



Government of **Western Australia**
Department of **Health**
Public Health and Clinical Services

Emergo-Train System (ETS)

Introduction

Welcome

During the training you will participate in an Emergo-Train Exercise.

This presentation will provide you with details on how the Emergo-Train System works.

What is ETS

- Emergo Train System (ETS) is an instructional educational simulation system.
- ETS was developed by Professor Sten Linquist, a Trauma Surgeon with the University of Linköping.
- Magnetic Symbols representing patients, staff and resources are used on white boards to train and test the preparedness for and response to major incidents and disasters.

What is ETS

A typical exercise can be developed using the system to represent

- Incident site
- Casualty Clearing Post
- Emergency Department
- Radiology
- Blood Bank
- Operating Theatres
- Intensive Care Units
- Wards and other Units/Areas

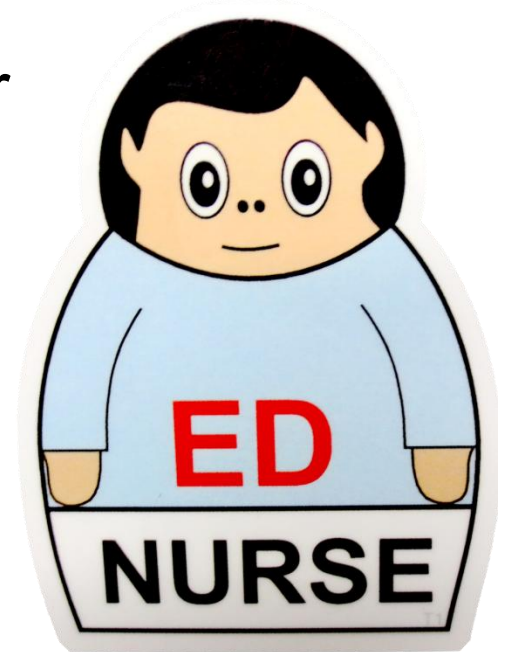


Metro Surge 2010

An ETS can be used to:

Explore capacity and capability for

- Clinical management
- Human resource management
- Physical resource management
- Hospital capacity
- Decision making skills
- Planning
- Ambulance transport availability
- Hospital Emergency Coordination/Operations Centre staff



Patients - Gubers

On the front of each guber you will find general casualty information that you might identify on approaching a casualty i.e.

- Gender
- Age
- Walking or lying down
- Appearance e.g. blood on both legs



If the patient is not walking you will need to turn the guber over to determine the casualty 'Sieve' triage category.

Patients - Gubers

The back of each guber details the remaining 'Sieve' data.

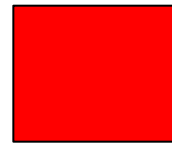
- Walking (front of guber)
- Breathing
- Respiratory rate
- Capillary refill/HR

The back of each guber also details the remaining 'Sort' data which will determine the triage category at the CCP

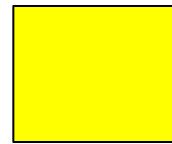
- Glasgow coma score
- Respiratory rate
- Systolic BP
- E = Examination findings

Triage

- Coloured tags are used to represent triage categories of patients.



Immediate/Now



Urgent/Soon



Delayed/Later



Deceased

Treatment

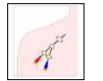
Stickers are used to represent various clinical interventions and equipment available.



Escharotomy



Nastro-gastric tube



Central Line



Burn IV fluid resus



Infusion pump



Monitor



Ventilator



Spinal board



IV cannulation



IV fluids



IV drugs (analgesia)



Blood



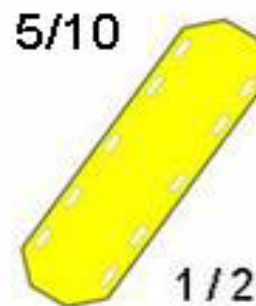
Oxygen



Dressings

Time management

- Figures are printed on the stickers to show the time taken to perform the intervention.
- The shorter time is used for ideal conditions and the longer for non-ideal.



Time management

- When a patient has been assessed and a decision made as to what interventions are needed to stabilise them, the time taken to perform them is added up, and an appropriate staff member (doctor, nurse, paramedic, first aider) is allocated – that resource then stays with the patient until the time has elapsed.



Example

- Arrival time at hospital **0900**
- Initial assessment **15 minutes**
- Plus interventions
 - IV cannula = **4 minutes**
 - IV fluids = **2 minutes**
 - Analgesia = **2 minutes**
- Total time taken **23 minutes**
- Time guber and associated staff member is not available to move until **0923am**

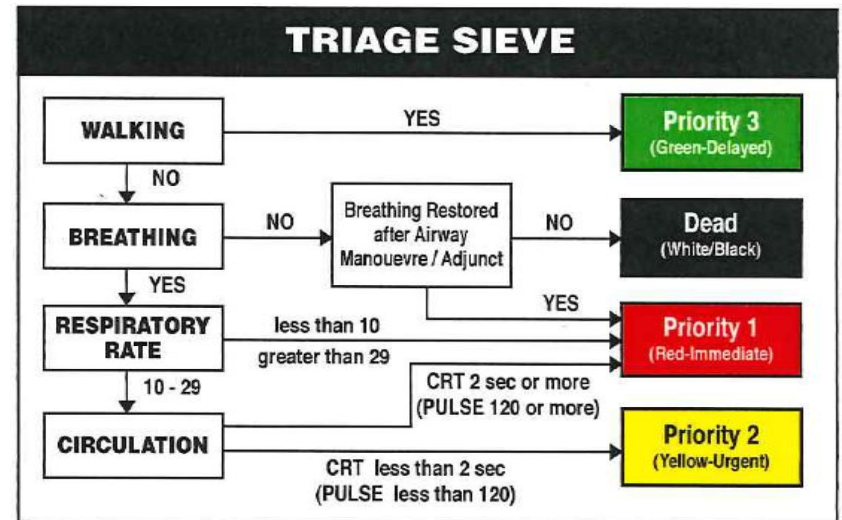


Now lets see how the boards work.

Incident site

At the incident site,
responders

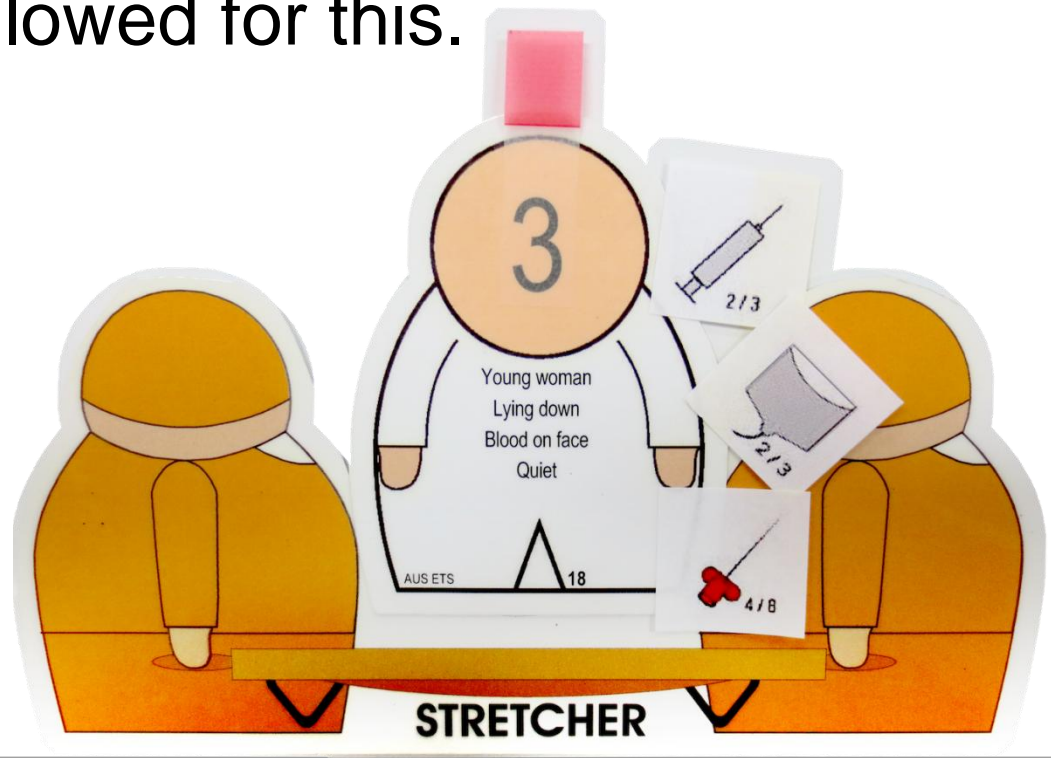
- Assess the scene
- Report back their findings
- Start to sieve the patients (usually ambulance)



Triage at this stage can be performed using the MIMMS Sieve system based on mobility, airway, breathing and circulation.

Transport to CCP

- Using resources available, the patient needs to be transported to the Casualty Clearing Post.
- A time delay is allowed for this.



Casualty Clearing Post

- Once at the CCP, the patient should be re-triaged using Triage 'Sort', based on respiratory rate, GCS and systolic blood pressure.

TRIAGE		SORT	
GLASGOW COMA SCORE		TRIAGE REVISED TRAUMA SCORE	
EYE OPENING	Score	GLASGOW COMA SCORE	Coded Value
Spontaneous	4	13 - 15	4
To voice	3	9 - 12	3
To pain	2	6 - 8	2
None	1	4 - 5	1
		3	0
VERBAL RESPONSE	Score	RESPIRATORY RATE	
Oriented	5	10 - 29	4
Confused	4	greater than 29	3
Inappropriate words	3	6 - 9	2
Incomprehensible sounds	2	1 - 5	1
None	1	0	0
MOTOR RESPONSE	Score	SYSTOLIC BLOOD PRESSURE	
Obeys commands	6	greater than 89	4
Localises to pain	5	76 - 89	3
Withdraws to pain	4	50 - 75	2
Flexes to pain	3	1 - 49	1
Extends to pain	2	0	0
None	1	PRIORITY SCORE	
		IMMEDIATE	1 - 10
		URGENT	11
		DELAYED	12
		EXPECTANT	1 - 3



Casualty Clearing Post

- Decisions need to be made on casualty management activities, dependant on resources available and transport prioritisation.



Transport board



- Ambulances and other transportation based on actual capacity will arrive at realistic times.
- Distribution of casualties will depend on arrangements in place and the systems being used for the exercise.
- A transport time to hospital and return will be allowed and a delay incurred.

Emergency Department

1	2	3	4
ED CONSULTANT ED NURSE	ED NURSE	ED REGISTRAR	ED NURSE
ED INTERN 1 0		2	4
IN 15-45 FREE AT 16-18	IN 13-10 FREE AT	IN 15-55 FREE AT 16-19	IN 16-05 FREE AT 16-17

- The Emergency Department will be prepared with existing patients already in the department at commencement of the exercise.
- The Department will be prepared with normal staffing numbers.
- Should you need more staff, they will need to be requested through normal channels.

ED Triage

- Patients will arrive at the ED as advised by the transport officer. The ambulance crew accompanying them will remain until the patient has been moved to another area or the department. They can then return to the transport board.
- The patient will need to be re-triaged. You can continue to use MIMMS or the NTS.
 - (If you use NTS you will need to write the NTS category on a post-it note and place on the guber.)

Emergency Department

- When moved inside the department, decisions will need to be made as to what investigations are required. Time and resources need to be allocated.
- An exercise control staff member may be able to provide information regarding diagnosis if satisfied that the appropriate investigation has been made.

Medical imaging/blood

- Medical imaging and blood requests need to be written on a yellow post-it note and left at the appropriate board.
- On return from Medical Imaging the results will be available.

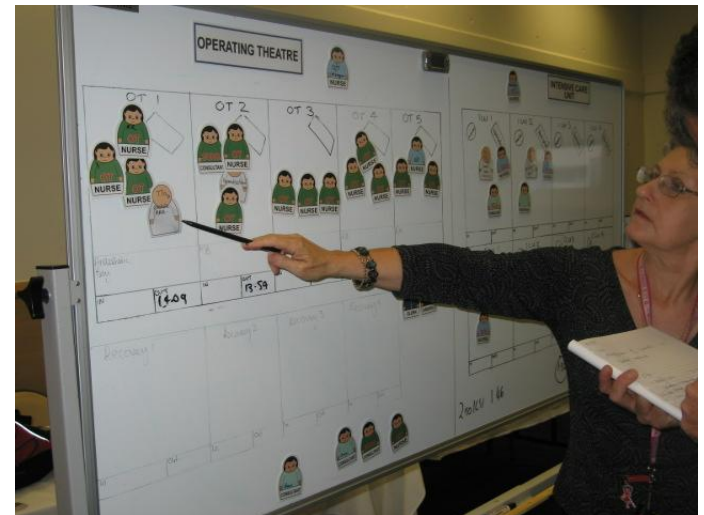
ED Radiological / Nuclear Medicine Investigations		
Chest X-Ray	10	mins
Cervical X-Ray	15	mins
Abdo. X-Ray	15	mins
Limb X-Ray	10	mins
Pelvis X-Ray	15	mins
Fast Ultrasound	10	mins
Ultrasound	20	mins
CT Scan	20	mins
MRI	45	mins

Other hospital areas

- Requests for patients to go to theatre will follow normal process in regards to prioritisation.
- Further negotiations will be required with your hospital Emergency Coordinator/Operations Team to request extra resources such as staff or equipment that you may require.
- Normal processes will apply in relation to patient transfer and bed allocation.

Operating theatres

- The operating theatre will be prepared with the hospital's theatre list for the day of the exercise together with the normal staffing (medical, nursing and any other staff).
- The work of the Theatre will follow on from the ED subject to negotiation and prioritisation of the patients.



Operating theatres (when new patient bank is used)

- A set of patient information cards will be available.
- When a patient arrives, find the corresponding card and details of the surgery required, time taken and whether ICU placement is required will be stated. Record on the bottom of the 'theatre' when the surgery is scheduled to finish (allow cleaning time)

Intensive care unit/ high dependency area/wards/units

- The intensive care unit, high dependency area/unit and another other ward or specialised unit participating, will be prepared with the patients in the areas on the day of the exercise together with the normal staffing (medical, nursing and any other staff).
- The work of the Unit/Area will follow on from the Emergency Department and Theatre subject to negotiation and prioritisation of the patients.

Hospital emergency coordination

- The hospital's Emergency Coordination/Emergency Operations Centre may be activated.



Exercise parameters

- Hospitals will respond according to the magnitude of the disaster and their capacity and capability to deal with the response.



Exercise rules

- Exercise rules will often vary according to the aim and objectives. However, some generic rules are as follows.
 - Follow the directions of the exercise staff.
 - All communications between departments/areas must be followed by a _____.
 - Follow the times stated on the boards and intervention labels.
 - Enjoy yourself.

End of exercise

- Debrief.
- Clean up.