronic physical conditions compared with those with no mental disorder. This data and data from other sources indicate that people with serious mental illness in New Zealand are also more likely to be obese or overweight and to have a higher prevalence of other health conditions, including cardiovascular disease, respiratory disease, chronic pain, high blood pressure and high cholesterol. Overall, people in NZ who use mental health services have more than twice the mortality of the general population. This disparity is significantly worse for people with psychotic illness, who have more than three times the overall death rate. Most of this excess mortality is due to natural causes, with cardiovascular diseases and cancers accounting for most deaths (Cunningham et al., 2014).

The challenge to address this inequity is not unique to Australia and New Zealand as further afield in the USA, recent research found that clients of public mental health services die an average of 25 years earlier than the general public (Manderschied & Delvecchio, 2018). Many of the causes of death amongst this group were found to be similar to the causes of death of others in the population. That is, were not a direct consequence of having serious mental illness and could be treated or prevented through timely access to effective health care and information.

Complexity of care a barrier to managing mental and physical healthcare

We found in other literature that the attitudes of health-care staff in both primary and secondary care as well as in specialist settings, can inhibit help-seeking by people with mental illnesses and associated physical health needs (De Hert et al., 2011). The stigmatisation of people with mental disorders was highlighted by Phelan et al. (2001), Fleischlacker et al. (2004) and Kane (2009) as contributing to negative staff attitudes. A large-scale review of studies found that a significant proportion of patients with serious mental illness do not receive testing for metabolic risk factors, and those with diabetes were less likely to receive standard levels of care in relation to this health condition (De Hert et al., 2011).

This is particularly concerning as a link between the frontline mental health pharmacological interventions and exacerbation of metabolic risk factors is well established (Barnes et al., 2015; NSW Health, 2017). There is a consensus across evidence-based guidelines that patients on continuing antipsychotic medication should receive regular metabolic monitoring and subsequent treatment of any cardiometabolic risk factors identified. With regard to cardiovascular disease, people with serious mental illness have the highest mortality, but are the least likely to receive specialised interventions or be prescribed certain medications. In routine clinical practice, monitoring tends to fall well short of relevant guideline recommendations (Barnes et al., 2015). On a broader level, the literature contains many reports of the lack of assessment, monitoring and documentation of the physical health status of people with serious mental illness, within both primary and secondary settings. GPs, MH-NPs and other providers of mental health care have the capacity to address these issues with clients.

Early work by Phelan et al. (2001) highlighted a tendency for service providers to focus on mental health issues rather than on physical health status. In some studies, physical complaints were regarded only as psychosomatic symptoms (Lawrence & Keisley, 2010). Studies completed by Druss et al. (2002), Fleischlacker et al. (2004), Frayne et al. (2005), Hennekens et al. (2005) and Kane (2009), as cited in Ballenden and Duggan (2015), all point to suboptimal and somewhat worse quality of care offered by clinicians to patients with serious mental illness. Furthermore, a lack of assessment, monitoring and continuity of care for the physical health status of people with serious mental illness was identified by Paton et al. (2004), Robson and Gray (2007) and De Hert et al. (2009).

Essential role of GP in physical health care for MH patients

With evidence of gaps in monitoring highlighted, it can be argued that the GP has a critical role to play in improving the physical health of mental health consumers. Kane (2009) identified that the *complexity* and *time intensity* of coordinating both medical and psychiatric medications also impacts the service providers' capacity to be thorough in addressing patients' physical health needs. The

contemporary 5th National Mental Health and Suicide Prevention Plan (2018) also recognises the important roles the GP plays in mental health care and in managing patients' physical health needs.

The editorial in *The Lancet* (2013, p. 1154) asked 'Why are patients with mental health problems being denied such important care?' It concluded that a lack of confidence amongst physical health teams in helping people with serious mental illness in both primary care and acute hospital settings, combined with mental health staff not feeling confident in providing physical health care, is a major part of the answer to this question.

As a common first point of contact for people with a mental health issue or illness, the GP often provides mental health care for this group and refers to other appropriate services. This gives GPs the opportunity for early identification and treatment for a client's physical health problems. GPs are uniquely placed to provide information and support to the mental health client (as well as their family and carers) in relation to physical health or lifestyle issues In this role they can provide long-term continuity of care in monitoring clients' physical health (NSW Health 2017.)

Regardless, however, support of mental health patients' physical health has been part of the integrated practice of MH-NPs. A survey 38 Australian nurses working in mental health reported that physical health-care provision in collaboration with GPs and other health-care professionals was a common approach (Happell, Platania-Phung, & Scott, 2013).

In New South Wales, circa 2017, it seemed, however, that the biases listed in studies in the proceeding paragraphs is still apparent. The NSW Health Department has released a policy document aiming to close the gaps in physical health care that arise due to a lack of thoroughness for patients who experience mental illness. This policy readily asserts the importance of strong collegial partnerships between GPs and the mental health services.

Further evidence to support closing the gaps can be found in the Australian National Health Commission's 5th National Mental Health Care Plan (2018) focussing efforts for 2017-2022 including managing the physical health needs of the mental health consumer. The commission as previously mentioned indicate that GPs play and will need to continue to play a significant role in the delivery of the Plans intent. Furthermore, it acknowledges their input 'at the coalface' into the system of mental health care.

Finally, regarding clients themselves, their social circumstances as well as their illness have been identified as influencing factors or barriers to optimal physical health. These include: not a accessing medical healthcare (Kane, 2009; Maj, 2010; Thornicroft et al., 2010), not seeking physical healthcare due to the symptoms of the serious mental illness [e.g. cognitive impairment, social isolation and suspicion] (Phelan et al., 2001), difficulty comprehending health-care advice and/or carrying out the required changes in lifestyle due to psychiatric symptoms, and adverse consequences related to mental illness [e.g. low educational attainment, reduced social networks, lack of employment and family support, poverty, inadequate housing] (Lambert at al., 2003; Robson & Gray, 2007).

Also factored is the severity of mental illness [serious mental illness clients have fewer medical visits, with the most severely ill patients making the fewest visits] (Cradock-O'Leary et al., 2002). Behavioural health risk factors and lifestyle factors (e.g. substance abuse, poor diet, smoking, lack of exercise and unsafe sexual practices) are also documented (De Hert et al., 2009) with these clients less compliant

with treatment (Brown et al., 2000; Hennekens, 2007). Unawareness of physical problems due to cognitive deficits or to a reduced pain sensitivity associated with antipsychotic medication has been identified (Ananth, 1984; Goldman, 1999).

Migrant status and/or cultural and ethnic diversity introduce another layer of risk for not seeking help for physical illness (Lau & Chau, 2007), as does a lack of social skills and difficulties communicating physical needs (Phelen et al., 2001; Sokal et al., 2004).

From these data, it is therefore is apparent that, for a multitude of reasons, the physical health needs of the mental health consumer may have been overlooked and /or undermanaged. It is essential that GPs as primary care co-ordinators manage the complexity and 'time intensity' of addressing mental health patients' physical and mental health needs. All the disciplines who are primary care providers have substantial opportunities to make a significant impact on this problem.

In conclusion, MH-NPs are in a unique and advantageous position of being nurse specialists with skills and knowledge to assess clients who have mental disorders, to provide continuing care through monitoring progress and helping clients to manage both their physical and mental health needs.

DATA COLLECTION AND ANALYSIS

Data collection included medical record audit and in-depth individual interviews. Multiple methods of data analysis were used to increase the utility of the findings.

Analysing the impact of Mental Health Nurse Practitioner Program was by a recorded evaluative semi-structured individual interview conducted at Tristar premises. Everyone who had participated in the program from commencement was invited via flyer or email to contribute to this evaluation. This included Nurse Practitioners, General Practitioners, Psychiatrists and consumers of the service.

Quantitative data were analysed using descriptive statistical methods.

All interviews were audio recorded with permission. Recordings were professionally transcribed and all were transcribed verbatim for thematic analysis, using the Braun and Clark (2006) six-step method.

RESULTS

NURSE PRACTITIONER PROGRAM Key Statistics:

- The Tristar Mental Health Nurse Practitioner Program has been operational since 2014.
- Victoria based MH Nurse Practitioners (N=7) have performed roles within the program since its inception.
- **Datasets were extracted from 1/1/16 to 29/5/2019 (1214 days)**
- Total number of client visits: 29,433
- Main service hubs: Bendigo, Mildura and Horsham
- All clients were bulk billed
- 2,378 clients were logged on the system as holding Health Care Cards
- MBS item numbers were 82200, 82205, 82210, 82215

There were more female than male clients, with ages spanning 93 years. The majority (~70%) were employed or engaged in caring / home duties and most were in a relationship. A very small number presented to the emergency department [ED] (n=22) or required hospitalisation (n=12) for mental health problems. The main reasons individuals were hospitalised pointed to more acute risks and the need for containment type admissions.

Instances of self-harm per client was difficult to obtain. However, anecdotally there were few individuals who actively self-harmed or disclosed needed self-harming thoughts. Overall approximately 7%. NPS reported that they were able to quickly reshape such maladaptive behaviour onto more constructive options that prevented self-sabotage. Clients with suicidal ideation were also serviced under PHN derived Suicide Prevention Funding streams.

Clients had involvement with other services including the Victorian Department of Health and Human Services, legal services, drug and alcohol services, Headspace and Spectrum. Referrals to and from these services were made and accepted by the MHNPs. This is particularly true regarding referrals from Headspace, which are usually the more complex clients. Because two MHNPs have CYMHS expertise and had engaged the young person in one of our settings (in school or in clinic), had already been to Headspace, and preferred to come to the MHNP. An overall profile of the clients is provided in Table 1.

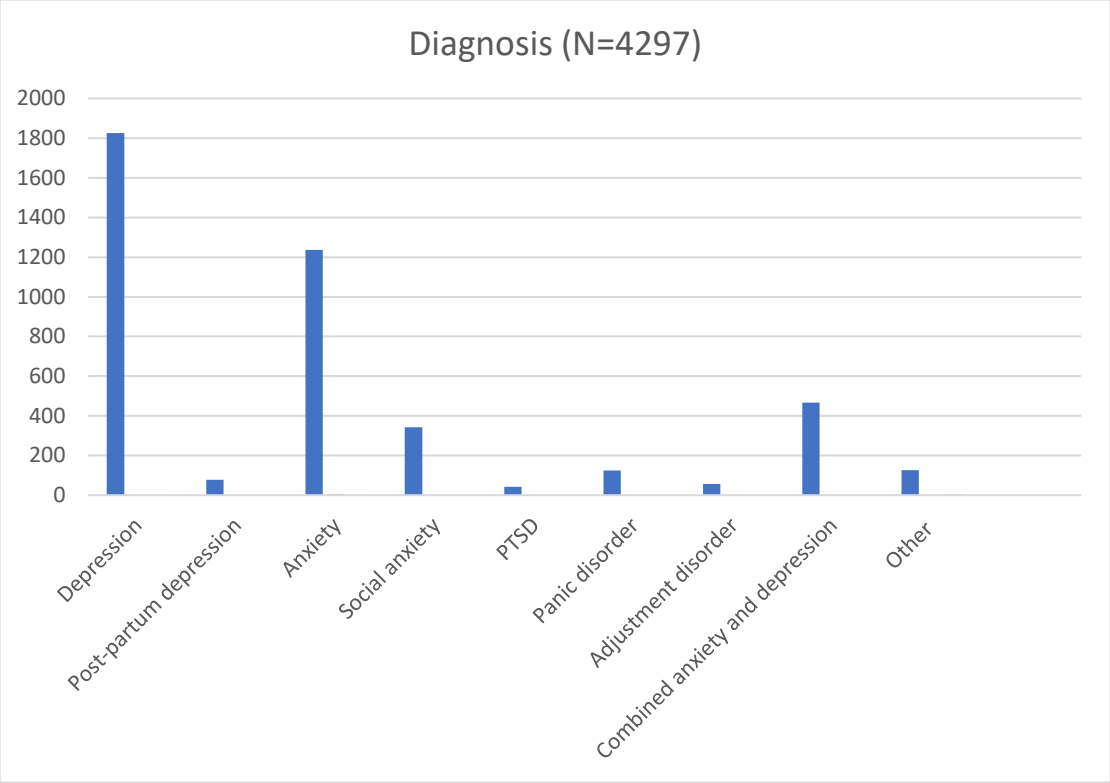
Table 1. Profile of clients

Client profile (N=4,297)		
Category	Descriptor	N (%)
Age range (years)		2 - 95
Gender	Female	2,457 (57)
	Male	1,840 (43)
Relationship status	Married	2235
	In a relationship	1357
	Not in a relationship	705
Employment	Employed	2500
	Carers/home duties	600
	Disability pension	175 (4)
	Student	270 (6.3)
	Unemployed	873 (20)
	Retired	120 (3)
Drug and alcohol use		1547 (36)
Suicidality		275 (6.4)
Hospitalisations		12
ED presentations		22

Nurse practitioners treated clients with multiple mental health diagnoses (Figure 1). The bulk of the diagnoses were in high prevalence disorders of depression and anxiety (including their variants) (n=4171). Other diagnoses (n=126) included:

- Psychosis (n=20)
- Schizophrenia (n=14)
- Obsessive Compulsive Disorder (n=6)
- Borderline Personality Disorder (n=32)
- Antisocial Personality Disorder (n=2)
- Dependant Personality Disorder (n=14)
- Substance Abuse Disorders (n=16)
- Anorexia Nervosa (n=7)
- Bulimia Nervosa (n=4)
- Autism Spectrum Disorder (n=4)
- Attention Deficit Hyperactivity Disorder (n=4)
- Asperger's syndrome (n=3)

Figure 1. Diagnoses



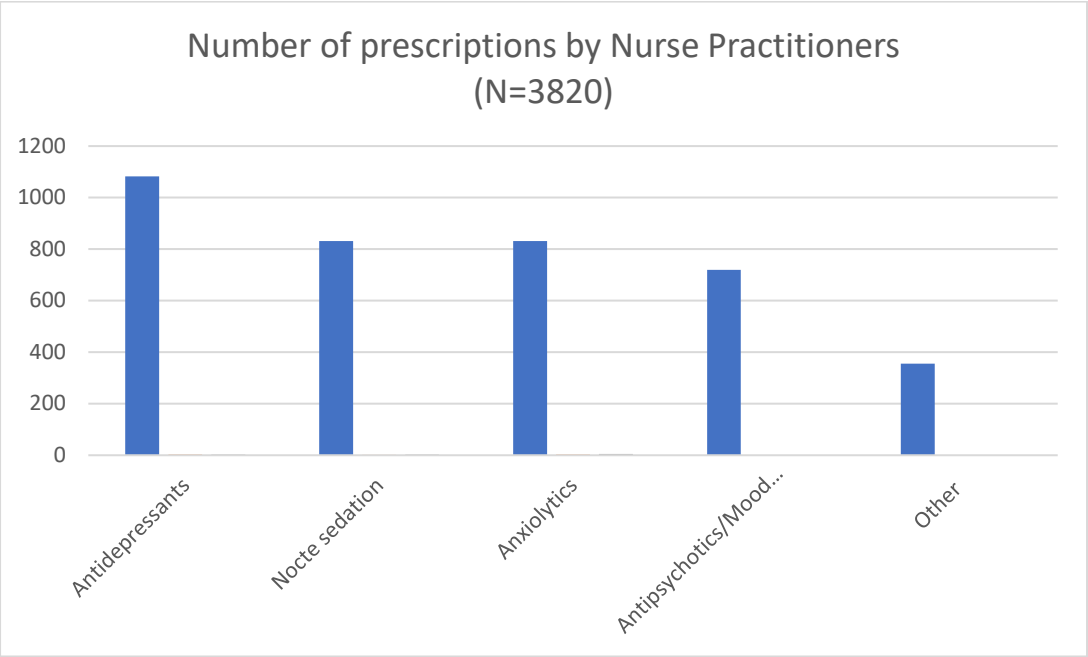
Nurse practitioners treated multiple physical health disorders. Many clients presented with numerous problems (Table 2).

Table 2. Physical health disorders

Category	Types
RESPIRATORY DISORDERS	Asthma COAD COPD
NEUROLOGICAL DISORDERS	ABI Substance intoxication Delirium Guillain Barre Syndrome Migraine and Cluster migraines Insomnia
ENDOCRINE DISORDERS	Diabetes Type 1 and 2 Hyper and hypothyroidism
MUSCULO-SKELETAL	Arthritis Fibromyalgia Various muscle and joint injuries
CARDIO-VASCULAR DISORDERS	Iron Insufficiency Obesity High Cholesterol Hypertension

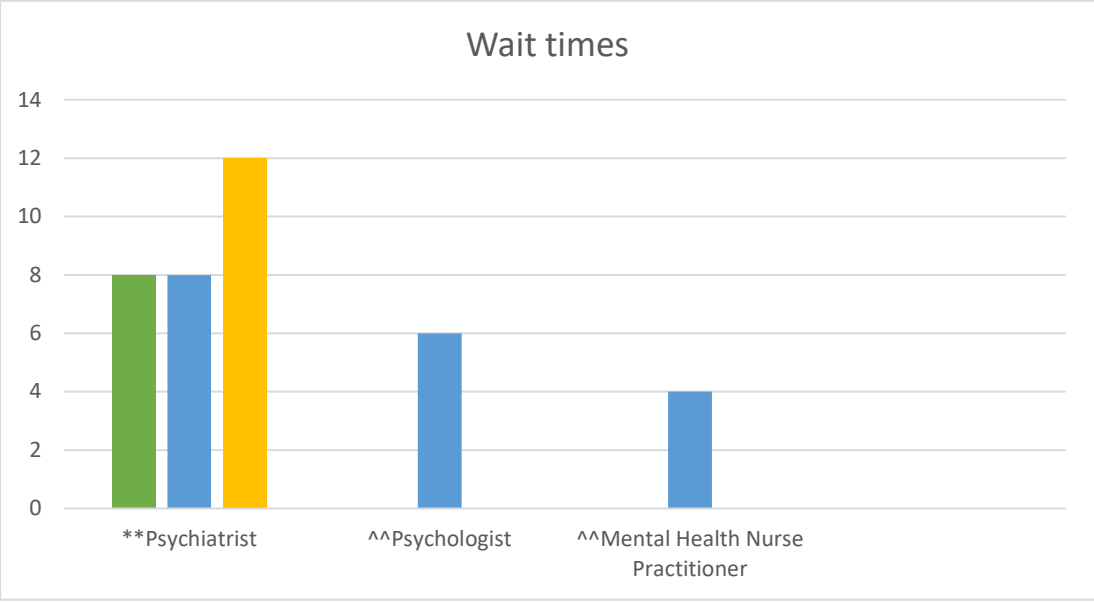
Nurse practitioners made numerous prescriptions for psychoactive drugs (Figure 2).

Figure 2. Drugs prescribed



Nurse practitioners were more available than other health professionals with mental health credentials, with significantly lower wait times (Figure 3).

Figure 3. Wait times



**Psychiatrist in Mildura (6-8 weeks), Bendigo (6-8 weeks), Horsham (10-12 weeks)
^^Psychologist all areas (4-6 weeks), MH-NP all areas (2-4 weeks)

Outcome Measurement datasets indicate 100% demonstrated improvement in outcome ratings for care provided by MHNP. 4078 Clients were administered the Kessler 10 (K10) scale with a mean admission score of 28 and mean discharge score of 14. The K10 is widely recommended as a simple measure of psychological distress and as a measure of outcomes following treatment for common mental health disorders. The K10 is in the public domain and is promoted on the Clinical Research Unit for Anxiety and Depression website (www.crufad.org) as a self report measure to identify need for treatment. The K10 uses a five value response option for each question – all of the time, most of the time, some of the time, a little of the time and none of the time which can be scored from five through to one. The maximum score is 50 indicating severe distress, the minimum score is 10 indicating no distress (See Appendix 1).

The Health of the Nation Outcome Scales (HoNOS) is a clinician rated instrument comprising 12 simple scales measuring behaviour, impairment, symptoms and social functioning for those in the 18 - 64 years old age group. 637 clients were administered the HoNOS and outcome measures indicated an improvement from an admission mean of 20 and a discharge mean of 8 (See Appendix 1).

Results of the client interviews

Ten client participants (2 males, 8 females) were interviewed and the transcripts analysed for emergent themes. Four main themes emerged: Skilled professionals, learning about self and illness, approachability and availability, developing strategies and connections. Each theme is described and participants' voices are provided to highlight their views. All participants have been de-identified.

Skilled professionals

Participants admired the capability and skills of the Nurse Practitioners. They appreciated how they worked together to provide a holistic service to both patients and their families.

> *Compassion, the caring and the nurturing. I'm just trying to think of all the things that you just automatically just take XXXX [MHNP] is very easy to interact with, and that surprises me in that I was able to interact with him as a male, because I actually thought having a male would be - I wouldn't be able to share a lot of things with but surprisingly, I feel comfortable with him. I think that's because he brings something into it that makes you feel comfortable, it makes you feel at ease with being able to open up and tell all sorts of things to him. His acceptance also of my husband; my husband usually attends with me to generally most sessions (C8).*

> *I think because of his knowledge and experience and other things … he's dealt with. … so there was - you know, a dude with his head popped off on the side of the road in Afghanistan. I don't think he or she would necessarily get their head around that, if that was the first thing out of the gate. But by seeking out someone that's dealt with first responders that have seen - been in similar situations, it gives you a level of confidence that they can get their head around something that is outside the box, something that isn't every day (C17).*

Learning about self and illness

Many participants were unaware of the nature of their mental health disorders and how they are affected. Nurse Practitioners provided reassurance, specific information about various aspects of the illness and options for management.

Well one of the things he does say to me a lot is, that is normal because here's me thinking my thinking is all doom and gloom and everything. Quite often, he convinces me that what I'm going through is normal. Normal in my case and maybe normal in a lot of cases but with me, I don't come up as quick (C4).

we had a little hiccup with medication with a GP and by the time I got to XXXX I was in an absolute mess because she decided to change all my medications. XXXX sorted it out. She was meant to be talking with XXXX to make sure - she was a new doctor ... Since then, I refuse to allow anyone else to work with my medications (C8).

I can just go through all my problems and XXXX will always try and talk about some tactics to try and not get over it, because I don't get over things. That's just my problem I live with, and sort of to put me in a little bit better mood or stop me from doing things when I feel really - sometimes I do feel suicidal. That comes across a lot. XXXX just tries to calm me down, talk me down, along with my medication (C15).

Approachability and availability

One very significant aspect of the Nurse Practitioner program was their approachability. In addition to service delivery, information sharing and crisis management, participants valued the interpersonal style and the non-judgemental approach of the Nurse Practitioners. Participants felt that they could broach any subject and that the Nurse Practitioners were available when needed including at times outside practice hours.

Well the thing is, I can talk to him without being judged. It's so lovely to be able to come and actually unload on XXXX and know that I'm not going to be judged. I'm not going to be told to snap out of it. Because that's a phrase I've heard so much over the years from friends, my parents (C6).

She's friendly, yeah, she's warm. Like I said, she's caring, she listens, she understands. She's helpful, she helps explain things to me. I don't know, she just gets me. She helps me figure things out and … been there and supported me through my really darkest times. No, you just couldn't thank them enough (C4).

My friend was supposed to have her appointment … and I just had a breakdown in front of her. I was just losing it. I felt like I was going crazy. I wasn't coping. Like, I don't want to feel like this anymore and I just started crying. She looked at me, she's like, I don't care what you're saying, you're having my appointment... I was like, are you sure, you need it. She's like, look at you, you need it more. Yeah, yesterday was one of those days (C18).

Developing Strategies and Connections

Much of the stress and many of the problems that emerge within people struggling with mental health disorders are due to limited or maladaptive coping strategies. In addition, they frequently need to access or interact with multiple other services such as housing, legal, child protection services.

He gives me things to do and to think about. Like even just putting music on, lighting a candle. It's not just writing out a script for my - I can't sleep very well, so hence the sleeping pills and I'm on Effexor which he has raised since I first came. But he gives me constructive ideas (C6).

He has helped financially. I've been struggling quite a bit with my bills and stuff like that. He's helped me link-in with other support programs, so that they would help me be able to pay my bills and stuff like that (C9).

Results of the stakeholder interviews

Eight stakeholders were interviewed (3 nurse practitioners, 3 general practitioners, 1 psychiatrist, 1 practice nurse). Three main themes emerged: Access, continuity of care, sustainability. Each theme is described and participants' voices are provided to highlight their views. All participants have been de-identified.

Access

Participants noted that having a nurse practitioner in the practice enabled clients to have both their physical and mental health needs attended to without having to make multiple appointments. Participants also appreciated having the nurse practitioner in the same building to confer about clients in real time.

I think the accessibility, especially the GPs when they want to refer patients, and if there is a wait list for the psychiatrist, then the nurse practitioners come in and they can assist, screen and treat the patients and give recommendations to the GPs and, if needed, they can refer to the psychiatrist with secondary consultations, and I think that will help in lowering the time - the delay (Psychiatrist).

It does help us very much, because look not everyone actually are diagnosed with such, not everyone even are aware they have problems or are not vocal about it, but while you have a chat, doing even non-mental health issues, like for example just a normal care plan or patient just came in for wound dressing. So I'll cite an example where a young lady came in just for wound care. All of a sudden she was crying (Practice Nurse).

I mean, in certain cases most of the time I always struggled with the medication aspect of it. Okay. Until the patient gets to see the psychiatrist, I can call always call up XXXX and say that; look, I need to get this patient on this medication and he's on this medication … instant advice on that. …but [psychiatrist] needs a bit more of an assessment. Whereas nurse practitioners are more quicker to get in, more easily accessible and [give] good advice as well (GP).

It's very important because especially in these rural and remote areas - I know some areas are mainly run by nurse practitioners…when you've got less access to mental health services in these rural and remote areas, it's important that there are every opportunity for people to be able to be seen and assessed and counselled (NP).

Continuity of care

Many people with mental health problems need long-term interventions for both their mental health as well as their physical health problems. Having a multidisciplinary team within the same building or within easy electronic contact ensures that clients of the service receive timely and ongoing care, regardless of the nature of the problem. Participants in this study were unanimous in their views about the role of the MHNP in facilitating continuity of care.

Well, you know, a nurse practitioner - especially mental health nurse practitioners - is an asset to a clinic like that. Say if the GP wanted to refer a patient, then there is - you've got that expert

opinion immediately. You can get that opinion, and I would certainly recommend to have a nurse practitioner in a practice. Then - but say if you get a client who you share, you have to be sure what you are doing. There are certain roles you do. If the doctor is prescribing medications, I would probably allow - or I would ask the GP to talk to the nurse practitioner to say what roles they take (GP).

The mental health has a huge gap in the whole country and we have, I can call it, absolute disaster we have a system not coping with cases presented and the cases presented don't have continual care and where there is continual care it is beneficial manage the patient taking 70% of the load of the Doctor you have another strain because with mental cases you try to book them to see anybody that's months and months. Until then they are not managed and it puts a huge burden on the Practice, so having a NP in the mental health gives such a great asset. That would take 70-80% of my workload dealing with mental health alone, which is a huge area (GP).

Mental health is a chronic condition, which doesn't happen today. It's not a cut, a cut you clean it, the tumour you pull it out. It needs day-to-day continuous care the most important thing is continuous care (Practice Nurse).

Yes. It's fantastic because I mean the doctors are just downstairs and you either ring downstairs, or you go downstairs. You have the opportunity to sit in with the GP and the client at the same time. Likewise, if I was seeing a client, I could just – and if they needed to see the doctor, we could just ring through and take them straight to their GP. That is really good (NP).

Sustainability

General practices are small businesses that must be financially viable in order to exist. Workers within the general practice space need to contribute to the revenue and productivity of the business. Most funds within general practices are derived from the Medicare Benefits Schedule. Given that MBS rebates differ among professionals, the practice directors must make decisions about the best usage of space with regard to revenue generation. Participants in this study acknowledged the funding difficulties, especially when relate to clients with mental health problems.

The main problem that comes to my mind - and I have that problem - is that I don't know where nurse practitioner sits in the structure of Medicare - in the structure of the practice - because after all a practice is a small business. So, they have to make certain - they have to meet business [objectives] they have to have a business explanation. So, if I employ a nurse practitioner, who is going to pay for them? How much is their expenses that they bring with them, and what is the outcome for the practice? So, there is no clear pathway for that (GP).

…and because nurse practitioner Medicare rates are set at a particular time frame, I don't think they match the needs, particularly for clients. I can very easily spend an hour with each client. But that doesn't match the Medicare rebate in my view. It is about two thirds less than a psychologist rebate. So that means there's limited, there's a time limit on that. I don't think that's fabulous for the client (NP).

It's MBS funding, funding distribution… It takes for ever for the patient to settle, especially with mental health to settle with a specific person or professional health and to go and sever this relationship just because of funding issue you literally lost all the investment which you've

been doing with the patient for the past three to four years. And it takes double the practice resources just to get the patient back again on the same level and this is a challenge we never get through and I don't know why it doesn't get through to the authorities which hold the funding. They are not getting the concept, mental health is a major problem as a nation it needs special care and special consideration and you cannot adjust and change because I decided to shift the funding and distribution that way or that way. It just doesn't work like that, it doesn't (GP).

EVIDENCE OF COST EFFECTIVENESS

Data mined for the purpose of this study over 1214 days revealed that the Nurse Practitioner cohort had completed 29433 individual 40 minute plus consults. Cost effectiveness pertaining to the Nurse Practitioner can be showcased by correlating the costs for the 29433 consults (all bulk billed) as they would be applicable under the MBS across the entire nursing and allied health disciplines (Table 3).

Table 3. Comparison of professional costs to MBS

Professional	MBS Item Number	Time / Fee	Total Cost
Mental Health NP	82215	40+mins @ $50.60	$1,489,309
Clinical Psychologist	80011	50+mins @ $126.50	$3,696,784
Psychologist	80111	50+mins @ $86.15	$2,535,653
GP	2713	20+mins @ $72.85	$2,144,194
Social Worker	80160	50+mins @ $ 75.95	$2,235,436

From the numbers listed in the table above cost effectiveness is clearly demonstrated and especially when aligned against the comprehensive service provision outcomes and consumer satisfaction.

CHALLENGES

Participants noted that one of the main challenges that faced the nurse practitioners was lack of community awareness, including government departments, of their roles and responsibilities.

I think the other barrier is that a community aren't really aware of what we do. I've seen this just with working with another psychologist. They will wait three or four weeks to see her, rather than coming in to see me in the next week because I have better availability. So I think community awareness is a barrier as well (NP).

I had a report written by XXXX. DVA [Department of Veterans Affairs] didn't recognise XXXX qualification to much frustration of mine, so then I had to be reassessed by a psychologist. So then I had to revisit all those issues again. I can't see the treatments being too dissimilar, but DVA has boxes and if you're outside the box, they just fizz out (C17).

At a national level we need more education and we need to get to the people who are decision makers to come and actually fit it in the scope of funding for Medicare so you don't introduce a barrier (GP).

The other main challenge is the funding disparity for Mental Health Nurse Practitioners. There is a disparity in the funding of the various service providers and particularly relating to the role of the Nurse Practitioner. Tristar values the role of the Nurse Practitioners across its entire network to the point where it has an endorsed (via AHPRA) Nurse Practitioner Model of Care that allows Nurse Practitioners to work very closely with our GPs and Psychiatrists to provide high quality and timely interventions that are making a measurable difference to our patients.

Tristar has also developed a Nurse Practitioner Training and support process that seeks to challenge current Credentialed MHNs working at in Tristar clinics to take work towards Nurse Practitioner endorsement. Nurse Practitioners hold the most comprehensive array of skills of all the health professions, with the exception of the GP and Psychiatrist.

Nurse Practitioners undertake the most training of any discipline outside of the GP and can officiate roles across the whole biopsychosocial framework and have advanced knowledge in body systems and advanced diagnostics in addition to significant knowledge of pharmacology and are authorise to prescribe medicines under their scope of practice.

Sadly, MHNPs are likely to lose their inherent value in primary care due to inadequate funding of their specialist roles. Nurse Practitioners have only three levels of individual billing under the MBS item Numbers 10 min 82205 $17.85 20 min 82210 $33.80 ≥ 40 mins 82215 $49.80. It is recommended that there be additional items for 60 mins plus that allow for the opportunity to provide a combination of the entire biopsychosocial model to be delivered and especially given the breadth of time it takes to provide comprehensive assessment, diagnosis and planning across the all domains.

Please see Tables 4 and 5 that highlight scope of practice and comparison of funding.

Table 4. Scope of Practice

Comparison of scope of practice	Clinical Psychologist	Gen Psychologist MH SW MH OT	Credentialed Mental Health Nurse (previous)	MH Nurse Practitioner	Psychiatrist	General Practitioner
Referral is ***not*** required for a client to engage & initiate service				✓		✓
Care Plan				Health Care Homes		✓6 hour MH training
Assessment						
Biological systems assessment			✓	✓	✓	✓
Medication assessment & monitoring			✓	✓	✓	✓
Social assessment	✓	✓	✓	✓	✓	✓
Psychological assessment	✓	✓*	✓	✓	✓	✓
Clinical investigations and pathology				✓	✓	✓
Diagnosis	✓			✓	✓	✓
Treatment						
Advance psychotherapeutic skills	✓*	✓*	✓*	✓*	✓*	
Focused psychological strategies (FPS)	✓*	✓*	✓*	✓*	✓*	✓* 20 hours CPD FPS
MH Counselling	✓	✓	✓	✓	✓	✓
Outcome measures	✓	✓	✓	✓	✓	✓
Psychometric testing	✓			✓	✓	
Prescribe medication				✓	✓	✓
Referral to medical specialist				✓		✓
Write sick certificates				✓	✓	✓
Admission rights				✓	✓	✓
Number of sessions	10 BA 12 ATAPS	10 BA 12 ATAPS	✓ MHNIP (ceased) 12 ATAPS	✓ unlimited	✓ unlimited 306 – 50 319 - 160	✓ unlimited FPS 12 sessions

*Note: the HC professional can provide service with extra training and credentialing

*NP Legislation was implemented in 2000. In 2010, the MBS items and PBS authorisations were established for NP. Both require updating to allow full implementation of NP authorisations.

Source: S. Miller, Chair, Australian Mental Health Nurse Practitioner Special Interest Group

Table 5. Comparison Mental Health Service funding in Primary Care

Practitioner	MHNP	Better Access NB: excludes MH Nurses while they provide FPS under ATAPS, CDMP, PSC	PHN Psychological Services (ATAPS)	Chronic Disease Management Plan (CDMP)	Pregnancy Support Counselling (PSC)	GP providing Focus Psychological Strategies (FPS)	GP Standard Consult	Consultant Psychiatrist
Costs	10 min 82205 **$17.85** 20 min 82210 **$33.80** ≥ 40 min 82215 **$49.80**	≥ 50 min Clinical Psychologist **$124.50** Gen Psychologist **$84.80** Allied Health **$74.80**	≥ 50 min **$125.00** **CMHN** **Clin Psych** **Gen Psych** **MHSW** **MHOT**	≥ 20 min **$52.95** **Inc CMHN** **Allied Health**	MBS 81000, 81005, 81010 ≥ 30 min **$62.20**	MBS 2721 30-40 min **$92.75** MBS 2725 40+ min **$132.75**	B consult -20 min **$37.60** C consult 20+ consult **$72.80** D consult ≥ 40 min **$103.50**	MBS items 296 ≥ 45 min **$221.30** 302 15–30 min **$73.50** 304 30+ min **$113.15** 306 45–75 min **$156.15**
No. of Sessions	unlimited	10	12	5	3	12	unlimited	unlimited

Source: S. Miller, Chair, Australian Mental Health Nurse Practitioner Special Interest Group

SUMMARY

This project aimed to evaluate the role of the Mental Health Nurse Practitioner in primary care. We found that the Mental Health Nurse Practitioner was valued by clients of the service, as well as their multidisciplinary colleagues. Overall, Mental Health Nurse Practitioners improved access and continuity of care for clients and enabled other colleagues to share care aspects in real time. The Mental Health Nurse Practitioners' skills and knowledge were recognized and respected. Nevertheless, due to lack of understanding of the role and the level of expertise that it encompasses within the community, Mental Health Nurse Practitioners do not receive the funding that reflects their level of attainment. This impacts directly on the sustainability of the role in primary care.

Mental health nurses are the largest and most geographically accessible clinical mental health workforce, creating enormous potential to increase access to mental health services across Australia, including in rural and remote locations (AIHW, 2017). Having access to an enhance career pathway into Nurse Practitioner will allow for a more dynamic operationalisation of this resource.

Mental health nurses have demonstrated great aptitude for facilitating strong outcomes for people experiencing severe and complex mental illness. As registered nurses, mental health nurses are also well placed to support people with co-occurring chronic physical health conditions, including monitoring and responding to the adverse impact of psychotropic medications on physical health in collaboration with the patient's psychiatrist and/or GP. They have proven themselves very effective in the primary care landscape, evidenced by the treatment successes noted under the now obsolete MHNIP Program. To extend their impact, Mental Health Nurses require better funding under the MBS.

Access to affordable mental health treatment under the MBS is limited, particularly for those with more chronic mental health conditions requiring access to more intensive and prolonged treatment. The limited time available for consultations continues to pose a problem. Communicating and identifying key issues reflective of the person's mental wellbeing as well as their physical health. Consumers often report that psychiatric consultations of less than 15-30 minutes provide little opportunity to achieve more than a medication review and a very brief discussion relating to their mental state. Mental Health Nurse Practitioners in primary care fill such gaps.

Effective utilisation of the Mental Health Nurse Practitioner workforce in collaboration with psychiatrists and GPs offers a way of increasing access to collaborative, integrated mental health care under the MBS. Furthermore, the entire biopsychosocial model is addressed and especially when managing physical health needs and suicide prevention are highlighted in the 5th National Mental Health and Suicide Prevention Plan.

All Credentialed Mental Health Nurses and Mental Health Nurse Practitioners complete their formative years in Acute Care and similar settings whereby the management of risk and suicide prevention strategies training and interventions are strong hallmarks of their daily roles. With these facts in mind Mental Health Nurses are highly skilled in the identification and effective management of suicidal and / or at-risk behaviours. Targeted measures are a key thrust of the 5th National Mental Health and Suicide Prevention Plan.

Given the growing need in the community, effectively harnessing the currently underutilised mental health nursing workforce represents an opportunity for improving access to specialist mental health

care for Australians with mental health issues, mental disorder or mental illness, and improving mental health outcomes for all Australians.

Mental Health Nurse Practitioners have specialist qualifications in mental health and many also have specific training in particular therapy modalities such as family therapy, CBT, DBT, MI, and psychotherapy. Many also specialise in identified high need areas (e.g., older adults, child and youth, eating disorders, perinatal and managing physical health needs). Psychiatrists and GPs continue to experience funding barriers to engaging these highly skilled and qualified nurses to support the clients in their practice. This directly contributes to barriers to access and service gaps experienced by Australian consumers for specialist mental health services. Mental Health Nurse Practitioners do have access to the MBS however remuneration rates and time fractions do not allow for maximum impact and financial viability, hence the reason most MHNPs situate themselves in the public health system. Mental Health Nurse Practitioners can have the greatest community impact in primary care and preventative medicine.

This General Practitioner sums up the role beautifully:

> *If I want to summarise this, this was a gap in the services, especially in the rural area. In the cities, probably there are plenty of psychologists, plenty of social workers. In a rural area, we just don't have that facility, that luxury. So, having a nurse practitioner, especially for the areas which are short of GPs already, and the patient may be running out of their scripts and they cannot see a GP, at least they are seeing the nurse practitioners on a regular basis, and they can get their script from them. If they are suicidal and they cannot see their GP, they can see the nurse practitioner. So, there are a lot of advantage of having a nurse practitioner on board (GP).*

REFERENCES AND BIBLIOGRAPHY

Australian Bureau of Statistics. (2016). *National Health Survey: Mental Health and co-existing physical health conditions, Australia, 2014 – 15*. (Cat no 4329.0.00.004). Canberra, ABS.

Australian College of Mental Health Nurses. (2019). What is mental health nursing? Home page on the Internet: http://www.acmhn.org/about-us/about-mh-nursing cited 25th Sept 2019.

Australian College of Mental Health Nurses. (2018). The Mental Health Nurse Incentive Program. At: http://www.acmhn.org/career-resources/mhnip/background

Australian Institute of Health and Welfare. (2016). *Australian Burden of Disease Study: impact and causes of illness and death in Australia, 2011*. Australian Burden of Disease Study (series no 3, Cat no, BOD 4), Canberra: AIHW.

Australian Institute of Health and Welfare. (2018). *Mental Health Services—in brief, 2018*. (Cat. no. HSE 211). Canberra: AIHW.

Australian Medical Association (AMA). (2018). Mental Health Position Statement. (14th Jan 2018) At: www.ama.com.au cited on 26th April 2019.

Ananth, J. (1984). Physical illness and psychiatric disorders. *Comprehensive Psychiatry, 25,* 586–593.

Appel, A. L., & Malcolm, P. (1999). The struggle for recognition: The nurse practitioner in New South Wales, Australia. *Clinical Nurse Specialist, 13*(5), 236-241.

Appel, A. L., & Malcolm, P. (2002). The triumph and continuing struggle of nurse practitioners in New South Wales, Australia. *Clinical Nurse Specialist*, *16*(4), 203-210.

Bagg, J. (2004). Rural nurse practitioners in South Australia: recognition for registered nurses already fulfilling the role. *Australian Journal Rural Health*, *12*(1), 3-5.

Ballenden, N. & Duggan, M. (2015). Keeping body and mind together. Improving the physical health and life expectancy of people with serious mental illness. RANZCP.

Barraclough, F., Longman, J., & Barclay, L. (2016). Integration in a nurse practitioner-led mental health service in rural Australia. *Australian Journal of Rural Health*, *24*(2), 144-150.

Barnes, T. R. E., Bhatti, S. F., & Adroer, R. (2015). Screening for the metabolic side effects of antipsychotic medication: findings from a 6-year quality improvement programme in the UK. *BMJ Open, 5*, e007633.

Bartosiewicz, A., & Januszewicz, P. (2018). Readiness of Polish nurses for prescribing and the level of professional burnout. *International Journal Environmental Research Public Health*, *16*(1).

Begg, S., Vos, T., & Barker, B., et al. (2007) *The burden of disease and injury in Australia, 2003*. (Cat. no. PHE 82). Canberra, AIHW.

Ben-Natan, M. (2015). Registered nurses, nurse specialists and physicians have a neutral to moderately positive view on nurse prescribing, though physicians still have patient safety concerns. *Evidenced Based Nursing*, *18*(2), 60.

Beyond Blue (2019). *General Statistics*. At: www.beyond blue.org.au Cited on 26th April 2019.

Blum, A. B., Shea, S., Czeisler, C. A., Landrigan, C. P., & Leape, L. (2011). Implementing the 2009 Institute of Medicine recommendations on resident physician work hours, supervision, and safety. *Nature and Science of Sleep*, *3*, 47-85.

Binkowska-Bury, M., Więch, P., Bazaliński, D., Marć, M., Bartosiewicz, A., & Januszewicz, P. (2016). Nurse prescribing in Poland: Opinions expressed by primary care doctors, nurses, and patients. *Medicine, 95*:33.

Bradley, E., & Nolan, P. (2009). Experiences of ward-based nurse prescribers in an acute ward setting. *British Journal of Nursing, 18*(1), 34-37.

Britt, H., Miller, G. C., Henderson, J., Bayram, C., Harrison, C., Valenti, L., … & Charles, J. (2016). *General practice activity in Australia 2015–16*. (General practice series no.40). Sydney, Sydney University Press.

Browne, G., & Hurley, J. (2018). Mental Health Nurses as therapists in a rehabilitation setting: A phenomenological study. *International Journal of Mental Health Nursing*, *27*(3), 1109-1117.

Callaghan, L. (2008). Advanced nursing practice: an idea whose time has come. *Journal of Clinical Nursing*, *17*(2), 205-213.

Carryer, J., Gardner, G., Dunn, S., & Gardner, A. (2007). The core role of the nurse practitioner: practice, professionalism and clinical leadership. *Journal of Clinical Nursing*, *16*(10), 1818-1825.

Carr, J., Bethea, J., & Hancock, B. (2001). The attitude of GP's towards the nurse practitioner role. *British Journal of Community Nursing*, *6*, 444-451. Doi: 10.12968/bjcn.2001.6.9.9475.

Cashin, A., Buckley, T., Donoghue, J., Heartfield, M., Bryce, J., Cox, D., . . . & Dunn, S. V. (2013). Development of the Nurse Practitioner Standards for Practice Australia. *Policy, Politics, and Nursing Practice, 16*(1-2), 27-37.

Cashin, A., Stasa, H., Dunn, S. V., Pont, L., & Buckley, T. (2014). Nurse practitioner prescribing practice in Australia: confidence in aspects of medication management. *International Journal of Nursing Practice*, *20*(1), 1-7.

Chaston, D., & Seccombe, J. (2009). Mental health nurse prescribing in New Zealand and the United Kingdom: comparing the pathways. *Perspectives in Psychiatric Care*, *45*(1), 17-23.

Cleary, M, Kornhaber, R, Sayers, J, Gray, R. (2017). Mental health nurse prescribing: A qualitative, systematic review, *International Journal of Mental Health Nursing*, *26*(6), 541-553.

Creedon, R., O'Connell, E., McCarthy, G., & Lehane, B. (2009). An evaluation of nurse prescribing. Part 1: a literature review. *British Journal of Nursing*, *18*(21), 1322-1327.

Cunningham, R., Peterson, D., Sarfati, D., & Stanley, J. (2014). Premature mortality in adults using New Zealand psychiatric services. *New Zealand Medical Journal, 127*, 31–41.

Currie, J., Edwards, L., Colligan, M., & Crouch, R. (2007). A time for international standards? comparing the Emergency Nurse Practitioner role in the UK, Australia and New Zealand, *Accident and Emergency Nursing*, *15*(4), 210-206.

Currie, J., Chiarella, M., & Buckley, T. (2019). Privately practising nurse practitioners' provision of care subsidised through the Medicare Benefits Schedule and the Pharmaceutical Benefits Scheme in Australia: results from a national survey. *Australian Health Review*, *43*, 55–61. https://doi.org/10.1071/AH17130

Darvishpour, A., Joolaee, S., Cheraghi, M. A., & Mokhtari-Lakeh, N. (2016). Iran's health policymakers' views on barriers and facilitators of nurse prescribing in their context: A qualitative study. *Iran Journal of Nursing and Midwifery*, *21*(3), 297-305.

Davidson, P. M., Elliott, D., & Daly, J., (2006). Clinical leadership in contemporary clinical practice: implications for nursing in Australia. *Journal of Nursing Management*, *14*(3), 180-187.

De Hert, M., Correll, C. U., Bobes, J., Cetkovich-Bakmas, M., Cohen, D., Asai, I., & Leucht, S. (2011). Physical illness in patients with severe mental disorders: I: Prevalence, impact of medications and disparities in health care. *World Psychiatry*, *10*(1), 52–63.

Delaney, K. R., Hamera, E., Drew, B. L. (2009). National survey of psychiatric mental health advanced practice nursing: the adequacy of educational preparation: voices of our graduates, *Journal of the American Psychiatric Nurses' Association*, *15*(6), 383-392.

Department of Health New South Wales. (2017). *Physical Health Care of Mental Health Consumers*. Sydney, NSW, Department of Health.

Dinh, M., Walker, A., Parameswaran, A., & Enright, N. (2012). Evaluating the quality of care delivered by an emergency department fast track unit with both nurse practitioners and doctors. *Australasian Emergency Nursing Journal*, 15(4), 188-194.

Delaney, K. R., Drew, B. L., & Rushton, A. (2018) Report on the APNA National Psychiatric Mental Health Advanced Practice Registered Nurse Survey. *Journal of the American Psychiatric Nurses Association.* Jun 1.

Dobel-Ober, D., & Brimblecombe, N. (2016). National survey of nurse prescribing in mental health services; a follow-up 6 years on. *Journal Psychiatric Mental Health Nursing*, *23*(6-7), 378-386.

Department of Health. (2018). *Nurse Practitioners Fact Sheet 2017*. At: NHWDS Data Tool and Resources: http://hwd.health.gov.au

Department of Health and Aging. (2013), *National mental health report 2013: tracking progress of mental health reform in Australia 1993–2011*. Canberra, DoHA.

Drew, B. L., & Delaney, K. R. National survey of psychiatric mental health advanced practice nursing: development, process, and finding. *Journal of the American Psychiatric Nurses' Association*, *15*(2), 101-110.

Elsom, S., Happell, B., & Manias, E. (2005). Mental health nurse practitioner: expanded or advanced? *International Journal of Mental Health Nursing, 14*(3):181-186.

Elsom, S., Happell, B., & Manias, E. (2008). Expanded practice roles for community mental health nurses in Australia: confidence, critical factors for preparedness, and perceived barriers. *Issues in Mental Health Nursing*, *29*(7), 767-780.

Elsom, S., Happell, B., & Manias, E. (2009). Nurse practitioners and medical practice: opposing forces or complementary contributions? *Perspectives in Psychiatric Care*, *45*(1), 9-16.

Fisher, J. E. (2005). Mental health nurse practitioners in Australia: Improving access to quality mental health care. *International Journal of Mental Health Nursing*, 14(4), 222-229.

Fisher, J. (2011). *The therapeutic role of the mental health nurse: implications for the practice of psychological therapies*. (Dissertation) Southern Cross University, Lismore, NSW.

Fleischhacker, W. W., Cetkovich-Bakmas, M., De Hert, M., & et al. (2008) Comorbid somatic illnesses in patients with severe mental disorders: clinical, policy, and research challenges. *The Journal of Clinical Psychiatry, 69*, 514–519.

Fong, J., Buckley, T., Cashin, A., & Pont, L. (2017). Nurse practitioner prescribing in Australia: A comprehensive literature review. *Australian Critical Care*, *30*(5), 252-259.

Forchuk, C., & Kohr, R. (2009). Prescriptive authority for nurses: the Canadian perspective. *Perspectives in Psychiatric Care, 45*(1), 3-8.

Foster, K, & Isobel, S. (2018) Towards relational recovery: Nurses' practices with consumers and families with dependent children in mental health inpatient units. *International Journal of Mental Health Nursing*, *27*(2), 727-736.

Frayne, S. M., Halanych, J. H., Miller, D. R., Wang, F., Lin, H., Pogach, L., ... & Berlowitz, D. R. (2005). Disparities in diabetes care: impact of mental illness. *Archives of Internal Medicine*, *165*(22), 2631-2638.

Furlong, E., & Smith, R. (2005). Advanced nursing practice: policy, education and role development. *Journal of Clinical Nursing*, 14(9), 1059-1066.

Gaebel, W., Kowitz, S., & Zielasek, J. (2012). The DGPPN research project on mental healthcare utilization in Germany: inpatient and outpatient treatment of persons with depression by different disciplines. *European Archives Psychiatry Clinical Neurosciences*, 262, Suppl 2, S51-55.

Gardner, A., Hase, S., Gardner, G., Dunn, S. V., & Carryer, J. (2008). From competence to capability: a study of nurse practitioners in clinical practice. *Journal of Clinical Nursing*, *17*(2), 250-258.

Ghosh, D., Sterns, A. A., Drew, B. L., & Hamera, E. (2011). Geospatial study of psychiatric mental health-advanced practice registered nurses (PMH-APRNs) in the United States. *Psychiatric Services*, *62*(12), 1506-1509.

Gielen, S. C., Dekker, J., Francke, A. L., Mistiaen, P., Kroezen, M. (2014) The effects of nurse prescribing: a systematic review. *International Journal of Nursing Studies*, *51*(7):1048-1061.

Glod, C. A., & Manchester, A. (2000). Prescribing patterns of advanced practice nurses: contrasting psychiatric mental health CNS and NP practice, *Clinical Excellence in Nurse Practice*, 4(1), 22-29.

Goldman, L. S. (1999). Medical illness in patient with schizophrenia. *Journal of Clinical Psychiatry, 60*, 10–15.

Goswell, N., & Siefers, R. (2009). Experiences of ward-based nurse prescribers in an acute ward setting. *British Journal of Nursing*, *18*(1), 34-37.

Green, A., Westwood, O., Smith, P., Peniston-Bird, F., & Holloway, D. (2009). Provision of continued professional development for non-medical prescribers within a South of England Strategic Health Authority: a report on a training needs analysis. *Journal of Nursing Management, 17*(5), 603-614.

Harvey, C. (2011). Legislative hegemony and nurse practitioner practice in rural and remote Australia. *Health Sociology Review*, *20*(3), 269-280.

Hampel, S., Procter, N., & Deuter, K. (2010). A model of succession planning for mental health nurse practitioners, *International Journal Mental Health Nursing*, *19*(4), 278-286.

Hanrahan, N. P., Delaney, K. R., & Stuart, G. W. 2012 Blueprint for development of the advanced practice psychiatric nurse workforce, *Nursing Outlook*, *60*(2), 91-104.
Happell, B., Scott, D., Platania-Phung, C., Nankivell, J. (2012). 'Should we, or shouldn't we?' Mental health nurses' views on physical health care of mental health consumers. *International Journal of Mental Health Nursing*, *21*(3), 202-210.
Happell, B., Platania-Phung, C., & Scott, D. (2013). Mental Health Nurse Incentive Program: Facilitating physical health care for people with mental illness? *International Journal of Mental Health Nursing*, *22*(5), 399-408.
Happell, B., & Platania-Phung, C. (2017). Review and analysis of the mental health nurse incentive program. *Australian Health Review*, *43*(1), 111-119.
Healthcare Management Advisors. (2012). *Evaluation of the Mental Health Nurse Incentive Program*. [final report]. Adelaide: Department of Health and Ageing. Available at: https://web.archive.org/web/20160329004106/http://health.gov.au/internet/main/publishing.nsf/Content/DD58A9B56E005910CA257BF0001ACCD7/$File/evalnurs.pdf.
Hemingway, S., & Ely, V. (2009). Prescribing by mental health nurses: the UK perspective. *Perspectives in Psychiatric Care*, *45*(1), 24-35.
Hennekens, C. H., Hennekens, A. R., Hollar, D., Casey, D. E. (2005). Schizophrenia and increased risks of cardiovascular disease. *American Heart Journal*;*150*, 1115–1121.
Jennings, N., Clifford, S., Fox, A. R., O'Connell, J., & Gardner, G. (2015). The impact of nurse practitioner services on cost, quality of care, satisfaction and waiting times in the emergency department: A systematic review. *International Journal of Nursing Studies*, 52(1), 421-435.
Jennings, N., O'Reilly, G., Lee, G., Cameron, P., Free, B., & Bailey, M. (2008). Evaluating outcomes of the emergency nurse practitioner role in a major urban emergency department, Melbourne, Australia. *Journal of Clinical Nursing*, 17(8), 1044-1050.
Jennings, N., Lee, G., Chao, K., & Keating, S. (2009). A survey of patient satisfaction in a metropolitan Emergency Department: Comparing nurse practitioners and emergency physicians. *International Journal of Nursing Practice*, 15(3), 213-218.
Jones, M., Bennett, J., Lucas, B., Miller, D., & Gray, R. (2007). Mental health nurse supplementary prescribing: experiences of mental health nurses, psychiatrists and patients. *Journal of Advanced Nursing*, *59*(5), 488-496.
Jones, M., Robson, D., Whitfield, S., & Gray, R. (2010). Does psychopharmacology training enhance the knowledge of mental health nurses who prescribe? *Journal Psychiatric Mental Health Nursing*, *17*(9), 804-812.
Kaas, M. J., Dahl, D., Dehn, D., & Frank, K. (1998). Barriers to prescriptive practice for psychiatric/mental health clinical nurse specialists, *Clinical Nurse Specialist,* 12(5), 200-204.
Kane, M. N., & Green, D. (2009). Help-seeking from mental health professionals or clergy: Perceptions of university students. *Journal of Spirituality in Mental Health*, 11(4), 290–311.
Kannusamy, P. (2006), A longitudinal study of advanced practice nursing in Singapore. *Critical Care Nursing Clinician North America, 18*(4), 545-551.
Kelley, F. J., & Kopac, C. A. (2001). Advanced health assessment in nurse practitioner programs. *Journal of Professional Nursing*, *17*(5), 218-225.
Kelley, F. J., Kopac, C. A., Rosselli, J. (2007). Advanced health assessment in nurse practitioner programs: follow-up study, *Journal of Professional Nursing,* 23(3), 137-143.
Kritharides,, L., Chow, V. & Lambert, T. (2017), Cardiovascular disease in patients with schizophrenia, *Medical Journal of Australia*, *207*(4), 179.
Kroezen, M., Van Dijk, L., Groenewegen, P. P., de Rond, M., de Veer, A. J., & Francke, A. (2014)., Neutral to positive views on the consequences of nurse prescribing: Results of a national survey among registered nurses, nurse specialists and physicians, *International Journal Nursing Studies, 51*(4), 539-548.
Kudless, M. W., & White, J. H. (2007). Competencies and roles of community mental health nurses. *Journal of Psychosocial Nursing Mental Health Services*, *45*(5), 36-44.
Latter, S., Courtenay, M. (2004). Effectiveness of nurse prescribing: a review of the literature. *Journal of Clinical Nursing*, *13*(1), 26-32.
Latter, S., Maben, J., Myall, M., Young, A. (2007). Perceptions and practice of concordance in nurses' prescribing consultations: findings from a national questionnaire survey and case studies of practice in England. *International Journal of Nursing Studies, 44*(1), 9-18.
Lawrence, D., Hancock, K. J., & Kisely, S. (2013). The gap in life expectancy from preventable physical illness in psychiatric patients in Western Australia: retrospective analysis of population based registers. The BMJ, *346*,:f2539.
Li, J., Westbrook, J., Callen, J., Georgiou, A., & Braithwaite, J. (2014). The impact of nurse practitioners on care delivery in the emergency department: A multiple perspectives qualitative study. *BMC Health Services Research*, *13*(1), 356..
Lockwood, E. B., & Fealy, G. M. (2008). Nurse prescribing as an aspect of future role expansion: the views of Irish clinical nurse specialists. *Journal of Nursing Management*, *16(*7), 813-820.
Lowe, G. (2010). Scope of emergency nurse practitioner practice: Where to beyond clinical practice guidelines? *Australian Journal of Advanced Nursing*, *28*(1), 74-82.
Lynch, M. P., Cope, D. G, & Murphy-Ende, K. (2001). Advanced practice issues: results of the ONS Advanced Practice Nursing survey. *Oncology Nurse Forum*, *28*(10), 1521-1530.
MacDonald, J. A., Herbert, R., & Thibeault, C. (2006). Advanced practice nursing: unification through a common identity. *Journal of Professional Nursing. 22*(3), 172-179.
Macleod, S.H., Elliott, L., & Brown, R. (2011). What support can community mental health nurses deliver to carers of people diagnosed with schizophrenia? Findings from a review of the literature. *International Journal Nursing Studies*, *48*(1), 100-120.
Mahoney, J. S., Carlson, E., Engebretson, J. C. (2006). A framework for cultural competence in advanced practice psychiatric and mental health education, *Perspectives in Psychiatric Care*, *42*(4), 227-237.
Maj, M. (2010). Physical health care in persons with severe mental illness: a public health and ethical priority. *World Psychiatry*, 8, 1–2.
Manderschied, R., & Delvecchio, P. (2008). Guest editors' introduction: moving toward solutions: responses to the crisis of premature death. *International Journal of Mental Health, 37*, 3–7.
McCleery, E., Christensen, V., Peterson, K., Humphrey, L., & Helfand, M. (2014). *The quality of care provided by advanced practice nurses,* VA Evidence-based Synthesis Program. [Evidence Briefs]. Washington D.C., Department of Veterans Affairs.

Medibank Nous. (2012) The case for mental health reform in Australia: A review of expenditure and system design. (report) Medibank Australia
Mitchell, A. J., Malone, D., & Doebbeling, C. C. (2009). Quality of medical care for people with and without comorbid mental illness and substance misuse: systematic review of comparative studies. *The British Journal of Psychiatry*, *194*(6), 491-499.
Morgan, V. A., Waterreus, A., Jablensky, A., Mackinnon, A., McGrath, J. J., Carr, V., & et al. (2011). People living with psychotic illness 2010, Canberra: DoHA.
Mwebe, H. (2017). Physical health monitoring in mental health settings: a study exploring mental health nurses' views of their role. *Journal of Clinical Nursing*, *26*(19-20), 3067-3078.
National Mental Health Commission. (2016). National consensus statement on physical health and mental illness. Canberra: Commonwealth of Australia.
National Mental Health Commission. (2018). The 5th National Mental Health and Suicide Prevention Plan. Canberra: Commonwealth of Australia.
Naylor, C., Das, P., Ross, S., Honeyman, M., Thompson, J., & Gilburt, H. (2016). *Bringing together physical and mental health: A new frontier for integrated care*. London: The Kings Fund.
Newhouse, R. P., Stanik-Hutt, J., White, K. M., Johantgen, M., Bass, E. B., Zangaro, G., …& Weiner, J. P. (2011). Advanced practice nurse outcomes 1990-2008: a systematic review. *Nursing Economist*, *29*(5), 230-250.
Norman, I. J., Coster, S., McCrone, P., Sibley, A., & Whittlesea, C. (2010). A comparison of the clinical effectiveness and costs of mental health nurse supplementary prescribing and independent medical prescribing: a post-test control group study. *British Medical Council Health Services Resource*, *10*, 4.
Mianda, S, & Voce, A. S. (2017). Conceptualizations of clinical leadership: a review of the literature. *Journal of Healthcare Leadership*, *27*(9), 79-87.
Nursing and Midwifery Board of Australia. (2012). Endorsement as a Nurse Practitioner registration standard. Retrieved from https://www.nursingmidwiferyboard.gov.au/registration-standards/endorsement-as-a-nurse-practitioner.aspx
O' Connell, E., Creedon, R., McCarthy, G., & Lehane, .B. (2009). An evaluation of nurse prescribing. Part 2: a literature review. *British Journal of Nursing*, *18*(22), 1398-1402.
O'Connell, J., Gardner, G., & Coyer, F. (2014). Profiling emergency nurse practitioner service: An interpretive study. *Advanced Emergency Nursing Journal, 36*(3), 279-290.
Paton, C., Esop, R., Young, C., & Taylor, D. (2004). Obesity, dyslipidaemias and smoking in an inpatient population treated with antipsychotic drugs. *Acta Psychiatrica Scandinavica*, *110*(4), 299-305.
Patterson, E., Del Mar, C., & Najman, J. (1999). A descriptive study of nurses employed by general practitioners in south-east Queensland. *Australian Journal of Advanced Nursing*, *17*(2), 13-20.
Patterson, E., Del Mar, C., Najman, J. (1999). Nursing's contribution to general practice: general practitioners' and practice nurses' views, *Collegian, 6*(4):33-39.
Pearson, G. S. (2009). Global prescribing: A transition. *Perspectives in Psychiatric Care*, 45(1), January..
Perraud, S., Delaney, K. R., Carlson-Sabelli, L., Johnson, M. E., Shephard, R., & Paun, O. (2006). Advanced practice psychiatric mental health nursing, finding our core: the therapeutic relationship in 21st century. *Perspectives in Psychiatric Care*, *42*(4), 215-226.
Piatt, E. E., Munetz, M. R., & Ritter, C. (2010). An examination of premature mortality among decedents with serious mental illness and those in the general population. *Psychiatric Services*, *61*(7), 663-668.
Phelan, M., Stradins, L., & Morrison, S. (2001). Physical health of people with severe mental illness: can be improved if primary care and mental health professionals pay attention to it. *British Medical Journal, 322*(7284), 443-444.
Poot, B., Zonneveld, R., Nelson, K., & Weatherall, M. (2017). Prescribing by nurse practitioners: Insights from a New Zealand study. *Journal of the American Association Nurse Practitioners*, *29*(10), 581-590.
Price, K., Patterson, E., & Hegney, D. (2006). Being strategic: utilising consumer views to better promote an expanded role for nurses in Australian general practice. *Collegian*, *13*(4), 16-21.
Quinn, K., & Hudson, P. (2014). Establishing a nurse practitioner collaborative: Evolution, development, and outcomes. *International Journal of Palliative Nursing, 20*(9), 457-461.
Robson, D., & Gray. R. (2007). Serious mental illness & physical health problems: a discussion paper. *International Journal of Nursing Studies. 44*(3), 457- 466.
Rookhuizen, E. D., Stringer, B., Huising, M. S., de Ruijter, E., van Meijel, B. (2017). Prescribing psychotropic medication by the nurse practitioner in mental health care: an explorative study. *Tijdschrift Journal of Psychiatry,* 59(4), 229-233.
Rosenberg, S. (2017). Mental health funding in the 2017 budget is too little, unfair and lacks a coherent strategy. Cited on 26th April 2019: www.theconversation.com
Ross, J. D., Kettles, A. M. (2012). Mental health nurse independent prescribing: what are nurse prescribers' views of the barriers to implementation? *Journal of Psychiatric Mental Health Nursing*, *19*(10), 916-932.
Ross, J. (2015). Mental health nurse prescribing: the emerging impact. *Journal Psychiatric Mental Health Nursing*, *22*(7), 529-542.
Royal Australian and New Zealand College of Psychiatrists. (2016). *Keeping body and mind together: Improving the physical health and life expectancy of people with severe mental illness*. RANZCP.
Skingsley, D., Bradley, E.J., & Nolan, P. (2006). Neuropharmacology and mental health nurse prescribers. *Journal Clinical Nursing, 15*(8), 989-997.
Sokal, J., Messias, E., & Dickerson, F. B. (2004) Comorbidity of medical illnesses among adults with serious mental illness who are receiving community psychiatric services. *Journal of Nervous and Mental Disorders, 192*, 421–427.
The Lancet. (2013). Mental health care in the UK: time for change (editorial). *Lancet*; *382*, October 5.
Thornicroft, G. (2013). Premature death among people with mental illness. *BMJ*, *346,* 345–353.
Turner, C., & Keyzer, D. (2002). Nurse practitioners: a contract for change and excellence in nursing. *Collegian, 9*(4), 18-23.
Turner, C., Keyzer, D., & Rudge, T. (2007). Spheres of influence or autonomy? A discourse analysis of the introduction of Nurse Practitioners in rural and remote Australia. *Journal of Advanced Nursing*, *59*(1), 38-46.
Vasudev, K.,& Martindale, B. V. (2010). Physical healthcare of people with severe mental illness: everybody's business! *Mental Health in Family Medicine, 7*(2), 115-122.

Wabnitz, P., Löhr, M., Schulz, M., Nienaber, A., Oppermann, G., Sauter, D., … & Pollmächer, T. (2019). Perspectives and opportunities for psychotherapeutic interventions in inpatient psychiatric treatment delivered by nurses. *Psychiatric Practice*, Jan 14.

Wand, T., White, K., Patching, J., Dixon, J., & Green, T. (2011). An emergency department-based mental health nurse practitioner outpatient service: Part 2, staff evaluation. *International Journal of Mental Health Nursing*, *20*(6), 401-408.

Wand, T., White, K., Patching, J., Dixon, J., & Green, T. (2012). Outcomes from the evaluation of an emergency department-based mental health nurse practitioner outpatient service in Australia. *Journal of the American Academy of Nurse Practitioners*, *24*(3), 149-159.

Wand, T., & White, K. (2015). Building a model of mental health nurse practitioner-led service provision in Australia. *Journal for Nurse Practitioners*, *11*(4), 462-465.

Weber, M. T., & Snow, D. (2006). An introductory clinical core course in psychiatric management: an innovative lifespan course blending all nurse practitioner majors. *Perspectives in Psychiatric Care, 42*(4), 245-251.

While, A. E., & Biggs, K. S. (2004). Benefits and challenges of nurse prescribing. *Journal of Advanced Nursing*, *45*(6), 559-567.

APPENDICES

APPENDIX 1 AUDIT TOOL

Total number of consumers seen over the period					
Total number of consultations over the period					
Consumers' demographics:					
Postcode:					
Gender:	Male	Female	Other		
Age (in years)					
Level of education					
Employed:	Yes	No			
Mental Health Diagnosis:	Primary	Secondary			
Other physical health diagnoses (Please list):					
Drug and/or alcohol use:	Yes	No			
Suicidality:	Yes	No			
Number of Hospitalisations per consumer					
Instances of self-harm per consumer					
Medications prescribed by nurse practitioners					
MBS item numbers					
Involvement of other services:	DHS	Legal	D&A	Headspace	Spectrum
HONOS changes					

APPENDIX 2 CONSUMER FLYER

A mixed methods evaluation of mental health nurse practitioners' role in a primary care context.

Hello everyone,

We are inviting Tristar mental health consumers to participate in a study about the role of Mental Health Nurse Practitioners.

The aim of the study is to understand the effectiveness of Mental Health Nurse Practitioners in relation to consumers' mental health, physical health and social outcomes as well as their efficiency within the service.

Who do we need?

We need Tristar mental health consumers who have been cared for by a mental health nurse practitioner and who are 18 years or older.

The research involves an in-depth individual interview to explore your experiences, ideas and suggestions regarding the nurse practitioner program at Tristar.

Want to know more?

If you want to know more about the research, please contact the Principal Researcher:
Prof Wendy Cross, Dean, School of Nursing & Health Care Professions Federation University
PH: 03 51226091

APPENDIX 3 CONSUMER INTERVIEW SCHEDULE

Thank you for agreeing to participate in this interview.

1. Could you tell me a little bit about yourself?

2. You have received service from other providers, how does the nurse practitioner role differ? In what ways?

3. Would you describe the things that your nurse practitioner does? (Probe about MSE, communication, outreach, continuity of care, crisis intervention, health promotion, safety, medication, aspects of control, information sharing, system knowledge)

4. What would you describe as essential attributes for the Nurse Practitioner role (Personal and professional)?

5. To what extent is the relationship vital to you and your recovery?

6. Would you describe the helpful therapies that the Nurse Practitioner uses? (Apart from medication)?

7. What are the most important aspects of the role?

8. Describe any current problems that you have is receiving the services that you need. How does your nurse assist in fulfilling that need?

9. What suggestions do you have for health providers considering this type of service model?

10. What advice would you give to someone contemplating seeing a nurse practitioner?

APPENDIX 4 INTERVIEW SCHEDULE: NURSE PRACTITIONER

Thank you for agreeing to participate in this interview.

1. Would you describe the tasks you perform in your role? (Probe about MSE, communication, outreach, continuity of care, crisis intervention, health promotion, safety, medication, aspects of control, information sharing, system knowledge)
2. What would you describe as essential attributes for the Nurse Practitioner role (Personal and professional)?
3. To what extent is the therapeutic relationship vital?
4. Would you describe the therapeutic interventions (helpful therapies) that you use? (Apart from medication)?
5. What are the most enjoyable aspects of the role?
6. Describe the current problems that nurses have in fulfilling their roles.
7. What are the systems issues affecting the role?
8. How do you maintain your practice expertise?
9. What suggestions do you have for other health providers considering this type of service model?
10. What advice would you give to nurse contemplating a nurse practitioner role?

APPPENDIX 4 INTERVIEW SCHEDULE: OTHER PROFESSIONS

Thank you for agreeing to participate in this interview.

1. The Nurse Practitioner role has been in place for some time now. Do you find it affective? In what ways? If not, how can it be improved?

2. Could you describe the tasks the NP performs in their role? (Probe about MSE, communication, outreach, continuity of care, crisis intervention, health promotion, safety, medication, aspects of control, information sharing, system knowledge)

3. What would you describe as essential attributes for the NP role (Personal and professional)?

4. How does the NP relate to other professionals in the work environment?

5. In what ways have you individually benefitted from having a NP working with you?

6. To what extent is the professional relationship vital?

7. What are the most important aspects of the role?

8. Describe any current problems that nurses have in fulfilling their roles.

9. What are the systems issues affecting the role?

10. How does the practice support nurses to maintain their practice expertise?

11. What suggestions do you have for other health providers considering this type of service model?

12. What advice would you give to nurse contemplating a NP role?