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Business Planning Framework

A tool for nursing workload management

Mental Health Services Addendum

Queensland Government

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Author:	Nursing and Midwifery Office, Queensland
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Endorsed by:	Nursing and Midwifery Office Queensland and the Nursing and Midwifery Implementation Group
Contact:	Nursing and Midwifery Office, Queensland Email: chiefnurse-office@health.qld.gov.au

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This report was authored by Queensland Health, Nursing and Midwifery Office, Queensland by:

- Kate Veach, Assistant Director of Nursing (Project manager and report author)
- Diana Schmalkuche, Nursing Director Workforce and Careers (Project executive)
- Cheryl Burns, Acting Chief Nursing and Midwifery Officer (Project sponsor).

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- Nathan Dart, Nurse Manager, Mental Health Services, Royal Brisbane and Women's Hospital, Metro North Health Service District
- Lindsay Farley, Director, Mental Health Services, Central Queensland Health Service District
- Kylie Hay, Nurse Unit Manager, Kirwan Rehabilitation, Townsville Health Service District
- Irene Henley, Nursing Director, Mental Health Services, Metro South Health Service District
- David Higson, Assistant Director of Nursing, Mental Health Services, Royal Brisbane and Women's Hospital, Metro North Health Service District
- Wendy Hoey, Nursing Director, Mental Health Services, Central Queensland Health Service District
- Sharyn Hopkins, Professional Officer, Queensland Nurses' Union
- Joanne King, Director of Nursing, The Park Centre for Mental Health, Darling Downs/West Morton Health Service District
- Leianne McArthur, Assistant Director of Nursing, Mental Health Services Logan, Metro South Health Service District
- Greg Neilson, Nursing Director, Acute and Community Mental Health, Darling Downs/West Morton Health Service District
- Debra Nizette, Mental Health Nurse Advisor, Nursing & Midwifery Office Queensland
- John Quinn, Manager, Mental Health Alcohol and Other Drug Directorate, Head Office
- Kate Veach, Assistant Nursing Director, Nursing and Midwifery Office, Queensland.

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- Kristen Breed, Manager, Mental Health Information Unit
- Michael Kilshaw, Nursing Director, Mental Health Unit, The Prince Charles Hospital, Metro North Health Service District
- Kathy Stapley, Manager, Mental Health Clinical Improvement Team
- Tony Swain, Nursing Director, Mental Health Services, Townsville Health Service District.

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- Peter Dwyer, Corporate Finance Manager, Queensland Health
- Wendy Hoey, Nursing Director, Mental Health Services, Central Queensland Health Service District
- Sandy Jamieson, Director of Nursing, Primary and Community Health Services, Metro North Health Service District
- Mark Kearin, Executive Director of Nursing, Midwifery and Rural Health Services, West Moreton Health Service District
- Carol McMullen, Nurse Manager Informatics, Wide Bay Health Service District
- Trevor Saunders, District Chief Finance Officer, Gold Coast Health Service District
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Disclaimer
The Mental Health addendum has been prepared to promote and facilitate innovative and evidence-based workload and business planning practices. Information in this report is current at time of publication. Queensland Health does not accept liability to any person for loss or damage incurred as a result of reliance upon the material contained in this addendum. Material provided in this addendum does not replace or remove professional judgement or the professional care and duty necessary for each specific case. Work carried out in accordance with this addendum should be provided within the context of locally available resources and expertise. The following addendum does not address all business planning models for nursing and midwifery practice. Individual managers and clinicians are responsible for:

- discussing issues in an environment that is culturally appropriate and which enables respectful confidential discussion
- advising nurses and midwives of their choice and ensuring informed consent is obtained
- meeting all legislative requirements and maintaining standards of professional conduct
- documentation in accordance with mandatory and local requirements.

For further information, contact:

Mail: Nursing and Midwifery Office, Queensland
Queensland Health
GPO Box 48
Brisbane Qld 4001
Email: chiefnurse-office@health.qld.gov.au
Phone: 07 3237 1550

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1.0 Introduction

The *Business Planning Framework: A tool for nursing workload management* (4th edition) is Queensland Health's mandated tool for managing nursing and midwifery workload, as documented within the *Nurses (Queensland Health) – Section 170MX Award 2003*. The Business Planning Framework (BPF) supports nurses and midwives in determining appropriate staffing levels to meet service requirements and assists them in evaluating the efficiency and effectiveness of their performance. The framework focuses on balancing the supply of services and resources with service demands through an individual unit or program based approach to business planning. The framework encourages nursing staff to use quantitative and qualitative methods to analyse and determine human resource requirements, identify priorities and set service goals aligned with the organisation's strategic directions.

Within Queensland Health, a number of nursing and midwifery services were experiencing issues with the application of the BPF in certain speciality areas after its release in 2008. Consequently, a recommendation was made within the workforce planning strategy of the *Nurses and Midwives (Queensland Health) Certified Agreement (EB7) 2009* to further refine and develop the BPF in those specialty areas. This recommendation was made to ensure an effective workload management tool is available for all Queensland Health nurses and midwives.

The following speciality areas were nominated to participate in the BPF refinement process:

- mental health
- primary and community health
- public health
- perioperative services
- outpatient and ambulatory services.

Working parties and strategic groups were formed to engage clinical experts, nursing leaders, professional nursing bodies and finance officers in the development of strategies to improve application of the BPF in these areas.

This addendum aims to clarify the application principles of the BPF in each of the designated specialty services and to ensure consistent and transparent business planning practices.

2.0 Purpose of the Mental Health Services addendum

The purpose of the Mental Health Services addendum is to improve the application and implementation of the BPF in mental health services throughout Queensland Health by supporting the analysis of specialty service demands, establishing the nursing resources required and evaluating service performance. It is recommended the addendum be used in conjunction with the existing *Business Planning Framework: A tool for nursing workload management* (2008).

This addendum will assist nursing staff to:

- determine and manage the unique circumstances within mental health services that require special consideration when applying the principles of the BPF
- transfer business planning and workload management concepts to meet the diverse needs of mental health specialties, such as child and youth services, and acquired brain injury in older person services
- articulate productive (direct and indirect) nursing activity within mental health services
- understand the current and emerging demand considerations for nursing hours within mental health services
- determine appropriate consumer acuity and activity measures to improve consistency of BPF application in mental health services
- review the application methods of the standard BPF multipliers in mental health services to assist the calculation of non-productive nursing hours
- develop productive hour planning tables relevant to mental health services.

3.0 Business planning context for mental health services

There is a number of different workload management methods used in mental health services throughout Australia. These methods have been reviewed to establish practical themes relating to workload management in mental health services which may be beneficial to readers of this addendum. Subsequently, practical concepts and models from around Australia were used to improve the application methods of the BPF in Queensland Health.

Articulating consumer complexity in mental health services can be a complicated process. Current literature provides considerable support to the concept of using standardised factors to identify consumer complexity for the purposes of workload management and service planning in mental health [1-9]. However, reaching agreement on how to identify and weight complexity indicators in nursing work is difficult due to diverse mental health environments, varying consumer groups and differing contexts of practice [1, 4, 7]. Further empirical research is needed to improve the identification of complexity indicators and their impact on nursing workloads in mental health services.

Mental health information systems
Over the past two decades, there have been significant achievements in mental health information systems, particularly in the development of standardised measures that assess consumer outcomes [10-12]. Two data collection systems capable of providing specific consumer information relevant for service planning in mental health facilities are:

- *Health of the Nation Outcome Scale* (HoNOS) which collects and scores information about a consumer's health and social circumstances
- *Consumer Integrated Mental Health Application* (CIMHA) which collects data about consumer demographics and mental health treatments provided [12,13].

Both systems capture useful consumer complexity identifiers in mental health services such as psychiatric symptoms, physical health, the ability to function, involvements in relationships and housing arrangements. These indicators assist in monitoring consumer complexity and in specifying consumer demands [10, 12]. Hence, the accuracy of this information must be maintained through a strict data entry process to ensure mental health clinicians and managers are confident in data credibility.

Casemix data collections can also be used to source information relating to consumer acuity. This information is regularly used by health service managers to determine levels of service demand. Currently, mental health casemix data lacks capacity to accurately represent the acuity of mental health consumers. Local and national reports have indicated that mental health casemix data is not yet suitable for determining consumer complexity because of the difficulty in correctly assigning and weighting diagnostic related groups (DRGs). At this point in time, DRGs do not distinguish between influential consumer demographics (i.e. homelessness, problem drinking or drug taking), therefore they cannot generate standardised complexity weightings suitable for use in determining nursing workload demands [14]. For example, a patient diagnosed with schizophrenia, who is homeless, would require a higher level of nursing intervention compared to a person living in a stable home environment. However, casemix data is currently unable to make this distinction [15, 16].

4.0 Calculating productive nursing hours

Productive nursing hours include both direct and indirect clinical hours and are based on client complexity and service activity. Calculating these hours is integral in delivering mental health services and determining the total operating budget. As outlined within the BPF manual (2008), direct nursing and midwifery hours relate to the activities nurses do that directly contribute to care provided to the client. Indirect hours relate to the activities nurses do for clients while not in direct contact within them.

Total productive hours = Direct clinical hours + Indirect clinical hours

It is essential that all direct and indirect hours are included in the total number of productive nursing hours calculated for a service. Creating a list of common direct and indirect nursing activities in your unit or program will assist in monitoring the use of productive hours. Undertaking this process with staff from your unit encourages discussion about the activities performed and can highlight areas where efficiencies can be gained.

Education and training undertaken in clinical units and attendance in units/wards or facility education/training programs, are considered indirect hours. Whereas, mandatory training days and professional development leave is calculated within the non-productive hours.

Information about productive nursing hours can be used to inform a number of service requirements such as staffing numbers, skill mix, models of care and education/training programs. It is important to document all nursing activities relevant to your service, particularly those considered unique to your unit or program. Defining productive nursing hours increases the understanding of the nursing work undertaken and provides an excellent foundation when developing a service profile.

Figure 4.1 provides an example of productive and non-productive nursing activities within mental health services. The table does not include every nursing activity performed and should be used in conjunction with examples already provided in the BPF manual (2008, p.50-51).

Figure 4.1: Examples of mental health productive nursing hours

Activity	Direct	Indirect	Non-productive	Examples
Service delivery				
Nursing interventions	X			Nursing/physical assessment, metabolic monitoring, seclusion and restraint
Therapy	X			Individual, group, family
Counselling	X			Individual, group, family
Mental health triage	X			Emergency centre, outpatient care
Psychiatric interviews	X			Nursing assessment
Patient assessment	X			Joint reviews (General Practitioner, private practitioner)
Mental status examinations	X			Nursing assessment
Crisis intervention	X			Clinical care delivery
Coordinating/delivering patient care	X			Meal supervision, patient activities of daily living supervision, video conferencing services
Recovery planning	X			Discharge coordination, inter-agency communications, patient leave follow-ups
Patient escorts	X			Tribunal, mandated, security and overnight leave
Safety observations	X			Clinically indicated – physical and environmental
Clinical risk assessment and management	X			Attending consumer care plan
Incident reporting/management	X			Incident reports and follow-up at the time to immediately address the issue
Clinical review and case presentations	X			Multi-disciplinary case conferences
Consultation liaison services	X			Roving mental health nursing services
Staff meetings		X		Multi-disciplinary, unit or program
Clinical administration		X		Referral management (new/review)
Review tribunals		X		External tribunals
Business planning processes		X		Service profile development
Consultative forums		X		Mental health service forum
Community capacity building processes		X		Communicating with outside agencies/ service providers
Service networking		X		Inter-departmental/interdisciplinary
Operational and strategic planning		X		Service planning days
Staff management				
Roster management		X		Daily, weekly, monthly rostering
Leave management		X		Managing annual, emergent ,unpaid leave
Skill mix management/allocation		X		Staff allocation process
Human resource management		X		Performance improvement plans, succession planning
Staff recruitment and retention		X		Workforce planning strategy development
Staff debriefing/counselling		X		Employee assistance scheme
Policy development/management				
Committee participation		X		Local, statewide and national
Quality audits		X		Fire checks, workplace health and safety checks
Health service policy planning		X		Development and review of clinical policy
Clinical governance processes		X		Quality and safety processes
Ministerial responses		X		Service based response to ministerial enquires
Staff development and research				
Clinical supervision		X		Staff supervision
Clinical facilitation		X		Staff training within the clinical environment
Mandatory/requisite training			X	Basic life support, fire safety
Staff education (unit/ward based)		X		In-services, credentialing activities
Orientation program		X		District and local unit or program
Induction program		X		Organisationally endorsed unit specific program

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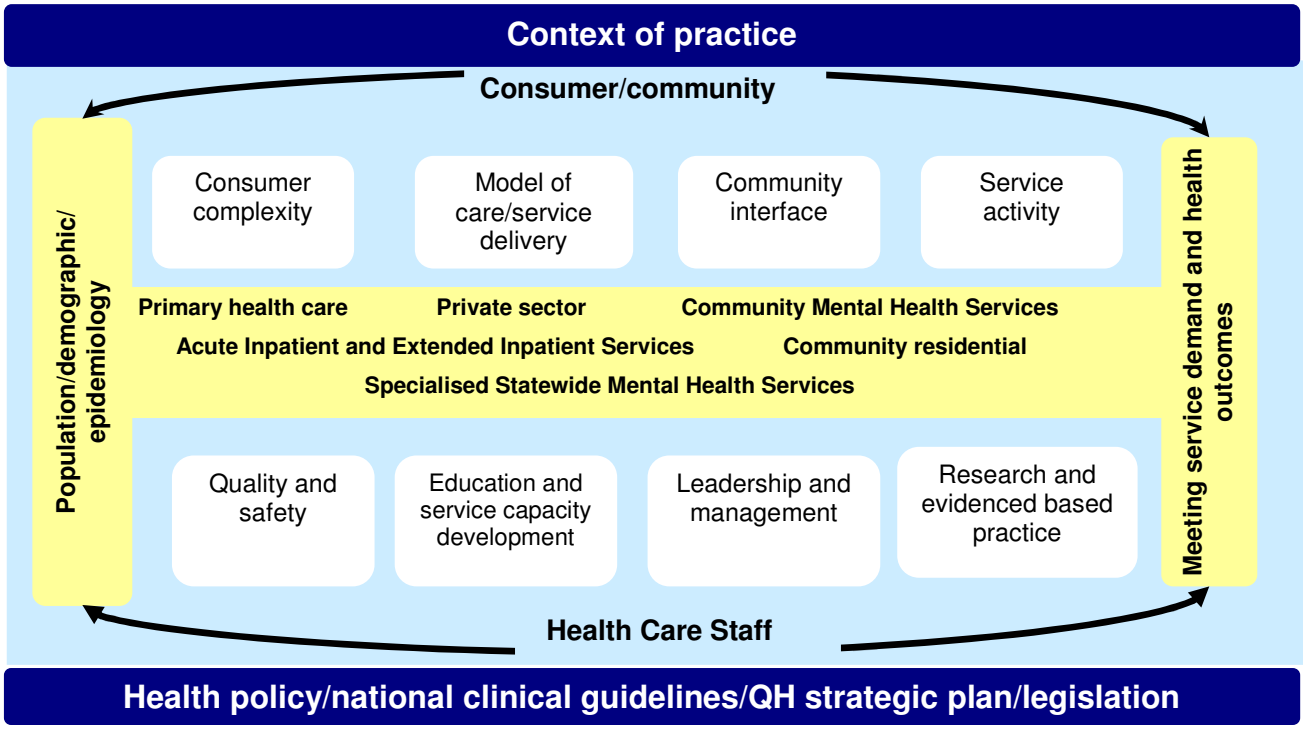
Undergraduate program		X		Student facilitation
Graduate nurse program		X		Preceptorship programs
Post graduate program		X		Post graduate clinical assessments
Professional development leave			X	Conferences, credentialing activities
Clinical portfolios		X		Infection control, quality, education
Performance appraisal and development		X		Annual performance appraisals
Preceptoring/mentoring/coaching		X		Student, graduates, new starters
Succession planning		X		Transitioning registered nurses to clinical nurses
Staff meetings		X		Regular unit or program meetings
Research		X		Organisation based research studies
Information management				
Data collection (clinical)	X			Consumer Integrated Mental Health Application
Data collection (business planning)		X		Reviewing staffing and budget reports
Miscellaneous				
Clinical travel	X			Patient transfers/escorts
Non-clinical travel			X	Professional development leave/training
Coordinating maintenance		X		Equipment checks, car maintenance

5.0 Mental health nursing core demand considerations

To improve the consistency and transparency in the application of the BPF, specific demands on direct and indirect nursing hours in mental health services have been categorised to assist in articulating nursing work. The categories are based on the most common and frequent demands placed on nursing hours within mental health services. Figure 5.1 illustrates the relationships between all sections which coexist and interact with each other. This diagram should be used as a reference source when developing local service profiles, reviewing service capacity and during any negotiation process regarding service delivery. This section includes explanatory notes about each category and a practical example of how to use the diagram is available in appendix A.

Figure 5.1: Mental health nursing core demand considerations



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5.1 Meeting service demands and health outcomes

Successfully meeting service demands and achieving positive health outcomes is a key goal in delivering healthcare to consumers. Developing service objectives, strategies and goals assists in achieving a balance between service demand and supply in your area. It is important to articulate the core demands on your service and consider all influences when planning workforce numbers, skill mix profiles and material resource requests. The mental health nursing core demand diagram (Figure 5.1) illustrates a number of areas which regularly impact the delivery of services to consumers.

Before you develop a service profile and begin calculating the total productive nursing hours needed in your unit or program, address and compare these demands with your service capability.

5.2 Population and demographics

Analysing your catchment area's population provides useful insights into the types and levels of mental health care required in your community. Calculating the percentage of potential and known at risk populations will assist in workforce planning and management of nursing workloads.

When reviewing the nursing hours required to meet the service demands of a population, consider:

- demographics (e.g. growth rate, age, socioeconomic status)
- cultural considerations (e.g. diversity of population)
- morbidity/mortality (e.g. disease trends)
- birth rates (e.g. present and potential)
- transient trends (e.g. influence of industrial fly-in and fly-out populations)
- community expectations (e.g. are they realistic and deliverable?).

5.3 Context of practice

Context of practice considers all the essential elements of your service and determines the framework of nursing practice. Reviewing the context of practice helps to highlight workload considerations for nursing and midwifery staff. Demand considerations include, but are not limited to:

- services offered
- catchment area coverage
- location of direct care delivery (e.g. home, community centre, tele-health facilities, public area or hospital setting)
- resources available.

Conduct an environmental analysis of your service to help manage workload demands caused by context of practice and its impact on nursing services. Refer to the BPF manual (2008, p.18) for more information about environmental analysis criteria.

5.4 Health policy, clinical guidelines, strategic plans and legislation

Health policy, clinical guidelines, strategic plans and legislation influence the level of demand placed on nursing hours within mental health services. This demand can directly influence a number of service areas such as staffing numbers, quality standards, clinical protocols and education/training requirements.

When developing a comprehensive service profile for the purpose of managing both direct and indirect nursing hours, refer to relevant health policies, clinical guidelines, strategic plans and legislation (see Section 8).

5.5 Research and evidence-based practice

Research and evidence-based practice are essential for improving the standards of care and enhancing better health outcomes for consumers. Undertaking research and evidence-based practice activities will influence the number of indirect nursing hours required for service delivery.

Include research and evidence-based practice demands in your service profile by:

- assigning an average allocation of nursing hours to research and evidence-based practice within your regular roster or;
- accumulating hours for use during a designated period within the financial year.

5.6 Consumer complexity

Measuring consumer complexity in mental health services is a multi-faceted process. Using only a quantitative approach when measuring complexity is not always suitable due to variability in consumer groups and contexts of practice.

Use a combined approach to measure consumer complexity, including both quantitative information to monitor changes in service trends and complexity, and qualitative information based on professional experience.

Figure 5.6 provides examples of possible complexity identifiers, which can be used to monitor trends in mental health services. However, this is not an exhaustive list and individual units, wards and community teams should identify the consumer complexity identifiers relevant to their services.

Figure 5.6: Examples of consumer complexity identifiers

Caseload complexity identifiers	General complexity identifiers
Contact frequency	Diagnosis
Expected time allocation	Stage of illness
Intervention type	Co-morbidities
Skill mix level required	Number of consumer/population risk factors
Caseload maturity	Socioeconomic status
Location of consumers/customers	Support networks
Mental Health Act status	Level of intervention
Response difficulty	Type of care package
Staff competence/seniority required	Weighted Activity Units (WAUs)
	Carer engagement

5.7 Service activity

There are a number of ways to measure service activity within the mental health environment. Most methods involve counting the number of service sessions delivered and/or the number of consumers accessing or admitted to a service. The method/s you choose to measure activity in your area will depend on the type of service/s provided, funding models and data collection systems used. To gain a thorough understanding of measuring and reporting activity in your service, you will need to collaborate with executive management and business teams. Examples of commonly used activity measures are listed below:

- Occasions of Service (OOS)
- Occupied Bed Days (OBDs)
- Weighted Activity Units (WAUs)
- number of separations
- number of consumer attending a group sessions
- number of referrals
- number of home visits.

Please note that this is not an exhaustive list as each individual service will experience different circumstances.

Additional descriptors about service accessibility, activity targets, waiting lists and scheduling arrangements can be also used to complement the primary activity data collected. Including relevant primary and secondary activity data within the environmental analysis section of your service profile will help you calculate the amount of productive nursing hours required.

5.8 Models of care/service delivery

The demand placed on nursing hours within mental health services is affected by the model of care and/or service delivery model used. Describing how a model of care or service delivery model influences the calculation of productive hours within your unit or program is important when validating the hours required.

Any change to models of care or service delivery will require an impact assessment on nursing hours relating not only to the amount of hours themselves, but also to the required clinical skills. Impact assessments should review factors relevant to your service including, but not limited to, the healthcare setting, internal health providers (e.g. multidisciplinary teams) and external providers (e.g. Disability Services Queensland).

When developing your annual service profile, review and evaluate your model of care and service delivery model in relation to the nursing hours required.

5.9 Leadership and management

The leadership and management structure within your mental health service will impact the level of demand placed on productive nursing hours. Leadership and management roles are closely linked with local service delivery models and organisational strategic directions. The list below provides some common examples of leadership and management demand considerations:

- skill requirements of leaders and managers
- service accountabilities and responsibilities
- human resource management (eg. recruitment, succession planning, business planning)
- organisational involvement (eg. committees, networking)
- organisational culture
- staffing profile (eg. categories, scope of practice, training and skills)
- interactions with multi-disciplinary team members.

The type and level of influence from leadership and management demands will depend on a number of factors which may vary throughout the year. Review your local leadership and management structure on a regular basis.

5.10 Quality and safety

Quality and safety activities within a mental health environment are primarily governed by organisational policy and legislation. The productive nursing hours of your service will be influenced by quality and safety processes, however the distribution of direct and indirect hours will depend on variables such as type of service delivered, staff competency required and location of the unit or program. The following list outlines quality and safety concepts which can place demand on the number of productive nursing hours required:

- consumer safety
- staff safety
- mandatory and specialty requisite training requirements
- policy development and review
- portfolios
- incident and near miss reporting and management
- *Mental Health Act*.

As this is not an exhaustive list, a review of your local activities is recommended.

5.11 Education and service capacity developers

The demand on nursing hours within mental health services is influenced by educational requirements and service capacity developers. Organisational policy, health registration boards and legislation provide guidelines on the level of influence these demands have on your service e.g. productive hours used to support undergraduate, graduate and postgraduate training. Local human resource functions such as recruitment, orientation, succession planning and rostering also impact the number of nursing hours required within your service. The correct allocation of indirect hours and non-productive hours will ensure adequate nursing coverage across your healthcare service.

Individual units and programs should assess the level of influence these demands have on a yearly basis or when a change in service delivery occurs.

5.12 Community interface

There are a variety of service delivery models within the mental health environment that provide care to consumers across primary care and inpatient units. In most cases, the individual models inter-relate and generate demand on productive hours within the connecting services. Your unit or program may directly and/or indirectly interact with the following service areas:

- primary health care
- private sector
- community mental health services
- acute inpatient and extend inpatient services
- community residential
- specialised statewide mental health services
- correction/forensic services.

Consider the time staff commit to these activities and the allocation and documentation of hours used. When calculating the productive nursing and midwifery hours for your service, include all quantitative and qualitative information regarding community interface activities.

6.0 Business planning considerations for mental health services

The BPF manual (2008, p.18-27) outlines the general factors a service should consider when analysing the internal and external environment as part of developing their service profile. However, there are a variety of business planning factors which influence mental health services and result in service demand fluctuations. These internal and external factors need to be considered when analysing service demand. Units and programs should annually assess the impact of each factor on their environment and make the necessary adjustments to the allocation of nursing hours.

Figure 6.1 provides examples of several business planning considerations relevant to mental health services based on recognised internal and external influences. Clearly document the impact and level of influence each consideration has on nursing workloads within your service in the service profile to support the productive hours required.

Internal factors
1. Structural
2. Human resource management
3. Information technology
4. Performance

External factors
1. Policy/legal
2. Economic factors
3. Social factors
4. Technological factors
5. Research and evidence-based practice

Figure 6.1: Business planning considerations for mental health services

Influences (Internal and external)	Service impact	Examples of workload management considerations
Locality of service **(Internal)** (Metropolitan, regional, rural and remote)	The locality, type and catchment area of a service will influence the balance of service demand and supply. **Examples:** Rural and remote mental health services need to review the workload impacts of delivering nursing care to isolated communities. Community mental health services should consider how their context of practice impacts workload management. All mental health services need to consider the impact of skill mix and multidisciplinary teams on optimal service delivery.	**Direct nursing hours** : Calculation of clinical hours for direct care, allocation of clinical hours (rosters), selection of service activity and acuity measures, use of minimum staff staffing requirements.
Type of service **(Internal)** (Primary health care, Community mental health, acute inpatient and extended inpatient, community residential and speciality statewide mental health services)		**Indirect nursing hours**: Calculation of clinical hours for non-direct care, travel, unit/ward education, clinical supervision, quality activities and research
Catchment area **(Internal)** (Local Health &Hospital Networks versus Statewide Services)		**Workforce planning**: Development of strategic local/statewide workforce plans to inform FTE requirements, skill mix profiles and macro workforce planning formulas.
Nursing structure **(Internal)** (Roles, functions, accountabilities and relationships between all categories of nursing staff)	The model of care selected for a service will influence the nursing and support structures required. Nursing roles and how they relate with other nursing and non-nursing roles will impact on the balance of service demand and supply. **Examples:** The recovery model of care adopts a multi-disciplinary team approach. Positions can be categorised for an interchangeable range of healthcare professionals such as social workers and occupational therapists which can impact on the number of nursing staff employed and their workloads. Within rural and remote communities, access and support from other services including mental health may be limited. Nurses within these environments are required to practice autonomously at an advanced level. The classification of positions within these communities will reflect this requirement. Providing support to other services such as emergency departments will impact on nursing workloads.	**Direct nursing hours**: Calculation of clinical hours for direct care provided in and outside the service, position classifications for the clinical hours required, allocation of clinical hours (rosters), selection of optimal service activity/acuity measures, use of minimum staffing requirements.
Support structure **(Internal)** (Providing support to other services and/or receiving support from other services)		**Indirect nursing hours**: Calculation of clinical hours for non-direct care networking/collaboration (internal and external) travel, staff training, professional development, quality activities and research.
Model of care **(Internal)** (Multi-disciplinary teams)		**Workforce planning**: Development of role descriptions and skill mix profiles suitable for the context of practice (internal and external) to the service. Devising operational and organisational structures to support staff in applying the chosen model of care. Development of operational workforce plans to inform fulltime equivalent (FTE) requirements and macro workforce planning formulas.
Policy/legal factors **(External)**	Changes in mental health policy and legislation will influence service delivery and staff requirements. Common change drivers include government (commonwealth/state), licensing organisations, professional and industrial groups. Examples: Legislation – *Mental Health Act 2000* Commonwealth - Mental Health Reform Agenda Queensland Health – Clinical Services Capability Framework 2011	**Direct nursing hours**: Calculation of clinical hours for direct care (based on available funding), position classifications for the clinical hours required, registration commitments for clinical hours, allocation of clinical hours (rosters), selection of optimal service activity/acuity measures, and use of minimum staffing requirements.

Economic factors (External)	Funding policies, the national economy and the interface between public and private health care providers will influence the mental health services provided and staff required. Examples: National mental health reform initiatives are providing funding increases for specific services which results in new, additional or expanded services. The skill and number of mental health nurses required will be affected.	**Indirect nursing hours:** Calculation of clinical hours for non-direct care, policy development, business planning, community interface, travel, staff training, professional development, quality activities and research.
Social factors (External)	Population demographics, cultures and community expectations will inform the types of mental health services offered, how they are offered, staffing numbers and skill mix required for service delivery. **Examples:** A community with a high proportion of non-English speaking people will impact the number and type of clinical hours required to deliver mental health services. Prison communities have a larger known percentage of offenders with mental illness. Staff with mental health experience or access to staff in external services is required. The number of clinical nursing hours per consumer within this environment is expected to be higher due to security policies and procedures.	**Workforce planning**: Development of role descriptions and skill mix profiles suitable for the context of practice (internal and external) to the service. Devising operational and organisational structures to support staff in applying the chosen model of care. Development of operational workforce plans to on inform FTE requirements and macro workforce planning formulas.

7.0 Information systems and collections for mental health services

Accessing relevant information about the mental health service you provide is critical when applying the BPF and its principles. Information systems such as Consumer Integrated Mental Health Application (CIMHA), Hospital Based Corporate Information System (HBCIS), Primary Related Incident Management and Evaluation System (PRIME) and Decision Support System (DSS) provide a wide range of information about consumers, workforce and service performance and can assist in service profile development. Mental health information collections are also available and offer a collation of reports relating to service activity and expenditure, consumer activity, complexity and outcomes. The reports derived from these systems and collections are valuable when undertaking an environmental analysis of your service and should be referenced within your service profile.

However, the available information systems may not always capture the data required for conducting a comprehensive environmental analysis of your nursing service. In this situation, spreadsheets can be developed to collect local service demand data specific to your nursing service. When developing local spreadsheets, it is important to be consistent with the application of data collection standards and to adhere to all relevant Queensland Health policies relating to information management.

All data sources must be referenced and available for review by other team members involved in business planning and be approved by senior management. Figure 7.1 outlines the main information systems and collections suitable for business planning in mental health services.

Figure 7.1: Mental health information systems and collections

Information system/ collection	Purpose	Informs
Consumer Integrated Mental Health Application (CIMHA)	Records consumer focused clinical information to support mental health clinicians in providing safer quality mental health services. http://qheps.health.qld.gov.au/mentalhealth/cimha/	- Activity - Workforce - Services - Performance - Consumer demographics
Hospital Based Corporate Information System (HBCIS)	Records inpatient activity for all consumers admitted to a public hospital. http://qheps.health.qld.gov.au/id/	- Activity - Workforce - Services - Performance - Consumer demographics
Mental health inpatient activity (admission, transfer and discharge)	Informs Queensland Health Admitted Patient Data Collection (QHAPDC) National Minimum Data Sets Mental Health Admitted Mental Health Care (subset information)	- Activity - Workforce - Services - Performance
Mental health activity data collection	Collects all service contacts provided by specialised mental health services for all consumers not admitted to acute care hospitals or those residents in 24 hour specialised residential mental health services. National Minimum Data Sets Mental Health Care (subset information)	- Activity - Workforce - Services - Performance
Mental health outcomes information	Clinician-rated and consumer self-assessment outcome measures and other information. National Outcomes and Casemix Collection (subset information). HoNOS, HoNOS 65+, HoNOSCA, Life Skill Profile, Resource Utilisation Groups-Activity of Daily Living Scale, Children's Global Assessment Scale, Factors Influencing Health Status and Focus of Care. http://qheps.health.qld.gov.au/mhinfo/systems.htm	- Consumer trends - Consumer complexity - Consumer outcomes - Performance
Annual survey of mental health services	Collects establishment information from districts and statewide services including consumer and carer participation, types of services, bed numbers, patient activity data, FTE numbers and service expenditure. National Minimum Data Sets Mental Health Establishments (subset information)	- Activity - Workforce - Services - Expenditure
Primary Related Incident Management and Evaluation System (PRIME)	Records management of clinical incidents and health care complaints http://connect.health.qld.gov.au/prime/	- Performance - Service safety - Consumer outcomes
Decision Support System (DSS Panorama)	Provides summary data reports displaying aggregate expenditure, budgets, variances and balances for cost centres and account codes for services. Reports are available for agency use, overtime, leave/ absenteeism, position occupancy and work centres. http://dss.health.qld.gov.a u/	- Workforce - Expenditure - Performance

Data collection also supports the measurement of financial outcomes and service performance. As per the BPF manual (2008, p.87), a balance scorecard assists in identifying service objectives, selecting appropriate performance measurements and monitoring the progress of those objectives. It highlights both successful and unsuccessful performance trends and allows service comparisons to be made internally and externally.

Key performance indicators should be chosen based on the individual service, with consideration to the consumer, staff and the greater organisation. Examples of performance indicators suitable for mental health services are listed in Figure 7.2.

Figure 7.2: Performance indicators for mental health services

Consumer Indicators	Staff Indicators	Service/Organisation
Access	Absenteeism	Activity/occupancy
Complaints/compliments	Education hours	Budget integrity
Incidents	Re-deployment	Cost per WAU
Seclusion and restraint episodes including length of episode	New - established staff ratio	Leave usage/accumulation
Waiting times	Satisfaction surveys	NHPPD/NHPOOS/NHPAU
Readmission rates (time framed)	Turnover rates	Policy issues
Average length of stay	Workcover claims	Quality and safety initiatives/audits/issues
Patient follow ups (time framed)	Workload grievances	Skill mix profile
Completed discharge summaries (time framed)	Competency compliance	Workforce data - vacancy

8.0 Reference documents for mental health services

Reference documents can originate from local, state, national and international sources and are prepared by healthcare services, governments, specialist interest groups, colleges and universities. Reference documents are important in assessing the delivery of any service and are useful when planning and managing change in the mental health environment. The suitability of reference sources will depend upon your individual area and should be selected on the level of influence that impacts on service delivery. For example, documents based on legislation will sustain the highest level of influence as mandated by law. Figure 8.1 provides a selection of reference sources suitable for business planning in mental health services.

Figure 8.1: Mental health business planning reference sources

Queensland Health reference sources
Building Guidelines for Queensland Mental Health Facilities 1996 http://www.health.qld.gov.au/cwamb/mhguide/1934B_GuideSec_3-15.pdf
Child and Youth Health Practice Manual for Child Health Nurses and Indigenous Child Health Workers http://www.health.qld.gov.au/child-youth/webpages/CYHP-manual.asp
Clinical Services Capability Framework – Mental Health Services 2011 http://www.health.qld.gov.au/cscf/docs/30_mentalhealth.pdf
Clinical Supervision Guidelines for Mental Health Services 2009 http://qheps.health.qld.gov.au/mentalhealth/docs/superguide09.pdf
Consumer Integrated Mental Health Application http://qheps.health.qld.gov.au/mentalhealth/cimha/home.htm
Mental Health Alcohol and Other Drugs Directorate (MHAODD) http://qheps.health.qld.gov.au/mentalhealth/default.htm
Queensland Centre for Mental Health Learning (QCMHL) http://www.health.qld.gov.au/qcmhl/default.asp
Queensland Health and Queensland Police Service Preventing and Responding to Mental Health Crisis Situation and Information Sharing Guidelines 2006 http://qheps.health.qld.gov.au/mentalhealth/docs/police_32012.pdf
Queensland Health Forensic Mental Health Strategic Framework 2011 http://www.health.qld.gov.au/mentalhealth/docs/for_fw.pdf
Queensland Health Guidelines for the Administration of Electroconvulsive http://qheps.health.qld.gov.au/mentalhealth/docs/ect_guidelines_31960.pdf
Queensland Health Mental Health Case Management Policy Framework: positive partnerships to build capacity and enable recovery 2007 http://qheps.health.qld.gov.au/mentalhealth/docs/casemanage_polstate.pdf
Queensland Health Patient Safety and Quality Plan 2008–2012 http://www.health.qld.gov.au/psq/governance/docs/s&q_patient_plan_v4.pdf
Queensland Health Strategic Plan 2011–2015 http://www.health.qld.gov.au/about_qhealth/strat_plan/strat-plan2011-15.pdf
Queensland Medical Transport System: Transport of People with Mental Illness from Rural, Remote and Regional Queensland http://qheps.health.qld.gov.au/mentalhealth/docs/TransportGL31958.pdf
Queensland Plan for Mental Health 2007–2017 http://www.health.qld.gov.au/mentalhealth/abt_us/qpfmh/p4.asp

This addendum is a complementary document to the industrially endorsed *Business Planning Framework: a tool for nursing workload management* (2008) and does not represent change to existing organisational policy.

Policy Statement: Reducing and Where Possible Eliminating Restraint and Seclusion in Queensland Mental Health Services 2008 http://www.health.qld.gov.au/qhpolicy/docs/pol/qh-pol-298.pdf
Service Delivery for People with Dual Diagnosis (co-occurring mental health and alcohol and other drug problems 2008) http://qheps.health.qld.gov.au/metrosouthmentalhealth/docs/ms_dual_diagnosis.pdf
State legislation reference sources
Child Protection Act 1999 http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/C/ChildProtectA99.pdf
Health (Drugs and Poisons) Regulation 1996 http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/H/HealDrAPoR96.pdf
Health Practitioners Regulation National Law Act 2009 http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/H/HealthPracRNA09.pdf
Nurses and Midwives (Queensland Health) Certified Agreement (EB7) 2009 http://www.health.qld.gov.au/eb/documents/eb7_nurses_final.pdf
Queensland Criminal Code Act 1899 www.legislation.qld.gov.au/LEGISLTN/CURRENT/C/CriminCode.pdf
Queensland Health Nurse and Midwives Award – State 2011 http://www.qirc.qld.gov.au/resources/pdf/awards/q/q0090_160311.pdf
Mental Health Regulation 2002 http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/M/MentalHealR02.pdf
National reference sources
Australian Bureau of Statistics: National Survey of Mental Health and Wellbeing 2007 http://www.abs.gov.au/ausstats/abs@.nsf/ProductsbyCatalogue/3F8A5DFCBECAD9C0CA2568A900139380?OpenDocument
Australian College of Mental Health Nurses Standards of Practice for Mental Health Nurses 2010 http://www.acmhn.org/news-a-events/publications/college-publcations/standards-of-practice.html
Australian Institute of Family Studies http://www.aifs.gov.au/
Australian Institute of Health and Welfare http://www.aihw.gov.au/
Australian Mental Health Outcomes and Classification Network http://amhocn.org/
Australian Safety and Quality Framework for Health Care 2010 http://www.safetyandquality.gov.au/internet/safety/publishing.nsf/Content/NSQF
National Standards for Mental Health Services 2010 http://qheps.health.qld.gov.au/metrosouthmentalhealth/docs/nat_stands_mh.pdf
National Safety Priorities in Mental Health: a national plan for reducing harm 2005 http://health.gov.au/internet/main/publishing.nsf/Content/mental-pubs-n-safety
National Statement of Principles for Forensic Mental Health 2002 http://www.health.wa.gov.au/mhareview/resources/documents/FINAL_VERSION_OF_NATIONAL_PRINCIPLES_FOR_FMH-Aug_2002.pdf
National Practice Standards for the Mental Health Workforce 2002 http://www.health.gov.au/internet/main/publishing.nsf/Content/2ED5E3CD955D5FAACA25722F007B402C/$File/workstds.pdf
Nursing and Midwifery Board of Australia (Australian Health practitioner Regulation Agency - APHRA) http://www.nursingmidwiferyboard.gov.au/
Mental Health Act 2000 http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/M/MentalHealA00.pdf
Workplace Relations Act 1997 http://www.legislation.qld.gov.au/LEGISLTN/ACTS/1997/97AC001.pdf

9.0 Business planning for mental health services

Before deciding on the number and skill mix of nursing hours required, you need to calculate the total productive hours required for your unit or program. The BPF manual (2008, p.46-84) recommends the following seven steps when establishing the total nursing operating budget:

Step 1 **Calculate total productive nursing hours**
Step 2 **Calculate total annual productive nursing hours to deliver service**
Step 3 **Determine skill mix/category of the nursing hours**
Step 4 **Convert productive nursing hours into full-time equivalents (FTE)**
Step 5 **Calculate non-productive nursing hours**
Step 6 **Convert FTEs into dollars**
Step 7 **Allocate nursing hours to service requirements.**

These seven steps are explained in detail within this section.

9.1 Step 1: Calculate productive hours

When calculating productive nursing hours, you will need to review the number of direct and indirect nursing hours. As historical payroll data does not distinguish between direct and indirect nursing hours, you must use alternative reference sources to provide the percentage of direct and indirect nursing hours used. Local records, patient dependency systems, education/ training databases and organisational policies are common ways to gather information relevant to indirect hours. Reports on staffing rosters, overtime shifts and extra nursing hours paid can be used to account for the direct hours used within your service. Most data collected from these sources will be retrospective and will require further analysis to assess the level of impact, if any, on the future allocation of nursing and midwifery hours.

When calculating the total productive nursing hours required, consider consumer acuity/complexity and service activity. Highlight any definite or expected change in either acuity and/or activity in the environmental analysis section of your service profile. This will assist in avoiding unpredicted variations in number or type of nursing hours required. The BPF manual (2008) provides examples of four possible methods to assist in determining the productive service hours required:

1. Historical payroll or rostering information
2. Applying a base staffing model (e.g. minimum safe staffing levels)
3. Benchmarking
4. Patient dependency systems.

This addendum calculates productive hours using payroll and rostering information. Information regarding the calculation of productive nursing hours using benchmarking, base staffing models and patient dependency systems is available within the BPF manual (2008). Examples of calculating productive hours in a mental health setting are provided below.

Data sources for these examples include DSS, HBCIS and local spreadsheets.

Example 1: Calculating productive hours in an acute mental health inpatient unit

Average rostered direct nursing hours per month = 667.6 shifts = 5,340.8 hours

Average rostered indirect nursing hours per month = 126 shifts = 1,008 hours

Average productive nursing hours (paid) used per month = 6,348.8 hours

$$\text{Average hours per patient day} = \frac{\text{Total no. of nursing hours worked (in a specified period)}}{\text{Total no. of occupied bed days (in the corresponding period)}}$$

$$\text{Average hours per patient day} = \frac{6{,}348.8}{1{,}021} = 6.22 \text{ NHPPD (direct and indirect)}$$

Example 2: Projected productive hours in an acute mental health inpatient unit with two additional electroconvulsive therapy (ECT) day sessions per week

Additional staffing required = 16 direct nursing hours per session x 2 days = 32 hours per week

Annual additional staffing hours = hours per week x weeks in year = 32 hours x 52 = 1,664 hours

Monthly additional staffing hours = $\frac{\text{Annual additional hours}}{\text{Months in year}} = \frac{1{,}664 \text{ hours}}{12 \text{ months}} = 138.7$ hours

Average direct nursing hours required per month = 5,340.8 + 138.7 = 5,479.5 hours

Average direct nursing shifts required per month = $\frac{\text{Direct nursing hours per month}}{\text{Shift length time}} = \frac{5{,}479.5}{8}$

= 684.9 shifts

Average rostered direct nursing hours per month = 684.6 shifts = 5,479.5 hours

Average rostered indirect nursing hours per month = 126 shifts = 1,008 hours

Average productive nursing hours (paid) used per month = 6,487.5 hours

Average hours per patient day = $\frac{\text{Total no. of nursing hours worked (in a specified period)}}{\text{Total no. of occupied bed days (in the corresponding period)}}$

Average hours per patient day = $\frac{6{,}487.5}{1{,}021}$ = 6.35 NHPPD (direct and indirect)

Example 3: Calculating productive hours in a mental health outpatient service (Operates Monday to Friday 0800-1700)

Nurse Unit Manager	1.00 FTE
Clinical Facilitator	0.32 FTE
Clinical Nurse	1.50 FTE
Registered Nurse	2.50 FTE
Enrolled Nurse	1.00 FTE

Average occasions of service = 980 per month

Average rostered direct nursing hours per month = 97.06 shifts = 776.48 hours

Average rostered indirect nursing hours per month = 32.94 shifts = 263.52 hours

Average productive nursing hours (paid) used per month = 1,040 hours

Average hours per occasions of service = $\frac{\text{Total no. of nursing hours worked (in a specified period)}}{\text{Total no. of occasions of service (in the corresponding period)}}$

Average hours per occasion of service = $\frac{1{,}040}{980}$ = 1.06 NHPOS (direct and indirect)

Example 4: Calculating productive hours in a mental health community service using a caseload management framework

Clinical Nurse 4.6 FTE
Average no. of consumers per month = 77
Average no. of consumers per nurse = 16.74

Average rostered direct nursing hours per month = 87.66 shifts = 701.28 hours

Average rostered indirect nursing hours per month = 7.13 shifts = 57.04 hours

Average productive nursing hours (paid) used per month = 758.32 hours

Average hours per consumer case = $\frac{\text{Total no. of nursing hours worked * (in a specified period)}}{\text{Total no. of consumer in caseload (in the corresponding period)}}$

Average hours of monthly activity per case = $\frac{758.32}{77}$ = 9.85 nursing hours/case/month (direct and indirect)

9.2 Step 2: Calculate annual productive hours

To calculate the total annual productive hours required for a service, the average hours per unit of activity is multiplied by the total number of activities per year.

Total annual productive hours = average hours per unit of activity x total no. of activities per year

Using the examples provided previously (acute mental health inpatient unit, outpatient services and community programs), the total annual productive hours are as follows:

Example 1: Acute Mental Health Inpatient Unit

Total annual productive hours = Average NHPPD x Total no. Occupied Bed days per year

Total annual productive hours = 6.22 NHPPD x (1,021 x 12) = 76,207 hours/year

Example 2: Acute Mental Health Inpatient Unit (2 additional ECT sessions)

Total annual productive hours = Average NHPPD x Total no. Occupied Bed days per year

Total annual productive hours = 6.35 NHPPD x (1,021 x12) = 77,800 hours/year

Example 3: Mental Health Outpatient Service

Total annual productive hours = Average NHPOS x Total no. Occasions of Service per year

Total annual productive hours = 1.06 NHPOS x (980 x 12) = 12,466 hours/year

Example 4: Mental Health Community Service

Total annual productive hours = Average NHPAU x Total no. Consumers per year

Total annual productive hours = 9.85 x (77 x 12) = 9,101 hours/year

9.3 Step 3: Determine skill mix/category of nursing staff

After the annual productive nursing hours are calculated, you must determine the skill mix required to meet service demands by referring to your service profile. The BPF manual (2008, p.64) recommends reviewing the following when determining the appropriate skill mix for a service:

- analysis of consumer needs
- scope of each nursing category
- desired health outcomes.

When consumer needs and health outcomes are matched with suitable nursing skills, the allocation of hours required is achieved. The following examples demonstrate this step based on operational hours and service preferences.

Example 1: Acute Mental Health Inpatient Unit

Rostering preferences:
NUM/CNC/NE – Day shifts rostered Monday to Friday
Clinical Nurses – Minimum of 1 CN on every shift (3 shifts/24 hours) Monday to Sunday
RN/EN – To cover designated shifts (3 shifts/24 hours) Monday to Sunday

Nurse grades	Hours/week
Grade 7 (NUM, CNC, NE) – 22.80 hours per day 5 days/week	114
Grade 6 (Clinical nurse) – 66.00 hours per day 7 days/week	462
Grade 5 (Registered nurse) – 111.00 hours per day 7 days/week	777
Grade 4 (Enrolled nurse) – 16.00 hours per day 7 days/week	112
Total	**1,465**

Example 2: Acute Mental Health Inpatient Unit

Rostering preferences:
NUM/CNC/NE – day shifts rostered Monday to Friday
Clinical Nurses – minimum of 1 CN on every shift (3 shifts/24 hours) seven days a week
RN/EN – to cover designated shifts (3 shifts/24 hours) and two additional ECT sessions Monday to Sunday

Nurse grade	Hours/week
Grade 7 (NUM, CNC, NE) – 22.80 hours per day 5 days/week	114
Grade 6 (Clinical nurse) – 66.00 hours per day 7 days/week	462
Grade 5 (Registered nurse) – 115.4 hours per day 7 days/week	808
Grade 4 (Enrolled nurse) – 16 hours per day 7 days/week	112
Total	**1,496**

Example 3: Mental Health Outpatient Service

Rostering preferences:
NUM – day shifts rostered Monday to Friday
Clinical Nurses – minimum of one per day (Monday to Friday, day shifts only)
RN – to cover shifts based on service activity (Monday to Friday, day shifts only)
EN – one per day (Monday to Friday, day shifts only)

Nurse Grade	Hours/week
Grade 7 (NUM, CNC, NE) – 7.60 hours per day 5 days/week	38
Grade 6 (Clinical nurse) – 13.80 hours per day 5 days/week	69
Grade 5 (Registered nurse) – 19.00 hours per day 5 days/week	95
Grade 4 (Enrolled nurse) – 7.60 hours per day 5 days/week	38
Total	**240**

Example 4: Mental Health Community Service

Roster preferences:
CN – averaging three staff per day (two shift service, 7 days/week)

Nurse Grade	Hours/week
Grade 7 (NUM, CNC, NE) – Nil	0
Grade 6 (Clinical nurse) – 25 hours per day 7 days/week	175
Grade 5 (Registered nurse) – Nil	0
Grade 4 (Enrolled nurse) – Nil	0
Total	**175**

9.4 Step 4: Convert productive nursing hours into full-time equivalents (FTE)

Expressing productive hours as FTE helps to determine the costs of your service. When determining the FTE numbers for your unit or program, you must research the amount of nursing hours required per week to manage service demand. This number is calculated during step 3. To calculate the number of FTE required, use this formula:

$$\text{FTE} = \frac{\text{Number of hours worked per week}}{38}$$

Example 1: Acute Mental Health Inpatient Unit

$$\frac{1{,}465 \text{ nursing hours per week}}{38} = 38.6 \text{ FTE}$$

Nurse Grade	Hours/week	Weekly FTE (Column 1/38)
Grade 7 (NUM, CNC, NE) – 22.8 hours per day 5 days/week	114	3.0
Grade 6 (Clinical nurse) - 66 hours per day 7 days/week	462	12.2
Grade 5 (Registered nurse) – 111 hours per day 7 days/week	777	20.4
Grade 4 (Enrolled nurse) – 16 hours per day 7 days/week	112	3.0
Total	**1,465**	**38.6**

Example 2: Acute Mental Health Inpatient Unit (additional ECT session included)

$$\frac{1{,}496 \text{ nursing hours per week}}{38} = 39.4 \text{ FTE}$$

Nurse Grade	Hours/week	Weekly FTE (Column 1/38)
Grade 7 (NUM, CNC, NE) – 22.8 hours per day 5 days/week	114	3.0
Grade 6 (Clinical nurse) – 66 hours per day 7 days/week	462	12.2
Grade 5 (Registered nurse) – 115.4 hours per day 7 days/ week	808	21.3
Grade 4 (Enrolled nurse) – 16 hours per day 7 days/week	112	3.0
Total	**1,496**	**39.5***

* There is 0.1 FTE difference in weekly FTE due to totals being rounded to one decimal place.

Example 3: Mental Health Outpatient Service

$$\frac{240 \text{ nursing hours per week}}{38} = 6.3 \text{ FTE}$$

Nurse Grade	Hours/week	Weekly FTE (Column 1/38)
Grade 7 (NUM, CNC, NE) – 7.6 hours per day 5 days/week	38	1.0
Grade 6 (Clinical nurse) – 13.8 hours per day 5 days/week	69	1.8
Grade 5 (Registered nurse) – 19 hours per day 5 days/week	95	2.5
Grade 4 (Enrolled nurse) – 7.6 hours per day 5 days/week	38	1.0
Total	**240**	**6.3**

Example 4: Mental Health Community Service

$$\frac{175 \text{ nursing hours per week}}{38} = 4.6 \text{ FTE}$$

Nurse Grade	Hours/week	Weekly FTE (Column 1/38)
Grade 7 (NUM, CNC, NE) – Nil	0	0
Grade 6 (Clinical nurse) – 25 hours per day 7 days/week	175	4.6
Grade 5 (Registered nurse) – Nil	0	0
Grade 4 (Enrolled nurse) – Nil	0	0
Total	**175**	**4.6**

9.5 Step 5: Calculate non-productive nursing hours

After you have determined the total productive FTE requirements, you can calculate the non-productive hours. Non-productive nursing hours include all leave and mandatory training requirements. Calculating non-productive hours assists in determining on-costs, such as penalty payments and other allowances. To determine the leave replacement hours and costs associated with non-productive entitlements, you will need to convert the hours into a daily percentage.

For example, over a year (52 weeks), a three shift full-time position will work 38 hours/week and be entitled to six weeks annual leave. To calculate the on-costs percentage for this position, you will need to calculate the total annual nursing hours by multiplying the hours worked per week in a year.

Total annual nursing hours required = 38 hours/week x 52 weeks/year = 1,976 hours

To find out the daily percentage, divide the nursing hours worked by the annual nursing hours and multiply this number by 100.

Daily percentage = (7.6 / 1976) x 100 = 0.38%

To determine the percentage cost for six weeks of annual leave, multiply the daily hours worked by the number of leave days and then divide that number by the total annual nursing hours and multiply by 100.

Annual leave percentage (6 weeks) = (7.6 x 30)/1976 = 0.1154 x 100 = 11.54%

The tables below provide quick reference sources and examples of the on-costs calculations in your service. More examples are available in the BPF manual (2008, p.67-74).

Days	No. of hours	Percentage
1	7.6	0.38%
2	15.2	0.77%
3	22.8	1.15%
4	30.4	1.54%
5	38	1.92%
6	45.6	2.31%
7	53.2	2.69%
8	60.58	3.08%
9	68.4	3.46%
10	76	3.85%

Item	Amount	Percentage
Annual Leave	6 weeks 5 weeks 4 weeks	11.54% 9.6% 7.6%
Sick leave	Based on QH previous year average	4.00 *
Professional development	3 days	1.15%**
Penalties	Average of use within your service	24 %***

* Example only – Refer to your business team annually for the statewide sick leave average.
** Example only – Refer to Queensland Health policy for the relevant professional development leave entitlements relevant to your service.
*** Example only – Refer to your business team annually for the average penalty percentage used within your service.

Examples for calculating the non-productive nursing hours in FTE are provided in the following tables. The service examples follow on from those used in previous sections. For the purposes of this addendum, the examples provided include sick leave FTE in the total FTE. Transferring this practice to your area will depend on local recruitment strategies and business rules. It is recommended that you discuss these strategies with your nursing and business teams first before applying.

Example 1: Acute Mental Health Inpatient Unit

Productive		Non-Productive					
Grade	FTE	Annual Leave (5/6 weeks)	Sick Leave (4%)	Professional Development Leave (PDL) (1.15%)	Mandatory Training		Total FTE
					Average 4 new staff headcount (4.23%)	Existing 44 staff headcount (1.92%)	
7	3.0	0.29 (5)	0.12	0.05			3.46
6	12.2	1.40 (6)	0.49	0.18			14.27
5	20.4	2.35 (6)	0.82	0.24	0.17	0.85	24.83
3	3	0.33 (6)	0.12	0.05			3.50
1	0	0	0	0			0
Total	**38.6**	**4.37**	**1.55**	**0.52**	**0.17**	**0.85**	**46.06**

Mandatory training is calculated based on headcount. Hence, for the example provided the headcount for the unit has been set at 48 staff. The mandatory training FTE allocation has been incorporated into the grade 5 level as a recruitment strategy.

The following calculations can be applied to all grades of staff within the examples provided:

Calculation example for grade 7 (3 FTE):

Annual leave FTE = productive FTE x annual leave (week) % = 3.0 x (9.6/100) = 0.29 FTE

Sick leave FTE = productive FTE x sick leave % = 3.0 x (4/100) = 0.12 FTE

Professional development leave FTE = productive FTE x PDL% = 3.0 x (1.15/100) = 0.05 FTE

Total FTE = 3.46

Calculation example for grade 5 (20.4 FTE):

Annual leave FTE = productive FTE x annual leave (6 week) % = 20.4 x (11.54/100) = 2.35 FTE

Sick leave FTE = productive FTE x sick leave % = 20.4 x (4/100) = 0.82 FTE

Professional development leave FTE = productive FTE x PDL% = 20.4 x (1.15/100) = 0.24 FTE

Mandatory training (11 day) = new staff headcount x 11 day % = 4 x (4.23/100) = 0.17 FTE

Mandatory training (five day) = existing staff headcount x 5 day % = 44 x (1.92/100) = 0.85 FTE

Total FTE = 24.83

Example 2: Acute Mental Health Inpatient Unit (additional 2 ECT sessions)

Productive		Non-Productive					
Grade	FTE	Annual Leave (5/6 weeks)	Sick Leave (4%)	Professional Development Leave (PDL) (1.15%)	Mandatory Training		Total FTE
					Average 4 new staff headcount (4.23%)	Existing 44 staff headcount (1.92%)	
7	3.0	0.29 (5)	0.12	0.05			3.46
6	12.2	1.40 (6)	0.49	0.18			14.27
5	21.3	2.35 (6)	0.85	0.25	0.17	0.85	25.77
3	3	0.33 (6)	0.12	0.05			3.50
1	0	0	0	0			0
Total	**39.5**	**4.37**	**1.58**	**0.53**	**0.17**	**0.85**	**47.00**

Mandatory training is calculated based on headcount. For this example, the headcount for the unit has been set at 48 staff. The mandatory training FTE allocation has been incorporated into the grade 5 level as a recruitment strategy.

Example 3: Mental Health Outpatient Service

Productive		Non-Productive					
Grade	FTE	Annual leave (5/6 weeks)	Sick leave (4%)	Professional development Leave (PDL) (1.15%)	Mandatory training		Total FTE
					Average 1 new staff headcount (4.23%)	Existing 8 staff headcount (1.92%)	
7	1.0	0.10 (5)	0.04	0.01			1.15
6	1.8	0.17 (5)	0.07	0.02			2.06
5	2.5	0.24 (5)	0.10	0.03	0.04	0.15	3.06
3	1.0	0.10 (5)	0.04	0.01			1.15
1	0	0	0	0			0
Total	**6.3**	**0.61**	**0.25**	**0.07**	**0.04**	**0.15**	**7.42**

Mandatory training is calculated based on headcount. For this example, the headcount for the unit has been set at 9 staff. The mandatory training FTE allocation has been incorporated into the grade 5 level as a recruitment strategy.

Example 4: Mental Health Community Service

Productive		Non-Productive					
Grade	FTE	Annual leave	Sick leave	Professional development	Mandatory training		FTE
					Average 1 new staff (headcount)	Existing 5 staff (headcount)	
7	0	0	0	0	0	0	0
6	4.6	0.44 (5)	0.18	0.05	0.04	0.10	5.41
5	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
Total	**4.6**	**0.44**	**0.18**	**0.05**	**0.04**	**0.10**	**5.41**

Mandatory training is calculated based on headcount. For this example, the headcount for the unit has been set at six staff.

9.6 Step 6: Calculate total nursing FTEs and convert into dollars

Calculating costs of nursing FTE is essential when allocating resources during the business planning process. The BPF manual (2008) outlines two methods of converting the total nursing FTEs required into a dollar value: nurse-by-nurse and averaging. Nurse-by-nurse uses the hourly rate of an individual's grade and pay point to calculate the total costs, whereas averaging involves using the average costs of a category of staff. Refer to the BPF manual (2008, p.71-73) for more information.

The four examples below use the averaging method to determine the costs of the total nursing FTE required, with real annual base salary data current as of September 2011. Example 1 provides a detailed step-by-step process for calculating the costs of FTE.

Example 1: Acute Mental Health Inpatient Unit

Grade	Pay point	FTE	Annual base salary per pay point
7	3	3.0	293,028
6	1	2.0	148,296
6	3	5.0	388,315
6	4	5.2	413,041
5	1	3.0	162,531
5	3	4.0	248,432
5	4	8.0	518,408
5	5	4.4	297,004
5	7	1.0	72,896
3	4	2.4	122,237
3	5	0.6	31,066
1		-	-
Total		**38.6**	**2,695,254**

Step 1: Calculate the costs of FTE required within your service by collecting information about the grade and pay points of all nursing staff.

Access the current annual base salary per pay point on QHEPS: http://www.health.qld.gov.au/hrpolicies/wage_rates/nursing.asp.

Calculate the annual base salary of FTE per grade and pay point using the formula below:

Annual base salary = pay point per grade ($) X FTE

Annual base salary = Grade 6.1 ($74,148) x 2
= $148,296

Step 2: Determine the total annual base salary per grade by adding together the annual base salary of each grade and pay point.

Total annual base salary/grade 6 = grade 6.1 ($) + grade 6.3 ($) + grade 6.4 ($)
= $148,296 + $388,315 + $413,041
= $949,652

The total annual base salary per grade can then be used to calculate the costs of nursing staff in step 3.

Step 3: Calculate the total cost for each grade by using the established multiplier percentages provided in section 9.5.

Productive			**Non-productive**						
Grade	FTE	Annual base salary/ grade	Penalties @ 24% $	Annual leave 9.6%/11.54% $	Sick leave (4%) $	Professional development (1.15%) $	Mandatory training Average 4 new staff (headcount) $	Mandatory training Existing 44 staff (headcount) $	Total $
7	3.0	293,028	0	28,131	11,721	3,370			336,250
6	12.2	949,652	227,916	109,590	37,986	10,921			1,336,065
5	20.4	1,299,271	311,825	149,936	51,971	14,942	11,814	58,988	1,898,747
3	3.0	153,303	36,793	17,691	6,132	1,763			215,682
1	-	-	-	-	-	-	-	-	-
Total	**38.6**	**2,695,254**	**576,534**	**305,348**	**107,810**	**30,996**	**11,814**	**58,988**	**3,786,744**

Total cost for grade 7 FTE:
Penalties = $0 (nil required)
Annual leave = annual base salary x five weeks leave %6.3
= $293 028 x 0.096 %
= $28 131
Sick leave = annual base salary x sick leave %
= $293 028 x 0.04 %
= $11 721
PD leave = annual base salary x PDL %
= $293 028 x 0.01154
= $3 370
Total cost for grade 7 FTE = annual base salary + penalties + annual leave + sick leave + PDL
= $293,038 + $0 + $28,131 + $11,721, $3,370
= $336,250.

Example 2: Acute Mental Health Inpatient Unit (additional 2 ECT sessions)

Grade	Pay point	FTE	Annual base salary per pay point
7	3	3.0	293,028
6	1	2.0	148,296
6	3	5.0	388,315
6	4	5.2	413,041
5	1	3.0	162,531
5	3	4.9	304,329
5	4	8.0	518,408
5	5	4.4	297,004
5	7	1.0	72,896
3	4	2.4	122,237
3	5	0.6	31,066
1	-	-	-
Total		**39.5**	**2,751,151**

Step 1: Calculate the costs of FTE required within your service by collecting information about the grade and pay points of all nursing staff.

Step 2: Determine the total annual base salary per grade by adding together the annual base salary of each grade and pay point.

Step 3: Calculate the total cost for each grade by using the established multiplier percentages on page 33 of this addendum.

Productive			**Non-productive**						
Grade	FTE	Annual base salary ($ average)	Penalties @ 24% $	Annual leave (9.36%/ 11.54%) $	Sick leave (4%) $	Professional development (1.15%) $	Mandatory training		Total $
							Average 4 new staff (headcount) $	Existing 44 staff (headcount) $	
7	3.0	293,028	0	28,131	11,721	3,370			336,472
6	12.2	949,652	227,916	109,590	37,986	10,921			1,336,065
5	21.3	1,355,168	325,240	156,386	54,207	15,584	11,785	58,840	1,977,210
3	3	153,303	36,793	17,691	6,132	1,763			215,682
1	-	-	-	-	-	-	-	-	-
Total	**39.5**	**2,751,151**	**589,949**	**311,798**	**110,046**	**31,638**	**11,785**	**58,840**	**3,862,207**

Example 3: Mental Health Outpatient Service

Grade	Pay point	FTE	Annual base salary per pay point
7	3	1.0	97,676
6	1	1.0	74,148
6	3	0.8	62,130
5	2	1.0	59,418
5	4	0.8	51,841
5	7	0.7	51,027
3	4	0.5	25,466
3	5	0.5	25,889
1		-	-
Total		**6.3**	**447,595**

Step 1: Calculate the costs of FTE required within your service by collecting information about the grade and pay points of all nursing staff.

Step 2: Determine the total annual base salary per grade by adding together the annual base salary of each grade and pay point.

Step 3: Calculate the total cost for each grade by using the established multiplier percentages on page 33 of this addendum.

Productive			**Non-productive**						
Grade	FTE	Annual base salary ($ average)	Penalties @ 24% $	Annual leave (9.36%/ 11.54%) $	Sick leave (4%) $	Professional development (1.15%) $	Mandatory training		Total $
							Average 1 new staff (headcount) $	Existing 8 staff (headcount) $	
7	1.0	97,676	0	9,377	3,907	1,127			112,087
6	1.8	136,278	0	13,083	5,451	1,573			156,384
5	2.5	162,286	0	15,579	6,491	1,873	3,005	10,913	200,148
3	1.0	51,355	0	4,930	2,054	593			58,932
1	-	-	-	-	-	-	-	-	-
Total	**6.3**	**447,595**	**0**	**42,969**	**17,904**	**5,165**	**3,005**	**10,913**	**527,551**

Example 4: Mental Health Community Service

Grade	Pay point	FTE	Annual base salary per pay point
6	1	1.4	103,807
6	2	2.4	182,158
6	3	0.8	62,130
Total		**4.6**	**348,095**

Step 1: Calculate the costs of FTE required within your service by collecting information about the grade and pay points of all nursing staff.

Step 2: Determine the total annual base salary per grade by adding together the annual base salary of each grade and pay point.

Step 3: Calculate the total cost for each grade by using the established multiplier percentages on page 33 of this addendum.

Productive			**Non-Productive**						
Grade	FTE	Annual base salary ($ average)	Penalties @ 24% $	Annual leave (9.36%/ 11.54%) $	Sick leave (4%) $	Professional development (1.15%) $	Mandatory training		Total $
							Average 1 new staff (headcount) $	Existing 5 staff (headcount) $	
7	0	-	-	-	-	-	-	-	
6	4.6	348,095	83,543	33,417	13,924	4,003	3,201	7,265	493,448
5	0	-	-	-	-	-	-	-	
3	0	-	-	-	-	-	-	-	
1	-	-	-	-	-	-	-	-	
Total	**4.6**	**348,095**	**83,543**	**33,417**	**13,924**	**4,003**	**3,201**	**7,265**	**493,448**

9.7 Step 7: Allocate nursing hours to service requirements

The final step in developing an operational budget for your service is to balance the supply of nursing resources with the demands of the unit. The BPF manual (2008, p.75) recommends reviewing the following considerations when assessing the supply and demand trends of your service:

- time of day
- day of week
- seasons
- medical officer availability
- compulsory service closures
- other locally significant reasons such as tourism, industry and major community events.

Service demand and supply requires a retrospective analysis of quantitative and qualitative data. As a result, reviewing monthly activity trends using data such as occupied bed days and occasions of service will help to reveal peak periods. Alternatively, historical data regarding the actual nursing hours used per month will be useful when allocating hours to future requirements.

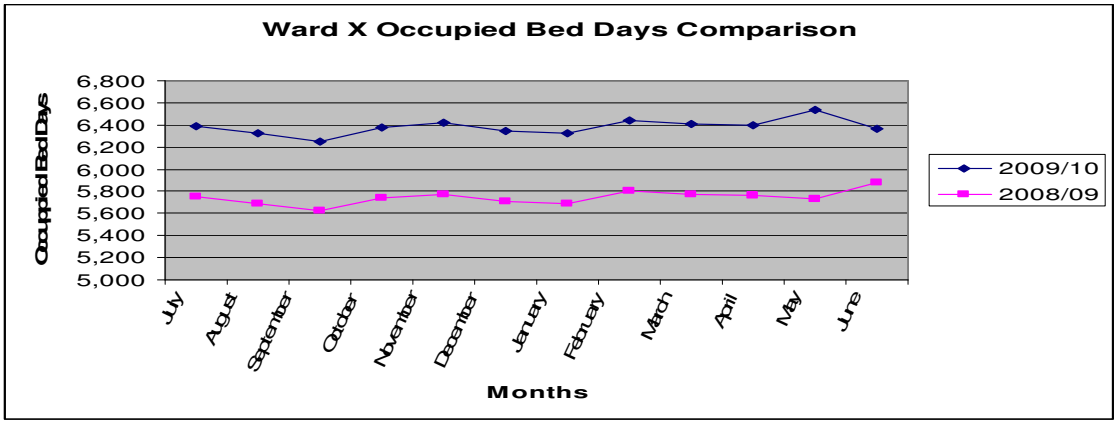
It is acknowledged that some areas will experience significant variations in service demand and supply when compared with other similar services. For this reason, conduct a thorough environmental analysis, as part of your service profile, to provide an overview of the demand and supply variables within the service.

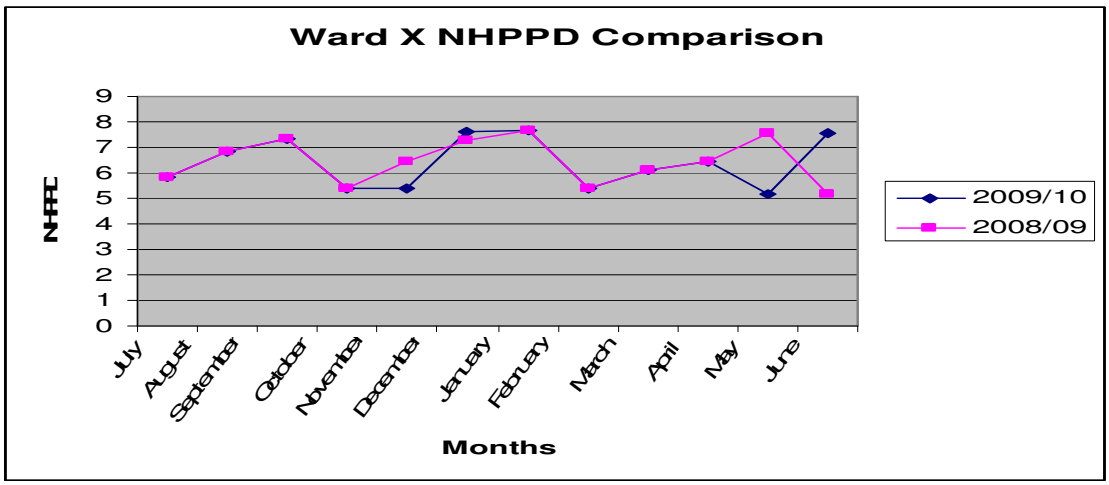
The following graphs illustrate the quantitative trends in activity and nursing hours used in inpatient and outpatient mental health services. A short qualitative analysis of the data follows each example provided. The concept of monitoring service activity and nursing hours on a monthly basis can be transferred to daily and weekly trending if required.

Example 1: Acute Mental Health Inpatient Unit (Monthly overview)

2009/10	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Tot. hrs required/ month	6,391	6,321	6,246	6,381	6,420	6,345	6,319	6,444	6,412	6,399	6,532	6,365	76,575
OBD	1,100	922	850	1,189	1,192	832	827	1,201	1,050	992	1,260	840	12,225
Average NHPPD	5.81	6.86	7.35	5.37	5.39	7.63	7.64	5.37	6.11	6.45	5.18	7.58	6.26

2008/09	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total hours required/ month	5,752	5,689	5,621	5,743	5,778	5,711	5,687	5,800	5,771	5,759	5,729	5,879	68,918
OBD	990	830	765	1,070	900	785	744	1,081	945	893	756	1,134	11,030
Average NHPPD	5.81	6.85	7.35	5.37	6.42	7.28	7.64	5.37	6.11	6.45	7.58	5.18	6.33





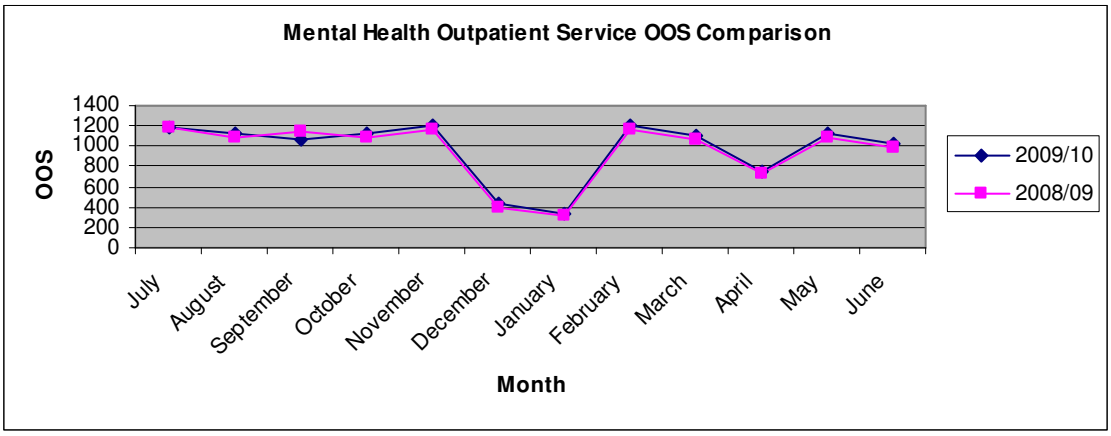
Evaluation of service activity and nursing hours used:

- Increase in the number of OBDs between 2008/09 and 2009/10
- Minimal change in the annual trend of OBDs during both financial years
- Minimal change in the NHPPD and annual trend used over the comparison periods
- Consider leave allocation and mandatory training opportunities during September, December, January and May as OBDs are lower than the average during these times.

Example 2: Mental Health Outpatient Service (monthly overview)

2009/10	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total hours required/ month	1,260	1,245	1,125	1,239	1,293	552	380	1,340	1,103	819	1,245	1,100	12,701
OOS	1,180	1,126	1,073	1,125	1,197	442	330	1,208	1,104	740	1,116	1,019	11,760
Average NHPOS	1.07	1.11	1.05	1.10	1.08	1.25	1.15	1.11	1.00	1.11	1.12	1.08	1.08

2008/09	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total hours required/ month	1,180	1,126	1,073	1,125	1,197	442	330	1,208	1,104	740	1,116	1,019	11,660
OOS	1,178	1,087	1,140	1,091	1,161	390	320	1,172	1,071	725	1,083	988	11,406
Average NHPOS	1.00	1.04	0.94	1.03	1.03	1.13	1.03	1.03	1.03	1.02	1.03	1.03	1.02



Evaluation of service activity and nursing hours used:

- Nil significant changes in OOS between 2008/09 and 2009/10
- Minimal change in the NHPOS and annual trend used over the comparison periods
- Consider leave allocation and mandatory training opportunities during September, December, January and April due to holiday service closures.

10.0 Summary

Determining total staffing requirements and operational budgets is an important process when balancing the supply of nursing staff with the demand for health services. Within Queensland Health, the BPF is used to promote transparency and consistency in managing the supply of nurses with service demand. The framework supports nurses and business teams to assess, develop and evaluate healthcare services using local information gathered from a variety of quantitative and qualitative sources.

Service profile development is the industrially agreed process for nursing staff to follow when implementing the BPF. The information required when conducting a service profile will assist staff in reviewing historical service data, assessing current circumstances and developing plans for the future. A comprehensive service profile will help determine the productive and non-productive nursing and midwifery hours required to meet service demand and assist nursing and midwifery mangers to develop workforce plans and operational budgets.

Mental health services can achieve improvements in workload management practices and outcomes by completing a service profile and:

- including all direct and indirect nursing activity as part of productive hours
- incorporating the effects of existing/emerging service demands on nursing resources in service profiles
- using consistent and appropriate client acuity/complexity and activity measures
- applying all standard multipliers as directed within the BPF manual (2008)
- networking and sharing workload management processes and business planning practices within the speciality area.

To assist the application and implementation of the BPF within your area, service profile and performance evaluation examples have been included within the appendices of this addendum.

For more information about the BPF, visit Queensland Health's intranet site: http://qheps.health.qld.gov.au/nmoq/default.htm.

Appendix A
Assessment of productive nursing hours in a Mental Health Acute Inpatient Unit (fictional example)

The following fictional example describes and prioritises a number of realistic demands which influence the total nursing hours required in a mental health acute inpatient unit (MHAIU) based on the core demand diagram located in section 5 of this addendum. Impact assessments of each demand have been included to highlight specific nursing workload considerations and implications for service delivery.

The demand impacts have been summarised and used to inform workload management strategies and workforce plans found in the Mental Health Acute Inpatient service profile in appendix B. This example does not constitute organisational policy.

MHAIU service demands/desired health outcomes

Consumer	• Increasing accessibility to outpatient electroconvulsive therapy program • Reviewing clinical management pathway and anaesthetic guidelines • Developing a sensory room for consumer therapy • Reducing consumer seclusion and restraint
Staff	• Developing a contemporary preceptorship model for new staff and students • Implementing the BPF • Introducing a clinical supervision model for all staff
Organisation	• Effective and efficient health promotion, illness prevention and early intervention • Access to quality services delivered in the right way, at the right time and in the right place • Improve the equity of health outcomes • Create a sustainable, proactive and continually improving health system • A sustainable and highly-skilled workforce to meet future health needs

Workload impact assessment:

- *direct nursing hours (delivering clinical care, considering nursing hours and skill mix required)*
- *indirect (ward-based training, clinical supervision, preceptorship, coaching, quality activities, clinical policy review/development, business planning, rostering, recruitment)*
- *non-productive nursing hours (mandatory training, scheduled and unscheduled leave, backfill arrangements).*

Population demographics

- Population of town is 211,000 people with an expected growth to 270,000 by 2021
- Wider catchment areas include an additional population of 70,000 to 80,000
- Future planning is based on the provision of 10 beds per 100,000 population

Workload impact assessment:

Steady growth in the primary population is expected, with additional increases likely in the wider catchment area. Plans to expand services within three to five years will be necessary. Increases in nursing resources and infrastructure changes will be required to maintain care delivery.

Context of practice

- regional area
- service is accommodated within a large acute care facility
- 38 bed acute inpatient unit, including eight psychiatric intensive care beds
- operates 24/7 hours (365 days per year)
- provides treatment for acute symptoms of a mental illness
- skill mix (assistant director of nursing, Nurse Unit Manager, clinical nurse consultant, nurse educator, clinical nurses, clinical facilitator, and registered and enrolled nurses)
- small pool of casual nursing staff with limited mental health experience
- emergent leave primarily covered with agency nursing staff
- uses a multi-disciplinary team process (consultant psychiatrist, registrars, residents, psychologist, occupational therapist and assistant, social worker and advance mental health worker)
- high level of community engagement with government and non-government agencies
- large number of short to medium term workers, staff attrition is higher than Queensland Health's state average.

Workload impact assessment:

The ward provides an acute, intensive mental health service and requires appropriately trained and experienced staff. In the current environment, the skill mix of permanent, temporary and casual staff is difficult to maintain as attrition is above the Queensland Health's state average. Strategies to improve and sustain optimal staffing numbers and skill levels are needed. Presently, preceptorship and training hours are high due to the rising number of new staff being recruited to the unit. As a regional service, access to skilled agency and casual staff is limited which influences the allocation and replacement of staff leave, the use of overtime hours and the number of part-time extra shifts approved.

Consumer complexity

- Top 5 DRG's 2009/10
  - U61Z Schizophrenia Disorders
  - U63Z Anxiety Disorders
  - U62A Paranoia & Acute Psych Disorder W Catastrophic/Severe complication or with Mental Health Legal Status
  - U63Z Major Affective Disorders
  - U65Z Eating and Obsessive Compulsive Disorders
- HONOS/CIMHA data – forensic patients (↑ 2%), involuntary patients (↑1.5%), HONOS (scores 3< ↑ 11%)
- 98% occupancy in 8 acute intensive care beds
- 34% increase (2010/2011) in electroconvulsive therapy (inpatient and outpatient)
- 32% of yearly admissions are new presentations (↑ 3% previous financial year)
- 28% of yearly admission are 65 years and older (↑ 4.2 % previous financial year)
- 11% of yearly admission are between 14-18 years (↑ 1.8 % previous financial year)
- 5.7% Aboriginal and Torres Strait Islander population (average in Australia 2.3%).

Workload impact assessment:

The data indicates an increase in the level of consumer complexity within the ward. Matching service demand with supply of human resources will require a review of the model of care, total nursing hours required, staffing skill mix profile, rostering practices, education/training programs and staff development. In conjunction with a review of the previous year's nursing hours, a comparison with peer groups and/or similar services is needed to assess the adequacy of allocated productive nursing hours.

Service activity

- Inpatient:
  - 1,021 Occupied Bed Days (monthly average)
  - 98% occupancy (yearly average).

- Outpatient:
  - 25% increase in occasions of service for outpatient clinics (2010/2011)
  - 2 additional outpatient ECT sessions commenced
  - 15% increase in new referrals
  - Waiting list time for new referral 4 weeks (↑15% previous year).

Workload impact assessment:

Inpatient and outpatient service activity is increasing. There has been significant growth in the number of new referrals, occasions of service, scheduled sessions and waitlist times. Additional clinics, sessions and rooms will be required to sustain the expansion in outpatient services. Fundamentally, staffing levels, skill mix, training requirements and service delivery models will need to be reviewed for both inpatient and outpatient services.

Model of care

The service uses a recovery model incorporating a multi-disciplinary approach.

Workload impact assessment:

A multi-disciplinary model of care requires a collaborative approach to workload management. Development of clear statements outlining the roles, responsibilities and accountabilities of nursing, medical and allied health staff are required. Improvement in data collection relevant to nursing workload is also needed to improve the accuracy in calculating the total number of productive nursing hours. Assessment and allocation of direct and indirect nursing hours is needed to ensure sufficient hours are available to meet service demands throughout the year.

Quality and safety

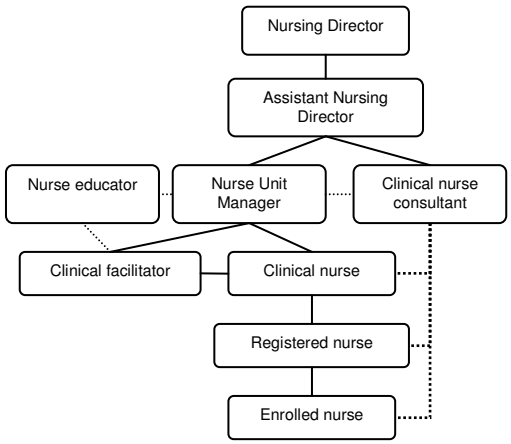
- Reporting and management of consumer and staff workplace incident reports
- Clinical workplace audits e.g. infection control, medication chart, environmental
- Staff compliance (100%) to mandatory workplace health and safety training requirements (ie. fire safety, occupational violence training, infection control and prevention)
- Staff participation in policy and procedure development and review
- Four clinical portfolios (infection control, workplace health and safety, education and training, quality improvement and evidence based practice)

Workload impact assessment:

Calculating the regular rostering of indirect nursing hours is required when supporting the quality and safety activities within the ward. Documentation of these activities, the resources used (including staff time) and evaluation processes provide valuable information that will assist with workload, workforce and operational planning.

Leadership and management

Mental Health Acute Inpatient Unit nursing structure



- **Nurse Unit Manager:** accountable at an advanced practice level for the coordination of clinical practice and the provision of human and material resources within the MHAIU on a daily basis including staffing, rostering, patient scheduling, recruitment, retention, performance appraisals and management.
- **Clinical nurse consultant:** provides clinical leadership to staff and uses their clinical expertise to deliver high level care directly to consumers.
- **Nurse educator:** responsible for the strategic direction of education within the ward. The nurse educator supports the clinical facilitator in delivering education and training specific for the mental health environment.
- **Clinical nurses:** require broad developing knowledge in professional nursing issues and a sound specific knowledge base in relation to acute mental health services. The clinical nurse assumes accountability and responsibility for own actions and acts to rectify unsafe practice and/or professional conduct. This role identifies, selects, implements and evaluates nursing interventions and provides support in the delivery of education, training and preceptorship specific for the acute mental health service.

Nursing staff are allocated to three teams based on knowledge, skills, attitudes and experience. Each team will rotate on a three monthly basis to cover the acute ward, intensive care unit and outpatient clinics. The staffing profile allows for four postgraduate nurses and two first year practice graduate nurses. Clinical supervision has been factored in at 2.5 hours per month, per full time equivalent staff. 75% of staff has mental health credentials. Leadership and management of Ward X is based on collaboration between the multidisciplinary team which includes a psychiatrist, registrars, resident medical officers, psychologists, an occupational therapist and social workers.

Workload impact assessment:

It is critical that rostering of productive hours and allocation of non-productive hours is performed in accordance with Queensland Health's best practice framework for rostering nursing personnel. Direct nursing hours will be used as a basis for calculating the indirect hours and non-productive hours required, such as clinical supervision, mandatory/requisite training, professional development and accrued leave. Reviewing role descriptions and work undertaken by nursing staff in a multi-disciplinary environment is necessary when monitoring the effectiveness and productivity of the nursing team.

Education and service capacity development

- Continual professional development points for all staff (registration requirement)
- Mandatory and speciality requisite training (e.g. *Mental Health Act*, CIMHA/Outcomes measures, suicide risk assessment and management)
- Undergraduate nursing students support (42 weeks per year)
- Postgraduate study support (variable numbers)
- 4 x FTE graduate nurses
- 3 x FTE nurses transitioning to mental health
- Recruitment and retention strategies
- Succession planning and performance appraisals.

Workload impact assessment:

The education and service capacity considerations for Ward X directly influences the number of indirect and non-productive hours required. Adequate allocation of nursing hours is required when maintaining service commitments in staff development and training. In the event that graduate nurse numbers were to increase, a temporary increase in clinical facilitation hours may be required. Currently, all recruitment and retention processes are managed locally by the Nurse Unit Manager and clinical nurses. The transfer of these activities to the central recruitment team is necessary to improve the effectiveness and efficiencies of clinical care delivery.

Research and evidence based practice

- 2 x 12 week practice development program planned
- Staff involved in two research studies (collaborative work between Queensland Health and University Y).

Workload impact assessment:

Calculating the allocation of indirect nursing hours is essential when meeting the demands of research and evidence based practice in Ward X. The time committed to practice development will need to be averaged throughout the year to assist in the consistent distribution of nursing hours. Review of backfill requirements for staff undertaking research activities and accessing SARAS leave will need to occur.

Health policy, guidelines, strategic plans and legislation

The MHAIU is influenced by a number of policies, guidelines, plans and legislation such as:

- Clinical Services Capability Framework 2011 – Mental health module
- Clinical Supervision Guidelines for Mental Health Services 2009
- *Mental Health Act 2000*
- Queensland Plan for Mental Health 2007–2017
- Policy statement on reducing and where possible eliminating restraint and seclusion in Queensland Mental Health Services 2008
- Queensland Health Strategic Plan 2011–2015
- *Nurses and Midwives (Queensland Health) Certified Agreement (EB7) 2009*
- Queensland Health Nurse and Midwives Award – State 2011
- *Health Practitioners Regulation National Law Act 2009*
- *Workplace Relations Act 1997*.

Workload impact assessment:

Demands placed on the MHAIU as a result of policy, guidelines, plans and legislation impacts both direct and indirect nursing hours. Some factors have been included in the allocation of nursing hours per patient day, while others may refer to alternative demands which are sourced through central services such as quality and safety, education and training and service capacity building.

Community interface

The MHAIU interacts regularly with extended inpatient services and community mental health services.

Workload impact assessment:

Nursing interaction with these services is generally performed directly and has been included in the established amount of nursing hours per patient day on the ward. Networking and other collaborative meetings are considered indirect and will need to be included when calculating the total productive nursing hours required.

Appendix B
Mental Health Acute Inpatient Unit service profile 2010/11 (fictional example)

Service name
Mental Health Acute Inpatient Unit

Service aim
To deliver quality mental health acute inpatient services to district X by:

- providing evidence based mental health services at the right time, in the right place and in the right way
- delivering sustainable mental health services that are effective and efficient in health promotion, illness prevention and early intervention.

Service objectives
1. Assess, plan and implement service capacity changes to meet the 30% growth in consumer demand for outpatient electroconvulsive therapy program by June 2011.
2. Achieve a 10% reduction in the use of consumer restraint and seclusion over the next year by aligning with Queensland Health policy, providing staff education and training programs and monitoring use within monthly reporting schedule.
3. Review and update all policies, procedures and guidelines relevant to the clinical management of consumers receiving anaesthetics within the service by December 2010.
4. Develop and implement a contemporary multidisciplinary preceptorship model for new staff and students by January 2011.
5. Introduce a clinical supervision model for staff based on Queensland Health policy and frameworks by January 2011.
6. Improve the business planning processes within the service by establishing monthly collaborative meetings with nursing management and business team members.

Present service
The Mental Health Acute Inpatient Unit (MHAIU) is a regional service located in hospital W. This unit is the sole provider of level five acute inpatient mental health services within the district. The unit operates 24 hours per day, every day of the year to deliver acute inpatient mental health services to consumers within a geographically large catchment area including rural and remote communities. This unit adheres to Queensland Health's Clinical Services Capability Framework version 3.0 and is capable of providing mental health services to low, moderate and high risk/complex voluntary and involuntary adult patients. Services within the MHAIU are delivered by a comprehensive multi-disciplinary team of mental health professionals (psychiatrists, nurses and allied health professionals). Services provided include:

- patient and carer education
- weekly case review
- group programs
- extensive primary and secondary prevention programs
- consultation with higher and lower level mental health services
- referral, where appropriate.

Internal environmental analysis

Structural

Hospital W is a tertiary referral teaching hospital located in suburb Y of town Z. The hospital is separated into three blocks (A, B and C) and provides a wide range of services to the community including:

- Medical (general and speciality services)
- Surgical (general and speciality services)
- Cardiac
- Neurology
- Obstetric
- Gynaecological
- Paediatric
- Cancer Services
- Mental health
- Neonatal and Special Care Nursery
- Medical Imaging
- Rehabilitation and Gerontology Services
- Allied health
- Anaesthetic
- Intensive Care Services
- Variety of Outreach Services.

The hospital is in close proximity to the local university which offers pre- and post-graduate education for medical, nursing and allied health staff. Mental health services within this region have an affiliation with this university.

The MHAIU is a 38 bed acute inpatient unit which includes 8 psychiatric intensive care beds, 6 x 4 bed rooms and 4 single rooms. It is situated in B block on the fourth floor of Town X's base hospital and accesses two enclosed outdoor verandas. The unit is physically separated into 3 pods:

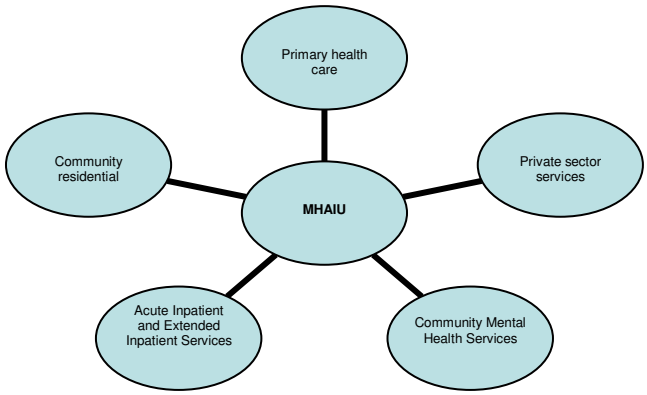
- Pod 1 – 8 psychiatric intensive care beds
- Pod 2 – 2 x 4 bed rooms and 4 single beds
- Pod 3 – 4 x 4 bed rooms.

Staffing and skill mix allocation is based on meeting the demands of the physical layout of the unit. Therefore three separate nursing teams are rostered per shift with additional staff available for out of ward services.

Each nursing team is led by a clinical nurse or other suitably qualified registered nurses with the support of clinical nurse consultants, clinical facilitators, registered nurses and enrolled nurses. The nursing teams are rotated every three months.

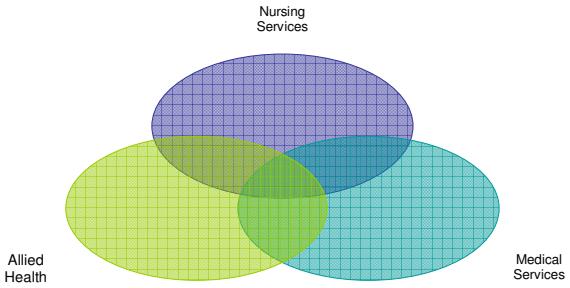
Electroconvulsive therapy for inpatients and outpatients is provided in the Day Surgery Unit in block C, level 1. Staff are often required to physically escort patients when participating in the care delivery process. After-hours clinical assistance is also provided to other inpatient units within the hospital (primarily the Emergency Department) upon request between 1700-0700. Based on consumer needs, the MHAIU regularly interfaces with other internal and external services as shown in the diagram below.

Mental Health Acute Inpatient Unit Service interface



A multi-disciplinary team comprising of medical (psychiatrists, registrars, and residents), allied health (psychologists, social workers, occupational therapists and advanced mental health workers) and nursing staff are employed within the MHAIU to support the skill mix within a recovery model of care. This model of care depends on a collaborative team structure delivering quality mental health services to the consumer. The following diagram depicts all individual disciplines that merge to form a united professional structure within the MHAIU.

MHAIU multi-disciplinary team structure



The unit's nursing structure is comprised of enrolled nurses, registered nurses, clinical nurses, educators and managers. Within this structure, each individual position works to support the delivery of direct and indirect care, either professionally or operationally for mental health consumers.

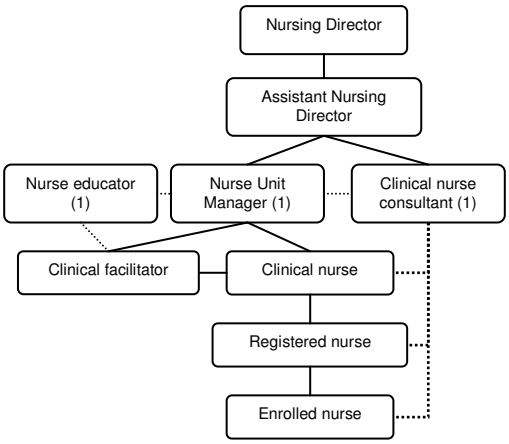
Educational support within the structure is vital to sustaining the unit's aim to provide quality acute inpatient mental health services. This is reinforced through 75% of nursing staff having mental health qualifications and/or equivalent organisational training/ competencies.

There are a large proportion of registered or clinical nurses employed within the MHAIU. The reason for this high percentage has been historically based on the following:

- physical layout of the unit requires three teams
- unit preference is for a clinical nurse/senior registered nurse to lead each team
- matching consumer acuity with nursing staff scope of practice and skill.

The current nursing structure (refer to diagram below) has been designed to facilitate the employment of more graduate registered nurses and enrolled nurses. Educational, managerial and clinical support is provided through three Grade 7 positions while additional clinical/preceptorship assistance is supplied by Grade 5 and 6 nurses and new transition to practice programs. The introduction of clinical supervision within the MHAIU is also expected to positively impact on the number of new and graduate nursing staff employed.

Mental Health Acute Inpatient Unit nursing structure



Nursing staff are allocated to three teams based on skills and experience. Each team will rotate on a three monthly basis to cover the acute ward, intensive care unit and outpatient clinics. Staffing profile allows 4 postgraduate nurses and 2 first year practice graduate nurses. Clinical supervision has been factored in at 2.5 hours per month, per full-time equivalent.

There are two cost centres used to service this unit. The first cost centre incorporates all costs associated with the inpatient unit, while the second covers the costs for all outpatient activity associated with providing electroconvulsive therapy. This structure allows the Nurse Unit Manager to coordinate the use of available funds while monitoring and evaluating the balance of service supply and demand.

Human resource management

The MHAIU is a fundamental component of mental health services in the district. Within the unit, the Mental Health nursing director and executive director are professionally responsible and accountable for the delivery of services within the unit. The incumbents of these two full-time positions are expected to hold suitable qualifications and experience in mental health and healthcare management.

Within nursing services, the assistant director of nursing is the conduit between operational and professional management. Consequently, the Assistant Director of Nursing and the Nurse Unit Manager are expected to work in partnership to achieve the aims and objectives of the MHAIU. These positions are also expected to possess suitable qualifications and experience in mental health nursing or to be working towards appropriate qualifications in healthcare management.

In 2009, a high percentage of MHAIU staff (71%) participated in a 'better workplaces" staff survey conducted hospital-wide (average participation of wards and units was 66%). Clinical staff and senior management noted issues regarding communication and change management, which were brought to the attention of MHAIU management for actioning. In accordance with organisational directions, the MHAIU and senior management have developed an action plan to improve communication processes between all levels of staff. The action plan priorities include:

- commencement of unit multi-disciplinary based staff meetings monthly, with clinical portfolios as standard agenda items
- fortnightly meetings scheduled between the Nurse Unit Manager, assistant director of nursing and nursing director
- monthly reporting structure modified ie. distribution of service line scorecard to Nurse Unit Manager and reformatting of Nurse Unit Manager monthly report
- service line clinical nurse forum held monthly for Mental Health Services
- staff member to be designated monthly to attend chief executive offices forum.

The action plan has been implemented with initial feedback from unit based staff being positive; however, an increase in the monthly use of indirect clinical hours has since occurred.

The core staff within this unit include:

- Nurse Unit Manager (1 FTE): accountable at an advanced practice level for the coordination of clinical practice and the provision of human and material resources within the MHAIU on a daily basis including staffing, rostering, patient scheduling, recruitment and retention, performance appraisals and management and business.
- Clinical nurse consultant (1 FTE): accountable at an advanced level for the coordination of clinical practice delivered in the MHAIU.
- Nurse educator (1 FTE): accountable at an advanced practice level for the design, implementation and assessment of nursing education programs, managing educational resources and providing nursing expertise on educational issues within the mental health specialty.
- Clinical facilitator (1 FTE): responsible for facilitation of clinical learning within the local unit.
- Clinical nurses (13 FTE): **:** require broad developing knowledge in professional nursing issues and a sound specific knowledge base in relation to acute mental health services. The clinical nurse assumes accountability and responsibility for own actions and acts to rectify unsafe practice and/or professional conduct. This role identifies, selects, implements and evaluates nursing interventions and provides support in the delivery of education, training and preceptorship specific for the MHAIU.
- Registered nurses (28 FTE): provide nursing care based on the ANMC national competency standards to mental health consumers within the MHAIU in collaboration with other health service providers. Registered nurses will be responsible for team leading and ward coordination in the absence of clinical nurses.
- Enrolled nurses (4 FTE): provide nursing care based on the ANMC national competency standards to mental health consumers within the MHAIU in collaboration with other health service providers and under the supervision of a registered nurse.
- Consultant psychiatrists (2 FTE): Are responsible for the operational delivery of consultant psychiatric medical services within the unit.
- Psychiatric registrars (2 FTE): Work in conjunction with the consultant psychiatrists to deliver psychiatric medical services.

- Resident Medical Officers (2 FTE): Support the delivery of psychiatric medical services within the MHAIU by working with consultants and registrars.
- Occupational therapist (1 FTE): Support the delivery of mental health services by providing occupational assessment, treatment and interventions to consumers within the MHAIU.
- Psychologist (1 FTE): Are responsible for delivering supportive psychological therapeutic services to mental health consumers within the MHAIU's multi-disciplinary environment.
- Social worker (1 FTE): Collaborates in as a multi-disciplinary team member in delivering external services and social working services for mental health consumers and their families/carers.
- Advanced mental health worker (0.5 FTE): Supports MHAIU staff in providing mental health services to indigenous consumers and families.
- Administration officers (1.5 FTE): Provide administrative support to the entire multi-disciplinary team.
- Operational staff (1.5 FTE): Provide operational support (primarily cleaning and consumer transport) within the MHAIU.
- Medical/Allied Health/Nursing students (variable numbers): undergraduate students attend clinical placements within the unit approximately 42 weeks per year.

As a tertiary mental health service, the MHAIU has a major role in supporting undergraduate, graduate and postgraduate education within the district. Providing clinical experience suitable for medical, allied health and nursing students is one of the MHAIU's educational priorities. Each discipline individually manages their students while working within the unit. For undergraduate nursing students, shifts are available from Monday to Sunday (early and late shifts only) for 42 weeks of the year.

The student placement program is centrally managed by the hospital's Clinical Education and Training Unit with support from local Nurse Educators. Each student nurse is allocated a registered nurse or small group of registered nurses to work with during their placement. Four students are consistently expected for 42 weeks, which means a minimum of 5.89 FTE of staff must be available and capable of facilitating students. To successfully facilitate nursing students, registered nurses must possess the following attributes:

- minimum of one year clinical mental health experience
- completed transition to practice modules for mental health
- working towards or completed organisational preceptorship course
- completed university student facilitator program.

MHAIU's level of participation in the undergraduate student placement program is unlikely to change over the next 12 to 18 months. Subsequently, the current allocation of productive nursing hours encompassing the student placement program remains unchanged. Postgraduate study is encouraged and supported within the unit through clinical experience and support provided by the nurse educator. Additional support is available through the organisations' Study and Research Assistance Scheme (SARAS) in relation to financial assistance and leave arrangements. The level of assistance provided is dependent on individual and organisational needs, which may vary in different academic terms. At present, two nursing employees have accessed SARAS with minimal impact to staff rosters and nursing workloads. An increase in the number of graduate nursing staff from 2 FTE to 4 FTE is planned in 2010/11. This increase will be supported by the introduction of two new programs; a multi-disciplinary preceptorship program and the

clinical supervision program. These programs will assist staff in developing and/or improving their preceptorship and induction skills, which will increase the number of staff available to preceptor. Allocation of indirect hours is necessary for these purposes to ensure a successful outcome is achieved.

Mandatory training and agreed speciality training requisites for the MHAIU are not expected to change within 2010/11. Current calculations of productive and non-productive nursing hours within the unit include all necessary education and training programs. In consideration of the specialty skills required in the MHAIU, all non-productive mandatory training time for new (11 days) and existing (5 days) staff has been included in the Total FTE required to recruit. This will ensure an appropriate skill mix of staff is available to backfill education and training time – similar to the processes already established for annual leave and professional development leave.

Nursing hours per patient day (NHPPD) required within the MHAIU are 6.35, which include both direct and indirect clinical hours. Included in the indirect hours are the following activities:

- portfolio management – infection control, workplace health and safety, education/ training and quality improvement/evidenced based practice.
- reporting and managing consumer and staff incidents
- workplace audits
- policy development and review
- clinical unit education/training
- continual professional development points (registration requirement)
- recruitment processes and retention strategies
- succession planning and performance appraisals
- practice development/evidence based practice/research.

Note: Staff are aware that not all professional development opportunities relating to registration requirements will occur internally.

Information technology

The information systems and collections most commonly used within the MHAIU are:

Information system/collection	Purpose
Consumer Integrated Mental Health Application (CIMHA)	• Consumer-centric clinical information system designed to support mental health clinician in the provision of safer quality mental health services.
Hospital Based Corporate Information System (HBCIS)	• Records inpatient activity for all consumers admitted to a public hospital.
Mental Health Inpatient Activity (admission, transfer and discharge)	• Informs Queensland Health Admitted Patient data Collection (QHAPDC) • National Minimum Data Sets Mental Health Admitted Mental Health Care (subset information).
Mental health activity data collection	• Collects all service contacts provided by specialised mental health services for all consumers not admitted to acute care hospitals or those residents in 24hr specialised residential mental health services. • National Minimum Data Sets Mental Health Care (subset information).
Mental health outcomes information	• Clinician-rated and consumer self-assessment outcome measures and other information • National Outcomes and Casemix Collection (subset information).
Annual survey of Mental Health Services	• Collect establishment information from districts and statewide services including consumer and carer participation, types of services, bed numbers, patient activity data, FTE numbers and service expenditure. • National Minimum Data Sets Mental Health Establishments (subset information).

Primary Related Incident Management and Evaluation System (PRIME)	• Management of clinical incidents and health care complaints
Decision Support System (DSS Panorama)	• Provides summary data reports displaying aggregate expenditure, budgets, variances and balances for cost centres and account codes for services. Reports are available for agency use, overtime, leave/ absenteeism, position occupancy and work centres.

The information systems used within MHAIU provide a wide range of quantitative data useful for monitoring consumer trends and service activity. Some of these systems are capable of collecting data relating to nursing work which is used to determine productive hours. However, as not all nursing work performed is captured; qualitative information from clinicians is also gathered to enhance the analysis of service demand and supply.

Unit based staff have designed local spreadsheets to monitor nursing workload which are approved for use by nursing management and the business team. Data is reported monthly by MHAIU nursing staff, which contributes to the final amount of nursing hours required within the unit.

Staff access to data varies depending on its relevance to the clinical position. For example, consumer incidents are reported monthly to all levels and categories of staff within the multi-disciplinary team, while cost centre reports are provided to management staff monthly. The majority of reports used within the MHAIU are not automated at an organisational level, hence the business team takes responsibility for the collation and distribution of reports to staff. Data interpretation/analysis represents core development skills within performance appraisals and succession management plans for grade 5, 6, and 7 nursing staff. These hours are included in the calculation of productive nursing hours.

In the MHAIU, frontline multi-disciplinary team members and administration staff are primarily responsible for data input. Issues with reliability, accuracy and the timely input of data have been acknowledged throughout the past year. Mitigating strategies, such as information system training programs and information technology awareness raising sessions, have been implemented throughout the unit's multi-disciplinary team. This has resulted in a significant increase in indirect clinical hours. These strategies are coordinated and monitored by the MHAIU Nurse Educator.

In addition, limited access to computers has proved to be an issue for staff and a major barrier in terms of efficient data entry. Consequently, a request has been submitted for three extra computer terminals. The request has been categorised as a high priority during this year's annual service planning day.

Performance

The overall performance of the MHAIU has been satisfactory when compared with formerly set service targets. During the last three years, the financial performance of the MHAIU shows labour expenditure to be above budgeted costs:

- 2009/10 – 14% overrun in labour expenditure compared to budget
- 2008/09 – 12% overrun in labour expenditure compared to budget
- 2007/08 – 11% overrun in labour expenditure compared to budget.

The major factors for this increase are:

- external agency use
- increase in the number of consumers requiring close or constant observation
- increase requests for staff to assist in other service areas e.g. emergency department

- increase service demands ie. consumer complexity, electroconvulsive therapy
- leave management ie. emergent and scheduled arrangements.

There have been marginal fluctuations between 3 to 4% in consumable expenditure as compared to previous budgets over the preceding two financial years. Changing pharmaceutical therapies and other associating costs have been the major attributing factor for this increase.

➢ Consumer complexity/acuity overview

Top five DRG's 2009/10
1. U61Z Schizophrenia Disorders
2. U63Z Anxiety Disorders
3. U62A Paranoia & Acute Psych Disorder W Cat/Sev or W Mental Health Legal Status
4. U63Z Major Affective Disorders
5. U65Z Eating and Obsessive Compulsive Disorders.

Top five DRG's 2008/09
1. U61Z Schizophrenia Disorders
2. U63Z Anxiety Disorders
3. U62A Paranoia & Acute Psych Disorder W Cat/Sev or W Mental Health Legal Status
4. U63Z Major Affective Disorders
5. U67Z Personality Disorders and Acute Reactions.

Current complexity considerations:

- Forensic patients ↑ 2% in2009/10
- Involuntary patients ↑1.5% in 2009/10
- HONOS scores three< ↑ 11% in 2009/10
- 8 acute intensive care beds - occupancy 98%
- 34% increase in 2009/10 in inpatient and outpatient electroconvulsive therapy
- 32% rise in new presentations (↑ 3% in 2009/10)
- 28% of yearly admission are 65 years and older (↑ 4.2 % in 2009/10)
- 11% of yearly admission are between 14-18 years (↑ 1.8 % previous financial year)
- Aboriginal and Torres Strait Islander population within region is 5.7% (average in Australia 2.3%).

Consumer complexity within MHAIU is currently categorised as high when compared with other mental health inpatient services. Comparatively, the number of new presentations, forensic/involuntary patients and older people has increased. This trend is expected to continue in the future based on historical data. Workforce plans and a staff skill mix profile have been developed to match the supply of staff with growing demand in consumer complexity.

A key priority of the MHAIU is to support new and inexperienced staff with education and training opportunities suitable for the mental health environment. Increase in education support roles, expansion of training programs and affiliations with postgraduate university studies has occurred with sufficient resources available to meet current and immediate future requirements.

The calculation of productive hours within this profile incorporates the nursing hours required to support the delivery of quality mental health services to complex consumers.

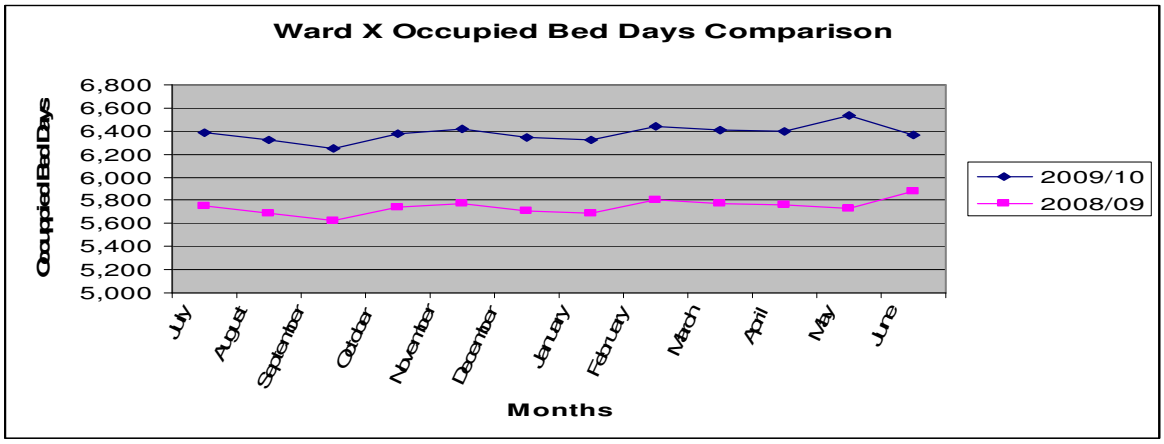
Activities such as rostering for a recovery model of care; clinical supervision, succession planning, and performance appraisal have all been considered as demands placed on nursing hours.

An adjustment to the number of allocated nursing hours for preceptorship and induction programs occurred in 2009/10. As a result, the introduction of the new multidisciplinary model reduced the number of 'nursing only' hours required in the promotion of shared resources and disciplines.

➢ Service activity

2009/10	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total hours required/ month	6,391	6,321	6,246	6,381	6,420	6,345	6,319	6,444	6,412	6,399	6,532	6,365	76,575
OBD	1,100	922	850	1,189	1,192	832	827	1,201	1,050	992	1,260	840	12,225
Average NHPPD	5.81	6.86	7.35	5.37	5.39	7.63	7.64	5.37	6.11	6.45	5.18	7.58	6.26

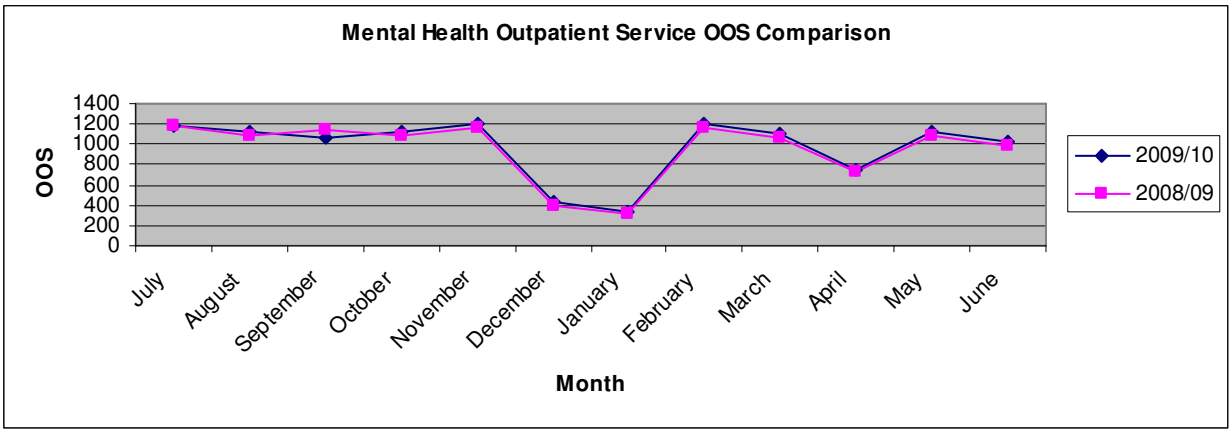
2008/09	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total hours required/ month	5,752	5,689	5,621	5,743	5,778	5,711	5,687	5,800	5,771	5,759	5,729	5,879	68,918
OBD	990	830	765	1,070	900	785	744	1,081	945	893	756	1,134	11,030
Average NHPPD	5.81	6.85	7.35	5.37	6.42	7.28	7.64	5.37	6.11	6.45	7.58	5.18	6.33



Example 2: Mental Health Outpatient Service (Monthly overview)

2009/10	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total hours required/ month	1,260	1,245	1,125	1,239	1,293	552	380	1,340	1,103	819	1,245	1,100	12,701
OOS	1,180	1,126	1,073	1,125	1,197	442	330	1,208	1,104	740	1,116	1,019	11,760
Average NHPOS	1.07	1.11	1.05	1.10	1.08	1.25	1.15	1.11	1.00	1.11	1.12	1.08	1.08

2008/09	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total hours required/ month	1,180	1,126	1,073	1,125	1,197	442	330	1,208	1,104	740	1,116	1,019	11,660
OOS	1,178	1,087	1,140	1,091	1,161	390	320	1,172	1,071	725	1,083	988	11,406
Average NHPOS	1.00	1.04	0.94	1.03	1.03	1.13	1.03	1.03	1.03	1.02	1.03	1.03	1.02



Service activity considerations:

- Inpatient:
  - 1021 occupied bed days (monthly average)
  - 98% occupancy (yearly average).

- Outpatient:
  - 3% increase in occasions of service for outpatient clinics (2010/2011)
  - 15% increase in new referrals
  - Waiting list time for new referrals 4 weeks (↑15% previous year)
  - 2 additional outpatient ECT sessions to be commenced.

➢ Evaluation of occupied bed days (OBDs) and occasions of service

There has been a 9.7% increase in the number of OBDs between 2008/09 and 2009/10 with minimal change in the annual trend of activity in both financial years. The review of paid nursing hours shows minimal change in the average NHPPD used during the two comparison periods. However, there has been a 15% increase in new referrals and wait list times for the outpatient ECT service. To meet this service demand, activity projections have been used to support the commencement of two new full day ECT sessions per week as well as assisting in the scheduling of staff leave and training. September, December, January and May have been identified as opportune months for leave allocation and mandatory training opportunities.

➢ Financial outcomes

The nursing labour costs within the MHAIU are over-budget primarily due to the high use of overtime. For the current year, labour costs are 14% above budget which is a 3.5% improvement on the previous financial year. Productivity measures indicate the increased labour costs are largely mitigated by consumer activity, however improvements in patient flow and the expansion of the ECT outpatient services will progress this result. Investment in recruitment and retention strategies as well as education and training programs and supports has contributed to reducing the labour costs in the last financial year. Plans to

progress this work exist as outlined in the service objectives by introducing clinical supervision and a multidisciplinary team preceptorship program.

➢ Quality of service

The quality of the services provided within the MHAIU is monitored through a monthly balance scorecard. Data is collected to assess the five key performance areas influenced by internal and external strategic directions, policies and legislation. The five areas are as follows:

- Clinical measurement: number of consumer allocated an allied person, number of consumers with a GP recorded in their external contacts
- Risk monitoring and management: discharge summary monitoring, lock down, seclusion and workload grievances
- Patient flow: 28 day re-admission rate, average length of stay, schizophrenia consumer followed up in seven days
- Consumer, carer and family participation: outcome participation
- Staff management: workforce, mandatory and requisite training, education and research.

Key performance summary

Key performance areas	Performance indicators	Performance achievements (Dec 2009)	Resulting actions
Clinical measurement	No. consumers allocated an Allied Health Person		Continue monitoring, multidisciplinary team awareness plans, ward meeting agenda item
	GP nominated		Continue monitoring
Risk monitoring and management	Discharge summaries		Continue monitoring
	Lock down		Continue monitoring
	Seclusion		Unit priority 10% reduction in consumer restraint and seclusion multidisciplinary team awareness plan, ward meeting agenda item.
	Workload grievances		Continue monitoring
Patient flow	28 day readmission rate		Continued monitoring and reporting to multidisciplinary team members, multidisciplinary team action plan.
	Average length of stay		
	Schizophrenia consumers follow up		
Consumer, carer and family participation	Outcomes participation		Continue monitoring
Staff management	Workforce		Increase graduate registered nursing numbers, review and refine staff retention strategies, growth of casual staffing pool, overtime reduction strategies.
	Mandatory/requisite training		Continue monitoring
	Education		Continue monitoring
	Research		Continue monitoring

Table Legend

On target

< 10% from target

> 10% from target

External environmental analysis

Policy/legal factors

The MHAIU is influenced by a number of policies, guidelines, plans and legislation. Service demands resulting from policy, guidelines, plans and legislation impact on both direct and indirect nursing hours. A number of policy and legal factors have been included during the establishment of NHPPD/NHPOS while others are captured in other activities involving safety and quality and education and training.

The key policy and legal documents impacting the MHAIU include:

- Clinical Services Capability Framework – mental health module
- Clinical Supervision Guidelines for Mental Health Services 2009
- *Mental Health Act 2000*
- Queensland Plan for Mental Health 2007-2017
- Policy statement on reducing and where possible eliminating restraint and seclusion in Queensland Mental Health Services 2008
- Queensland Health Strategic Plan 2011-2015
- *Nurses and Midwives (Queensland Health) Certified Agreement (EB7) 2009*
- *Queensland Health Nurse and Midwives Award – State 2011*
- *Queensland Nursing Act 1992*
- *Workplace Relations Act 1996*.

Economic factors

- International/national: The global financial crisis continues to impact funding capacity at the state government level.
- Public/private interface: The MHAIU is the only tertiary level mental health service in the region. Private facilities regularly refer consumers to the service.
- Private health care providers: The MHAIU interacts directly with extended inpatient services, community mental health, General Practitioners and Private Specialists.
- Capital works: Nil planned.

Social factors

The population of town Z is 211,000 people with an expected growth of 270,000 by 2021. There is an additional 70,000 to 80,000 people in the wider catchment area of the district. To manage the projected increase in the general population, 10 beds per 100,000 people is used as a general guide for service expansion plans.

The socioeconomic index for areas (SEIFA) decline ranking for this area is nine, which places this region in the second top 10%. Culturally, the population is made up of 5.7% Aboriginal and Torres Strait Islander people, 7.4% of residents were born overseas and for 5.2% of the population English is there second language. As the only tertiary referral inpatient mental health service hospital within the region, community expectations are high for accessible quality care. Feedback from consumer and carers groups is regularly sought and used to improve services.

Staff attrition levels within the MHAIU are considered high when compared with Queensland Health's state average. This is due to the growing number of travelling staff opting for short or medium term contracts over permanent employment. As a regional area, access to skilled agency and casual staff is limited, which impacts on the allocation and replacement of staff leave, overtime usage and the number of part-time extra shifts.

The MHAIU has committed to 'growing our own' staff by increasing graduate nurse numbers, providing education and training programs for inexperienced staff and investing in a multidisciplinary team preceptorship model.

Technological factors

The use of telehealth facilities for consumers and staff has risen over the past year. Follow-up appointments for consumers in the geographical outskirts of the district have been more efficient due to this service. Communication between MHAIU staff and primary health staff has also improved due to telehealth services. Plans to extend the use of these services for staff education and training purposes have been developed.

Research and evidence based practice

Two 12 week practice development programs have been incorporated into the calculation for productive nursing hours. The time committed to practice development has been averaged throughout the year. This will be rostered as separate blocks.

Two staff have been also been awarded mental health research scholarships in collaboration with the local university. SARAS leave has been approved to support each staff member while participating in research projects.

Strengths, weaknesses, opportunities and threats (SWOT) analysis

Strengths	**Weakness**
• Demand for services increasing • 75% of staff have qualifications in mental health nursing • Multi-disciplinary team focus • Unit committed to implementing organisation policies and CSCF • Succession management strategy • Committed and motivated staff • Focus on education and training • Clinical portfolios • Commitments to research and evidence based practice • Collaborative arrangements with other services (public and private)	• Computers access • Data management • Electroconvulsive services are provided outside the unit • Physical layout requires 3 teams of nursing staff • Higher than statewide attrition level • BPF implementation • Minimal number of mental health experienced staff within hospital's casual/relief pool • External agency use • Growing demand for productive hours • Recruitment management • Low level use of telehealth facilities
Opportunities	**Threats**
• Health Reform • University affiliations • External research grants • External non-recurrent funding • Collaborative programs with more primary and private services	• Unstable global economy • Health reform • Funding arrangements • Poor awareness of mental health initiatives within the local community

Appendix C
Balance scorecard example

Mental Health Acute Inpatient Unit monthly balanced scorecard 2010/11

Key performance area	Performance indicator	Performance target	Performance achievement	Rating
Clinical measurement	No. of consumers allocated an allied person	100%	92%	▲
	GP nominated	100%	98%	▲
Risk monitoring and management	Discharge summary monitoring	100%	97%	—
	Lock down	<5%	0%	—
	Seclusion	<5%	11%	▼
	Workload grievance	0	0	▲
Patient flow	28 day readmission rate	<5%	8%	—
	Average length of stay	<7.6 days	8.3 days	▼
	Schizophrenia consumer follow up 7 days	100%	99%	▼
Consumer, carer and family participation	Outcome participation	90%	88%	▲
Staff management	Agency usage	<1.89 FTE*	2.3 FTE	—
	Overtime usage	<2.0 FTE	4.8 FTE	▼
	Mandatory training	>90%	92%	—
	Education session attended by staff	>15	17	▲
	Evidence based practice projects/research	>2	3	—

* Based on Queensland Health's target of 0.75%

Table legend

On target	▲ Performance improvement
< 10% from target	▼ Performance decline
> 10% from target	— Nil change in performance

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  http://www.health.qld.gov.au/mentalhealth/abt_us/qpfmh/08132_qpfmh07.pdf
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Queensland Health Intranet Sites

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  http://dss.health.qld.gov.au/
- Mental Health Alcohol and Other Drugs Directorate
  http://qheps.health.qld.gov.au/mentalhealth/default.htm
- Mental Health Information Unit
  http://qheps.health.qld.gov.au/mhinfo/home.htm
- Patient Safety and Quality Improvement Service
  http://qheps.health.qld.gov.au/chi/PSQ/
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Glossary

Balance scorecard – a range of indicators used to measure an organisation's financial and non-financial performance.

Business Planning Framework: A tool for nursing workload management – the mandated tool used by Queensland Health nursing and midwifery services to balance service demand and the supply of nursing/midwifery services.

Clinical Services Capability Framework – a coordinated and integrated approach to health service planning and delivery in Queensland.

Consumer complexity – a measure used to assist nurses in identifying and planning the resources required to meet the care demands of consumers.

Diagnostic related groups – patient classification system.

Direct nursing hours - activities nurses and midwives do that directly contribute to care provided to the client.

External environmental analysis – analysis of the external environmental factors which can potentially influence a service.

Full-time equivalent – full-time employee working 38 hours per week.

Indirect nursing hours - activities nurses and midwives do for clients while not in direct contact within them.

Internal environmental analysis – analysis of the internal environmental factors which can potentially influence a service.

Service activity – work performed to produce outputs.

Service profile – describes the role and function of a service.

Socioeconomic index for areas – product developed especially for those interested in the assessment of the welfare of Australian communities.

Study and research assistance scheme – designed to assist employees to participate in further education.

Productive nursing hours – hours that contribute to patient care and include both direct clinical and indirect clinical care.

Non-productive nursing hours – hours over and above the direct and indirect hours covered in productive nursing hours. When converted to costs, these hours are often referred to as 'on-costs'.

Nursing hours per occasion of service – the average nursing hour per unit of activity for ambulatory patients.

Nursing hours per patient day– the average nursing hours per unit of activity for inpatient services.

Occasions of Service – any examination, consultation, treatment or other service provided to a non-admitted patient in a functional unit or a health service facility.

Occupied Bed Days – the total number of days a unit's beds are occupied over the financial year.

Weighted Activity Units – a measurement used to determine the relative value of a services activity.

List of acronyms

BPF	Business Planning Framework: a tool for nursing workload management
CIMHA	Consumer Integrated Mental Health Application
CN	Clinical Nurse
CNC	Clinical Nurse Consultant
CSCF	Clinical Service Capability Framework
DRG	Diagnostic Related Group
DSS	Decision Support System
EN	Enrolled Nurse
ENAP	Enrolled Nurse Advanced Practice
FTE	Full-time Equivalent
HBCIS	Hospital Based Corporate Information System
HoNOS	Health of the Nation Outcome Scale
MHAIU	Mental Health Inpatient Unit
NHPOS	Nursing Hours per Occasion of Service
NHPAU	Nursing Hours per Activity Unit
NHPPD	Nursing Hours per Patient Day
NUM	Nurse Unit Manager
OOS	Occasions of service
PRIME	Primary Related Incident Management and Evaluation System
QHAPDC	Queensland Health Admitted Patient Data Collection
RN	Registered Nurse
SARAS	Study and Research Assistance Scheme
SEIFA	Socioeconomic Index for Areas
WAU	Weighted Activity Unit

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