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Maximising scope of practice: Mental health nurse practitioners addressing community clinical complexity and unmet consumer need.

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Evaluation Framework – Maximising scope of practice: Mental health nurse practitioners addressing community clinical complexity and unmet consumer need.

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Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the authorship and/or publication of this article.

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Executive Summary

The development of Mental Health Nurse Practitioner (MHNP) community roles provides unique opportunities for advanced level practice at the top of MHNP's scope. These roles have the potential to maximise care, inclusive of prescribing and after-hours crisis management, for complex clinically deteriorating consumers across the continuum of care. This model of practice champions nurse led services, while embracing an interdisciplinary approach to meet the increased unmet need for a rapid nursing response for clinically deteriorating consumers, secondary consultation and support to primary mental health and associated community support services. This development aligns with current health strategic planning such as, the Advancing Health Service Delivery Through Workforce: A strategy for Queensland 2017-2026.

This new MHNP community expanded scope of practice and model of nursing care can significantly improve, enhance and further develop current mental health nursing practices, within community team settings for complex consumers. This approach of this evaluation report is, in brief, a staged approach to generate and evaluate both data and the practical implementation of such roles in community mental health teams in Queensland. Dissemination of learnings is as per evaluation strategies cited in this report, utilising tertiary partners, Sunshine Coast Hospital and Health Services (SCHHS) and the Innovation fund requirements.

Acknowledgements

This report is dedicated to those who experience mental health issues within their lives, their families/carers and the Mental Health Nurse Practitioners who work in these clinical areas- past and present.

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1. Introduction

1.1 Project background and policy context

The Sunshine Coast hospital and Health Service – Mental Health and Addiction Services (SCHHS-MHAS) was successful in receiving EB 10 Innovation funding in 2019, overseen by the Queensland Chief Nursing and Midwifery Office (OCNMO), to fund the development of a pilot Mental Health Nurse Practitioner (MHNP) community role in a twelve-month time frame.

Social determinants of health and identified unmet health care needs

Emerging needs within community mental health teams includes the increasing level of complexity and co - morbidities in (re)presentations, increasing requirements for rapid responses to clinically deteriorating mental health issues and physical health needs of consumers. The later issue is articulated well within the Queensland Health commissioned project by Apex consulting: Improving physical health for people with a lived experience of mental illness or problematic alcohol and other drug use – Guideline April 2019, and the Royal New Zealand and Australian College of Psychiatrists briefing: Keeping body and mind together: Improving the physical and life expectancy of problem with a serious mental illness (2015).

Prevalence of physical ill health in people with serious mental illness

National and international studies highlight that people living with serious mental illness have significantly higher rates of major physical illness than their counterparts in the general population (Harris et al., 2018). The imperative to address mental health illness and associated and physical issues has been highlighted globally (Collins et al., 2013; Patel et al., 2013). Similar rates of mental and physical comorbidity are found in both Australia and New Zealand. For example, 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 this 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) Morgan et al., 2013.

Unmet health need and mental health nurse practitioner roles

A Mental Health Nurse Practitioner (MHNP) role would provide a holistic paradigm of care, at an advanced level of nursing practice, to those consumers with the above physical and mental health needs and the ability to proactively diagnosis, treat, assess, prescribe and provide after-hours crisis management of these not currently available in many settings due to limited medical staff availability.

The ability of the MHNP to perform relevant diagnostic tests and develop appropriate referral pathways to primary health care settings would also greatly enhance the mental and health physical health status of those consumers at high risk for acute physical and mental health deterioration- an area of significant unmet need which also fosters collaboration across primary and tertiary level services.

Taking into consideration the above unmet health needs, and the local recognition of an additional unmet health need to more effectively address mental health clinical deterioration for complex consumers, a community Mental Health Nurse Practitioner MHNP role was proposed by the Sunshine Coast Hospital and Health Service – Mental Health and Addiction Services (SCHHS-MHAS) for the current successful EB 10 Innovation grant application, overseen by the Office of the Chief Nursing and midwifery Officer (OCNMO). This was based on prior work reviewing a new community Nurse Practitioner scope of practice and model of service for an advanced nursing role. This is outlined below.

Contextual background and local priorities

The Sunshine Coast Hospital and Health Service (SCHHS) has a record of implementing mental health nurse practitioner (MHNP) roles in an inventive way, achieving integration across service groups and disciplines. In 2017 the SCHHS employed 2.8 EFT Mental Health Nurse Practitioners (MHNPs) in the opening of new tertiary level facility, to practice in an Emergency Department (ED) setting.

The Emergency Department Mental Health (ED MH) model of care (MoC) at the SCHHS is an innovative, collaborative, model of service delivery which aims to reduce the trauma and distress experienced by patient/consumers who present to the ED with a mental illness. It does so by facilitating interdisciplinary care in a timely manner and maximising the care and efficiency of care during their ED stay.

This work is currently part of a current joint medial/nursing grant to articulate, evaluate and disseminate this new Model of care. The program is unique in that it is championed by an ED physician and supported by the ED and MHAS directors to manage a MHNP led model of mental health service delivery.

Queensland MHNP roles are currently predominately based in hospital emergency department settings. As part of the next stage of MHNP role development and associated consumer care, work was commenced on a framework for a community a MHNP role by MHAS in 2018/19. The focus of this new MHNP community

role was to expand the MHNP scope of practice to community mental health settings, create a new model of care for complex consumers/patients and establish a new career pathway for senior nursing staff.

In addition, a prior review of MHNP literature with a tertiary partner, the University of the Sunshine Coast and benchmarking with a Victorian mental health (MH) service was undertaken as the next stage of Mental Health and Addiction Services (MHAS) MHNP role development. This review was progressed in a briefing concept paper (Appendix Three) to MHAS executive around scoping future community nurse practitioner roles to meet the identified unmet need for clinically deteriorating community consumers to avoid hospital admissions. Following approval of this concept a potential MHNP role was created. The role embeds an MHNP in selected Community Mental Health Teams SCHHS-MHAS replicating a similar Victorian model. This new MHNP scope of practice and model of care forms the foundation for this OCNMO funded MHNP community project which aims to provide:

- a rapid/mobile response incorporating advanced clinical practice and interventions, whilst making autonomous decisions related to deteriorating consumer and support as required to carers/families.
- value adds and complements already existing interdisciplinary clinical work to provide assertive management of acutely deteriorating consumers across the continuum of care, inclusive of advanced nursing diagnosis, treatment and assessment, prescribing of medication and after-hours crisis management.
- a new MHNP scope of practice and model of practice to champion nurse led services, while embracing an interdisciplinary approach to meet the increased unmet need for a rapid nursing response for clinically deteriorating consumers, secondary consultation and support to primary mental health and associated community support services.

The specific focus of the pilot MHNP community role is on clinical deterioration and hospital avoidance via a rapid, mobile response with a high level of autonomous decision making for deteriorating consumers with support as required to carers/families. It is anticipated that the MHNP Community expanded scope of practice and new model of nursing care will significantly improve, enhance and further develop current mental health nursing practices within community team settings for complex consumers.

The MHNP currently undertaking the above role works full time across all shifts, with a particular focus on providing additional support to community teams in the after-hours and weekend time periods to address consumer acuity where limited medical staff are available.

This development aligns with current SCHHS strategic planning, the MHAS strategic plan and State-wide directions within the Advancing Health Service Delivery Through Workforce: A Strategy for Queensland 2017-2026.

Proposed scalability of new model of care /scope of practice

This new proposed MHNP community model of nursing care is scalable and sustainable if implemented in a staged approach as outlined below.

Stage one: Development of the SCHHS-MHAS project to commence a SCHHS-MHAS pilot site and that these participants then become the leaders of MHNP community roles to support other interested mental health services in any future implementation.

Stage two: The SCHHS-MHAS as the leading health service could provide support to other services interested in the implementation of MHNP roles via the establishment of a new state-wide MHNP network (minimum two meetings per year), utilising technology for connections over distance. In addition, the SCHHS has resources to share related to Nurse Practitioner (NP) candidacy pathways and ongoing NP practice development that would enable services without current MHNP's to participate, alongside services with established MHNP roles.

Stage three: Consideration of additional interstate networking with an identified Victorian service who contributed in prior benchmarking, in a consultative role in kind, for their experience and guidance of MHNP community role implementation. Consideration of potential on exchanges of MHNPs across interested health services to assist in the pilot implementation.

1.2 Project aim

The overall project aim is to develop a new scope of practice and model of care (MOC) for a mental health nurse practitioner (MHNP) community role, to improve care delivery for complex consumers.

This new role aims to significantly improve and enhance current mental health nursing practices, within Mental Health and Addiction Services (MHAS) selected community team settings, for complex clinically deteriorating mental health consumers. The specific focus of the MHNP role is to:

- Maximise MHNP community scope of practice, inclusive of prescribing medication and after-hours crisis management, for complex clinically deteriorating consumers across the continuum of care.
- Provide secondary consultation and support to primary mental health and associated community support services of the assessment, treatment and management of mental health consumers.
- Provide a rapid nursing response for the increased unmet need for clinically deteriorating consumers, within an interdisciplinary approach.

1.3 Description of the project

Project funding and background

The Nurses and Midwives Certified Agreement (EB10) established a fund to support models of care that are innovative, flexible and address emergent or unmet health care needs, the Innovation fund. This funding is held

and distributed by the Office of the Chief Nurse Midwifery Officer (OCNMO). Sunshine Coast Mental Health and Addiction Services applied for funding to implement a Mental Health Nurse Practitioner role, within the SCHHS-MHAS Community Mental Health Teams and the OCNMO 12 months timeline of the project. This funding was subsequently approved by a review panel and a MHNP was recruited temporarily by SCHHS-MHAS, described under the heading recruitment below.

Current Mental Health and Addiction Services:

The current service delivery for the Sunshine Coast Hospital and Health Service – Mental Health and Addiction Services, which the MHNP roles seeks to enhance is as attached in Appendix one.

The EB 10 Project practicalities: Recruitment, planning and commencement of the MHNP EB 10 project

Recruitment

Following the successful EB 10 Innovation funding application an internal expression of interest was circulated to employees of the Sunshine Coast Hospital and Health Service – Mental Health and Addiction Services (SCHHS-MHAS). The successful candidate was selected from within the currently employed SCHHS-MHAS cohort of 2.8 FTE Nurse Practitioners. This strategy was chosen to commence the role as soon as practical to begin the project with a practitioner familiar with local services. The successful candidate commenced duties on the 14/10/2019.

Planning: Governance, communication and education of the MHNP role

The MHAS Nursing Director (ND), Director of Integrated Services (Operational lead) and MHNP planned a stepped approach to commencing the MHNP role once recruited. This included:

- Development of the Scope of Practice MHNP Community, based upon prior 18 months of work, endorsed by the SCHHS Nurse Practitioner and Eligible Midwives Credentialing and Scope of Clinical Practice Committee.
- Development of the MHNP Role Description, endorsed by the SCHHS (Nursing) Role Description Review Panel.
- Discussions with the MHAS Clinical Director and General Manager of the proposed clinical governance structure for MHNP reporting, escalation of any clinical issues of concern and linkages to local team clinical and operations leads. Formal meetings were then undertaken with the Team Leaders (TLs) of the selected clinical teams to develop a clinical governance structure to prevent any confusion of the role and purpose of the MHNP Community, equitable clinical delivery by the role, and to provide the NPMH with support and guidance inclusive of day to day operational reporting.
- Following exhaustive consultation with Nursing Director and Team Leaders of the teams involved (Continuing Care Team North (CCT N), Continuing Care Team South (CCT S) and the Acute Care Team (ACT) the unilateral decision was for the MHNP to be located at the HUB Maroochydore site for the following reasons: logistical (desk space and computer access) and ease of accessibility to both CCT South and ACT for clinical input. Whilst the MHNP outreaches and embeds into the CCT North and utilises a 'hot desk' model for logistics.

- To enable a single point of accountability the decision was made by the collaborative group to have the MHNP report to the ACT TL for day to day operational necessities i.e. sick leave, roster requests and final decision-making point in relation to competing clinical requests if required.
- A communication strategy was developed for the MHAS and local teams involved in the MHNP role, utilising currently existing communication structures, such as SAFE CARE (local clinical governance structure) and local team clinical and business meetings. In addition, a six weekly meeting schedule was established with the Team Leaders, ND and MHNP involved for the life of the project. The purpose of these meetings was to identify any barriers to implementing the project, share any feedback regarding the project, forecast any support required for successful implementation of the project and interpretation of the data as it was collected.

Education of the MHNP role and development of an initial Model of Care with clinical seniors was undertaken within the selected community clinical teams involved in the project, inclusive of executive members as listed below:

- Executive members – SCHHS-MHAS- Clinical Director, General Manager, Nursing Director and MHAS Programme Directors. The MHNP and Nursing Director were core committee members.
- Community clinical Team members included Team Leaders Continuing Care Team (CCT) North and South and Acute Care Team, Consultant Psychiatrists (clinical leads) CCT North and South.
- Staff members included those working within clinical teams CCT North and South, Homeless Health Outreach Team (HHOT), Cultural Healing Program (CHP) and the Acute Care Team (ACT).

Commencement

The MHNP commenced the practical clinical work of the new MHNP role following his recruitment outlined above. Early feedback indicated the need for additional considerations of team access to the MHNP which was discussed in the six weekly meetings cited above. Outcomes from these meetings included:

- The NPMH developed an electronic outlook calendar to enable clinicians to access and have the capability to book NPMH appointments for consumer review and interventions.
- The development of a cyclic roster for the NPMH Community (ensuring equitable clinical input across the 3 clinical teams), day to day operational accountability, location and resource allocation i.e. desk allocation, computer access.

The Provision of clinical interventions planned to be provided by the MHNP to include:

- Delivering a service embedded within community Mental Health teams, enabling the MHNP to deliver a rapid/mobile response incorporating advanced clinical practice and interventions, whilst making autonomous decisions related to deteriorating consumer.
- Complementing already existing interdisciplinary team members with the added clinical ability to provide assertive management of acutely deteriorating consumers across the continuum of care. This was to be inclusive of advanced nursing diagnosis, treatment and assessment, prescribing of medication and after-hours crisis management.
- Delivering NP led clinics that incorporate consumer follow-up post discharge to prevent re-hospitalisation, independently expedite inpatient/consumer admissions/readmissions, provide secondary

consultations for the multidisciplinary team members, linkages to primary health providers including General practitioners and Non-government organisations.

1.4 Purpose and scope of the evaluation

The purpose of the evaluation of the Mental Health Nurse Practitioner Community Project is to enable an assessment of its implementation and outcomes. The findings generated from the evaluation will allow Sunshine Coast Hospital and Health Service Executive Director of Nursing and Midwifery Services in collaboration with Executive members of the Sunshine Coast Mental Health and Addiction Services understand the program's strengths and areas for improvement. This group can then make informed decisions regarding the ongoing program investment and scalability, to maximise the benefits for all mental health consumers and other key stakeholders.

An outline of the contents of this report is as below to address the evaluation sections of this report.

Section One: **OCNMO pre project planning frameworks**

The following aspects of evaluation were required to be addressed within a structured OCNMO workshop, led by the office prior to the commencement of the role:

- an assessment of aspects related to the implementation of the project
- an assessment of early outcomes (within 12 months) achieved by the project
- an economic evaluation based on CIMHA and MHNP data of hospital avoidance

1.5 Structure of this report

An evaluation framework and this reporting template was structured by OCNMO to address the below aspects of the project detailed in Appendix Two and outlined below:

- **Part One: Introduction**
- **Part Two: Conceptual approach to evaluation.** This part provides an overview of the conceptual approach to the evaluation, including summary of the program logic and how it aligns with the Quadruple Aim, and the evaluation questions guiding key lines of inquiry.
- **Part Three: Data Plan.** This part provides a comprehensive overview of all evaluation data collection activities including: the indicators that will be used to address each of the evaluation questions, the associated data sources and key informants and the timing for data collection and analysis
- **Part Four: Evaluation delivery plan.** This part comprises brief overview of the project governance arrangements, the approach to project management, approaches for the dissemination of evaluation findings, as well as the identified project risks and mitigation strategies.

The actual SCHHS-MHAS MHNP project outcomes and data are presented in subsequent sections as outlined below:

Section Two: SCHHS-MHAS Project outcomes

- **Part one: Findings** presents the findings and associated data from the project, including the small focus groups, online survey and state-wide data utilised by the MHNP in his role to demonstrate clinical interventions undertaken with concise summaries for each data set.
- **Part Two: Discussion** reviews part one in relation to the significance of the findings of this project to future MHNP community roles and critical learnings related to this. Included is a model proposed for a sustainable model for MHNP community roles within mental health services and support to achieve this.
- **Part Three: Recommendations** lists suggested actions of those aspects of the project significant to the future development of community MHNP roles.
- **Part Four Conclusion** is a short summary of the project.

1.6 Project management approach

Updates of the project were provided to the Office of the Chief Nursing and Midwifery Officer via the endorsed Project Status Report on a monthly basis. This report was compiled by the project lead with input from project advisor and project sponsor prior to sending to OCNMO.

2. Section Two: SCHHS-MHAS Project Outcomes

This section presents the project findings, including both qualitative and quantitative evaluation data generated by the project. The data is presented in full as it illustrates well the actual clinical interventions of the MHNP role and outcomes from evaluating this in the participants' comments, which is not achieved in summarising statements only. This is followed by a discussion of the relevance of this data for its clinical and organisational significance for future potential community MHNP roles. Recommendations are then made in relation to the practical aspects and sustainability of developing MHNP roles within community mental health teams, followed by a short conclusion of the overall project.

Three SCHHS-MHAS community mental health teams were included in the project described in Section 1.3 (Appendix Two) which included the Continuing Care Team North (CCT N), Continuing Care Team South (CCT S) and the Acute Care Team (ACT).

The total of MHAS staff in these teams was 80, inclusive of all staff i.e. part time. Within the CCT N, sub teams of a Homeless Health Outreach and Cultural Healing exist and are included in the datasets. The number of patients/consumers active during this period for the above teams during the project was 1,847. In addition, the MHNP worked within an addition team at Gympie for four weeks to cover a medical staff shortfall as a result of COVID 19.

2.1 A note on research for the project

The intention of this project was to also undertake research related analysis of the evaluation data collated. That is, the Consumer Integrated Mental Health Application (CIMHA) data, Focus Groups and Online Survey data. The event of COVID 19 impacted on the SCHHS-MHAS, alongside ongoing clinical acuity for the MHNP and Nursing Director involved in the project. Therefore, the research approval process and ethics was a longer process than anticipated. Given the deadlines to complete the project and the write up of this report the data activities were undertaken as both research and evaluation for the Focus Groups and Online Survey, with an ethical approval obtained for these (see Appendix Eight). An additional application for research approval for the use of the CIMHA data is still underway at the time of writing this report.

Ethically approved data obtained has been used in the reporting of evaluation outcomes for this project but not at the level of an in-depth research analysis. For example, statistical analysis has not occurred and this would be anticipated to be undertaken into the future, alongside further analysis, relevant publications and dissemination of findings outlined in Appendix Two.

The data presented has been reviewed by the senior clinicians involved in the project for its clinical relevance to mental health nursing practice. Hopefully this is at a level that is relevant to all Hospital and Health Services mental health clinicians and operational managers, and the SCHHS-MHAS Executives under the auspices of the OCNMO office.

2.2 Findings: CIMHA 12 months data sets

The Consumer Integrated Mental Health Application (CIMHA) is a state-wide consumer-centric clinical information system (see Appendix Five). A Provision of Service (POS) is the occasion of service offered by a clinician to a patient/consumer/consumer. Data below from this system was used by the MHNP to record his SCHHS-MHAS clinical activity. This data demonstrates the alignment of the focus of the MHNP role with the clinical interventions undertaken for the time of the project.

Data Source: MHAP POS Clinician Intervention Data Report

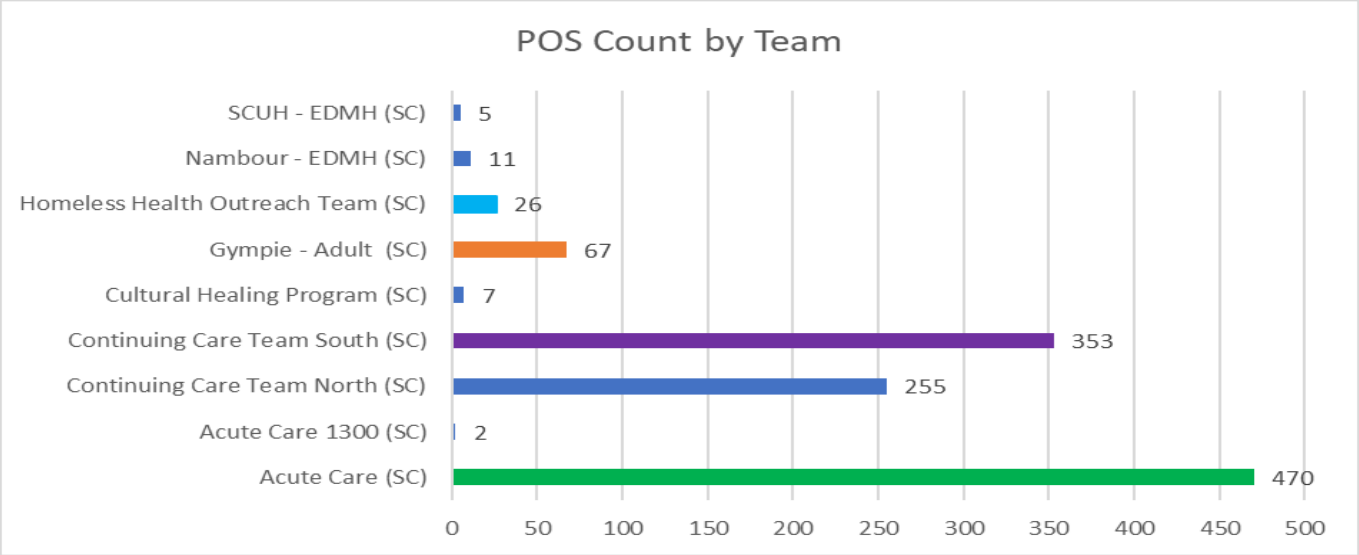
Reporting Period: 1 Sept 2019 – 31 Jul 2020

Inclusions: All activity recorded for Rob Leerentveld

Activity: All POS counts by Team and Interventions (excluding Case Review and Reviews)

POS by Team (Provision of service)

Team	Count of posid
Acute Care (SC)	470
Acute Care 1300 (SC)	2
Continuing Care Team North (SC)	255
Continuing Care Team South (SC)	353
Cultural Healing Program (SC)	7
Gympie - Adult (SC)	67
Homeless Health Outreach Team (SC)	26
Nambour - EDMH (SC)	11
SCUH - EDMH (SC)	5
Grand Total	**1196**

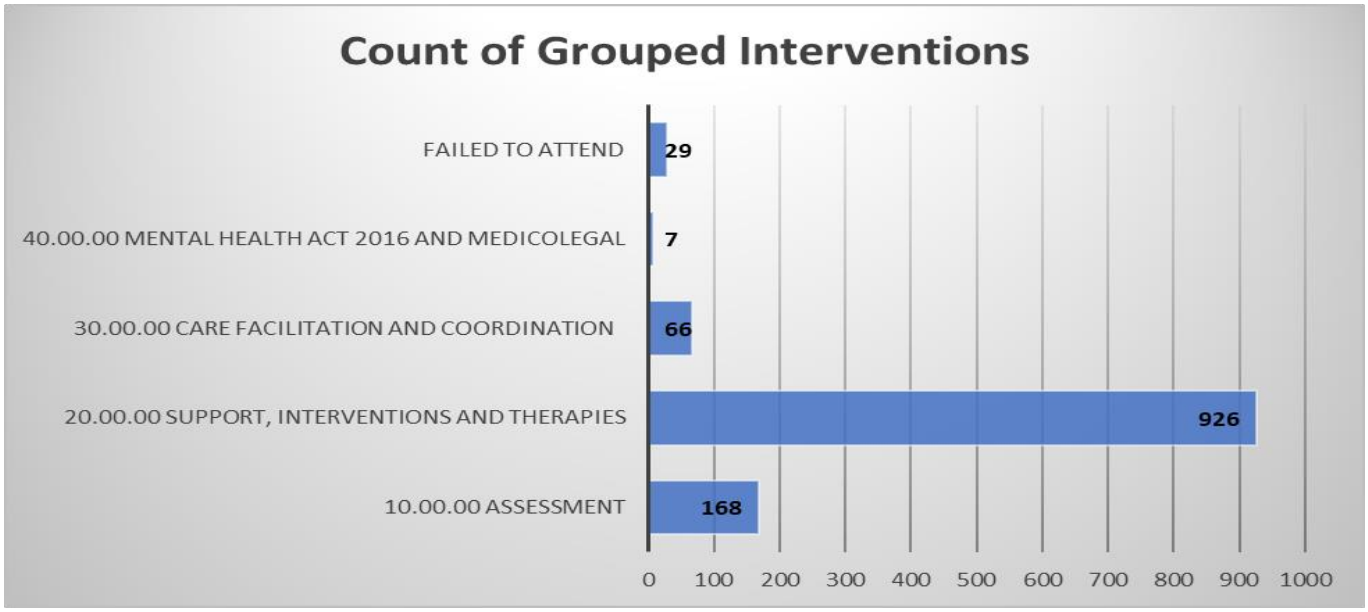


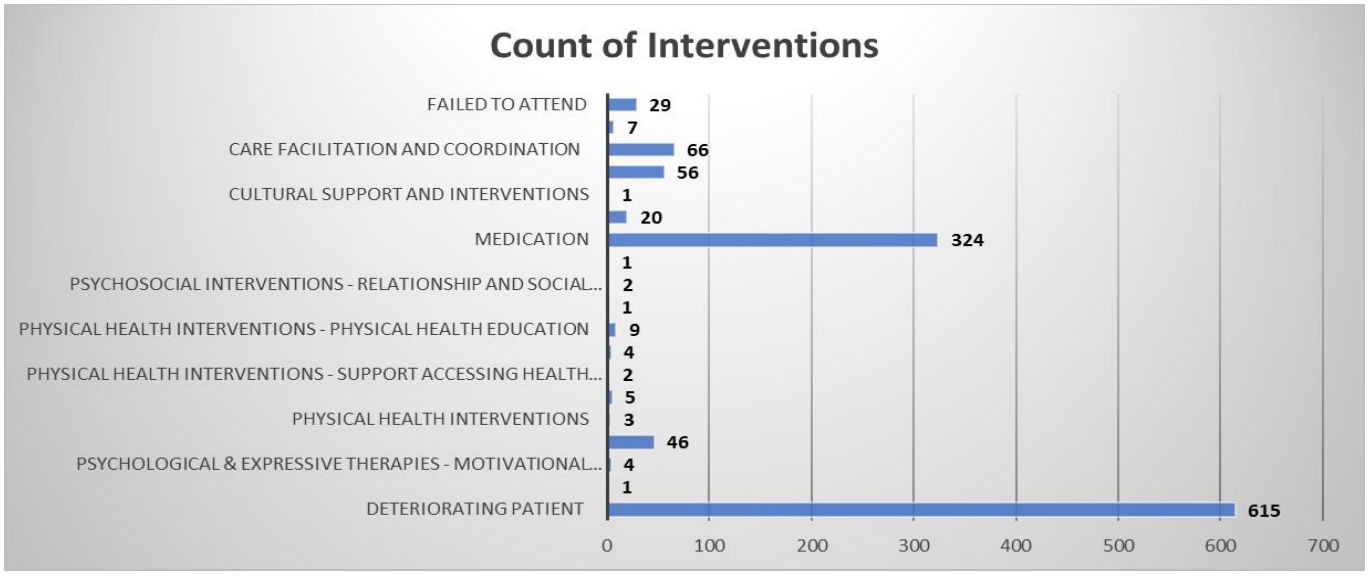
A Provision of Service (POS) Count for the Acute Care Team Mental Health was 470 occasions. These predominantly occurred in the afterhours space and align well to the MHNP role focus (clinically deteriorating patient/consumer, secondary consultation and medication intervention).

Requests for support during after-hours frequently occurs within the teams involved in the project. The MHNP role was utilised to address these by the MHNP reviewing the clinically deteriorating patients/consumers and offering relevant assessment and treatment.

Provisions of Service

Grouped Interventions	Acute Care (SC)	Acute Care 1300 (SC)	Continuing Care Team North (SC)	Continuing Care Team South (SC)	Cultural Healing Program (SC)	Gympie - Adult (SC)	Homeless Health Outreach Team (SC)	Nambour - EDMH (SC)	SCUH - EDMH (SC)	Grand Total
10.00.00 Assessment	89	1	24	36	3	7	7		1	168
20.00.00 Support, Interventions and Therapies	329	1	214	307	4	53	16		2	926
30.00.00 Care Facilitation and Coordination	33		13	4		2	1	11	2	66
40.00.00 Mental Health Act 2016 and Medicolegal	5			1			1			7
Failed to attend	14		4	5		5	1			29
Grand Total	**470**	**2**	**255**	**353**	**7**	**67**	**26**	**11**	**5**	**1196**





Summary

The majority of POS activity was:

- Support/Interventions and Therapies at 926 occasions

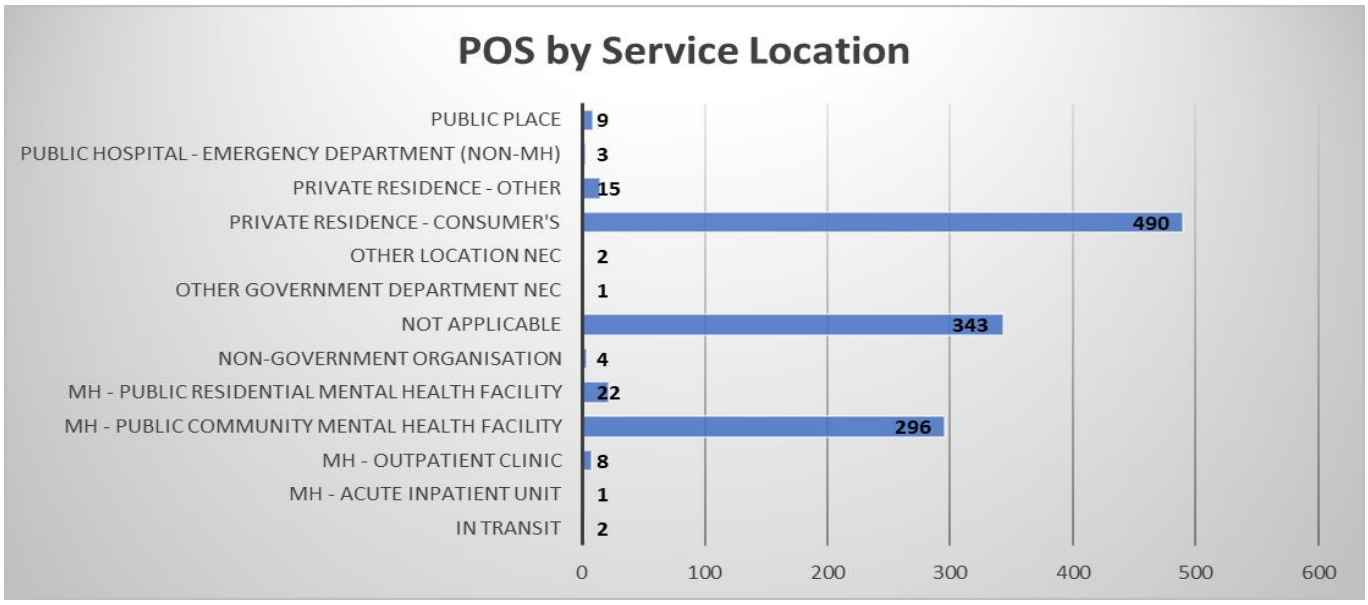
- Medication interventions at 324 occasions

- Assessment POS at 168 occasions.

These POS numbers demonstrate the MHNP's ability to respond to a significant number of clinically deteriorating patients/consumers. This provided the relevant community mental health teams with access to additional clinical support from an advanced practitioner with interventions to enhance consumer outcomes.

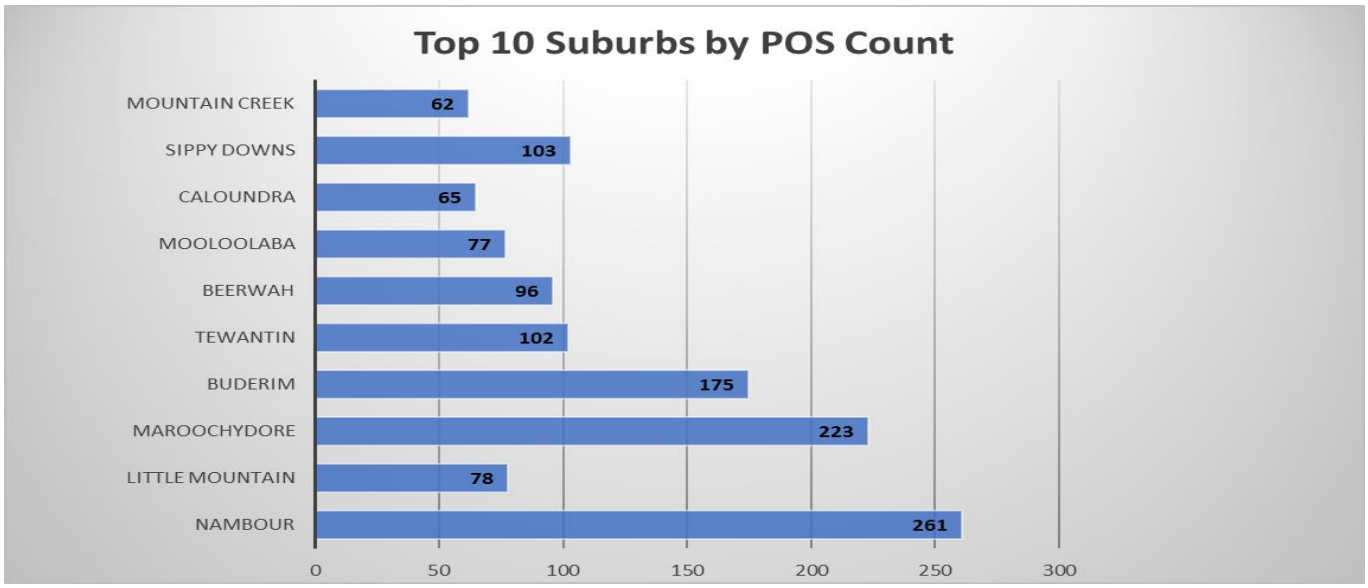
POS by Service Location

Location	Count of posid
In Transit	2
MH - acute inpatient unit	1
MH - outpatient clinic	8
MH - public community mental health facility	296
MH - public residential mental health facility	22
Non-government Organisation	4
Not Applicable	343
Other government department NEC	1
Other location NEC	2
Private residence - consumer's	490
Private residence - other	15
Public Hospital - emergency department (non-MH)	3
Public Place	9
Grand Total	**1196**



*Note The high count of non-applicable service location data above is related to clinicians attending the clinical handovers on a daily basis. If the MHNP does not see the patient/consumer face to face, a location is not required in CIMHA. This reads as not applicable in CIMHA.

Top 10 Suburbs for the SCHHS-MHAS teams involved in the project



The majority of the interventions by the MHNP occurred within the patient/consumers usual residence, that is their own home. This activity supports the project's original focus to provide a responsive, mobile advanced delivery of clinical interventions for patient/consumers.

2.3 Findings: Additional analysis of MHNP data

As an additional part of this project to support this final evaluation report, a temporary Associate Clinician Nurse Consultant (ACNC) role was created via an internal EOI process to support the MHNP with a further review of MHNP identified data. This ACNC role was funded via the EB 10 project for eight weeks.

The MHNP in the community is uniquely positioned to complement and enhance existing mental health services to capture and intervene in the case of deterioration and prevent avoidable hospital admissions. The MHNP role supports the development of new methods, and changes in service delivery resulting in reduced emergency department presentations and an increase in hospital avoidance options within the SCHHS, whilst contributing to timely detection and treatment of deterioration.

Innovative provision of care in the community setting is key to reducing strain within the hospital system and to providing services that rate highly in terms of satisfaction for consumer's and carer's (Lakeman., 2008; Baker et al., 2018). Poor access to timely community-based care has been linked as a contributing reason in higher presentations to hospital for mental health consumers (Kahan et al., 2016). Whereas timely access to comprehensive assessment and treatment in the case of deterioration is evidenced to improve patient/consumer outcomes, reduce duration of illness and reduce avoidable hospital admissions (Unsworth et al., 2012). The literature indicates wide and varied community models being put in place in Australia and internationally to reduce avoidable hospital admissions (Iqbal, et al 2012., Pope and Harris., 2012).

The MHNP involved in the project recorded information daily related to the patient/consumers reviewed on a locally developed worksheet (Appendix Six). This worksheet included data that was not captured in CIMHA such as, clinical deterioration that was deemed to be clinically significant by the project team. These records were then reviewed by the ACNC as outlined below in relation to the three categories the project was focusing on:

- Hospital Avoidance
- Clinically deteriorating Patient/Consumer
- Secondary consultation

The time frame for these presentations dated from the commencement of the project in October 2019 until June 2020. This resulted in three separate data sets being captured (Hospital Avoidance, Deteriorating Patient/Consumer and Secondary Consultation) which are available for review in separate Excel files (Appendix Seven).

Information in each data set included a review of the patient/consumer's clinical file notes from the state-wide mental health reporting system (CIMHA). Also reviewed were clinical files notes pre and post the MHNP intervention, linked to the MHNP worksheet. This was to gain an understanding of events leading up to referral to the MHNP and patient/consumer outcomes post the MHNP interventions by the teams involved.

In each data set the presenting issue and diagnosis of consumer were classified separately. Within the secondary consult data, the presenting patient/consumer issue was separated into three categories; Treatment Planning/Medication Review, Opinion/Education and Routine Review. Pharmacotherapy interventions were captured as were admission rates and hospital presentation rates post review, additional follow up contact with the team was also reviewed.

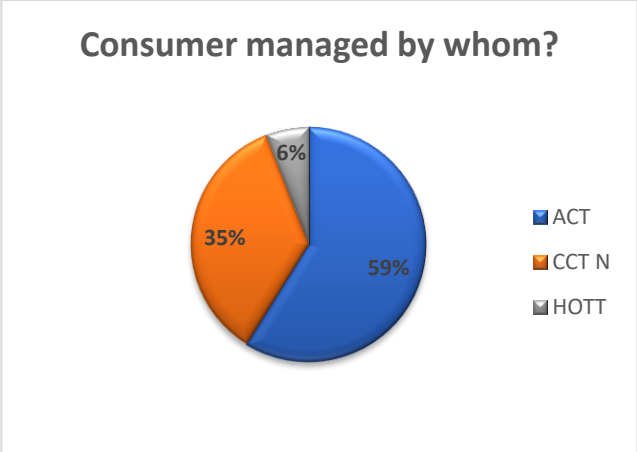
The focus of the data capture was determined following discussions with senior nurses involved in the project and included the Nursing Director, MHNP and the Acute Care team leader (please see the micro categories of data within the Excel documents).

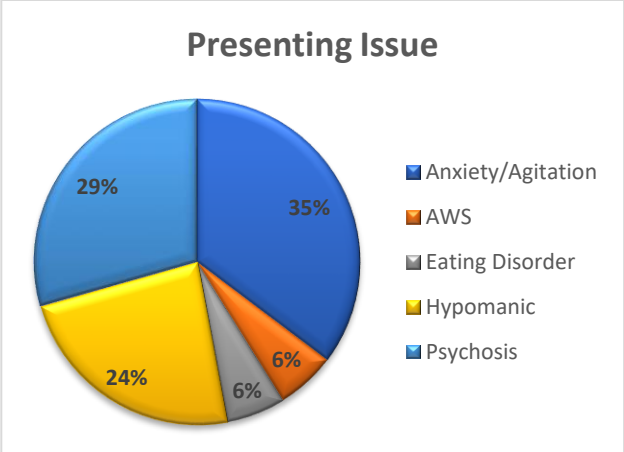
Three community teams were included in the project: Continuing Care Team North (CCT N), Continuing Care Team South (CCT S) and the Acute Care Team (ACT). Additionally, consumers were also reviewed by the MHNP over a one month period to assist with a medical staffing shortfall in an additional team (Gympie) who were not part of the project.

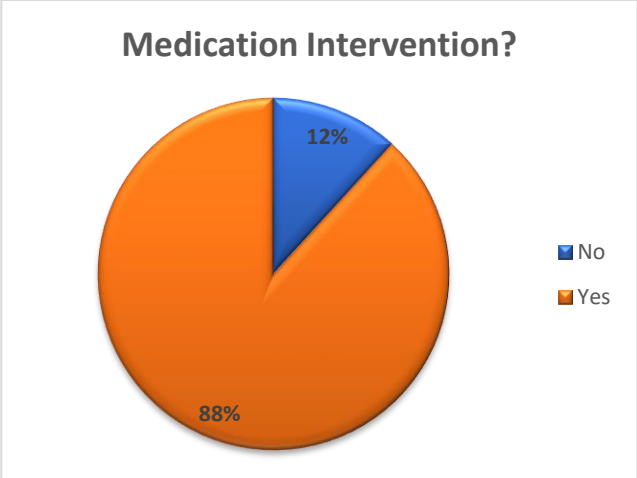
The data is presented as below from the three keys area of MHNP practice cited above, with a brief written summary for each section and overall learnings. This is an analysis from senior clinical staff cited above from the project reviewing the data and is not an in-depth analysis, which would be part of any future research review of this project once full ethics approval has been granted to utilise CIMHA data.

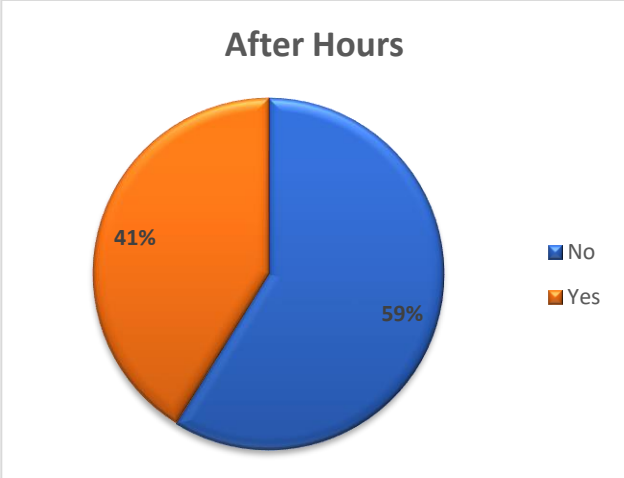
Hospital Avoidance data set: Identified patient/consumer description

See Appendix Seven for detailed excel collection workbooks relating to the data sets displayed below.









Summary

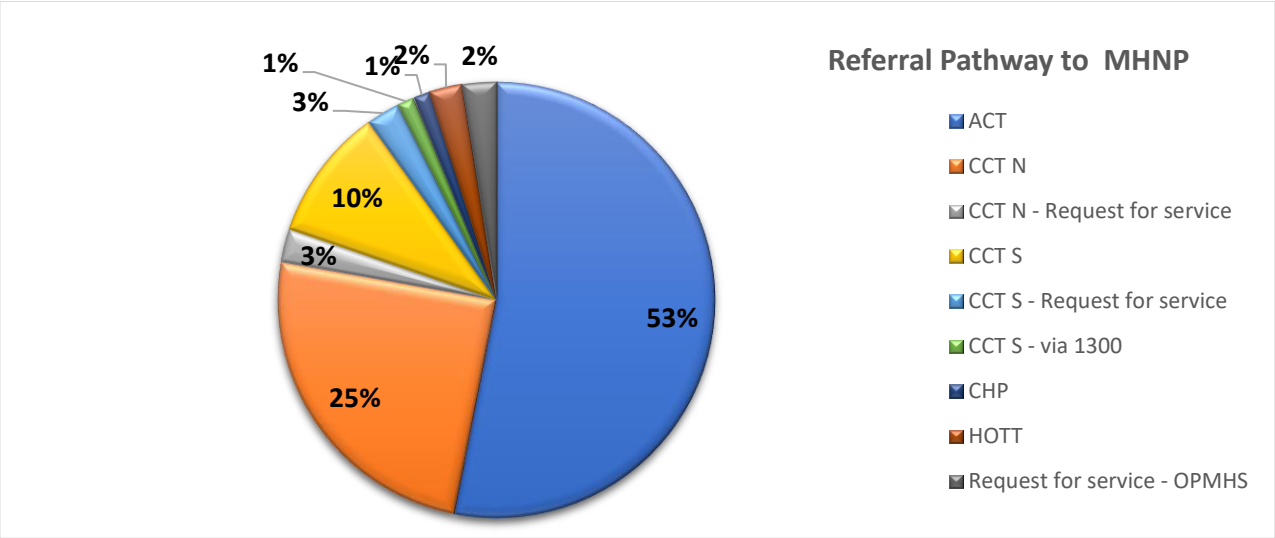
- 18 Emergency department (ED) hospital admission/presentations for patient/consumers were avoided by the MHNP interventions (Evidenced from the MHNP worksheet data).
- Patient/Consumers were predominantly seen via the Acute Care Team (60%), with a smaller number being referred from CCT North (35%).
- Following the initial MHNP intervention, only 1 patient/consumer re-presented in the subsequent 4-week period the ACNC reviewed data.
- 30% of patient/consumers were referred directly to the MHNP at point of referral to the service.
- 41% of hospital avoidance interventions occurred after hours.
- 88% of hospital avoidance interventions included a medication intervention.
- Predominant presenting issues for the 18 patient/consumer group were identified as: psychosis, hypomania and agitation/anxiety.
- Bipolar Affective Disorder was the largest diagnostic group followed by patients/consumers with a primary diagnosis of Schizophrenia.

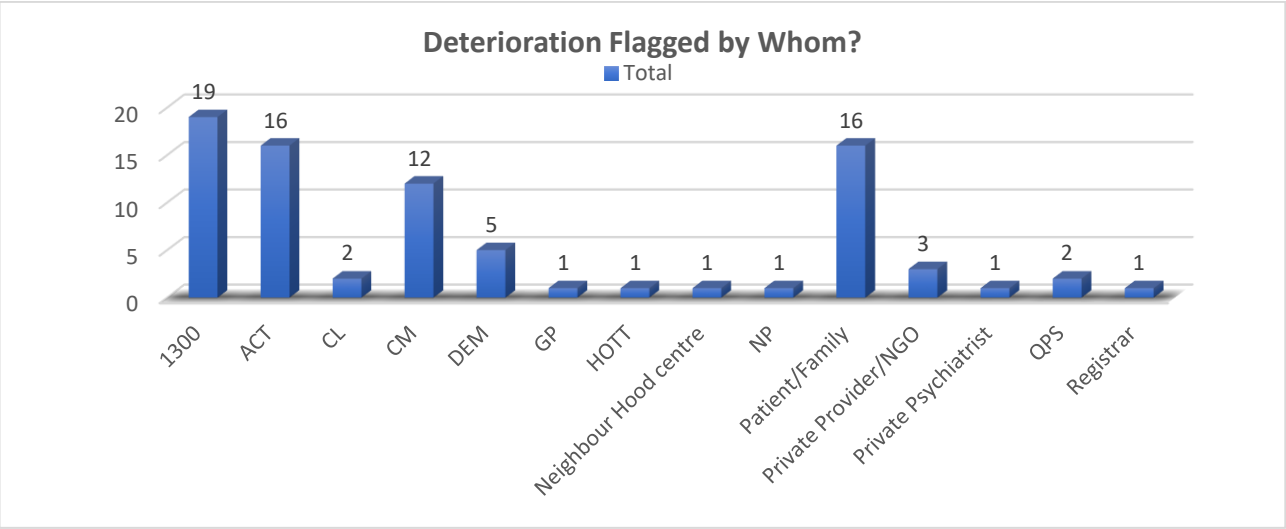
- Clinically interesting was that the files reviewed indicated that approximately 50% of consumers used substances problematically – though not all of these had a diagnosis of substance use disorder within CIMHA.
- 88% of the time the MHNP treatment plan was implemented by the team involved, post the MHNP intervention.
- Anecdotally it appears that contact by teams with the patient/consumer increased following the MHNP intervention.

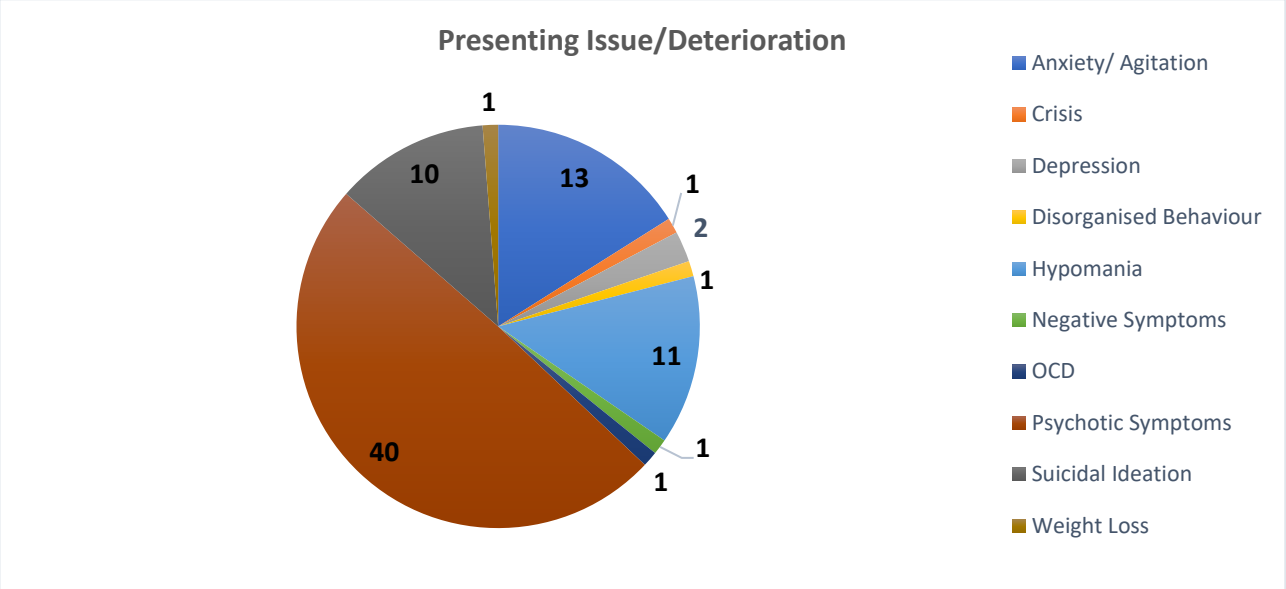
NOTE: Hospital avoidance was identified early as an outcome measure of the project. Following consultation with Dr Downes Associate Professor, Centre for Applied Health Economics, Menzies Health Institute and Queensland-Griffith University, during the evaluation workshop, it was identified that presentations to emergency departments range in cost from $2500-$4000 (depending on the treatment provided in Emergency Departments). Reducing avoidable hospital admissions for mental health consumer's is a pertinent issue for Hospital and Health Services within Australia and internationally. Hospital admissions play a crucial role in the treatment needs of consumers at certain junctures (Purdy et al., 2013). The early detection of deterioration and avoidance of inpatient/consumer stays is often of benefit to the consumer; from a patient/consumer experience perspective, and the Hospital and Health Service in terms of delivering high quality services with limited inpatient/consumer beds and resource restrictions (Walker et al., 2009; Purdy et al., 2013).

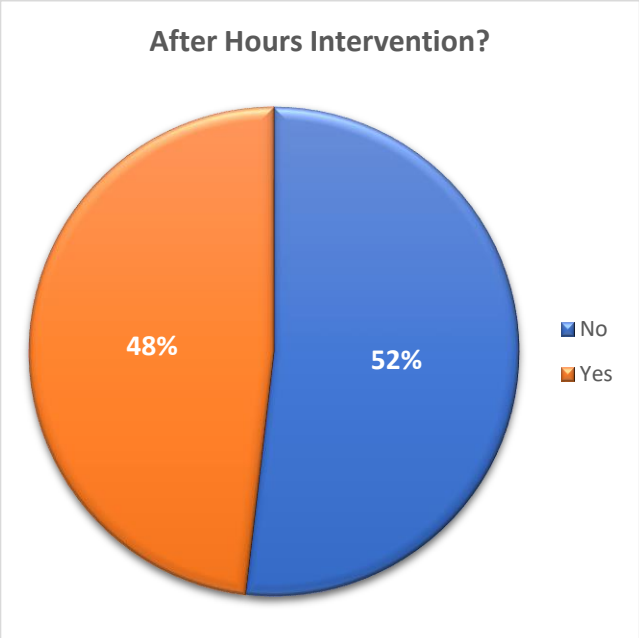
Deteriorating Patient/consumer data set:

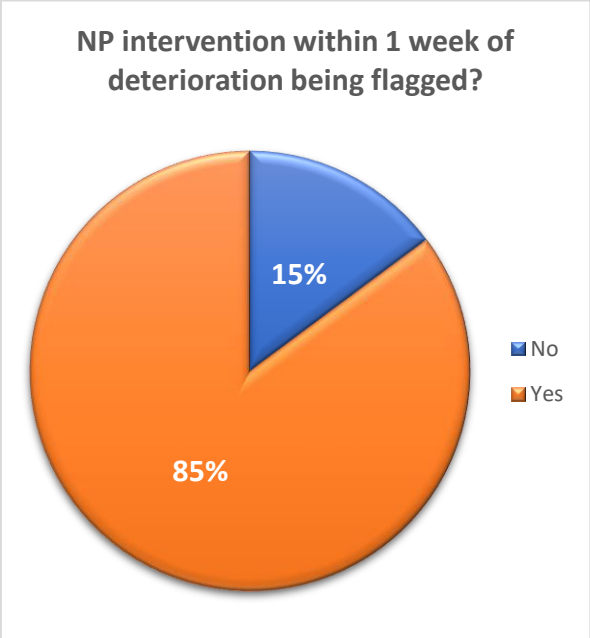
See Appendix Seven for detailed excel collection workbooks relating to the data sets displayed below.











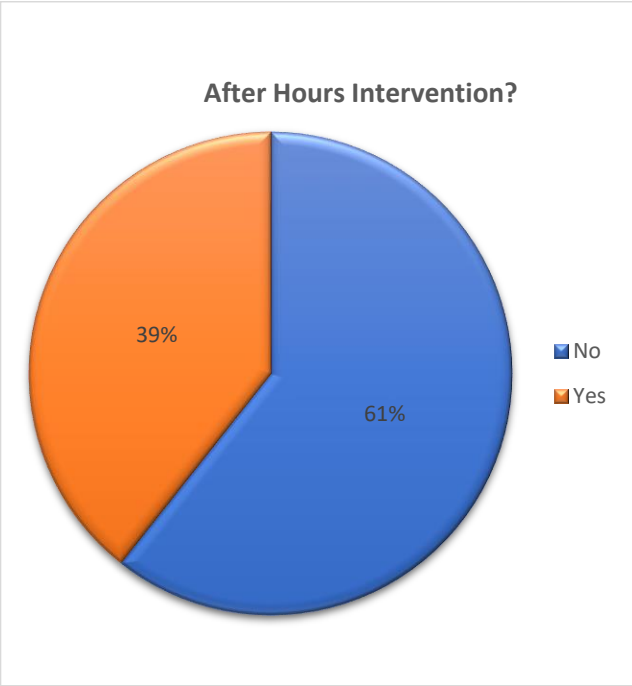
Summary

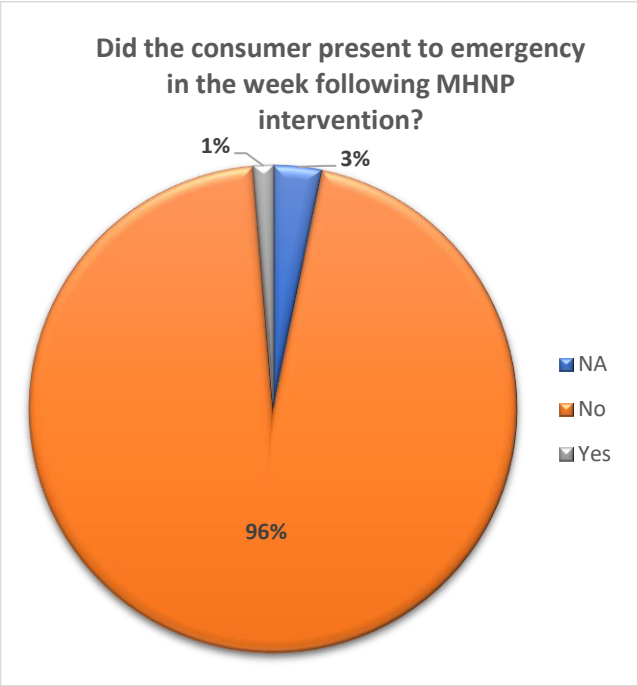
- There were 81 patients/consumers that were identified as clinically deteriorating either prior to the referral to the MHNP or at review by the MHNP.
- 53% of these referrals came from the Acute Care Team with an additional 8% via 'Request for Service' from other community teams via the Acute Care Team. 25% of referrals came from CCT North with 10% of referrals from CCT South.
- Nearly half of the interventions relating to clinically deteriorating patient/consumers occurred after hours.
- 47% of deteriorating patient/consumers were presenting with psychotic symptoms, 18% with agitation/anxiety, 14% with suicidal ideation and 14% with hypomania.
- 25% of people had a diagnosis of schizophrenia, 15% Schizoaffective Disorder, 15% with Depressive Disorder.

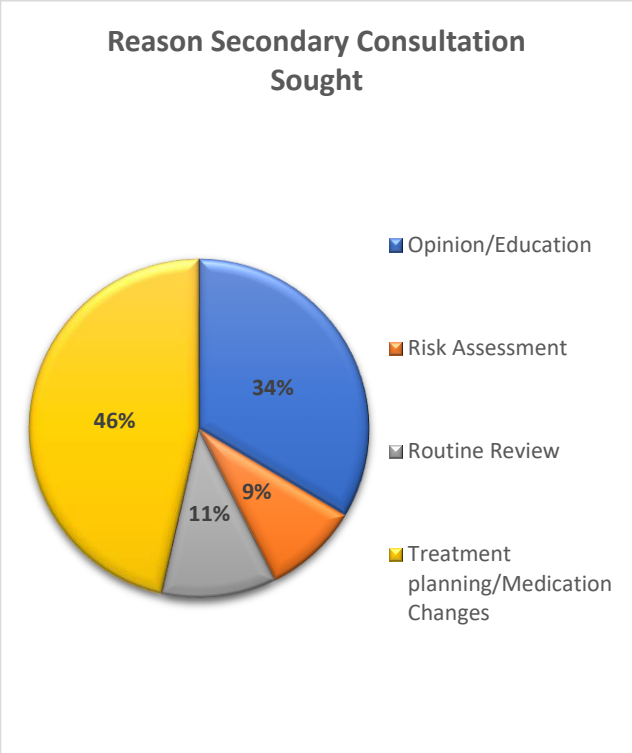
- Clinical deterioration was most often noted by the acute 1300 phone service. Patient/consumers who were newly referred to the service were then referred to the MHNP via the Acute Care Team. Deterioration was flagged by family/patient/consumer as often as it was flagged by Case Managers. This was evaluated as patient/consumer or family having been the ones to reach out to the service by the ACNC.
- The clinical files indicated that substance use was a likely factor in clinical deterioration in 39% of cases.
- A pharmacotherapy intervention took place in 54% of cases (in comparison this was 88% in the hospital avoidance category).
- In 25% of cases the patient/consumer had either been an inpatient or had a presentation to the Emergency Department in the week before the MHNP review.
- High follow up rates of patients/consumers by treating teams was noted in the week following a MHNP intervention (84%).
- High rates of the MHNP plan being followed in its entirety was noted by the team following a MHPN review.

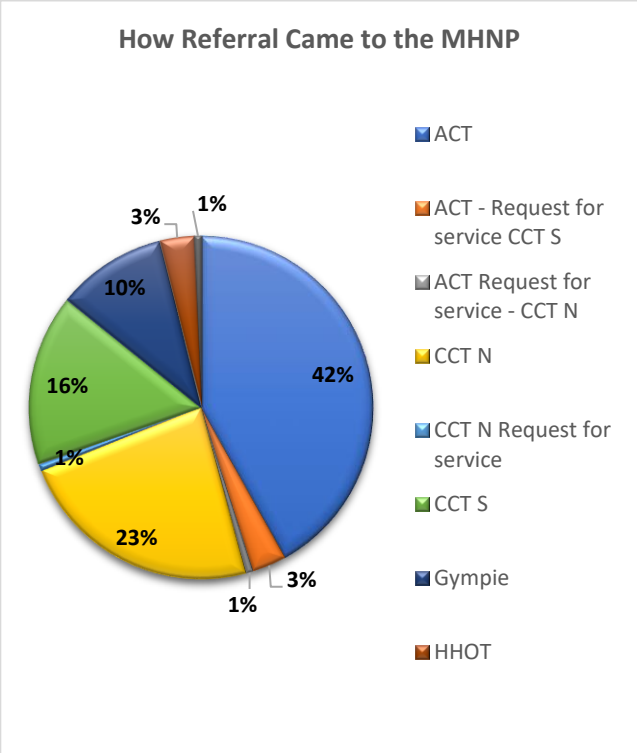
Secondary MHNP Consultation Data Set:

See Appendix Seven for detailed excel collection workbooks relating to the data sets displayed below.









Summary

- 156 consumers were seen by the MHNP for the purpose of a secondary consultation. This affirms the projects initial focus on the significance of this role aspect for the teams involved.
- 46% were reviewed for Treatment Planning/Medication review.
- 34% were reviewed for Opinion/Education
- 20% reviewed for Risk Assessment or Routine review.
- Primary diagnosis for secondary consultations review: Schizophrenia 26%; 15% w depressive episodes; 12% schizoaffective disorder; 8 % bipolar disorder with a range of other issues of less significance.
- 39% of secondary consult interventions occurred after hours with the majority of the referrals again coming from the Acute Care Team (47% - 5% of that figure being for requests for service from CCT's), 23% of referrals from CCT North and 16% from CCT South.
- 46% of secondary consultations involved a medication intervention.

NOTE: Overall in the above data the ACNC noted there was limited evidence of interventions in the files reviewed for consumers with Dual Diagnosis for Alcohol and Other Drug interventions. There were multiple cases in all data sets of references to substance issues, and substances contributing to deterioration but with an absence of a diagnosed substance use disorder in CIMHA. This would require a more detailed review to ensure the service is accurately capturing rates of substance use.

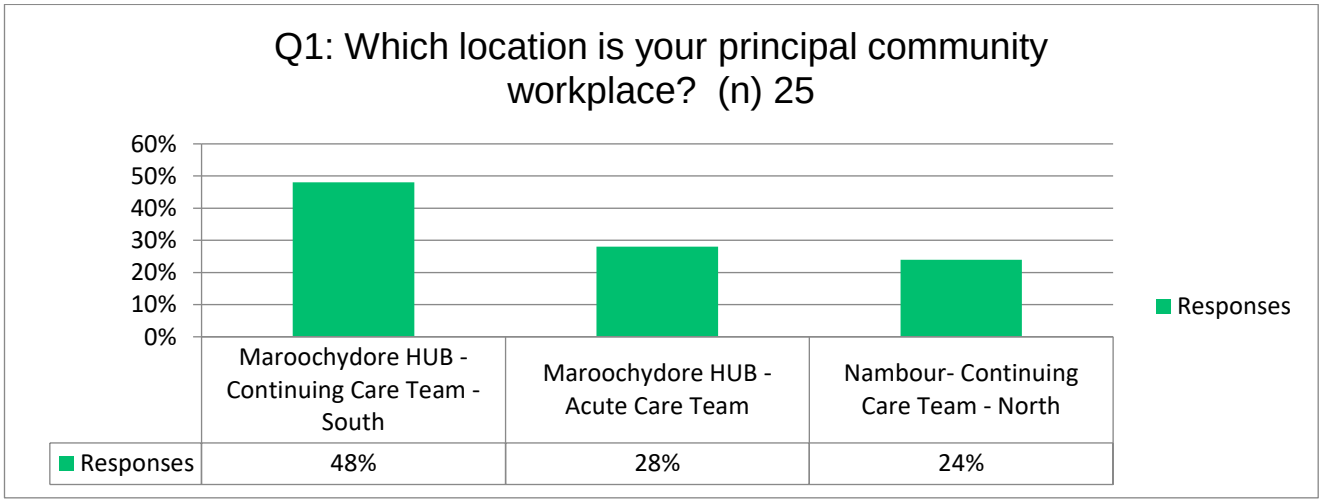
2.4 Findings: Online Survey and Focus Small Group Interviews

Online Survey

An online survey was conducted over a two-week period to capture staff working shifts, as per the approved research protocol outlined previously (Appendix six), for the three teams involved in the project. 25 responses were received with associated comments which are self-explanatory and are presented below:

Nurse Practitioner Mental Health Community Model of Care – Staff Survey

Q1: Which location is your principal community workplace?



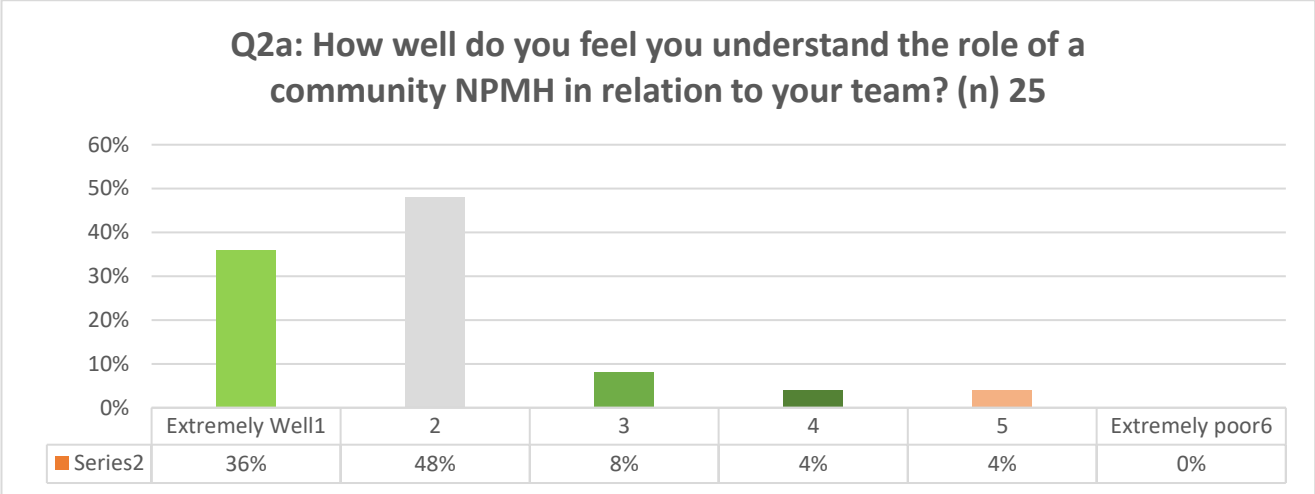
	Maroochydore HUB - Continuing Care Team - South	Maroochydore HUB - Acute Care Team	Nambour- Continuing Care Team - North
Responses	48%	28%	24%

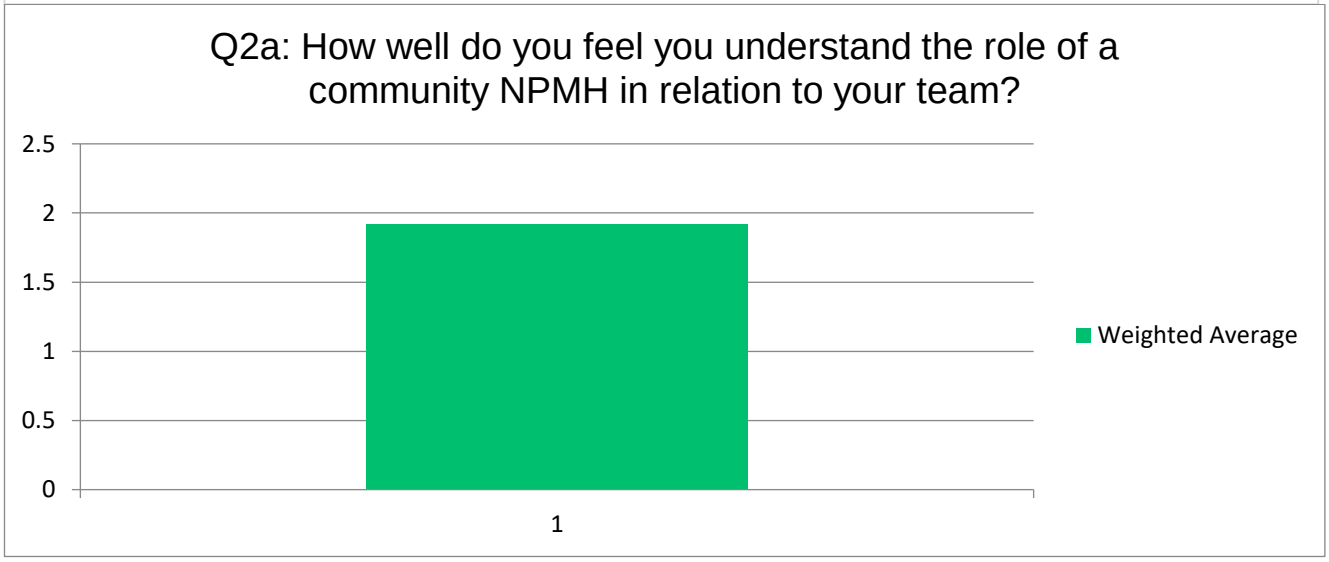
Teams	Responses	
Maroochydore HUB – Continuing Care Team – South	48%	12
Maroochydore HUB – Acute Care Team	28%	7
Nambour- Continuing Care Team – North	24%	6
	Answered	**25**

Q2a: How well do you feel you understand the role of a community NPMH in relation to your team?

Extremely Well1		2		3		4		5		Extremely poor6		Total	Weighted Average
36%	9	48%	12	8%	2	4%	1	4%	1	0%	0	25	1.92
												Answered	25

Extremely Well1	36%
2	48%
3	8%
4	4%
5	4%
Extremely poor6	0%





Q2c: What is your understanding of the activities that a NPMH community role does in your team? (n) 25

Responses
• It was very helpful for our team to have another clinician who prescribes outside of business hours who is aware how the team runs and of the consumers. It made our service more efficient (not having to call on-call reg) and we were able to respond faster to crisis needs. It also assisted with the consultant / reg workload and was useful for discussing medication queries etc over the weekends or evening shifts. Rob fit well into our team environment and his experience was great to have on board
• The initiation and role of NP was never discussed with the team
• I feel I understand the need and importance of a Nurse Practitioner within a community team as I have worked with them and have seen the benefits
• Have a thorough understanding
• I have worked closely with NP so understand the role
• I have worked closely with Rob; he oriented our team to his service very well on commencement of role. He has been helpful and makes himself available at times of Acute need
• Roles and Responsibilities – medical review including full mental health assessment, physical health assessment, medications prescription except for clozapine
• Worked closely and regularly with the Nurse Practitioner
• Adequate
• Explanation was provided by MHNP on commencement
• Feel reasonably clear
• I actually have a limited idea of availability and role with our team
• NP assists in management of deteriorating patient in urgent interventions whether during or after hours. Purpose is to keep the patient in the community, avoid admission. In the Acute Care Team, NP interventions essentially after hours
• I have conducted several home visits to see my clients with the community NP clinician
• Understand the role fairly well
• I have a very clear understanding of the role but am always cautious about being 100%
• Additional support for community management of consumers with deteriorating mental state including providing after hours medical support and assistance with medical reviews, prescribing and medication advice
• The NP has provided acute clinical interventions for the deteriorating patient after hours with the capacity to enable ACT to provide community-based treatment vs hospital care
• NPMH is extremely useful in assisting with assessing, diagnosing, and prescribing in collaboration with our doctors. NPs take a great amount of pressure off the team medical staff by filling gaps within the service
• Have had direct conversations with NP to clarify role
• I am unsure of their scope of practice on when I refer to them instead of the Psychiatrist/Psychiatric Registrar
• I feel like Rob has explained the role quite well and has been in constant contact with the team around how his role can support the case management model within the CCT team
• The role was explained well to the team prior to the nurse practitioner starting

• Feeling supported and knowing the client is safe, in a clinical perspective utilising MHNP expertise
• Rob is approachable and an invaluable asset to our CCT North Team in assisting with home visits with our deteriorating patients and sometimes able to prevent an admission or other times admit seamlessly. Rob has been helpful and invaluable when we have had an absence of Medical or Registrar cover in relation to prescription writing or medication reviews. Rob is an invaluable resource for us as well

Q2c: What is your understanding of the activities that a NPMH community role does in your team? (n) 25

Responses
• Provides after hour advice / review / medications to consumers of ACT which can assist in keeping these consumers out of hospital. Also streamlines team processes and offers much needed additional support in the afterhours spaces.
• Assist with follow up consultations, minor medication changes, prescriptions
• The Nurse Practitioner helps the team by reviewing patients when our doctors don't have the capacity or availability to do so. • Support the team by reviewing patients that have ongoing and more frequent reviews. • Supporting the team with second opinions.
• Full understanding of activities
• Consultation • Medication management • Expertise
• I use NP similar to psych Reg. He is as knowledgeable, more often available and able to home visit where psych Reg cannot
• Tremendous support for our team
• Providing a valuable leadership role within the team • Prescribing rights, which is essential in giving relief to valuable time for our Consultant and Registrar
• NP can assess mental state • Can prescribe medication, provide education around medication and assess side effects • Can support case workers and medical team in assessment and management
• NPMH provides support to case managers to assess and respond to deteriorating patients
• Medication advice • Crisis response to deteriorating mental health • Provide medication script • Risk management
• Scripts • Clinical support
• As above + pharmacological management of crisis in deteriorating patient
• Mental health assessment and prescription of medication

• Care of deteriorating patients in the community and support to the community teams
• Deteriorating patient reviews and medical support
• Home visits to review consumers • Medical reviews • Risk assessments • Prescribing of some medications • Medication advice • After hours clinical support
• Provides clinical service for the deteriorating patient to maintain community treatment and reduce symptoms and optimise recovery
• NPMH is extremely useful in assisting with assessing, diagnosing, and prescribing in collaboration with our doctors
• Support to assess and respond to deteriorating patients • Support medical reviews • Support case manager in clinical decisions
• Writes scripts (although I am not sure when they do this as opposed to the Psychiatrist/Psych Reg) • Review clients (although I am not sure when they do this as opposed to the Psychiatrist/Psych Reg) • Not sure what else they can do
• To provide support to clinicians for a more in-depth assessment to assist with treatment planning and assessing change in risk • To provide support for medical reviews and medication changes due to demand of the psychiatrist and registrar

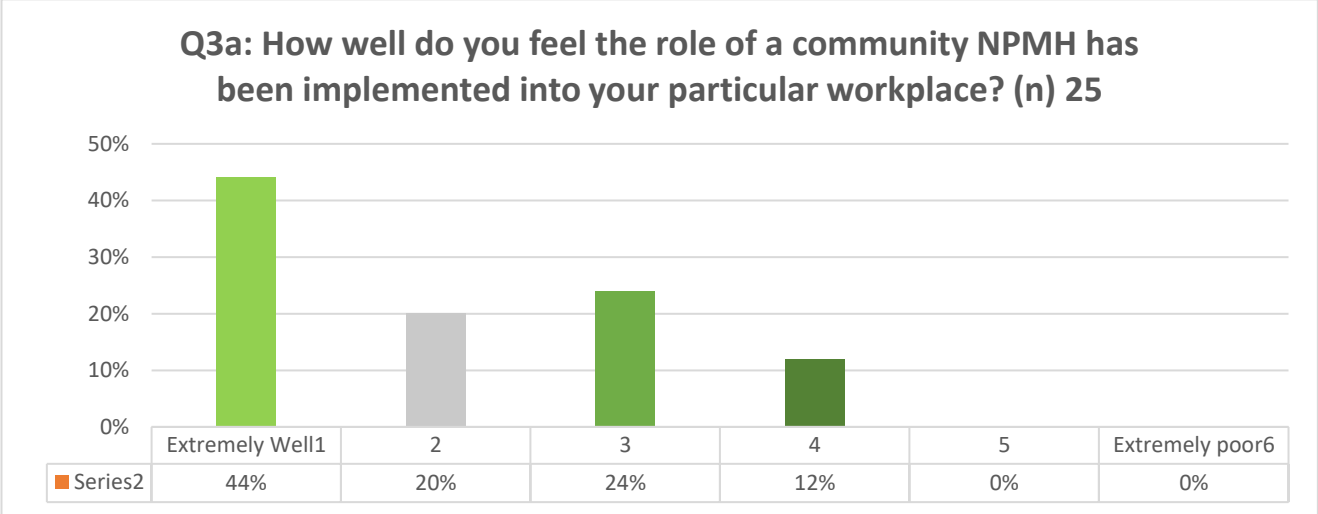
• The role continues to develop but the nurse Practitioner has been used effectively:
  ○ when the consultant has not been available in an advisory role (in the clinic and in the community)
  ○ providing scripts for medication and UDS's,
  ○ as well as medication reviews
  ○ secondary consultations for clinicians
  ○ as well as rapid access for deteriorating patients

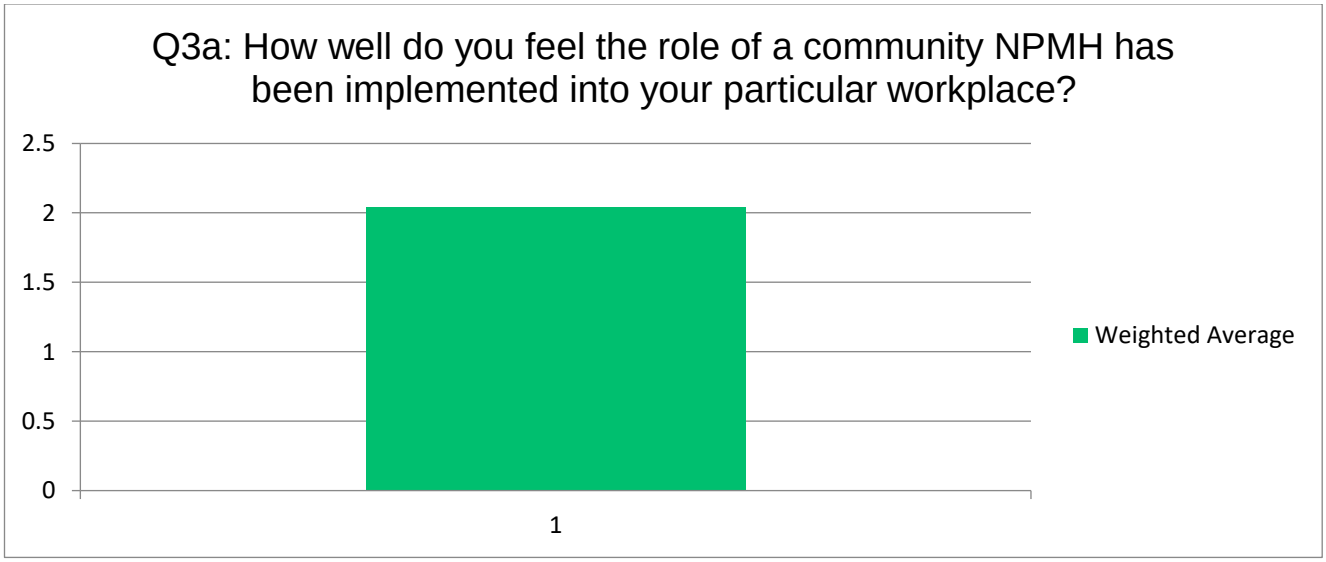
• Consultation • Advise deteriorating patient • Script writing • Assessment • Supervision
• Advanced assessment of Deteriorating Patient • Medication Review • Writing of prescriptions • Facilitation of admission • Supportive use of Mental Health Act

Q3a: How well do you feel the role of a community NPMH has been implemented into your particular workplace?

Extremely Well1		2		3		4		5		Extremely poor6		Total	Weighted Average
44%	11	20%	5	24%	6	12%	3	0%	0	0%	0	25	2.04
												Answered	25

Extremely Well1	44%
2	20%
3	24%
4	12%
5	0%
Extremely poor6	0%





Q3b: Provide a comment to explain the reason for your choice (n) 25

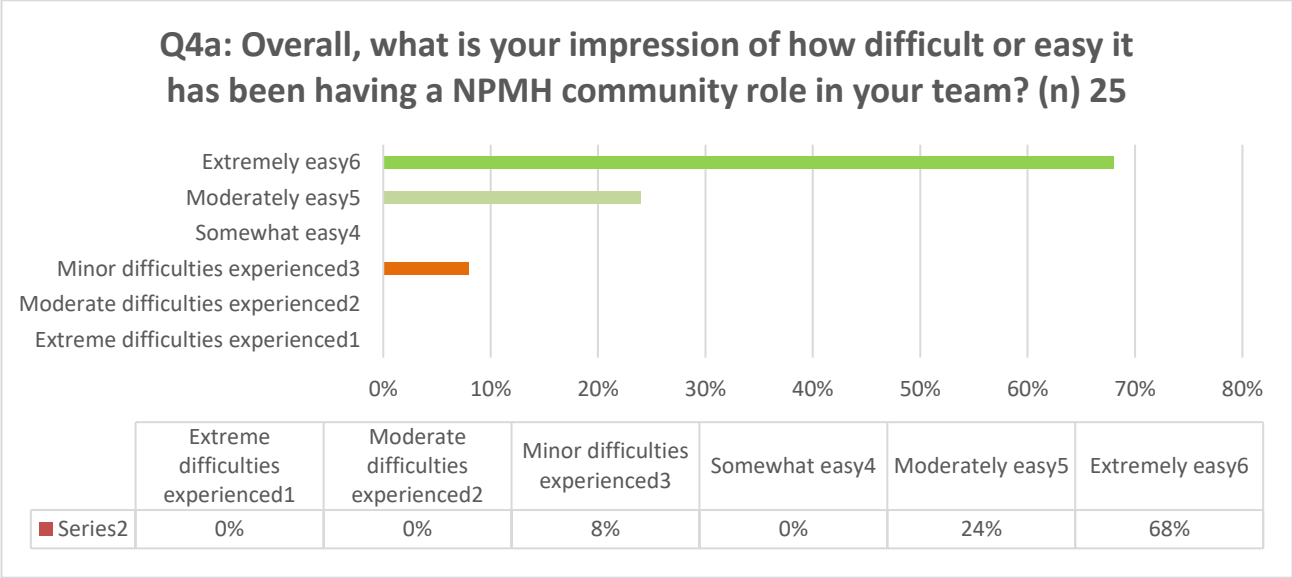
Responses
• Has been utilised at times we really need NP – late shifts and weekend work
• As listed above, an introductory description for the NP role was never handed over to team
• I feel the support from the NPMH role has greatly improved the efficiency of the functioning of the team
• Fills a huge gap where medical coverage is poor
• We greatly value the NP role. It has taken pressure off requiring Doctor especially on weekends.
• Rob is well involved with CCT's
• The NP involvement in our team has been good
• The Nurse Practitioner has been implemented extremely well, giving support to junior and senior staff alike • Staff also are able to access the NP'S diary in order to plan and organise time with the Nurse Practitioner.
• Clinicians have been working autonomous for long periods so having another clinician accompany has not initially been a natural plan • NP has provided cover more for lack of other alternate medical appointments
• The NPMH has been utilised regularly to provide assessment and treatment of deteriorating patients
• Clinician was underutilised, not booked to see patients enough
• As per prior answer • Not sure if supporting role
• In regard to the Acute Care Team. The roster of the NP could be reviewed to cover those times during the week when medical officers are not available (reduced capacity)
• I feel that the role could be utilised more than it has been so far
• The Acute Care Team really needs coverage on Wednesdays due to doctor meetings and reviews Very helpful on weekends however
• I don't feel everyone is utilising the np as well as they could. I believe that there is a poor understanding of the experience and expertise the np has and therefore people don't think to book the np. There needs to be further time for people to fully understand the role
• Excellent additional resource for afterhours clinical work and medical input for managing acute presentations for both existing and new consumers.
• We have utilised the role on every available shift, and provided acute higher-level care after hours than the team has usually available
• I think the team could utilize the NP more, however, some staff are not used to having NPs to rely in. They are also unsure of their role. However, with more exposure to NPs and their clinical expertise I believe staff will feel more and more comfortable utilizing their services.
• Could have more direct contact with case managers. • Has been very helpful in access to medication changes including scripting and pathology.
• I don't hear of them being utilised

• I feel that the NP role has been well implemented into the CCT as the NP calendar is full and clinicians are seeking to utilise the available appointments.
• Valuable asset
• The nurse Practitioner has become a very well respected and well used resource within the team
• It would be good to have more access to Rob or having an NP full time in our team

Q4a: Overall, what is your impression of how difficult or easy it has been having a NPMH community role in your team?

Extreme difficulties experienced1		Moderate difficulties experienced2		Minor difficulties experienced3		Somewhat easy4		Moderately easy5		Extremely easy6		Total	Weighted Average
0%	0	0%	0	8%	2	0%	0	24%	6	68%	17	25	5.52
												Answered	25

Extreme difficulties experienced1	0%
Moderate difficulties experienced2	0%
Minor difficulties experienced3	8%
Somewhat easy4	0%
Moderately easy5	24%
Extremely easy6	68%



Q4b: Provide a comment to explain the reason for your choice (n) 25

Responses
• Integrated smoothly into team processes and offered good additional support that was needed
• It has made easier access to certain medical resources
• I don't feel as though there has been any negative impacts from having a NP on the team
• Our NP is very approachable
• Integrated well • Role explained • Nil difficulties experienced
• Rob is easier to access than the busy doctors, very experienced, provides excellent formulation and plans
• Great experience
• It has been extremely easy having a NPMH in our team as it has provided a terrific understanding of the role for our staff and a valuable resource
• Lack of autonomy for NP • Scope of practise, unable to provide pathology forms • Not able to assist with Clozapine if needed as unable to prescribe
• The NPMH is flexible and approachable
• Participated on team level well, helpful & professional
• -
• The NP represents added valuable skills and knowledge leading to increased capacity to respond to crisis situation with solid and comprehensive intervention and avoiding time and resources consuming of an admission. This makes having an NP in the team not only easy but a great bonus
• It has been such a great addition to the team
• Has been very supportive
• Access simple and uncomplicated
• Easily assimilated into community team and role of ACT, working alongside clinicians and much easier to access NP for medication advice
• Our NP always communicates with the team in an open and considered manner. Approachable at all times
• Rob has a lot of experience and knows what he is doing • He's a great addition to the team
• Due to shared role with other team some access issues. If more time available, it would be better
• I would have preferred to pick option 'unsure' if one was available
• I believe the NP role has been an excellent addition to the CCT and has provided an increase in the quality of care provided
• The nurse Practitioner has been very approachable and is always happy to help
• MHNP remain transparent and approachable
• Rob has transitioned into our team effortlessly and is a valued member of our team and a welcome resource

Q4c: List any activities that you found easy, or more easy than other things, to do with the introduction of the NPMH community role in your team. (n) 23

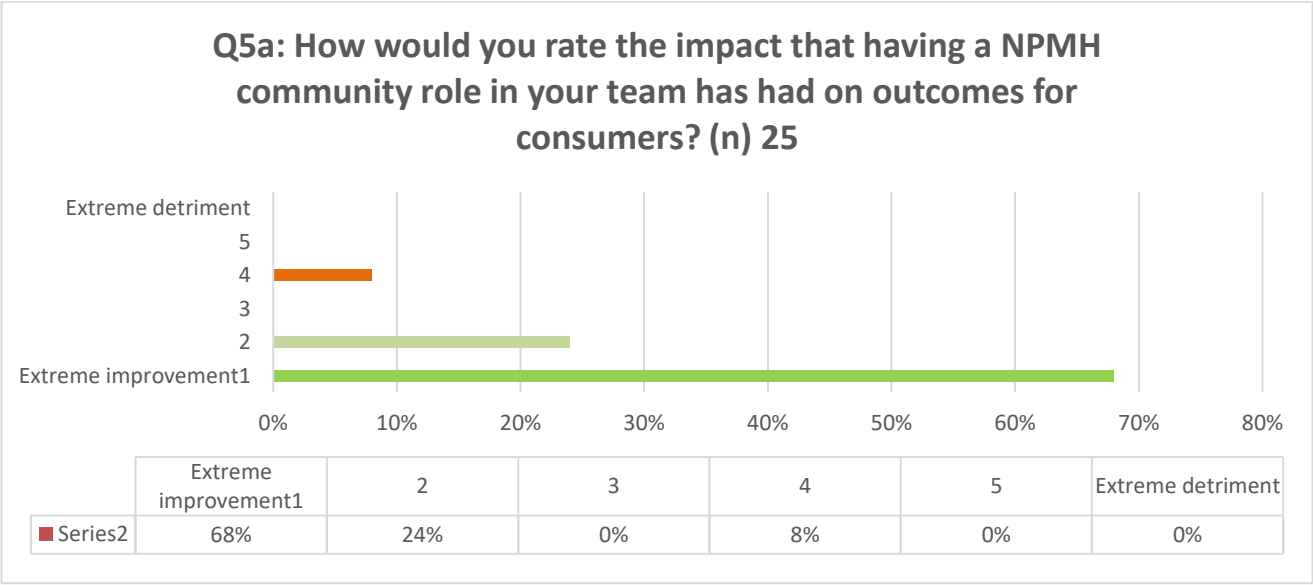
Responses
• Gaining access to scripts • Gaining additional input and assessment into complex consumers • Better access to assessments at home
• Regular reviews
• Providing essential service via outreach with Case Manager
• Extra consultation opportunities. • Nil need to chase psych reg on call at weekends
• Able to access assessment in acute situation rather than wait weeks for medical review
• Booking appointments • Helpful in giving advice • Supportive
• Home visits and medical reviews with the NPMH have been extremely helpful for me to give a valuable delivery of service and a new perspective in patient care
• As Above • Helpful to have availability at times for prescriptions to be written and second opinion of MS
• Review medication • Provide scripts • Provide pathology request forms • Provide joint home visits for assessment • Troubleshooting
• Direct discussions • Bookings • Availability
• Very supportive when we engage
• Pharmacological intervention • Assessment of deteriorating patient
• Booking appointments in with NP
• Medical reviews
• Booking • Managing acute deterioration • Hospital diversion • Comprehensive care • Patient centred • High level experience • Detailed assessment • Management of medication safety among other things
• Medication advice and management to maintain community treatment
• The communication to the team was clear

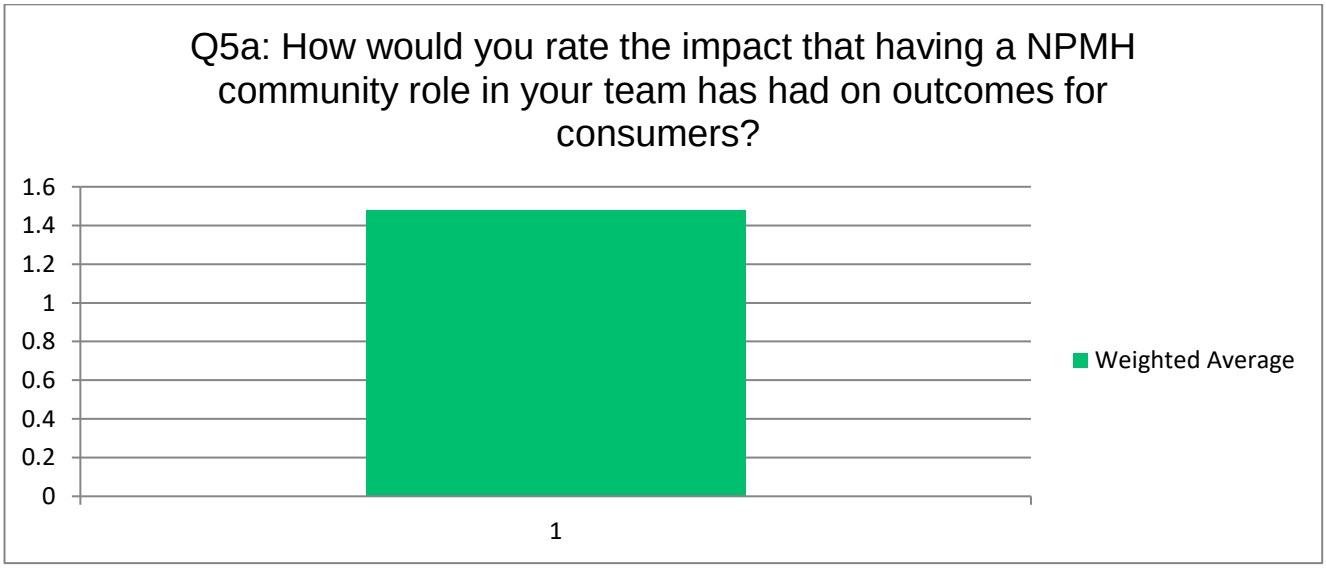
• Helpful to have someone else on the team that can assess/diagnose/and prescribe • Our clients no longer have to wait for care to be provided due to lack of medical appointments
• Get clients reviewed and scripts written when Psychiatrist/Psychiatric Registrar unavailable
• I found it easy to book an appointment • I found it easy to discuss clients with the NP and assist in formulation of a treatment plan
• Time saved in having to deal with scripts, tricky situations in the community regarding deteriorating clients and risky situations
• Admission and assessment for DP
• Prescription writing • Medication reviews • Urgent Assessments of Deteriorating Patients

Q5a: How would you rate the impact that having a NPMH community role in your team has had on outcomes for consumers?

Extreme improvement1		2		3		4		5		Extreme detriment		Total	Weighted Average
68%	17	**24%**	6	**0%**	0	**8%**	2	**0%**	0	**0%**	0	25	1.48
												Answered	**25**

Extreme improvement1	**68%**
2	**24%**
3	**0%**
4	**8%**
5	**0%**
Extreme detriment	**0%**





Q5b: Provide a comment to explain the reason for your choice (n) 25

Responses
• By being able to respond to deteriorating consumers in the afterhours space has kept consumers out of hospital
• It has been a fantastic resource, but I feel we could utilise this resource better with more education on the role
• I feel that increased availability of having someone to reviews our patients has provided more security and reduced the risk for some of our consumers
• Clients can access essential mental health cover
• It has been very successful • Works well and relieves pressure in other areas
• Made my work a lot less stressful
• If there is no medical cover, NP has provided great support for our team
• There have been very good outcomes and improvements for several of my own clients
• Limited as time structure but helpful when available
• Timely and flexible interventions
• Avoided delays that would normally be encountered if waiting for a medical review • Additional staff member to assist in clinical management of complex and/or deteriorating patients
• I rarely work with him • Not transparent re role and availability
• Improvement in fast delivery of pharmacological intervention. Reducing risk of further deterioration and decreasing need for presentation to ED
• Such as great role especially when medical reviews with the consultant are booked up and not available for weeks in advance
• Wish we could have a NP full time
• As previously outlined high level experience and able to support the team effectively and efficiently
• Able to provide additional clinical support including medical interventions to manage community consumers after hours
• Able to provide advanced clinical nursing practice level to treatment that was initiated after hours and enabled community-based care to continue
• It improves access to care for clients that would otherwise need to wait for a doctor's appointment to become available. • Additionally, having the NP assist CMs with reviews is extremely helpful in making sure they are receiving a holistic treatment plan
• Access to better psychoeducation
• Increased availability for clients to someone who has the power to review and prescribe medication
• I feel that the NP has had a great impact into the team and provided a great service for the team, that improves health outcomes for our clients
• Reduced stress levels for staff and has impacted on better outcomes for the consumers as their needs have been met quicker
• Once again valuable asset
• Facilitate seamless admissions and or prevent admissions to facilitate least restrictive practice and facilitate assertive community follow up

Q6a: Are there any other comments (for example concerns, compliments or recommendations) that you would like to make us aware of in relation to having the NPMH community role in your team?

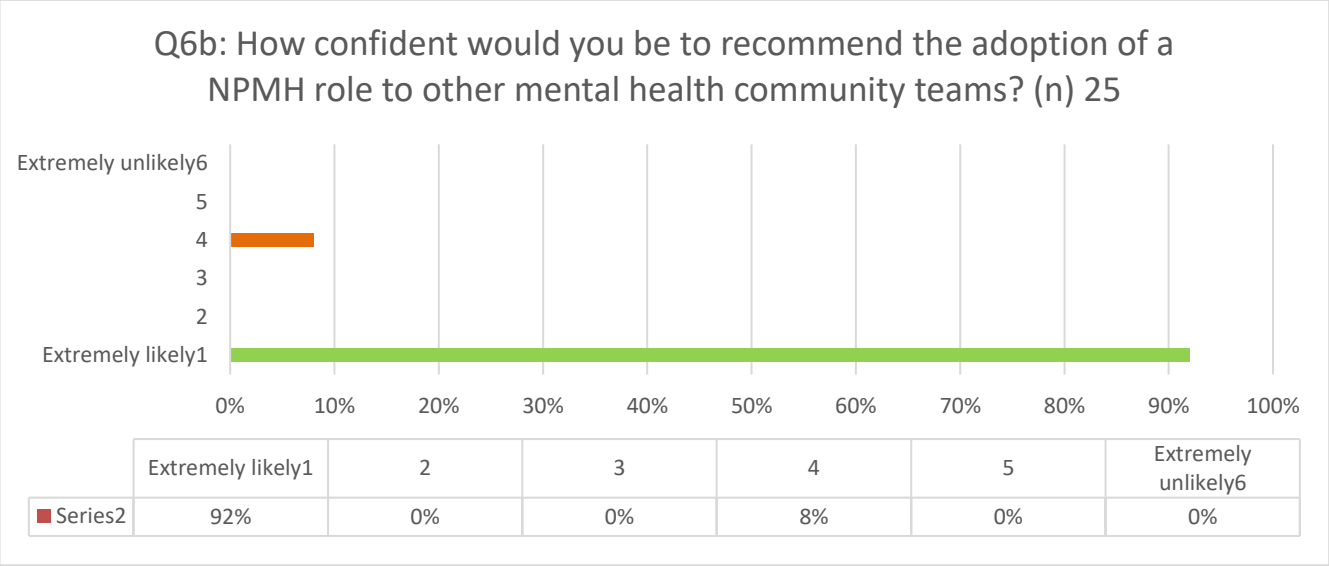
Responses
• It would be a shame to lose this position from our team. I feel it has been invaluable for both team workload and consumer outcomes
• Introductory education that can be given/circulated regarding the role of NPMH
• n/a
• No
• The NP has benefited the team greatly
• Please continue role and if possible, add more NP roles
• Highly recommended for NPMH to be integrated in the community team
• One of my client's family members (mother) provided a written compliment to the team due to one outcome for her relative
• Consultation between NP, medical and case workers to progress process and accountability. • It appears as though NP needed to always discuss with medical before decision making. • As there is lack of clinical medical time it would be preferable for NP to have decision making scope of practise in certain areas, medication and side effects etc.
• The MHNP has been an invaluable addition and resource in providing timely and evidence-based care to our client group
• No
• Easy to talk to when we do engage
• It would be great to have more hours of an NP in ACT
• I believe this is an essential role and should be continued
• No
• The only further comment would be for there to be improved understanding of the team regarding the role of np. When utilised well the role has made a significant difference when having to manage acute deterioration
• Rob has been very approachable and responsive to any requests for assistance and has been an asset in assisting to manage consumers with crisis presentations or CCT consumers with medication issues after hours for staff working in MH CALL
• I consider our NP as an adjunct to acute community mental health that strengthens the capacity of service delivery, the depth of knowledge and increased scope of practice supports the team in its afterhours assessment and treatment
• NPMHs are great. We need more of them!
• -
• It would be very helpful to provide ongoing education regarding the NPMH Community role so that new staff can be made aware of the NPMH Community scope of practice to maximise utilisation
• I feel the role of an NP in the community should be made a permeant position across all the community teams. • I feel that Rob has made a great contribution to the CCT team

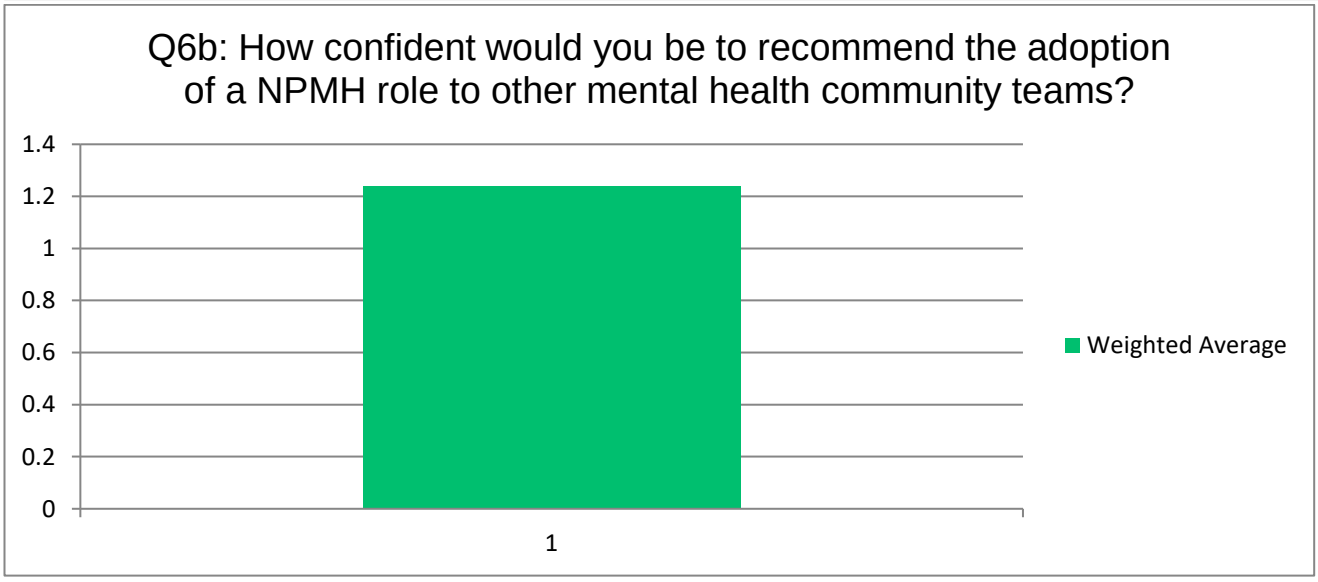
• Our team would love to have a nurse Practitioner as a full-time post
• Consider a permanent role for MHNP we have come a long way and this project enables leadership
• I would highly recommend a full-time position of NP's in community teams as Rob is friendly, professional and approachable and extremely thorough in his assessments and interventions and has intact professional boundaries in respecting interdisciplinary boundaries with working with Consultant Psychiatrist and Case Managers identifying his role in the team as a value added service • Rob is able to quickly develop a therapeutic rapport with a variety of different types of consumers

Q6b: How confident would you be to recommend the adoption of a NPMH role to other mental health community teams?

Extremely likely1		2		3		4		5		Extremely unlikely6		Total	Weighted Average
92%	23	**0%**	0	**0%**	0	**8%**	2	**0%**	0	**0%**	0	25	1.24
												Answered	**25**

Extremely likely1	**92%**
2	**0%**
3	**0%**
4	**8%**
5	**0%**
Extremely unlikely6	**0%**





Small Focus Group interviews

In addition to the online survey above the same questions were utilised within Focus Group Interviews to gather additional comments from clinicians involved about their understandings of the MHNP role and its implementation.

Thirteen staff participated in the small Focus Group interviews. One from CCT S, three from ACT, six from CCT N, and the three Team Leaders in their own group. It was unfortunate that on the day of the scheduled groups clinicians were not able to attend due to the acuity of consumers, requiring staff to attend to consumer care as a priority, and staff absences due to emergent leave. This resulted in only 13 participants from the overall pool of 80 clinicians from the teams involved.

The project advisor/author is trained in thematic narrative analysis (Riessman, 2008; Riessman and Speedy, 2007) and principles of this were used in an initial evaluation analysis of the transcribed data from the interviews to create the themes listed below. Please again note, this is evaluation only data for the purposes of this report. Further in-depth research analysis and articulation of this would be anticipated at a future date, as per the research protocol and ethics approval (Appendix Six), to meet the standards required for further dissemination and publication.

Themes from small focus group interviews:

The MHNP role was perceived as an additional support or resource to the teams. This was noted particularly in relation to being a "conduit" of communication between teams transferring patients/consumers; offering a secondary consultation or second opinion process for clinicians in in relation to managing clinical deterioration; an advanced level of assessments/treatment; and the prescribing of medication particularly in the after-hours space when medical staff not available.

Senior nursing leadership provided by the MHNP role which included: expanded clinical expertise, clinical and professional development, proactive treatment for consumers in the out of hours space and the potential for nurse led clinics into the future.

The MHNP role was well understood by the majority of the participants:

> "I think I understand the role really well" with comments from 1-3 of about some confusion over understanding the role and focus upon its commencement: " I feel the team initially didn't understand how we would utilise him", and one comment of not understanding the MHNP scope to not prescribe clozapine medication.

Benefits for patients/consumers included the flexibility of the MHNP role being more mobile, seeing people in their own homes and that the time taken to see people was reduced and more streamlined:

> "…this is a huge benefit for them[consumers] to be treated in their own environment".

> "There is a more streamlined process for the consumer. For a deteriorating patient it has been more effective".

> "With a more streamlined process you can be more relaxed at the end of the day. When you go home you can think about what you are going to do for the rest of the week and not worry about work ".

Also, that the MHNP role was "quite helpful" in admissions to the ED for patients/consumers as they knew that environment well.

The MHNP role was well accepted and integrated into the teams involved:

"I do think the NP role offers the team a great resource in being able to provide comprehensive treatment options for deteriorating patients in the out of hours space and this is a key strength of this position".

These themes are similar to those within the online survey comments cited above, which is not surprising as they were the same questions. Given that some teams worked shift work both the Online Survey and Focus Group Interview options were offered to clinicians involved in the project to maximise their feedback. Overall the MHNP role was well understood, valued, integrated and utilised within the teams involved who responded.

2.5 Discussion

MHNP role meeting project aims to improve emerging unmet patient/consumer care

From the data presented above the SCHHS-MHAS role has demonstrated an impact on improving patient/consumer care in the three specific practice areas identified in the project aim:

- Maximising a community scope of practice, inclusive of prescribing medication and after-hours crisis management, for complex clinically deteriorating consumers across the continuum of care.
- Providing secondary consultation and support to primary mental health and associated community support services of the assessment, treatment and management of mental health consumers.
- Providing a rapid nursing response for the increased unmet need for clinically deteriorating consumers, within an interdisciplinary approach.

These interventions are exemplified in the below practice narrative collated by the MHNP during the project:

The MHNP was asked to review a 38yr old man with a diagnosis of Paranoid Schizophrenia prior to the administration of his Long-acting Injection (LAI) medication, due every 28 days. A review and information provided by his case manager indicated that within the last 12 months this patient had been admitted to the Acute Mental Health Inpatient Unit eight times.

This patient/consumer was subsequently commenced on the LAI medication. However, due to his reluctance and poor insight into his illness he had been required to be transported via Queensland ambulance service/Queensland police service (QAS/QPS) to the Emergency Department to receive this medication every 28 days for the last 5 months.

The MHNP reviewed the patient/consumer with his regular case manager and patients/consumer's mother. The review involved rapport building, assessment, psychoeducation, reflection and treatment option discussions. These interventions resulted in patient/consumer receiving his prescribed LAI medication and avoiding the need to involve QAS/QPS and hospital presentation. Subsequently a written compliment was received from the

patients/consumer's mother regarding the MHNP interventions and inclusiveness/thoroughness of the intervention.

MHNP role meeting project aims to develop advanced practice positions: Nurse Practitioners

This SCHHS-MHAS pilot of a MHNP Community role builds on prior work within this service on MHNP roles in the Emergency Department setting, the traditional role of a MHNP. The shift to a MHNP role in selected community teams, alongside the early findings cited above, indicate this is a valuable role for the impact on patient/consumer care, and has been well accepted within the multidisciplinary teams involved. While other MHNP roles may exist in Queensland developed out of local necessity, this is the first formally evaluated pilot via OCNMO and as such creates a platform for other interested services to build upon in developing MHNP community roles. This is a key focus of the Innovation fund – creating advanced practice positions. Resources created by the SCHHS – MHAS project are available to be shared with other interested services to support new MHNP community roles.

Continued benchmarking with Victorian Mental Health Services already undertaking MHNP Community roles, offers opportunities to more rapidly develop these roles based on Interstate implementation learnings. Further data and evaluation are required to ascertain the effectiveness of these roles longer term as they are developed within other health services.

Senior clinical leadership

The SCHHS-MHAS MHNP role highlighted the usefulness of a senior clinical role which works both within and across community teams in a mental health service. For example, the MHNP's high level of clinical leadership bought insights and understanding of service improvements needed for consistent clinical deterioration monitoring and hospital avoidance strategies in relation to improving patient/consumer care and the systems involved in achieving this. This aligns with the Nursing and Midwifery Board of Australia, Nurse Practitioner (NP) standards. More specifically, the NP education, research and leaderships domains embedded within the four clinically focussed standards in the link below:

https://www.nursingmidwiferyboard.gov.au/codes-guidelines-statements/professional-standards.aspx

Acceptance of the MHNP role in established community teams

At the commencement of the project the team involved carefully considered governance structures and engagement with the three Team Leaders (operational managers– Allied Health and Nursing) to ensure effective communication about the project via these roles to the teams and clinicians involved.

These managers, the MHNP and Nursing Director became the main drivers of the project with additional oversight from the MHAS Governance Group, SCHHS-MHAS and the EDNM Executive Sponsor. In addition, the MHNP selected for the pilot role was an extremely experienced clinician of 11 years as a MHNP. This expertise resulted in the quick acceptance by community clinicians of the value of the MHNP role as a skilled practitioner who could offer expert clinical skills, including the of prescribing of medication in the after-hours space when

medical staffing was limited. In addition, the MHNP was valued in their secondary consultation role to upskill and support local teams in managing complex patients/consumers.

Hospital avoidance

Hospital avoidance was achieved for 18 patients/consumers, likely more as the MHNP was conservative in the estimates from the data. Even this number is significant in terms of cost savings to the SCHHS-MHAS by one MHNP role. Using the figure of $2500-$4000 supplied by Dr Downes Associate Professor, cited previously from workshop costings, means a savings of between $45,000 -$72,000 for the service by delivering care in the community, often closer to family/carers. This also aligns to recovery orientated care for mental health consumers required in national health directions.

Given the above savings to the SCHHS-MHAS, the MHNP role and model of care is worthy of further consideration as part of an overall service approach to hospital avoidance. In addition, further data collation, evaluation and research around these roles and their contribution to hospital avoidance and the delivery of a comprehensive high-level care in a community setting is worth further exploration.

Additional community team support in COVID 19

During the project the event of the pandemic COVID 19 occurred which had an impact on the MHNP being requested to provide care to an additional team not in the original project, to support a medical deficit. The team understood the MHNP role and were accepting of the additional clinical support. This demonstrated the capability of the MHNP role to be flexible and adapt to local service need.

Sustainability of a MHNP role: Tailoring an MHNP role and model of care to the local service context

At the commencement of this project, the MHAS Nursing Director and MHNP clinician involved called upon their prior extensive knowledge of NP roles to develop the scope of practice for this new community role. They also talked to the MHAS Nursing Executive and local team leaders about how this role might be utilised across teams to meet the project aims, as outlined in section 1.3. This lead to the MHNP role being located operationally within the ACT team but also servicing the two other community teams CCT S and CCT N who manage the majority of MHAS consumers.

Conversations with the local MHAS team leaders while reviewing this project during its final stages elucidated some interesting comments about the utility of a MHNP role in light of the above placement of this clinician and considerations for developing a model of MHNP care. These team leaders suggested that a MHNP role could continue to be based both within and across a number of teams depending on the service need. For example, the placement of a MHNP role is best thought about in terms of service need holistically rather than just as an individual team's needs. The sharing of such a role facilitates inter-service communication and networking which is vital to meeting the mental health needs of consumers when transferring their care. This is an important aspect to consider in developing a model of MHNP care to meet community needs. The practical aspects of hours worked needs to be negotiated to meet both the service need in the after-hours space, and the health and wellbeing of the MHNP involved to maintain clinicians in the role longer term.

In addition, the project team and local teams involved acknowledged the exceptional level of clinical expertise and leadership of the SCHHS-MHAS MHNP. Rob Leerentveld was the first mental health NP in Queensland and has a well-deserved reputation for excellence. This does however pose a dilemma for other MHNPs commencing in the role and the teams supporting them. Not all MHNPs would be at the level of the SCHHS-MHAS clinician in

this project when they start. Consideration needs to be given when developing a model of care to the supervision and support required for any new MHNP in the role to facilitate their professional development and clinical leadership. Networking MHNPs at a state-wide level, as outlined in Section 1.1, would supplement local services support systems for MHNPs as part of a care model and provide much needed collegial connections for senior leadership roles.

2.6 Recommendations

- In line with the EB 10 Innovation Fund project aims, MHNP roles be considered for other interested Hospital and Health Services with support offered in the establishment of these and a model of care from the SCHHS-MHAS pilot site, drawing upon the findings of this report.
- Hospital and Health Services (HHS's) interested in developing MHNP roles take into consideration the findings of this report, alongside their own local practice wisdom, model of care, operational and professional requirements. The outline of governance structures and engagement undertaken with local team leaders in this project, was pivotal in the uptake of the SCHHS-MHAS MHNP role and a notable local learning that maybe useful to others.
- The proposed scalability of a new model of care and scope of a community MHNP practice role (outlined in section 1.1 Project background and policy context) be considered by those Hospital and Health Services interested in developing such roles within their mental health services. This three-stage approach (pilot SCHHS-MHAS site, establishment of a new state-wide MHNP network and the consideration of additional interstate networking), allows for support from the pilot SCHHS-MHAS site to other interested Hospital and Health Services, and the sharing of current resources including the MHNP scope of practice to facilitate the development of further nursing career pathways to the top of an MHNP's scope of practice.
- Further data collation, evaluation and research around MHNP Community roles is needed, alongside understanding their contribution towards addressing critical aspects of Mental Health Services requirements and strategic directions. These directions include hospital avoidance, addressing clinical deterioration and building the future nursing workforce in new, top of scope roles. This would consolidate the evidence base for not only MHNP community roles but also the clinical interventions MHNPs undertake which is lacking in the current Australian context and literature.

2.7 Conclusion

The Mental Health Nurse Practitioner (MHNP) role has been embedded within the SCHHS- MHAS in two Continuing Care Teams and the Acute Care Team, providing three days clinical coverage per fortnight to these teams.

This role has delivered over 460 interventions specifically for clinical deterioration, secondary consultation and medication intervention for mental health consumers. In addition, the MHNP role has prevented 18 occurrences of Emergency Department presentations, a significant contribution to hospital avoidance by one practitioner within the 12 months of this project.

Initial evaluation from the teams involved is positive with feedback indicating the clinical relevance of the MHNP Community role. This demonstrates the significance of this senior nursing role for its clinical effectiveness, leadership and acceptance within the multidisciplinary mental health community teams in this pilot.

In relation to nursing workforce, this MHNP role meets the Innovation fund requirements by connecting this project's outcomes with the State-wide directions of the Advancing Health Service Delivery through Workforce: A strategy for Queensland 2017-2026. In addition, the NPMH Community role offers new future nursing career pathway opportunities for not only qualified MHNP's but also interested not yet endorsed MHNPs. For example, MHNP candidacy pathways opportunities exist where the Australian Health Practitioner Regulation Agency (APHRA**)** endorsed MHNP trains up an interested, not yet APHRA endorsed MHNP, into the role with relevant governance, operational and professional support and supervision.

The sustainability for future community MHNP roles and the development of a model to address this, within the SCHHS and other Health Services, has been discussed alongside state-wide networking to support the development of these roles.

While MHNP Community roles are promising from the initial learnings of this project, they are local to the SCHHS-MHAS. Therefore, these roles need to be replicated in other sites to determine their effectiveness and contributions to both state-wide health services and the broader body of nursing professional knowledge.

NOTE Thanks is given again to all those listed in the acknowledgements at the start of this report and also the many staff, too numerous to list, who have supported the team involved throughout the 12 months lifetime of this project.

Acronyms

Term	Description
ACT	Acute Care team
CCT	Continuing Care Team
MHAS	Mental Health and Addiction Services
MHNP	Mental Health Nurse Practitioner
NP	Nurse Practitioner
OCNMO	Office of the Chief Nursing /Midwifery Officer
SCHHS	Sunshine Coast Hospital and Health Service
TL	Team Leader – local operational manager may be non-nursing

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Appendices

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Appendix One: SCHHS-MHAS Service Description

Service Description

The Sunshine Coast Mental Health and Addiction Services (MHAS) provide hospital-based inpatient/consumer, residential, community / ambulatory mental health services and community alcohol and drug service to those living within the Sunshine Coast region.

The mental health and addiction services support children, adults and older consumers requiring inpatient/consumer and community / ambulatory treatment of mental illness and substance misuse. The service will be delivered as a contemporary, integrated model of care, focusing on research, community education and seamless continuity of care across all settings.

Services Provided

Acute inpatient/consumer care and sub-speciality services are based at the Sunshine Coast University Hospital (SCUH) and Nambour General Hospital (NGH). These services will provide short to medium term inpatient/consumer assessment and treatment of serious mental illnesses. An emergency department response is provided at SCUH, NGH and Gympie hospital. (see Table 1).

The Janelle Killick Community Care Unit located at Mountain Creek is a 35-bed residential rehabilitation facility with 24hr support from a multidisciplinary team to develop skills for successful transition to community living.

Community / ambulatory mental health and addiction services are based at community locations across the Sunshine Coast Hospital and Health Service and form a vital component of the contemporary and integrated model of care. (see table 2)

The service will maintain access to the:

- Secure Mental Health Rehabilitation Unit (SMHRU) located adjacent to the Caboolture Hospital. This facility provides 28 beds shared by agreement between the Redcliffe/Caboolture and the SCHHS. The Sunshine Coast Mental Health and Addiction Service accesses 9 beds at SMHRU.
- Glenbrook Residential Aged Care Facility is a 45-bed purpose built high care residential aged care facility at Nambour. The Sunshine Coast Mental Health and Addiction Service accesses 9 beds at Glenbrook.
- Lady Cilento Children's Hospital located in South Brisbane for children under the age of 14 requiring specialist children inpatient/consumer services.
- Hospital Alcohol and Drugs Service (HADS) at the Royal Brisbane Hospital for Adults requiring admission to inpatient/consumer detoxification beds; and to the Adolescent Drug and Alcohol Withdrawal Service (ADAWS) for young people.

Table 1: Mental Health and Addiction services to be available across the SCHHS

Facility	CSCF level*	Brief service description
SCUH	Level 5	• Level 5 Adolescent – acute inpatient/consumers (6 beds) • Level 5 Adult – acute inpatient/consumers (20 plus 4 intensive care beds) • Level 5 Older person – acute inpatient/consumers (12 Beds) • Level 5 Mental health assessment services (ED) • Services will be provided as part of the inpatient/consumer units; Adult Mental Health Intensive Care Unit (MHICU); electroconvulsive therapy (ECT); consultation liaison psychiatry and consultation liaison addictions services, inpatient/consumer therapy programs, adolescent mental health day programs.
NGH	Level 4	• Level 5 Adult – acute inpatient/consumers (20 plus 4 intensive care beds) • Level 4 Mental health assessment services (ED) • Onsite pharmacy level 3 which reduces the CSCF rating of the MH IPU • Services will be provided as part of the inpatient/consumer units; adult Mental Health Intensive Care Unit (MHICU); consultation liaison psychiatry and consultation liaison addictions services,
Caloundra Health Service (CHS)	N/A	• Community Older Persons Outpatient/consumer Mental Health clinics • Community alcohol and other drugs outpatient/consumer clinics • Continuing Care Team medication clinics
Gympie Health Service	Up to level 5	• See section for Gympie Community Mental Health Services
Mountain Creek Community Care Unit	Level 4	• Level 4 Adult Rehabilitation Service (35 non-acute beds)
Noosa Community Health Centre	N/A	• Community alcohol and other drug clinics

Table 2: Specialist community services

Service/support	CSCF-ambulatory	Description
Gympie mental health service	Up to Level 5	Located at Gympie Hospital. • Level 4 Child and Youth – ambulatory • Level 5 Adult – ambulatory • Level 5 Older Persons – ambulatory • Consultation Liaison service by community team Community alcohol and other drug clinics Community based mental health care including; child and youth, adult and older persons mental health as well as Evolve Therapeutic Services.
Acute care team	Level 5	Located at Maroochydore Health Hub. Facilitates 24 hour/ 7 days a week access through the 1300 MHCALL to mental health care for consumers with acute mental health illness. Includes a triage, assessment and short-term treatment component or refer to an alternative appropriate service provider. Include a co-responder service with Queensland Police Service.
Continuing Care Teams	Level 5 Adult – ambulatory	Located at Nambour (CCT North) and Maroochydore Health Hub (CCT South). Provides multidisciplinary community mental health treatment services to adults who are affected by mental illness and their families/carers. The model is traditionally a case management model. This team works Mon- Friday business hours.
Cultural Healing Program	Level 5	Is a specialist service and sits within the Continuing Care Team North Team. Provides culturally appropriate, holistic mental health care to Aboriginal and Torres Strait Islander people, with regular access to health workers and mental health clinicians. Delivers preventive and early intervention services to young people and their families.
Homeless Health Outreach Team	Level 5	Is a specialist service and sits within the Continuing Care Team North Team. Provides comprehensive assessments, care coordination and clinical interventions for homeless persons in the community who are experiencing mental illness.
Mobile Intensive Rehabilitation Team	Level 5	Located at Mountain Creek, Rehabilitation services. Provides services to adult consumers in the community with complex needs who would benefit from higher intensity involvement due to the unremitting nature of their illness. This team works 7 days a week and has extended hours.
Child and Youth Mental Health Service	Level 4	Located at Maroochydore Health Hub. Provides mental health care for children and young people under 18 years of age, and their families/carers. *Level 4 Perinatal and infant services
Assertive Mobile Youth Outreach Service (AMYOS)	Level 4	Located at Maroochydore Health Hub. An assertive engagement and intervention focus to assist adolescents decrease level of risk, reduce mental health symptoms, manage crisis situations, reduce the need for restrictive care options such as inpatient/consumer care, and increase the chance of engagement with clinic based services by discharge.

Service/support	CSCF-ambulatory	Description
Evolve Therapeutic Services	Level 5	Located at Maroochydore Health Hub. Provides specialist services to Bundaberg, Hervey Bay, Kingaroy and Gympie. The hub and spoke arrangement based at Mooloolaba supports children in the care of the Department of Child Safety who have extreme and complex emotional and behavioural problems.
Older persons mental health community services	Level 5	Located at Maroochydore Health Hub. Provides coordination of care to persons older than 65 years of age with first presentation or episode of mental illness, dementia with behavioural or psychiatric symptoms, or longstanding mental illness complicated by age related problems.
Alcohol and drug service	Level 4	Located at Nambour. Provides a comprehensive alcohol and drug assessment and treatment service in the community, including: pharmacotherapy; primary needle and syringe program; a consultation and liaison service for SCHHS hospitals; advice and support to clinicians and general practitioners for treatment of substance use problems; and a range of court diversion programs. AODS has access to inpatient/consumer detoxification beds is through the Hospital Alcohol and Drugs Service (HADS) at the Royal Brisbane Hospital for Adults; and to the Adolescent Drug and Alcohol Withdrawal Service (ADAWS) for young people.
Inclusive Services	N/A	Provides specialist advice and care in the areas of primary care, peer support, dual diagnosis, service integration, forensic liaison, consumer and carer consultant.
Eating Disorder Service	Level 5	Provides specialist care for consumers aged 18 years and above who have a diagnosis of an eating disorder or that there is concern regarding disordered eating behaviour.
Perinatal /infant Mental Health Service	Level 3	Provides specialist care to build the psychological and emotional wellbeing for mothers and their new babies within 18 months of their life.

Service Alignment

The Mental Health and Addiction Service (MHAS) continues to maintain accreditation against National Safety and Quality Health Service Standards and the National Standards for Mental Health Services 2010. This MHAS operational plan has been developed to align with the ***Shifting Minds: Queensland Mental Health, Alcohol and Other Drugs Strategic Plan 2018-2023***[1] and ***Connecting Care to Recovery 2016 -2021: A plan for Queensland's***

[1] Source: Shifting minds: Queensland Mental Health, Alcohol and Other Drugs Strategic Plan 2018 -2023

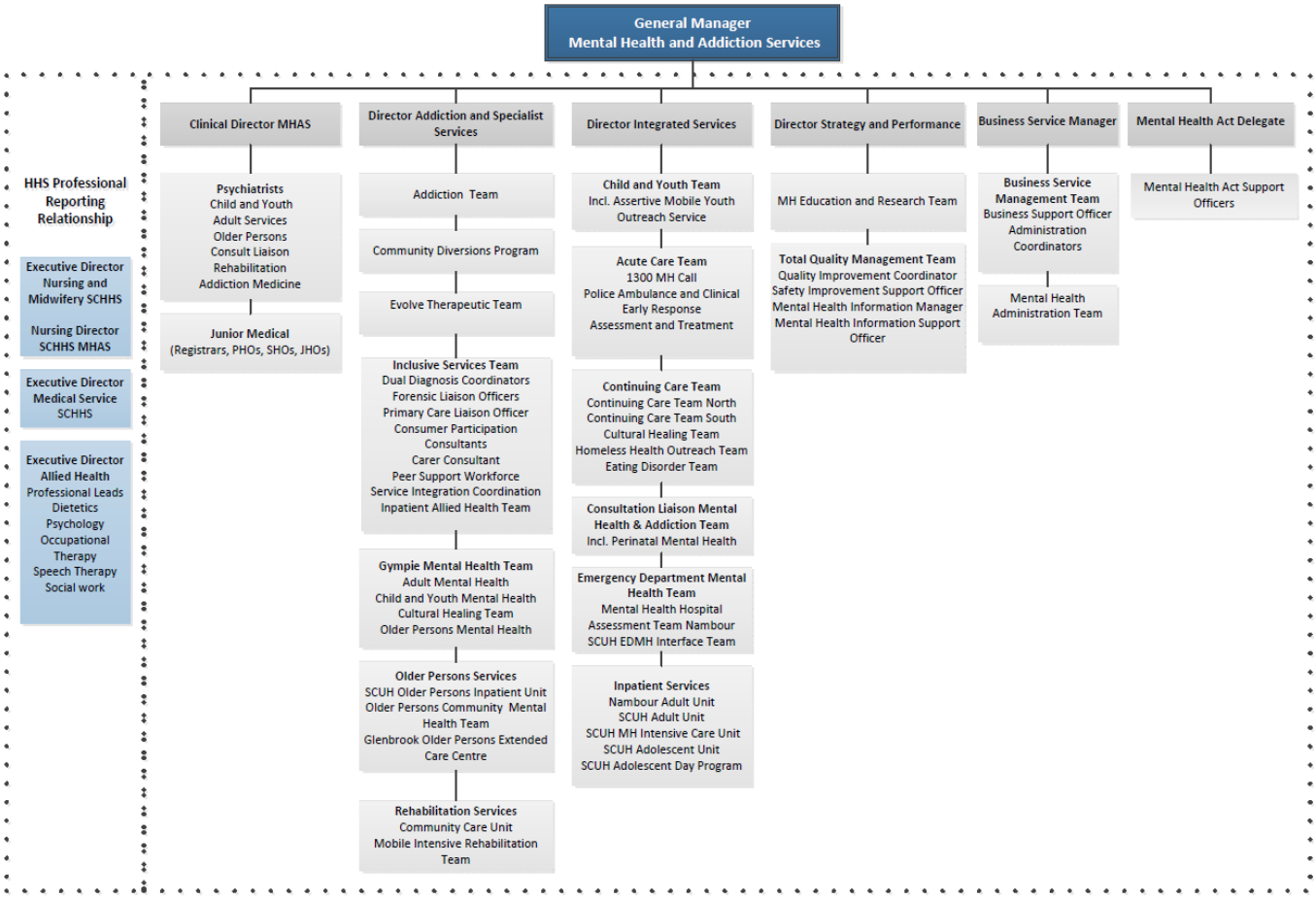
State-funded mental health, alcohol and other drugs services[2] **and the** ***SCHHS Strategic Plan 2016 – 2020***[3] of which include the three key strategic priorities:

- Improving everyone's experience of health care throughout our health service network
- Optimising the health outcomes of our community through collaboration and education
- Delivering sustainable, safe and high value services driven by continuous improvement, research and education

[2] Source: Connecting Care to Recovery 2016 -2021: plan for Queensland's State-funded mental health, alcohol and other drugs services

[3] Source: SCHHS Strategic Plan 2016 -2020

Organisation Chart as at September 2020



The mental health and addiction services staffing profile as at Budget Build 2019/2020 is 462 Full Time Equivalents. The workforce mix is as follows:

MHAS FTE	
Discipline	Approved FTE
Medical	52.70
Nursing	243.67
Allied Health	99.47
Administration	56.48
Operational	9.70
Total	462.02

Alignment of MHNP role to current Mental Health and Addiction Services

The proposed MHNP role is as outlined above, and in brief to be community based to improve, enhance and further develop current mental health nursing practices, within interdisciplinary team settings for complex

consumers. A primary aim of this role is to respond rapidly to clinically deteriorating consumers and assist in hospital avoidance while delivering recovery orientated best care to consumers. The practicalities of the recruitment, planning (inclusive of the location of this role within a selected community team and associated governance of this) and commencement of the role are discussed in the sections below.

Appendix Two: OCNMO Evaluation Framework

3. Conceptual approach to the evaluation

3.1 Program logic

A program logic model for the Maximising scope of practice: Mental Health nurse practitioners addressing community clinical complexity and unmet consumer needs was used in the development of the project framework. This was initially created within the evaluation workshop, pre commencement of the project, with support from selected University and Deloitte's advisors.

The program logic model links the project's inputs and outputs to the intended outcomes i.e. to demonstrate the intended causal links for the project. The table below provides additional detail relating to the outcomes specified in the program logic model, including how they align with the project's initial Quadruple Aim, and when they are expected to occur.

Table 1 Intended project outcomes, by time horizon

Time horizon	Patient/consumer experience	Health outcomes	Staff experience	Cost efficiency
Short term Below 12 months	Consumers receive timely and expert clinical interventions via NPMH Consumers satisfied with clinical interventions provided	Consumers receive rapid access to assessment, treatment and intervention in an appropriate setting (home, clinic based) Consumers receive a co-ordinated and seamless care experience	Enhanced understanding of role/functions and capabilities of NPMH Staff satisfaction with MOC and value adding capabilities of NPMH within the selected clinical teams	Reduction of Emergency Department/Hospital presentations thus reducing burden upon health care system

Time horizon	Patient/consumer experience	Health outcomes	Staff experience	Cost efficiency
Mid term 1-3 yrs.	Consumers receive timely and expert clinical interventions via NPMH Consumers and families/carers satisfied with clinical interventions provided	Consumers receive rapid access to assessment, treatment and intervention in an appropriate setting (home, clinic based) Consumers receive a co-ordinated and seamless care experience	Enhanced understanding of role/functions and capabilities of NPMH Staff satisfaction with MOC and value adding capabilities of NPMH within the selected clinical teams Maximising MHNP roles to top of scope of practice in other relevant community settings Development of a new nursing career pathway for other senior clinical nurses	Reduction of Emergency Department/Hospital presentations thus reducing burden upon health care system (hospital avoidance) with data to substantiate this
Long term	Consumers receive timely and expert clinical interventions via NPMH Consumers and families/carers satisfied with clinical interventions provided	Consumers receive rapid access to assessment, treatment and intervention in an appropriate setting (home, clinic based) Consumers receive a co-ordinated and seamless care experience		Significant and well evidenced reduction of Emergency Department/Hospital presentations thus reducing burden upon health care system (hospital avoidance) with data to substantiate this

3.2 Evaluation domains and questions

Table 2 Evaluation domains and questions.

These were used to generate the data required for evaluation and later research (once approved). For example, to formulate the online survey and Small Focus Group interview questions and access State-wide data sets (CIMHA) used in everyday practice.

Domain	Evaluation questions
Implementation	
Acceptability	Do clinicians of the mental health service perceive the model to be value adding to the interventions provided by the clinical teams?
Awareness and adoption	To what extent are clinicians aware of the project? To what extent are clinicians understand the model and its application? To what extent are the clinicians utilising the model?
Penetration	To what extent is the model being used routinely by clinicians?
Sustainability	To what extent is the model incorporated and integrated in business as usual?
Application	
Effectiveness	To what extent does the model improve patient/consumer reported outcomes compared to usual care?
Equity	Are there barriers to accessing care via the model?
Efficiency	Does the model deliver non-inferior consumer outcomes at a lower cost compared to usual treatment?

4. Data plan

4.1 Evaluation indicator framework

Table 3 Evaluation indicator framework

Evaluation question	Indicator/s	Data sources
Implementation		
Acceptability		
Do clinicians of the mental health service perceive the model to be value adding to the interventions provided by the clinical teams?	Reported and perceived degree of sector support for the project and its objectives.	Online staff survey Semi-structured interviewing of staff and team leaders/managers from teams involved in the selected community sites for the project
Awareness and adoption		
To what extent are clinicians aware of the project? To what extent are clinicians understand the model and its application? To what extent are the clinicians utilising the model?	Clinicians understand the model and its application of role and purpose. Clinicians utilisation of model of NPMH Community.	Online staff survey Semi-structured interviewing of staff and team leaders/managers from teams involved in the selected community sites for the project CIMHA activity reports Intervention collection and reporting via data collection worksheet
Penetration		
To what extent is the model being used routinely by clinicians?	Provision of interventions being provided by model	Online staff survey Semi-structured interviewing of staff and team leaders/managers from teams involved in the selected community sites for the project CIMHA activity reports Intervention collection and reporting via data collection worksheet

Evaluation question	Indicator/s	Data sources
Sustainability		
To what extent is the model incorporated and integrated in business as usual?	Perceived extent to which the model is well integrated within the existing local health and social care environment	Online staff survey Semi-structured interviewing of staff and team leaders/managers from teams involved in the selected community sites for the project CIMHA information – MHNP attendance at Intake meetings
Application		
Effectiveness		
To what extent does the model improve patient/consumer reported outcomes compared to usual care?	Implementation of improved care co-ordination processes and/or systems Development of communication channels across relevant service delivery practitioners	CIMHA POS location and intervention reports Online staff survey Semi-structured interviewing of staff and team leaders/managers from teams involved in the selected community sites for the project
Equity		
Are there barriers to accessing care via the model?	Access of relevant consumers to the model	Online staff survey Semi-structured interviewing of staff and team leaders/managers from teams involved in the selected community sites for the project CIMHA data
Efficiency		
Does the model deliver non-inferior consumer outcomes at a lower cost compared to usual treatment?		CIMHA data, inclusive of hospital avoidance data and MHN recording of consumers seen.

4.2 Data sources

4.2.1 Specification of existing data sources

Table 4 Existing data sources used to inform the evaluation- Quantitative.

All data for this report is evaluation only not research (pending full approval for CIMHA in progress).

Existing data source	Description	Timing for collection	Responsible for collection
CIMHA	Provision of service utilising existing intervention codes for three teams included in this project	Initial 4 weeks 12 weeks collection ongoing for life of project. Total data obtained – 1 September 2019 – 31 July 2020	NPMH and MHIM Inclusive of hospital avoidance data Note – ethics approval for this data not yet complete

4.2.2 Specification of primary data sources

Table 5 Primary Qualitative data sources used to inform the evaluation- all data for report evaluation only not research purposes (pending full approval for CIMHA in progress).

Primary data collection tool	Description	Timing for administration	Responsible for design of tool and administration
NPMH Worksheet	Manual collection of clinical interventions	Initial 4 weeks 12 weeks collection	NPMH
Semi structured Focus group interviews with: (1) staff and (2) Team leaders/managers of selected community teams involved in the project Focus groups numbers = 13. CCT N= 6 CCT S=1 ACT= 3 Team Leaders=3	Generation and analysis of qualitative materials with staff/managers involved in the project by external interviewer (evaluation aspects only not research)	Conduct interviews - August 2020 Evaluation only analysis August	Design: ND/MHNP with advice from SCHHS research office and Tertiary partner. Interviews by MHAS Director of Strategy and Performance (Skilled facilitator-not involved in the project & a Psychology background) See Appendix six for further details i.e. Research protocol, questions and ethics approval.

Primary data collection tool	Description	Timing for administration	Responsible for design of tool and administration
Online survey of: (1) staff and (2) Team leaders/managers of selected community teams involved in the project Survey numbers = 25	Generation and analysis of quantitively and qualitative materials with staff/managers involved in the project (evaluation aspects only not research)	Conduct survey – August 2020 Evaluation only analysis August	NPMH with advice/support from MHAS ND & MHAS Strategy and Performance Team, SCHHS research office and tertiary partner. See Appendix six for further details i.e. Research protocol, questions and ethics approval.

5. Evaluation delivery plan

5.1 Governance arrangements

Figure 1 Evaluation governance structure (example)

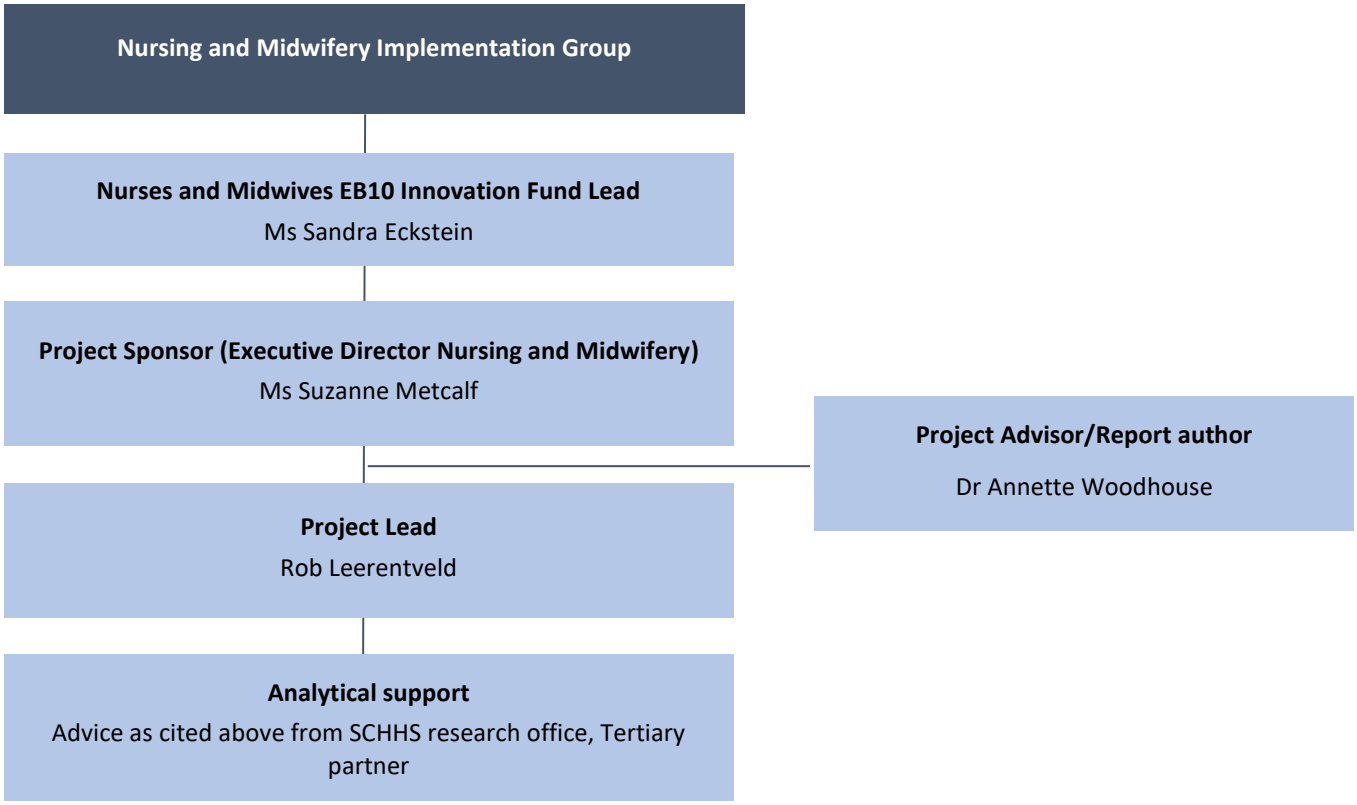


Table 6 Roles and responsibilities

Role	Personnel	Responsibilities
Project team		
Project Sponsor (Executive Director Nursing and Midwifery)	Ms Suzanne Metcalf	Responsibility and provide sign off on all evaluation outputs Ensure evaluation for appropriate and clearly defined objectives Support advocacy for sustainability beyond project funding
Project Lead and co report author	Rob Leerentveld	Oversee all data collection, ethics, data analysis and reporting Incorporate evaluation updates as part of regular updates and deliver to Department of Health Ensure evaluation stays on track and meets its key milestones
Project Advisor and report author	Dr Annette Woodhouse	Provide subject matter expertise to Project Lead

Role	Personnel	Responsibilities
Department of Health		
Nurses and Midwives EB10 Innovation Fund Lead	Ms Sandra Eckstein	Review project status and update reports and final evaluation reports

5.2 Information dissemination strategy

Information dissemination strategy

Pre project dissemination planning is as below with relevant actions. These have had to be modified due to COVID restrictions and will be revisited once restrictions ease. The OCNMO interim report and showcasing presentation (video and short summary page) have been completed. Please refer to Appendix Two. The research aspects of the project continue as outlined above previously and will be undertaken once full ethics approved for CIMHA data is obtained. See note on research in sections below.

Pre project dissemination planning:

The knowledge translation and dissemination of learnings from these sources would include presentations and discussions within:

- Nursing and Midwifery showcase as per grant requirements
- Nursing and Midwifery grand rounds
- Local and HHs level forums and conferences, including relevant research events

Please identify how this evaluation will be shared across your HHS and QH. If there is the intent to a journal article, consideration to ethics approval should be noted.

HREC approval has been sought for formal evaluation and research related to this project as previously cited. Ethics approval for the focus groups and online survey have been approved for research purposes and an application for CIMHA data access is in progress. The knowledge translation and dissemination of learnings from these sources would include future presentations and discussions within:

- Nursing and Midwifery showcase as per grant requirements
- Nursing and Midwifery grand rounds
- Local and HHs level forums and conferences, including relevant research events

Nursing, allied health and medical audiences

1.Local services level

SCHHS and HHS Nursing, Allied Health and Medical relevant meetings and committees: Nursing and Midwifery Leadership Teams, Nursing Professional Leads, Education Councils, Nurse Unit Manager forums, HHS Professional leads for Psychology and Social Work. Strategy to be used: Formal presentations and facilitated discussions at above meetings and events emphasising the value of providing a MHNP community roles and relevant outcomes.

Collaboration with relevant professional leads for presentations in other formats such as, allied health webinar series. Application to relevant HHS research meetings, annual events and communications offices for dissemination of findings via newsletters and service wide updates.

2. State-wide level

Nursing -Nursing Directors forums, Nurse educators' state-wide network and centre of excellence.

Allied health – Consultation with Queensland Health Allied Health State-wide Professional Lead, for relevant venues and format for translation of learnings to practice.

Medical – ACEM Symposiums

Strategy to be used:

Formal presentations and facilitated discussions at above meetings and events emphasising the value of providing our model, that it provides cost-effective care and improves patient/consumer outcomes, alongside any additional learnings relevant to these health professionals.

National and international

Strategy to be used:

Apply for relevant conferences to disseminate learnings such as, ACEM Scientific Meeting and future national ED MH summit.

Write articles on the study's outcomes and learnings and submit to relevant Nursing, Allied Health and Medical journals such as, the International Journal of Mental Health Nursing, Australian and New Zealand Journal of Psychiatry, Emergency Medicine Australasia.

Submit abstracts and present at relevant state-wide, national and international forums and conferences such as, the Nurse Practitioner annual conference, Australian College of Mental Health Nursing annual conference.

Nursing and Midwifery showcase as per grant requirements

Nursing and Midwifery grand rounds

Local and HHs level forums and conferences, including relevant research events

Appendix Three: SCHHS-MHAS Consultation Brief on potential Community Mental Health Nurse Practitioner roles

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Appendix Four: OCNMO Interim Report and Showcasing Summary (COVID version)

Innovation Fund Response - SCHHS N

Maximising scope of practice Mental Health Nurse Practitioners addressing community clinical complexity and unmet customer need

HHS: Sunshine Coast Hospital and Health Service	
Advanced practice position: Nurse Practitioner	
Project lead: Rob Leerentveld	**Project sponsor:** Suzanne Metcalf
Summary: The SCUH Emergency Department (ED) Mental Health Model of Care is an innovative, collaborative model of services delivery which aims to reduce the trauma and distress experienced by patients who present to the ED with a mental illness. It facilitates interdisciplinary care in a timely manner and maximises the care and efficiency of care during their ED stay. This model of care has been benchmarked with a Victorian Model, where the Nurse Practitioner Mental Health roles have been embedded in community Mental Health teams. This project has moved the Nurse Practitioner Mental Health role to the next stage in replicating the successful Victorian Model, with Sunshine Coast Mental Health and Addiction Services providing a flexible responsive service for consumers with the Nurse Practitioner Mental Health embedded within community Mental Health teams.	
Anticipated benefits: • Ability for Nurse Practitioner Mental Health to deliver rapid/mobile response incorporating advanced clinical practice and interventions, whilst making autonomous decisions related to a deteriorating consumer. • Complement current interdisciplinary team members with the scope of practice to provide assertive management of acutely deteriorating patients across the continuum of care, inclusive of advanced nursing diagnosis, treatment and assessment, prescribing and after-hours crisis management • Nurse Practitioner Mental Health led clinics that incorporate consumer follow up post discharge to prevent preventable readmissions, independently expedite inpatient admissions, provide secondary consultations for the multidisciplinary team members, collaborating with the primary healthcare providers including GPs and NGOs	
Early findings or value add: • Nurse Practitioner Mental Health embedded in two Continuing Care Teams and the Acute Care Team, providing 3 days clinical coverage per fortnight • Nurse Practitioner Mental Health interventions have prevented 18 occurrences of Emergency Department attendance • Over 460 interventions by the Nurse Practitioner Mental Health specifically for clinical deterioration, secondary consultation and medication intervention for mental health consumers.	
System connects: Advancing Health Service Delivery through Workforce: A strategy for Queensland 2017-2026	

Appendix Five: What is CIMHA?

factsheet-what-is-cimha.pdf

Appendix Six: MHNP worksheet

NPMH SCMHAS Worksheet **NPMH Community Settings** Facility: Sunshine Coast Mental Health and Addiction Services	**Affix patient/consumer label here** URN: Family Name: Given Name: Address: Date of Birth Sex: M☐ F☐	**Affix patient/consumer label here** URN: Family Name: Given Name: Address: Date of Birth Sex: M☐ F☐	**Affix patient/consumer label here** URN: Family Name: Given Name: Address: Date of Birth Sex: M☐ F☐
Date seen by NPMH:			
Staff member:			
MHNP clinical initiated intervention #	❒ Medication Activity ❒ Clinical Advice ❒ Education ❒ Secondary Consutlation ❒ Deteriorating patient/consumer ❒ Other _____	❒ Medication Activity ❒ Clinical Advice ❒ Education ❒ Secondary Consutlation ❒ Deteriorating patient/consumer ❒ Other _____	❒ Medication Activity ❒ Clinical Advice ❒ Education ❒ Secondary Consutlation ❒ Deteriorating patient/consumer ❒ Other _____
Face to face? communications with:	❒ Carers/NOK ❒ CCT Clinicians ❒ Psychiatrist/Psych Reg ❒ Patient/consumer ❒ Other _____	❒ Carers/NOK ❒ CCT Clinicians ❒ Psychiatrist/Psych Reg ❒ Patient/consumer ❒ Other _____	❒ Carers/NOK ❒ CCT Clinicians ❒ Psychiatrist/Psych Reg ❒ Patient/consumer ❒ Other _____
Referrals/Request for Service to:	❒ No ❒ Acute Care Team ❒ Admitted ❒ NGOs ❒ GP ❒ Other _____	❒ No ❒ Acute Care Team ❒ Admitted ❒ NGOs ❒ GP ❒ Other _____	❒ No ❒ Acute Care Team ❒ Admitted ❒ NGOs ❒ GP ❒ Other _____

Appendix Seven: ACNC Additional CIMHA data sets

Hospital Avoidance Data NP Project.xlsx

Deteriorating Patient Data NP Proj

Secondary Consultation Data N

Appendix Eight: Research Aspects. Research protocol, questions and ethical approvals for Focus groups and Online survey. *Note CIMHA data not yet approved- in process.

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20200623 Appendix G MHNP Evaluation

20200623 Appendix F MHNP Evaluation

20200623 Appendix E MHNP Evaluation

20200623 Appendix D MHNP Evaluation

20200623 Appendix C MHNP Evaluation

20200623 Appendix B MHNP Evaluation

20200623 Addendix H MHAS Evaluation

Budget template v1.11 RR.xlsm

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