

Medical Assessment Units: Improving Care & Flow For Medical Patients

"The RMH MAPU Experience"

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City Campus

BACKGROUND OF INCREASING MEDICAL ADMISSIONS

1. Significant increase in admissions of elderly patients with multiple comorbidities and chronic disease
2. Emergency pressures 12 months of the year
3. Many hospitals not coping
4. General medical patients longest wait in ED

PROBLEMS AT ROYAL MELBOURNE HOSPITAL PRIOR TO MAPU

1. Pressure on general medical beds – 80 beds
2. Patients distributed in many wards
 “Safari Ward Rounds”
3. Delays in Radiology
4. Poor discharge planning
5. Easier to admit than “sort out acutely” (no BPTs in ED)
6. Delayed access to subacute care

MAPU Objectives at RMH

1. To facilitate the development of a management plan for all non-elective general medical patients admitted to MAPU
2. Rapid multidisciplinary assessment and clinical care
3. To facilitate “patient flow” and optimise length of stay and discharge planning identifying preventable reasons for unplanned readmissions

MAPU

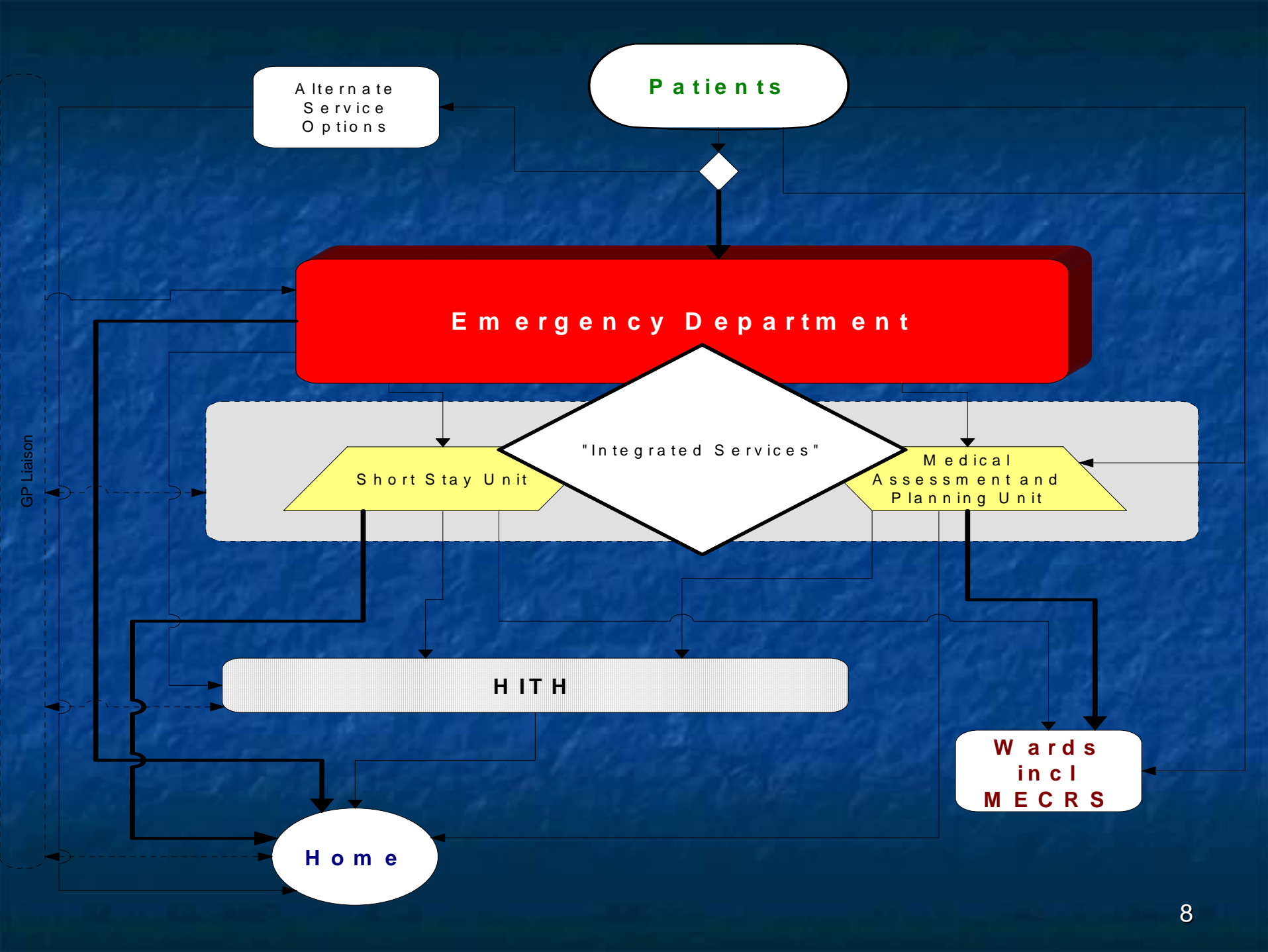
“MAPU is a philosophy not just Geography”

MAPU at RMH in General Medicine

1. Developed in 2003
 - Timely Assessment
 - Senior Assessment
 - Multidisciplinary Assessment
2. Initially 10 bed unit, now 20 bed unit
3. SSU 10 bed unit
4. Redevelopment of co-located ED/MAPU RMH

Aims of the RMH MAPU

1. Better, safer and more efficient patient care
2. Reduce number of unnecessary admissions
 - Home
 - HITH
 - Subacute direct admission (Rehab/Aged Care)
 - Community GPLO, HARP
 - MAPU
 - I/P Bed
3. Rapid assessment, treatment and investigation



MAPU and SSU at RMH

1. Rapid access to investigations
2. Strong links to Community Medicine – GPLO
3. Rapid review by general physicians and aged care physicians
4. Access to early outpatient clinic appointments
5. Multidisciplinary support [OT, PT, Pharmacy, Care coordinator]
6. Multi-skilled nursing workforce
7. Clerical support
8. Strong IT support

Who Runs the Team

1. Parent General Medical Unit (1-4) vs MAPU
 - Parent units – 1 Registrar, 2 Interns X 4
 - MAPU – 2 Registrars (am & pm), 2 Interns
2. Tried both models at RMH
3. Multiple medical teams may lead to “Doctor-Patient disconnect”?

“Patient-physician connectedness and quality of primary care”

Ann Intern Med 2009 Mar 3; 150(5):351-2

RMH MAPU

1. Which patients are entitled to admission to the Unit
- General Medicine ONLY (12 admissions per day)
2. Which patients are *not* entitled to admission to the Unit – Specialist Medicine
3. Sources of referral
 - ED admissions (> 90%)
 - OP
 - Rooms
4. Maximum length of time in MAPU
 - 48 hours (SSU 12-24 hours)

Strengths and Weaknesses

Strengths:

MAPU Registrar (1) - ED + MAPU

Intern (2) - MAPU

1. Rapid assessment 7.30 am → 10 pm
2. Patients under care of the 24 hour receiving unit – MAPU Interns each attached to 2 units
3. Rapid access to investigations – pathology/radiology
4. Pharmacy
5. Allied Health
6. Care Coordination/Social Work
7. Aged Care Assessment

Strengths and Weaknesses

Weaknesses:

1. Patient has multiple moves
2. Discontinuity – multiple doctors
3. Access Block
4. Bypass of MAPU Service
5. Delay in Consultant Reviews
6. Weekend Gap
7. Duplication of Services
8. Expense of “Double Medical Care”
9. “Compartmentalisation” of general physicians
 - “Acute Doctors”
 - “Chronic Doctors”
10. Staff Burn Out

Short Stay Unit - ED

1. ED admit and manage patients expected LOS < 24 hours
2. Strict Admissions and Discharge Criterion
3. Priority access to pathology/radiology investigation
4. Frequent medical review of patient
5. Clinical protocols for management of high volumes conditions
6. Share infrastructure and staffing with ED

Essential Items For MAPU

1. CONSULTANT MORNING HAND OVER 8.00-8.30
2. ALL NEW PATIENTS UNDER RECEIVING TEAM –
"1 Year Rule"
3. AM CONSULTANT POST-RECEIVE WARD ROUND
4. LATE AM MULTIPLE DISCIPLINARY MEETING

Monitoring and "KPIs"

MAPU

1. % of all general medical admissions admitted to MAPU
2. % of patients admitted to MAPU staying < 48 hours (Target 85%)
3. % of patients admitted to wards (Target < 75%)
4. Monitor Readmission Rates

"Evaluation of the Impact of Implementation of a MAPU Unit"

Kennedy, Brand, Russell et al

Study Objective

1. Evaluate impact of initial 10 bed MAPU unit
 2. Monitor
 - Length of stay
 - Readmission rate
 3. Pre-post study design
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Methods

Historical cohort study over 6 months

Pre MAPU 2002

Post MAPU 2003

Controls matched for ICD codes and clinical comorbidities (Charleston Score)

	General Medicine 1/8/2002-31/1/2003 (n=1531)		General Medicine 1/8/2003-31/1/2004 (n=1623)	
Mean Age (yrs) (SD)	75.25	(14.28)	75.11	(14.46)
Gender (%)	739	(48.3)	837	(51.6)
Male	792	(51.7)	786	(48.4)
Female				
Charlson Index (%)	50.00		56.75	
None	39.81		34.50	
1-2	10.19		8.75	
>3				
	General Medicine 1/8/2002-31/1/2003 (n=1531)		General Medicine 1/8/2003-31/1/2004 (n=1623)	
Median LOS – days (interquartile range)	4.22	(1.66-9.69)	3.85 *	(1.62-7.98)
No.Discharged ≤ 48hrs (%)	453	(29.4)	500	(30.8)
Total WEIS generated	2088.3		2117.3	
Average WEIS/bed day	0.181		0.199	
In Hospital Mortality (%)	92	(6.01)	87	(5.4)
HITH or MECRS (%)	43	(2.81)	56	(3.5)
Number discharged home (%)	1128	(73.7)	1158	(71.4)
Number transferred (%)	205	(13.4)	190	(12.1)
Patient transfers to medical units from high dependency (%)	172	(9.9)	215	(11.7)
Number readmitted ≤ 28 days of discharge	371	(24.2)	461*	(28.4)

* p<0.05

Success of MAPU

1. "MEDICAL CHAMPION"
 - Medical Director
 - Senior Medical Registrar
 2. Strong link ED/MAPU – Medical Registrar
 3. Coordinated Nursing & Allied Health Teams
 4. Financial support by Administration
 - Clerical
 - IT
 - Health professionals
- "if one link in the chain breaks"

MAPU Registrar

1. Assessment & triage of potential admissions from ED
 - Specialist vs General admission
 - Training exposure to Acute Medicine
 2. Close liaison with Admitting Team – prioritises admission destination
 - MAPU
 - CCU, ICU, DMU
 - General Ward
 3. Senior Registrar BPT 3 – “knows the hospital”
 4. Supervise MAPU Interns
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