

Metropolitan Wide Hospital Early Warning (HEWS)

Business Rules

Version 1.8

**Prepared & endorsed by: Metropolitan Health Services, MAS & DHS
September 2002**

Document Context

This document outlines the specific roles, responsibilities, and agreed principles for implementing a condition of Hospital Early Warning (HEWS) as part of an early warning system for hospitals and Metropolitan Ambulance Service.

This document should be read in conjunction with:

- DHS Hospital Circular 4/1998
- Metropolitan Health Services Bypass Policies
- MAS – Operational Procedure 6052 – Transport of patients to hospital

Background: Building a system response to emergency access pressure

Pressure on the Victorian public hospital system has been evidenced by longer waits for both elective and emergency admissions and high levels of ambulance bypass. Whilst ambulance bypass is often a result of hospital/system wide pressure, the potential for a regional approach to improve emergency access was recognised by the Patient Management Taskforce.

A number of hospitals have been refining the process of monitoring emergency activity and capacity and this has enabled them to identify a condition of Hospital Early Warning within their EDs, and to develop responses designed to avoid progressing to bypass status.

A trial of an early warning response has been conducted within the North Eastern Cluster and that approach is now to be extended across all 13 major metropolitan hospitals.

System wide HEWS is to commence 9/9/02.

HEWS : A hospital-level response that moves to a system-level response

The goal of HEWS is to better manage access for emergency patients by improving communication across and within both the hospital and the system, and to better match emergency demand to both hospital and system resources. The major benefits of HEWS are derived from the internal escalation processes within hospitals that create additional capacity to deal with demand pressure.

'Hospital Early Warning' enables hospitals to take a more planned approach when reacting to pressure:

Within the Emergency Department

Applying a standardised approach to identifying and responding to increasing pressure in a given ED,

Internally across the hospital

Implementing a whole of system response to that pressure to create additional capacity and where possible avert the need for bypass without compromising the performance of other parts of the system, i.e. MAS response times and ED performance.

Externally across the metropolitan system

Hospitals notifying MAS that they have activated their HEWS and MAS use of the information to better manage peak load distribution.

HEWS Definition

Hospital Early Warning has been defined as:

- *A standardised approach to identifying increasing pressure in a given ED, where the occupancy and workload within the department is at a level that there is a high likelihood that bypass criteria will be reached within the next hour*
- *A standardised hospital wide approach to responding to that increasing pressure within the ED*
- *The activation of a whole-of-system response to that pressure to create additional capacity and where possible avert the need for bypass.*

The assessment of this state is performed by experienced senior ED medical and/or nursing staff. Such an assessment is largely subjective, but is made on the basis of the experience and expertise of the senior staff and with reference to a range of agreed factors including:

- Level of occupancy of ED **and** Inpatient areas
- Workload actual & predicted
- Staffing levels (include skill mix, shortfalls)
- Other variables such as an external or internal disaster

These factors may vary across sites. The rigour in the HEWS system lies in strict compliance with a process and criteria that ensures a hospital wide response is activated consistently before requesting external assistance.

HEWS Roles and Responsibilities

The following section details the roles and responsibilities in relation to the whole-of-system response/HEWS, namely:

1. The ED and wider hospital experiencing the pressure
2. The EDs of hospitals within the cluster/ neighbouring who may receive additional patients
3. MAS who determine which ED to transport patients to

1. Intra Hospital Response

In relation to HEWS at hospital level, it is agreed that all hospitals will:

- Identify Hospital Early Warning point
- Identify staff who are authorised to declare HEWS
- Develop and document a Bypass Prevention Strategy that focuses on
 - Creating capacity within the ED
 - Wider communication within the hospital to facilitate patient movement and alleviate congestion in the ED
- Ensure that all elements of the Bypass Prevention Strategy are in place prior to any request for Hospital Early Warning.
- Contact MAS Duty Team Managers by phone to notify of HEWS
- Ensure that the minimum period of a HEWS request should not be less than 30 minutes and no greater than 60 minutes before a formal reassessment is made and a second period declared if required.
- Collect and collate the minimum agreed data about bypass and HEWS – Attachment 1
- Ensure that all episodes of ambulance bypass are preceded by a period of Hospital Early Warning of 30-60 minutes. Cases of unforeseeable demand and/or disaster may override this requirement.

2. Inter hospital Response - adjacent hospitals

In relation to HEWS, it is agreed that adjacent hospitals will:

- Establish systems/processes to be informed about change in status of other hospitals
- In response to information about the change in status of another hospital, review current indicators of pressure within their organisation in recognition of likelihood of additional workload from the hospital on HEWS.

3. Response by MAS

Delivery of patients to EDs by MAS is one of many factors in bypass incidence. MAS participation in the HEWS process is on the basis that MAS may contribute to managing ED access by diminishing occasional peaks in demand at EDs **after** rigorous internal escalation processes have been implemented by hospitals.

In relation to ambulance management of Hospital Early Warning, it is agreed that:

- MAS will record HEWS notification on EMSsystem, notify relevant crews of change in status and seek an alternative destination for appropriate patients where possible.
- HEWS will not extend to:
 - Time critical/Category 1/Signal 1 patients (Attachment 2)
 - Patient is already in transit
 - Patients being transported by helicopter or by MAS peripheral team crews
 - Patients requiring 'super speciality services'
 - Patients being transported by non emergency fleet or contractors
 - Some patients with a relevant and current past history eg: chronic disease management history (see below- point 4),

- Hospitals on HEWS are to review & reprioritise non-emergency booked transports to augment hospital internal bypass prevention response.

4. Patients with a chronic disease management history

Continuity of care for patients with chronic disease is important. In periods of normal demand, patients with a chronic disease will be transported by MAS to the ED of the hospital that usually provides their care, provided they are not in a time critical condition or do not require speciality services.

During periods where their usual hospital is on **HEWS**, patients with chronic diseases who require emergency care will not be transported to another hospital if the acute condition for which they are being transported is directly related to the chronic disease.

As a **general rule**, during periods where their usual hospital is on **bypass**, patients with chronic diseases will **not** be accepted by ambulance to that hospital. Exceptions may be negotiated on a case-by-case basis after communication between the MAS Clinician and the doctor-in-charge at the particular ED concerned.

It is agreed that all hospitals will:

- Develop systems to proactively identify and flag patients who qualify for consideration under the above chronic disease management guideline.
- Identify ways to manage medical records so that patients likely to be diverted can be effectively managed by another ED (this may involve exploring the role of care coordinators/case managers for frequent attendees etc)
- Ensure that if a patient with a relevant chronic disease management history at a specific hospital is transported to another hospital during a period of Hospital Early Warning or bypass, and requires ongoing care/admission, they will be transferred back to their usual treating hospital as soon as possible to an Inpatient bed. This process will be co-ordinated by the central bed management position at both hospitals.

Simultaneous or sequential requests for HEWS

Prior to requesting Hospital Early Warning status, the senior ED clinician will check EMSystem to ascertain whether any other adjacent hospital is on Hospital Early Warning status. In the event that adjacent hospital(s) is/are already on Hospital Early Warning the hospital staff will liaise with each other and ascertain which of them will benefit most from Hospital Early Warning status and then notify Metropolitan Ambulance Service accordingly. Generally, no more than 2 hospitals in an area/zone should be on Hospital Early Warning status at the one time.

A maximum of 2 consecutive periods of HEWS status may be requested before the hospital's ED status will either be Open or, in the event that actions to facilitate ED access have not overcome the peak in demand, will progress to Bypass status. In a period of 8 hours, no more than 2 Hospital Early Warning periods are to occur.

Where a hospital in an area or zone is on **ambulance bypass** this indicates that the area/zone may be under significant pressure and surrounding hospitals may be dealing with increased ED demand. Where another hospital in the same

area/zone requests Hospital Early Warning, Metropolitan Ambulance Service will consider the request in the context of current and predicted workload, ambulance coverage and the likely effect on response performance. The Metropolitan Ambulance Service, Duty Team Manager has the responsibility of maintaining ambulance coverage on an hour to hour basis and will be in a position to decide whether requests for Hospital Early Warning status in this situation can be facilitated.

Monitoring, Dispute Resolution and Review

The introduction of the agreed initiatives regarding Hospital Early Warning will be subject to ongoing monitoring by representatives of Metropolitan Health Services and the Metropolitan Ambulance Service. A local database of HEWS and bypass data, including agreed minimum data and process compliance will be maintained by each site (Refer Attachment 1). An evaluation of the HEWS system will be conducted one month after implementation of metropolitan wide system.

Issues surrounding delivery of ambulance patients to hospitals which breach agreed guidelines or expectations are to be addressed between the relevant E.D. Director and MAS Group Manager (i.e. these issues should not be raised directly with the ambulance crew(s) involved). It is agreed that these discussions should take place within two working days of the incident.

Metropolitan Ambulance Service is progressing work to collect and analyse data relating to altered patient destination events to better understand and quantify the effects of Hospital Early Warning on ambulance resource availability and response performance. The results of this work may influence Metropolitan Ambulance Service' position in regard to the Hospital Early Warning System if there is a proven detrimental effect on Metropolitan Ambulance Service' performance.

Attachment 1

Metropolitan Wide Hospital Early Warning (HEWS)

HEWS Documentation Proforma

*The HEWS proforma may need site-specific customisation to reflect local requirements eg titles & roles.
It is expected that all sites develop local data capture processes and conduct periodic reviews of HEWS compliance.
An Access database, developed by Eastern Health, is available if required.*

The Emergency Department HEWS action proforma is initiated prior to any request for an internal HEWS. The specific actions are below.

Actions to be taken before HEWS:

	Time	Yes	No	Outcome details
Bed Manager or After Hours Site Manager contacted?				
ADON called to access extra staff for ED?				
Sweep round to discharge patients from ED?				
Wards contacted to expedite transfers from ED?				
Patients referred to HITH/PAC where possible?				
Patients fast tracked where possible?				
Additional staff provided for ED?				
Additional staff provided to open extra beds?				
Time of most recent teleconference				

1.1 HEWS Proforma		1.2	
Hospital Early Warning System	Date:/...../.....		
	Notification of ED director or duty consultant (AH)	Time:hrs	
	Notification of Bed Manager / Nursing Supervisor	Time:hrs	
	Principal Reason for HEWS		
	HEWS called	<input type="checkbox"/> Yes Time.....hrs <input type="checkbox"/> No	
	HEWS requested from MAS clinician	<input type="checkbox"/> Yes Time.....hrs <input type="checkbox"/> No	
	Outcome of HEWS	

Attachment 1 – Continued

**Metropolitan Wide
Hospital Early Warning (HEWS)**

AMBULANCE BYPASS MINIMUM DATASET PROFORMA

Ambulance Bypass Proforma						
Date:/...../.....		Completed by:				
Notification of ED director or duty consultant (AH)		Time:hrs				
Notification of Bed Manager / Nursing Supervisor		Time:hrs				
Duty ED Consultant:.....	Duty ED ANUM:.....	Director Clinical Services:.....				
Previous bypass within prior 4 hours	<input type="checkbox"/> Yes			<input type="checkbox"/> No		
Patients In ED (incl waiting room) by triage	1	2	3	4	5	Total
Available (empty) patient spaces	Total			Monitored		
Patients In Waiting Room						
Patients In ED waiting For Bed						
Patients in ED waiting for ICU or CCU bed (detail)						
Recommended patients awaiting admission/transfer						
Patients In ED awaiting Psychiatric assessment						
Patients In ED Waiting For Admit – Discharge Decision	Awaiting IP unit review					
	Awaiting ED clinical workup coml.					
	Awaiting Pathology results					
	Awaiting Imaging results					
Patients in ED with ward bed allocated (not yet transferred to ward)	Number:					
	Reason not transferred yet:					
Empty Beds In Hospital						
Ed Staffing: (Normal / other) Medical & Nursing	Normal <input type="checkbox"/>			Decreased <input type="checkbox"/>		
	Specify					
Strategies Implemented To Avoid Bypass: (Specify / None Possible)	Specify					
	None Possible <input type="checkbox"/>					
Other detail / comment Principal reason for bypass						

AMBULANCE BYPASS

Attachment 2

Metropolitan Wide Hospital Early Warning (HEWS)

MAS TIME CRITICAL CATEGORIES

MAS – Time Critical Categories	
Actual:	at the time the vital signs survey was taken the patient was in actual physiological distress
Emergent:	at the time the vital signs survey was taken the patient was not physiologically distressed, but does have a "pattern of actual injury/illness" which is known to have a high probability of deteriorating to actual physiological distress.
Potential:	at the time the vital signs survey was taken, the patient was not physiologically distressed, and there was no significant "pattern of actual injury/illness", but does have a "mechanism of injury/illness" known to have the potential to deteriorate to actual physiological distress.

PRIMARY REASON FOR BYPASS/HEWS DEFINITIONS

AIM: TO USE A CONSISTENT SET OF DESCRIPTIONS FOR "PRIMARY REASON FOR BYPASS/HEWS" EVENTS AT THE 13 MAJOR METROPOLITAN HOSPITALS

Rationale:

Use of consistent definitions for the primary cause or reason for Bypass and/or HEWS will allow more valid comparisons for the drivers for these events both for individuals sites as well as system wide. It is acknowledged that there may be other factors contributing "upstream" to Access block or multiple contributing factors within the ED however, the aim is to capture the primary reason for the event as experienced by the ED. Sites may wish to record secondary reasons in addition to the primary reason.

The primary reasons for Bypass/HEWS are:

1. INPATIENT ACCESS BLOCK

Definition: The primary reason for the Bypass or HEWS is that the majority of available ED treatment spaces are occupied by patients who have been assessed as needing admission, have been notified to the bed manager, allocated a bed and waiting for internal transfer to an inpatient bed.

2. ACUITY/RESOURCE INTENSIVE PATIENTS

Definition: The primary reason for the Bypass or HEWS is that the acuity mix of patients in the ED exceeds the available resources (including staff). There are a greater than usual number of high acuity patients being managed in the ED including patients requiring respiratory support/ventilation, cardiac monitoring, intensive assessment, intervention and management requiring a 1:1 staff –patient ratio.

Note: This assumes the usual rostered number/skill mix of staff for that time and day are available otherwise, consider using Acute Staff Shortage as reason.

3. VOLUME OVERLOAD

Definition: The primary reason for the Bypass or HEWS is a large and/or unpredicted increase in presentations of all levels of acuity to the ED which temporarily exceeds available resources. This may result in an unacceptable number of patients waiting to be seen longer than appropriate. Note: This assumes the usual rostered number of staff for that time and day are available and the presentation pattern is beyond that which normally occurs at that time/day.

Note: If it is high acuity patients rather than the volume, use Resource Intensive Patients/Acuity as reason.

4. ACUTE STAFF SHORTAGE

Definition: The primary reason for the Bypass or HEWS is related to ED staffing levels of key clinical staff (medical and/or nursing) below the usual rostered numbers or skill mix for that time of day/day of week resulting in reduced ED capacity to manage the usual pattern of presentations.

5. EMERGENCY RESPONSES/DISASTERS – INTERNAL OR EXTERNAL

Definition: The primary reason for the Bypass or HEWS is that the Hospital and /or ED is involved in an internal or external emergency response such as fire, Bomb threat, internal disaster, security incident etc and access to the emergency department has been temporarily suspended or activity contained to existing patient population in the ED.

