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Introduction

A Medical Assessment Unit (MAU) is designed to improve the processes and clinical practice of care for medical patients who present to an inpatient facility and to improve the experience of those patients in accessing medical care through the public health system.

Medical Assessment Units (MAU) offers an opportunity to break conventional working patterns and boundaries and thereby improve practice of care for medical patients. This model does not replace Emergency Department (ED) but will facilitate the process.

MAU is an alternative pathway for adult non-critical medical patients; in many cases, these will be older patients with complex medical conditions with multiple co-morbidities. These patients may be transferred to the MAU from:
- A triage point, from within Blacktown ED, or
- From an external source, instead of going into the ED.

These patients typically require extensive medical and multi-disciplinary assessment, which may take many hours.

Patients in the MAU can expect to stay for a period of up to 48 hours, after which time it is expected that most patients will be discharged home (with community services where appropriate) while some who require specialised care will be transferred to an inpatient bed.

To operate efficiently and effectively, it is critical for MAU to have strong medical leadership and a dedicated medical, nursing and allied health team that has a strong culture of “immediate assessment and intervention”.

2. Aims

1. Enable comprehensive and timely multidisciplinary assessments of medical patients, led by experienced medical staff. Initiate immediate and appropriate care planning, treatment and investigations.
2. Initiate immediate and appropriate care planning, treatment and investigations.
3. Facilitate timely transition to in-patient, outpatient and community based facilities.
4. Receive direct admissions of non-critical patients, bypassing the usual Emergency Department’s service pathway.
5. Facilitate early discharge from acute care settings.

The unit will be appropriately resourced with medical, nursing and allied health staff required to perform multidisciplinary assessments and management. The service will have two rounds daily, one of these will be a team-based round. The service will have some priorities to ensure patient flow.
3. The MAU service

The MAU at Blacktown will consist of 14 beds. These beds will be distributed as follows:

- 8 beds located in the Surgical-Medical Short Stay unit at Blacktown Hospital
- 4 existing ETU beds will be converted to MAU to maintain service efficiency and functionality
- 2 beds will be located in the Emergency department (3a & 3b) at Blacktown Hospital.

Admitting Officer Hours
- Week days 1000-2000 hours
- Week ends and public holidays 1000-2000 hours

After Hours (2000-1000 hours)
  Medical Registrar, ED Consultant & ED Registrar to complete admission, patient referred to the specialty team

To enable the model to function as a rapid assessment and implementation unit extended hours of coverage for medical and allied health needs to occur. The dedicated medical coverage will be between 1000 -2000 hours 7 days a week. Allied Health support is available 5 days a week with some weekend service for mobilisation of patients to prevent deconditioning.

Medical admissions outside the admitting officer hours will revert back to existing practice i.e. following assessments by ED or Medical registrar and following consultation with admitting specialists.

The Blacktown MAU model of care will target patients that are haemodynamically stable, meets the inclusion criteria and triage categories 3, 4 and 5.

Proposed types of patients appropriate for MAU (Table 1)

<table>
<thead>
<tr>
<th>Geriatric Medicine/ACAT/Clinics</th>
<th>Cardiology</th>
<th>Respiratory Medicine</th>
<th>Gastroenterology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission through ACAT/Clinics</td>
<td>Admission through specialists’ rooms</td>
<td>Uncomplicated Pneumonia</td>
<td>Upper GI bleed, haemodynamically stable</td>
</tr>
<tr>
<td>Acute decline in mobility and function with potential to improve</td>
<td>Atypical chest pain for investigation with normal cardiac enzymes and ECGs</td>
<td>Mild exacerbation of CAL/ Asthma</td>
<td>Potential PACC candidates</td>
</tr>
<tr>
<td>Potential PACC candidates</td>
<td>Potential PACC candidates</td>
<td>Potential PACC candidates</td>
<td>Potential PACC candidates</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Renal Medicine</th>
<th>Infectious disease</th>
<th>Endocrinology</th>
<th>Neurology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncomplicated Pyelonephritis</td>
<td>Cellulitis potentially suitable for PACC</td>
<td>Seizures in a known epileptic</td>
<td>Headache for investigations</td>
</tr>
<tr>
<td>?PD peritonitis</td>
<td>Direct admission via PACC following discussion with ID specialist</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This model will also enable appropriate patients to bypass ED (third door approach) and be directly admitted into MAU.
In order to operate the MAU beds in Surgical Medical Short Stay Unit and ETU, the following will need to occur:

- Identify staffing requirements in allied health and nursing
- Establish at least 4 beds for cardiac monitoring
- Identify equipment needs such as ECG machines, bladder scanner, mechanical lifter, appropriate medical beds
- To improve the efficiency and communication between medical, nursing and allied health staff, it is felt the creation of home wards in Blacktown Hospital for Medicine is vital.

Proposed mix of home wards are:

Cardiac Step-down  Cardiology  
Medical Unit 1  Respiratory/Renal Medicine  
Medical Unit 2  Aged Care, Endocrine and Neurology  
SMSS  MAU/ Infectious Disease/Gastroenterology

The feasibility of the above will need to investigated taking into consideration of admission data and the available of nursing skill mix and environment of the wards

**Priorities critical for optimal functioning**

1. Access to Imaging
2. Access to pathology
3. Access to ward beds when transfer is determined out of MAU
4. Admission policy of allocation of teams when no team has been allocated
4. MAU Patient Care Model

The MAU (ED)

1. Patients will be admitted under the Emergency Physician (EP) of the day only after that EP has agreed to the MAU admission under their name. The overall medical responsibility for the care of the patients admitted to these MAU beds lies with the designated EP.

2. Patients will be admitted under the duty EP for a maximum period of 23 hours. If continuing inpatient care beyond 23 hours is required their care will be transferred to a designated specialty service.

3. Patients identified by the EP as requiring an admission and a length of stay greater than 23 hours are not to be admitted into the Unit.

4. Only in specialties where an on call specialty roster is NOT available for Blacktown Hospital can patients be managed by EP in MAU until the following day for admission to occur. If required, the allocation of which networked medical service for these patients will be negotiated by Central Cluster DCO, on advice from the EP currently looking after the patient in these MAU beds.

5. Patients may be admitted to ED MAU beds after discussion with the duty EP. All paperwork and documentation, including clerical staff's admission procedures must be completed under the name of the duty EP. Examples of patients who may be suitable for admission under EP include:
   - Drug overdose, self poisoning or envenomation
   - Investigation that requires the patient to remain in ED for greater than 5 hours before being the admission disposition decision can be made.

6. Patients may be suitable for admission to MAU beds under a specialty service only if the consultant has accepted the patient for admission but the patient is awaiting the completion of imaging prior to transfer to a ward.

7. Patients who are unlikely to be fit for discharge within 24 hours (including unable to be independently mobilise within 24 hours) should NOT be admitted in MAU. The overall medical responsibility for the care of the patients admitted to these MAU beds lies with the designated EP.

8. Patients discharged from MAU will be given a discharge letter by the inpatient specialty service and instructions for appropriate follow up by a GP or other specialist.
The Discrete MAU

The patients will be admitted to this unit from:

1. Emergency Department
   - Patients are to be identified at the ED triage at Blacktown and if they meet the inclusion criteria,
   - Refer to the MAU senior registrar / CMO.
   - ED assessment to commence
   - MAU CMO will perform a brief assessment in ED and identify investigations required
   - MAU CMO will notify the admitting specialty consultant on call and the MAU team either prior to transfer or following assessment in MAU.
   - The Bed Manager will facilitate transfer to the MAU.
   - Patients in ED who are already admitted under a specialty consultant may also be suitable for MAU and will be identified for transfer

Third door (Direct Admissions)

These admissions generally referred to requests for admission via consultants’ room, clinics or GP referrals, community patients via ACAT, RACS or PACC, following consultation with respective specialists. Generally an accepting specialist must be identified prior to admission. CMO or Director of MAU should be contacted by referring specialists or the team registrar of the admission and proposed plan of management.

The MAU patient will be accepted to the unit for:

- Team-based assessment
- Assessment and brief intervention
- Assessment and care planning
- Assessment for possible admission (transfer to other ward if admission required)

The MAU patient will be accepted by:

- The Medical Director of the MAU or delegate. A decision to admit or discharge and allocation of medical consultant is expected within 4 hours of arrival at MAU
- Admitted medical patients in ED who fulfil the MAU admission criteria may also be admitted to MAU

The MAU patient will receive as appropriate a comprehensive assessment by members of the team, as relevant.

This will include:
• MAU CMO will be primarily responsible for the patients in MAU in clerking of all admitted patients, organisation and review of investigations, prescription, liaising with GPs, completion of front sheets and provision of summaries on discharge

• He/she will communicate the plan with treating team at least daily

• Daily interdisciplinary meetings will be driven by the NUM and MAU CMO

• It is expected that treating team to nominate estimated date of discharge and parameters for discharge to guide MAU CMO who will facilitate discharges on the weekends from MAU

• Other discipline specific assessments

• Development of a care plan for inpatient care (within 4 hours of admission)

• Formulation of a discharge plan, including referral and linking to services as required.

• On weekends: Physiotherapy service focussed on mobilisation and functional restoration.

*The Outbound Care Navigator* will play a pivotal role working with the MAU staff to facilitate discharge and appropriate referrals to GP, community Health, DVA, etc.

5. Inclusion Criteria

• Non Critical Patients (Triage Categories 3-5)- Refer to table 1

6. Exclusion Criteria

• Triage category 1& 2 patients
• Age <less than 16 years of age
• Surgical or orthopaedic patients,
• Unstable vital signs (possible HDU, ICU admission or requiring CPAP or BiPap)
• Acute abdomen
• Palliative Care
• Haematemesis and maelena requiring surgical intervention
• Acute Stroke
• Nursing mothers requiring infant boarding
• Aggressive patients
• Spinal or acute head injuries
• Acute Respiratory Distress or Acute Coronary Syndrome
• Acute Psychosis/Scheduled patients
• MRSA or those requiring isolation
• Patients in acute respiratory failure
7. MAU Staffing Model

**Nursing**
The unit will be staffed 24 hours a day, 7 days a week with a skill mix of Registered Nurses and Enrolled Nurses. Nursing leadership will be provided by the existing NUM in SMSSU.

Nursing Staff report operationally the Nursing Unit Manager, who intern reports to the Director of MAU and the Network Nurse Manager. Nursing staff report professionally to the Director of Nursing, Central Cluster.

**Medical**

A CMO or senior registrar will be based on the unit to provide comprehensive medical input. He or she will have direct supervision from the Clinical superintendent (Medicine) and is responsible to the Director of MAU.

The Director of MAU will report to the Network Director, Aged and Chronic Care.

As an interim measure the Director of RACS will be acting Director of MAU. It is proposed that a second Advance Trainee position in Aged Care be created for 2008/9 to support the increased responsibility of Director of RACS. In 2009, it is proposed that a permanent Medical Director of MAU be appointed.

**Allied health**

A designated clinician from each discipline Occupational Therapy (OT) / Physiotherapy (PT) / Social Worker (SW), Speech Pathologist (SP), Nutrition & Dietetics (ND) will provide services to the MAU as part of a clinical caseload. A therapy assistant position will assist with mobilisation of patients over the weekend to help prevent deconditioning.

Allied Health new assessments within MAU will take priority within the caseload incorporating MAU. The same Allied Health clinician will continue to manage the patient as they transfer within MAU ED and MAU Ward. Within 4 hours of admission to MAU, Allied Health staff will provide a comprehensive assessment, care plan, and provide ongoing timely care as required during the stay in MAU. Allied Health Staff report operationally to the Director of MAU and professionally to their respective department heads.

Current facility based leave cover arrangements will apply with respective department heads to ensure adequate leave cover arrangements (planned & unplanned) are in place to provide ongoing services to MAU and ensure appropriate communication with other senior members of the MAU team in these circumstances, including the director of MAU and NUM.
8. MAU Clinical Governance / Reporting Structure

Blacktown Hospital MAU Clinical Governance / Reporting Structure

9. MAU Performance Management (KPI's)

KPI's to be monitored at Blacktown Hospital *(Please see Appendix 5 for description of KPI)*

- Readmission rates: <5% patients unplanned readmission within 28 days of MAU discharge home
- ED Length of Stay for MAU pts: <4 hrs for MAU patients in ED
- MAU Length of Stay: % patients discharged from MAU within 48 hrs (8)
- % patients discharged home from MAU within 48 hrs
- % patients transferred to inpatient ward from MAU
- Exit Block from MAU
- ALOS of pts transferred to ward from MAU
- Number of patients admitted to MAU who require escalation of medical treatment such as involvement of MET and transfer to High Dependency / Intensive Care Unit / Coronary Care Unit

10. Risk Identification

1. Capacity to support patients from acute to post-acute care and then on to long-term community management especially with potential “bottlenecks” such as availability of subacute beds, COMPACKs PACC and community services
2. Infrastructure & information technology for effective & streamlined communication
3. Acceptance of MAU model by other speciality services
4. Inappropriate transfer of patients to MAU
5. Acceptance and cooperation from ED
11. Patient Journey Map and KPI's

**PATIENT JOURNEY & KPI'S FOR MEDICAL ASSESSMENT UNIT AT BLACKTOWN HOSPITAL**

**Entry**
- Emergency Department
- Consultant Rooms
- Community Room - GP/GP/HealthOne/etc.

**Patient Type**
- Overdose
- Toxicology
- Admitted patients that need IMAGING ONLY

**Assessed for placement**
- Triage 3/4/5
- Geriatric patients
- Non-SCOPE
- Chronic Conditions
- Medical Patients

**Admission to MAU (ED)**
- Managed in MAU ED
- Immediate Assessment by Senior Registrar
- Case discussed with Medical Director and allocated Team
- Assessment by Allied Health/Nursing

**Admission to Medical Assessment Unit (MAU)**
- Transfer / 3rd Door Admission to MAU
- Case Plan Established in 4 hours after admission to MAU
- Assessments and Care Provided as per plan

**Care Plan established in 4 hours**
- Rounds twice daily
- Team rounds
- Team review
- Weekend round by Advanced Trainee/Fellow

**Disposition**
- To other WARD for further care under allocated team
- Linked with Outbound Coordinator
- Priorities apply
- To the patient
- Discharge progressed

**Care Navigation Unit**
- Planned Medical and Allied Health Assessment
- Brief admission for IV therapy, etc.

**2 Hours maximum to process**

**48 Hours maximum LOS**
12. Proposed Budget for MAU

The budget allocation for MAU is for 10 beds

Budget allocation for MAU from 1 July 2009

<table>
<thead>
<tr>
<th>Cost Item/Element</th>
<th>Dedicated Project Resources required</th>
<th>FTE Nos</th>
<th>Annual $000</th>
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<td>Annual Operating costs</td>
<td>Salaries and Wages</td>
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<td>$2,161,530</td>
</tr>
<tr>
<td>VMO’s</td>
<td></td>
<td>0</td>
<td></td>
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<tr>
<td>Other operating</td>
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<td>$179,417</td>
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<td>RMR Expenses</td>
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<td>Revenue</td>
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<td>$170,146</td>
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<tr>
<td>NCOS (Net cost of service)</td>
<td></td>
<td></td>
<td>$2,260,509</td>
</tr>
<tr>
<td>Capital Estimate to establish Unit</td>
<td>Modifications in ED (start-up only)</td>
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<td>$20,000</td>
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</table>

Staffing Levels

<table>
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<th>FTE Nos</th>
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<tbody>
<tr>
<td>Nurses</td>
<td>12.3</td>
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<tr>
<td>Medical</td>
<td>4.8</td>
</tr>
<tr>
<td>Allied Health</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>Total Staff</td>
<td>24.1</td>
</tr>
</tbody>
</table>

14. Proposed Model Limitations

a) Director of Geriatric Medicine will be taking on additional role as the MAU director. Until a permanent arrangement is found, the director will need support of an advanced trainee.

b) There is limited funding available for 2008/2009 as the bulk of funding will be expended in capital works. This impacts on capacity to recruit staff and provision of optimal clinical services.
Appendix 1:
*Patient Flow Business Rules for Medical Assessment Unit Emergency Department (MAU ED) Unit*

**Preamble**

Adherence to the following business rules is essential to ensure that appropriate patients are allocated to the MAU ED Unit and that effective communication between ED Triage and the MAU ED is maintained. I also do not believe Medical registrars need to assess these patients for admission to ED MAU

**Hours of operation:**
- 24 hours, 7 days a week

**After Hours (2000-1000 hours)**
- Medical Registrar, ED Consultant & ED Registrar to complete admission, patient referred to the specialty team
- The TCN/MAU Clinical Coordinator will primarily be located within MAU ED unit and be able to access Firstnet.

**Eligibility**
- Triage categories 3-5, not under ongoing care of subspecialty team.
- Patients identified to have expected LOS of less than 24 hours

**Process**

1. **Identification**
   - Patients meeting eligibility criteria will be identified by inbound care navigator in hours and the REAT Nurse after hours. Care navigation unit may also take referrals through “Hot Line” and arrange admissions
   - **Responsible Person:** Inbound Care navigator/REAT Nurse

2. **Selection**
   - Inbound Care navigator will screen identified patients for appropriateness of transfer and discuss with ED senior MO
   - **Responsible Person:** Inbound Care navigator/ED senior MO

3. **Transportation**
   - Selected patients will be transported to the MAU ED unit by a nurse with or without additional assistance from MAU ED Unit staff.
   - **Responsible Person:** Nursing Staff

4. **Information Management**
   - Firstnet will be used to track patients waiting for a MAU ED assessment and within unit.
   - **Responsible Person:** Clinical NUM / Inbound Care navigator
5. **Alternative Access to MAU ED Unit**

Patients who have had treatment initiated within the acute care area of the Emergency Department but are within 4 hours deemed suitable for the MAU ED unit may be transferred into the unit.

**Responsible Person:** Clinical NUM/ Inbound Care navigator/ ED senior MO

6. **Upon arrival in MAU ED**

Firstnet will be updated and assessment commenced

**Responsible person:** MAU ED Nursing Staff

7. **Initial Assessment**

Basic observations and Initial assessment will be undertaken by the nurse in the MAU ED Unit. Patients may be rapidly transferred to an inpatient area (following consultant approval) or remain for more thorough assessment.

**Responsible Person:** ED physician or MAU ED Nursing Staff

8. **Ongoing assessment**

May take place in MAU ED with a target stay of less than 4 hours.

**Responsible Persons:** Emergency physician or MAU ED Nursing Staff

9. **Discharge-Disposition**

Patient disposition location will include:

- inpatient areas after discussion with accepting Admitting specialists or delegates
- Aged Care Residential Facilities
- home (with or without domiciliary based care programs including ACBT and Community OPERA and PACC), either directly or via the Patient Discharge Unit.

**Responsible Persons:** Clinical NUM / Outbound Care navigator
Appendix 2:  
Patient Flow Business Rules for Movement of Patients to ED MAU beds

PREAMBLE
The Medical Assessment Unit is designed to improve the processes and clinical practice of care for medical patients presenting for inpatient medical care. There are Emergency Department (ED) beds 3a and 3b and 12 Medical Assessment Unit (MAU) beds. At all times PFU or the SNMAH will have a global picture of beds available in the hospital and in MAU. The Patient Flow Unit (PFU) or Senior Nurse Manager After Hours (SNMAH) allocates patients from the Emergency department beds 3a and 3b to the Medical Assessment Unit (MAU). Patients must meet the criteria for admission and be allocated in a timely manner within the KPI’s. The ED beds are staffed by an Endorsed Enrolled Nurse who provides ongoing nursing care through to transfer to MAU. The MAU beds function 24 hours a day 7 days a week. Medical cover is available Monday to Friday 1000-2000 hours and Saturday to Sundays and Public Holidays 1000-1800 hours. Beyond these hours The ED Staff Specialist and ED Registrar will complete admissions and refer the patient to the specialist team.

EXCLUSION CRITERIA
The following patients unable to be seen through ED for MAU include:
Triage category 1 & 2 patients
Age <less than 16 years of age
Patients whose length of stay will exceed 23 hours
Surgical or orthopaedic patients
Unstable patients for possible admission in HDU, CCU, ICU or requiring CPAP or BiPap
Acute abdomen
Palliative Care patients
Haematemesis and melena requiring surgical intervention
Acute Stroke
Nursing mothers requiring infant boarding
Aggressive patients
Spinal or acute head injuries
Acute Respiratory Distress or Acute Coronary Syndrome
Acute Psychosis/Scheduled patients
Patients with MRO requiring isolation

PROCESS – EMERGENCY

1. Patients are identified at triage as appropriate and meeting the criteria for assessment in an ED MAU bed (3a or 3b). All Firstnet information is entered correctly in a timely manner. The Clinical NUM is notified of the patient.
   Responsible Person: Triage Nurse or Inbound Care Navigator

2. Identified patients are transferred to an ED 3a or 3b bed within KPI limits after consultation with the ED Staff Specialist. Firstnet is updated. Additionally patients treated within the acute care area, meet the
criteria and within 4 hours of their treatment time commencing can be moved to an available ED 3a or 3b bed.
Responsible Person: ED Clinical NUM and SRN ED MO

3. Assistance, observations, assessment and care is provided as per their requirements and in consultation with the medical team.
Responsible Person: ED MAU nurse or ED Nursing staff

4. Assessment and suitability for MAU is determined after a medical assessment and discussion with the MAU CMO
Responsible Person: ED Staff Specialist

5. If the patient is suitable for a MAU bed and/or admitted, Firstnet will be completed including the bed request
Responsible Person: ED Clinical NUM

6. If MAU beds are available the patient will be allocated immediately and the ED Clinical NUM notified of the bed availability. Firstnet documentation will be completed regarding the bed availability.
Responsible Person: PFU Bed Manager or SNM AH

7. Where MAU beds are available, the patient is transferred as per hospital escort policy
Responsible Person: ED Nursing Staff

8. Where a MAU bed is unavailable suitable patients are transferred out of MAU to appropriate beds to create capacity of ED MAU patients.
Responsible Person: Clinical NUM / PFU Bed Manager or SNM AH

9. The patients care in MAU will include team based assessment, intervention where appropriate, care planning including admission and discharge.
Responsible Person: MAU CMO, MAU Nursing team and MAU Allied Health

10. The patients discharge and referrals to appropriate health professionals including GP, community Health and clinics are facilitated
Responsible Person: Continuum of Care Coordinator

Preamble

To ensure there are sufficient beds available to support the movement of patients from Emergency Department into the MAU ward it is imperative that there is continued movement from the MAU ward beds into other appropriate inpatient beds.
Process

1. Patient Flow Unit (PFU) notified by MAU NUM (Business Hours) or Team Leader (after hours) of identified MAU ward bookouts. PFU will liaise with inpatient wards and allocate bed as per PFU Business Rules.
   **Responsible Person:** MAU NUM/TL

2. Discharge from MAU Beds to ward beds is to receive the same priority as ED beds. The MAU transfers are to specialty wards if care transferred to other appropriate teams.
   **Responsible Person:** PFU / MAU NUM / After Hours Senior Nurse Managers

Quarantining of MAU beds

To ensure rapid turnover and bed availability, MAU Beds are to be quarantined from non-MAU admissions at all times.

Use of MAU beds by non-MAU patients

MAU Beds can only be used for non-MAU patients with the **authorisation of the Unit Director or the Central Cluster Director of Clinical Operations.**
   **Responsible Person:** PFU / NUM / After Hours Senior Nurse Managers

Authority to transfer care

MAU Consultants have the same-delegated authority as Senior Emergency Department Staff to determine if, after careful review, a patient would be more appropriately cared for by another clinical unit.
   *(See BMDH Department Admission Policy).*
Appendix 3:
Patient Flow Business Rules for Direct Admissions to Inpatient MAU

PREAMBLE

Patients may be admitted to directly to MAU following recommendation from a consultant or admitting team registrar. These patients may be from clinics, private consulting rooms, previously admitted Blacktown patients from the community and Day Only Ward. Patients who are likely to remain in hospital for greater than 48 hours cannot be admitted to MAU

PROCESS

• Where patients require an admission from a clinic, private consulting room, outpatients department, the admitting consultant or team registrar shall in the first instance contact the MAU CMO to request admission and inform of management plan. Once admission is deemed appropriate, the MAU CMO shall inform the MAU NUM of the admission and the medical plan as discussed with the admitting consultant or team registrar. The MAU NUM shall liaise with the Patient Flow Unit (PFU) to organise admission.
  Responsible Person: CMO/ NUM/ PFU

• On receiving a call from the MAU NUM or CMO regarding an admission, PFU shall inform the admission office of the admission and request the completion of all admission related paperwork. Patients cannot be admitted to MAU if clerical admission paperwork is not completed.
  Responsible Person: CMO/ NUM/ PFU/Admission office

• Where a bed is unavailable in MAU to accommodate a new admission, the PFU, MAU CMO and NUM will identify patients who can be immediately discharged, sent to the discharge lounge or transferred to an inpatient bed. An alternative plan may need to be negotiated with the Admitting Team Registrar/ Consultant to accommodate the patient when a MAU bed is unavailable.
  Responsible Person: PFU/ CMO /NUM
Appendix 4:

KPI definitions - Key Performance Indicator Descriptions

Performance Indicators

1. Off-Stretcher Time- Existing Definitions in use

Target: 90% within 30 minutes
Criteria: All patients admitted by ambulance to ED
Numerator: 
Denominator: 
Data Source: NSW Ambulance

2. Average Time in ED for admitted patients

Target: 10% decrease on 06/07 baseline
Criteria: All patients admitted from ED
Numerator: Total time in ED (Actual_Departure_Time-Arrival_Time) for all patients with ED separation_mode in (‘1’,’10’,’11’)
Denominator: Count of ED attendances with ED Seperation_mode in (‘1’,’10’,’11’)
Data Source: ED visit
Limitations: Time period based on Arrival_Date; Total LOS trimmed at 72hrs

3. Medical Patients RSI

Target: 2% decrease on 06/07 baseline
Criteria: All acute medical patients admitted to hospital
Numerator: 
Denominator: Count
Data Source: DAYS_EPISODE
Comment: Subset of Medical DRGs yet to be determined. Some logic to be used as total RSI but run on subset of data

4. Readmission Rate within 28 days of MAU Discharge

Target: <5%
Criteria: Patients with an unplanned readmission to the same hospital within 28 days of discharge from MAU to place of usual residence.
Unplanned admission: Urgency_of_admission =’1’ in the STAY table
MAU discharged to place of usual residence: trans_type=’DIS’ AND unit_type is a MAU ward in the DAYS_EPISODE table AND Inpatient mode_of_separation in (‘1’,’2’,’3’,’8’,’11’) in the EPISODE table
Numerator: Count of MAU discharges to place of usual residence that had an unplanned admission within 28 days of discharge
Denominator: Count of admissions to MAU
Data sources: DAYS_EPISODE, EPISODE, STAY
Limitations: Time period; Same facility
Process Indicators
These indicators are to assist areas to understand, manage and monitor internal processes

5. Average time in ED for MAU patients

Target: < 2hrs
Criteria: Patients admitted to MAU
Numerator: \(\text{sum(episode_length_hours)}\) where \(\text{unit\_type} = '17'\)
Denominator: Count of stays where patient was admitted to MAU from ED
Data source: DAYS_EPISODE, EPISODE
Limitations: Discharged patients; Time period; Same facility

6. Average Length of stay (hours) in MAU

Target: < 48hrs
Criteria: Patients admitted to a MAU
Numerator: \(\text{sum(episode_length_hours)}\) where \(\text{unit\_type} = '87'\)
Denominator: Count of stays where patient was in a MAU
Data source: DAYS_EPISODE, EPISODE
Limitations: Discharged patients; Time period; Same facility
Comments: This indicator does not differentiate between patients that were admit to MAU via ED and those admitted directly to MAU

7. Length of Stay (hours) in MAU for patients aged 65 and over

Target: <48hrs
Criteria: Patients aged 65+ that were admitted to a MAU
Numerator: \(\text{sum(episode_length_hours)}\) where \(\text{unit\_type} = '87'\) and age in STAY table >=65
Denominator: Count of stays where patient was in a MAU and age in STAY table >=65
Data source: DAYS_EPISODE, EPISODE, STAY
Limitations: Discharged patients; Time period; Same facility

8. % transferred out from MAU within 48hrs

Target: No target
Criteria: If a patient has been transferred in/out from MAU more than once during the same inpatient episode, the stay is only counted once, but total time in MAU is aggregated.
Numerator: Count of stays of stays where \(\text{sum(episode_length_hours)} < 48\).
Currently this may cause a rounding problem, so alternately sum the difference in hours and minutes between start\_date and end\_date for all MAU wards
Denominator: Count of stays where patient was in a MAU
Data source: DAYS_EPISODE, EPISODE
Limitations: Discharged patients; Time period; Same facility
9. **% Discharged to home from MAU**

**Target:** No Target  
**Criteria:** admitted to MAU AND discharged home to place of usual residence from MAU unit  
**Numerator:** Count of MAU discharges where trans_type=‘DIS’ AND unit_type is a MAU ward in the DAYS_EPISODE table AND mode_of_separation in (‘1’,’2’,’3’,’8’,’11’) in the EPISODE table  
**Denominator:** Count of stays where patient was in a MAU  
**Data source:** DAYS_EPISODE, EPISODE  
**Limitations:** Discharged patients; Time period; Same facility

10. **% Discharged to home from MAU within 48hrs**

**Target:** No Target  
**Criteria:** admitted to MAU AND discharged home to place of usual residence from MAU unit  
**Numerator:** Count of MAU stays where trans_type=‘DIS’ AND unit_type is a MAU ward in the DAYS_EPISODE table AND Inpatient mode_of_separation in (‘1’,’2’,’3’,’8’,’11’) in the EPISODE table where sum(episode_length_hours) < 48.  
**Denominator:** Count of stays where patient was in a MAU AND Inpatient mode_of_separation in (‘1’,’2’,’3’,’8’,’11’)  
**Data source:** DAYS_EPISODE, EPISODE  
**Limitations:** Discharged patients; Time period; Same facility

11. **% MAU Patients transferred to inpatient ward**

**Target:** No Target  
**Criteria:** Patients admitted to MAU and subsequently transferred to inpatient ward DAYS_EPISODE table contains a record with Unit_type = ‘87’ and trans_type = ‘TRA’  
**Numerator:** Count of stays where patient was in a MAU and inpatient ward  
**Denominator:** Count of stays where patient was in a MAU  
**Data source:** DAYS_EPISODE, EPISODE  
**Limitations:** Discharged patients; Time period; Same facility

12. **ALOS of pts transferred to ward from MAU**

**Target:** No Target  
**Criteria:** Patients admitted to MAU and subsequently transferred to inpatient ward DAYS_EPISODE table contains a record with Unit_type = ‘87’ and trans_type = ‘TRA’  
**Numerator:** sum(episode_length_hours) excluding unit_type =’17’ where patient was in a MAU and inpatient ward  
**Denominator:** Count of stays where patient was in a MAU and inpatient ward  
**Data source:** DAYS_EPISODE, EPISODE  
**Limitations:** Discharged patients; Time period; Same facility
### Appendix 5:

**Procurement (Medical & Non-Medical)**

<table>
<thead>
<tr>
<th>Equipment Required for Blacktown MAU</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless Propaq LTR Monitors</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>(incl roll stand, basket monitor mount &amp; power adapter bracket)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micropaq 408 with ECG, SPO2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Universal Battery Charger Kit, for all Micropaq batteries</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CP200 ECG, with MEANS interpretive Program, Spirometry, upgrade hospital chart, cable arm and shelf</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Vital signs Monitor with NIBP, PR, MAP, SPO2, TEMP &amp; Mobile Stand</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mobile Aneroid Sphygmo with adult cuff, 5 star mobile stand</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Wall Diagnostic Set with Otoscope, Ophthalmoscope, spare lamps, locking collars &amp; Mobile Stand</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Primary 19&quot; Flat Monitor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Base Platform for 4-12 Patient support configuration</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Standard Acuity SW Licence Per Bed</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Full Disclosure 24hrs with dual lead arrhythmia (requires Licence)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Advanced Arrhythmia Tool</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Uninterruptible power supply for acuity components AA_UPS_1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Uninterruptible Power Supply for Acuity AA_UPS_1</td>
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</tr>
<tr>
<td>Aruba WLAN 800-4 Controller</td>
<td>1</td>
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</tr>
<tr>
<td>Aruba WLAN 800-4 PE License</td>
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</tr>
<tr>
<td>Aruba WLAN AP-65</td>
<td>4</td>
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</tr>
<tr>
<td>Aruba WLAN AP-65 Mounting Bracket</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HP LJ Printer</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>WLAN Installation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Clinical Training</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL Price from Welch Allyn (Included $33,324.38 discount)** $105,366.01

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer (complete System)</td>
<td>1</td>
<td>$1,114</td>
</tr>
<tr>
<td>Computer (Base Only for PACS)</td>
<td>1</td>
<td>$925</td>
</tr>
<tr>
<td>24inch Monitor (Awaiting Quote confirmation)</td>
<td>1</td>
<td>$796</td>
</tr>
<tr>
<td>Printer HP Laserjet P300DN</td>
<td>1</td>
<td>$1,202.49</td>
</tr>
<tr>
<td>PACS GE Medical 19&quot; monitor (for PACS)</td>
<td>2</td>
<td>$2,288</td>
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<tr>
<td>Bladder Scanner- BVI 3000</td>
<td>1</td>
<td>$13,000</td>
</tr>
<tr>
<td>Basilar High Low</td>
<td>1</td>
<td>$5,698</td>
</tr>
<tr>
<td>Commode Chair/showerchair (Able Rehabilitation)</td>
<td>1</td>
<td>$1,507.00</td>
</tr>
<tr>
<td>Panasonic wireless LCD Projector</td>
<td>1</td>
<td>$1,428.90</td>
</tr>
<tr>
<td>Patient Lifter (Maximove lifter with 4 point hanger)</td>
<td>1</td>
<td>$8,736</td>
</tr>
</tbody>
</table>

**Total including GST** $142,064