

Hospital Facilities for Disaster Preparedness

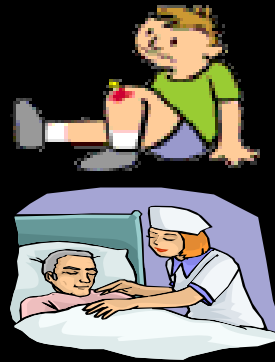
*Department of Emergency Medicine
Faculty of Medicine – University of Brawijaya*

Concept of Disaster & Emergency Assistance

Disaster

IDP's

- injuriesä
- deathsä
- malnutrition
- SAB & environment. (-)
- Paralized health services
- etc



Mass victims

- injuries
- handycap
- deaths



I frastructures damage



- building (hospital/PHC/Pustu) damaged
- Health equipment, Transport, communication equipment damage/missing
- Drugs supplies damage/missing, etc

- *“The key principle of disaster medical care is to do **the greatest good for the greatest number of patients**, while the objective of conventional medical care is to do the greatest good for the individual patient.”*

Ruined Health Center

Hospital



PHC (Puskesmas)



1. Facilities



General:

- Command Post
- Information Center
- Public Relation
- Public Kitchen
- Logistic depot
- Volunteer post
- Relatives/Family room

Victims Management:

- Triage
- Minor OT
- OT
- Isolation Room
- Wards
- Intensive-intermediate care unit
- Mortuary

Supporting Facilities:

- Electricity
- Clean water
- Medical gas
- Fuel tank
- Communication system
- Waste disposal
- Air and ventilation

FOOD !!!

Pos komando

- § Denah / peta RS tsb
- § Peta kota dan provinsi
- § Alat komunikasi
- § Komputer, printer dan internet
- § Televisi
- § Daftar nomer telpon penting
- § Buku Protap
- § Alur sistim komando & struktur organisasi

TIP & TRIK

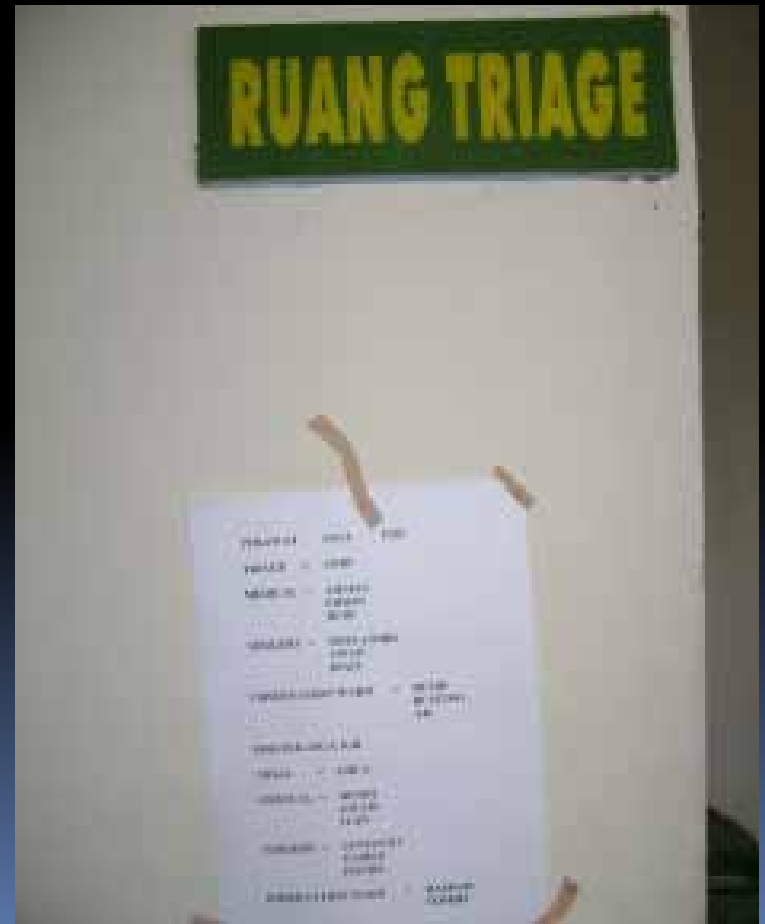
§ MINIMAL INTERVENSI, PENDEKATAN ~
KEBIJAKSANAAN LOKAL

Hospital facilities

Registration



Triage



Hospital facilities

P1 (RED)



P2 (YELLOW)



Hospital facilities

P3 (GREEN)



Minor OT



Hospital facilities

Ward



Mortuary



Hospital facilities

Nutrition/Public Kitchen



Logistic & Pharmacy



Hospital facilities

Nurse Station



Office



Hospital facilities

Water Source



Disposal



Post

Volunteer Post



Command Post



Relatives/Family Post



Emergency Mass Casualty Decontamination Area



“Surge Capacity”:

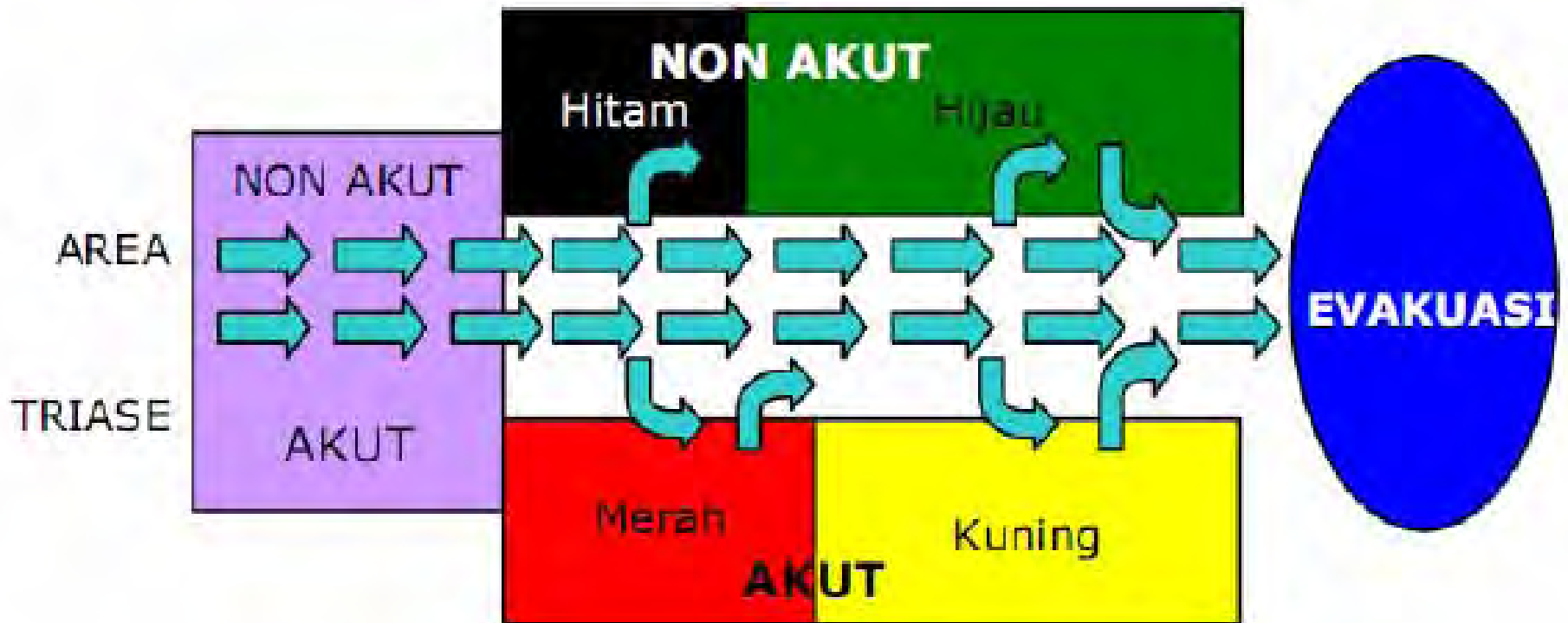
§ Kemampuan memenuhi kecukupan personil, supply dan peralatan, fasilitas, serta sistem agar dapat memberikan pelayanan yang memadai dihadapkan kebutuhan segera dengan adanya arus pasien yang besar akibat bencana.

Components Of Surge Capacity

- § General agreement does exist on its key components, which are referred to as the “4 S’s” of ‘staff,’ ‘stuff,’ ‘structure,’ and ‘systems.’
- **Staff** refers to personnel,
 - **stuff** consists of supplies and equipment,
 - **structure** refers to facilities, and
 - **systems** include integrated management policies and processes

2. Plan

Hospital = Advance Medical Service
Post



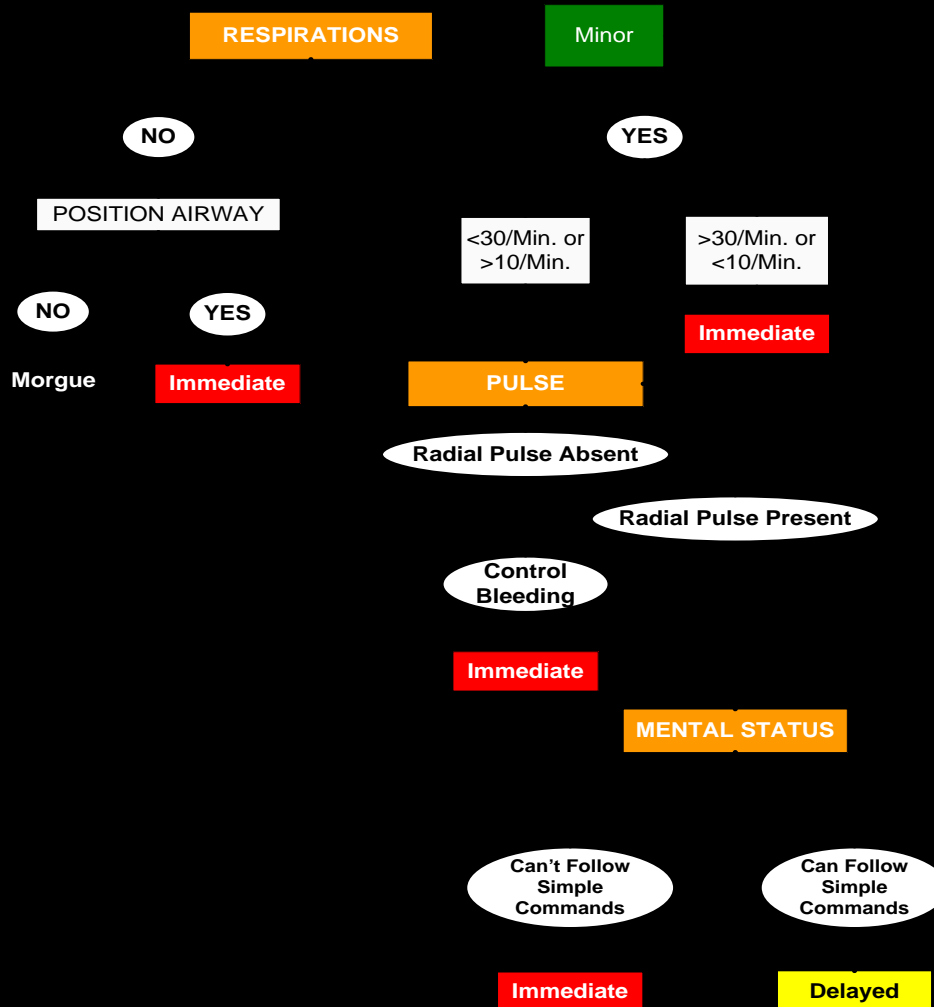
Sign Boards

KANTOR
(Office)



Think globally, act locally, empower with local capacities

Triage System for Disaster



Team of Emergency & Disaster

 Faculty of Medicine - University of Brunei Darussalam

 Saful Anwar General Hospital Malang

Leave the correct Triage Category On the end of the Triage Tag

Move the Walking Wounded	MINOR
No respirations after head tilt	DECEASED
<input type="checkbox"/> Respirations - Over 30	IMMEDIATE
<input type="checkbox"/> Perfusion - Capillary refill Over 2 seconds	IMMEDIATE
<input type="checkbox"/> Mental Status - Unable to follow simple commands	IMMEDIATE
Otherwise-	DELAYED

MAJOR INJURIES: _____

HOSPITAL DESTINATION: _____

ORIENTED X DISORIENTED UNCONSCIOUS

TIME	PULSE	B/P	RESPIRATION

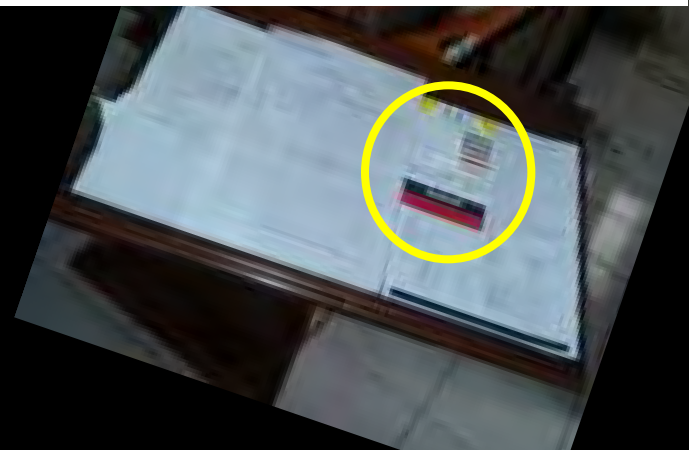
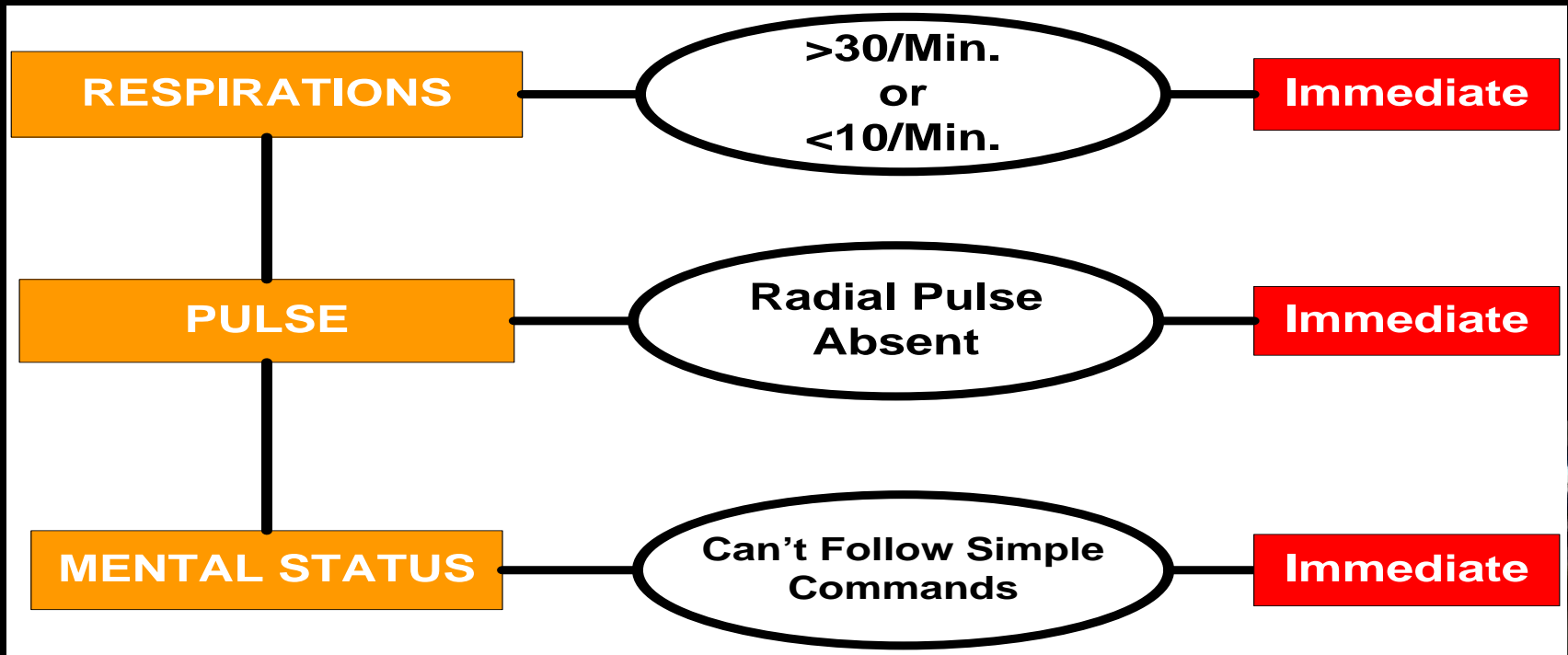
DECEASED

IMMEDIATE

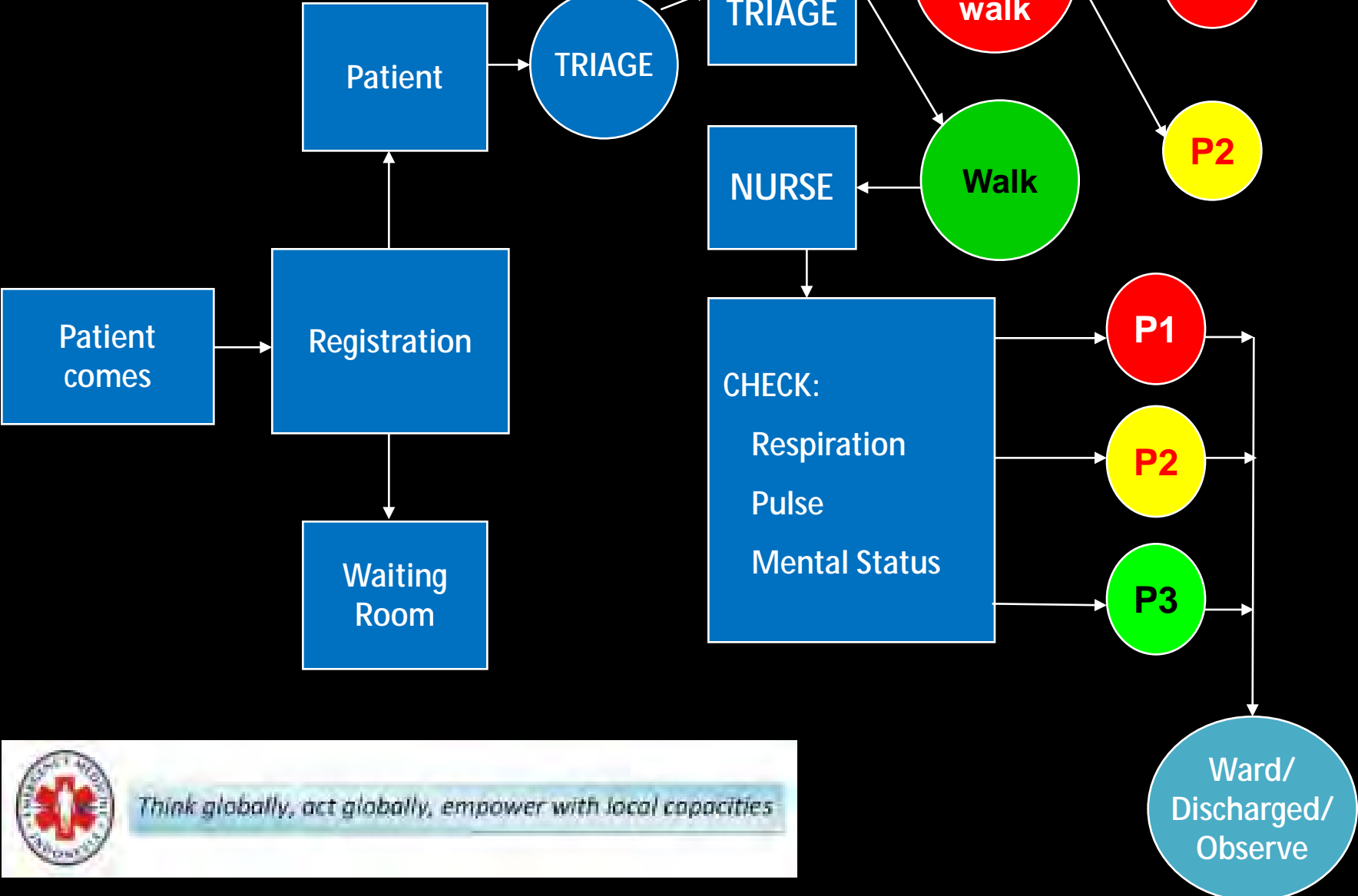
DELAYED

MINOR

S.T.A.R.T. (Simple Triage And Rapid Transport)



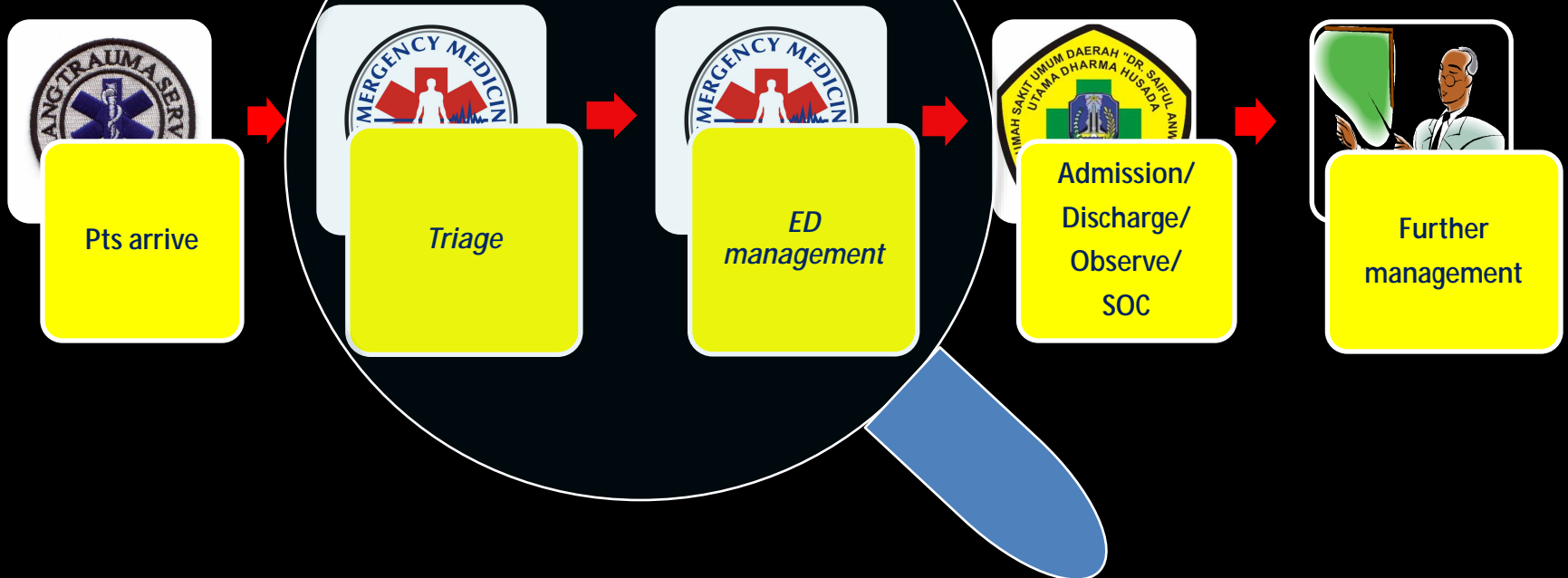
Patients Flow At the Hospital



Think globally, act globally, empower with local capacities

ED Flow; we are not only dealing with number of patients but also...

Response Time



Incident Operation Plan

A. Alasan untuk evakuasi

Untuk memindahkan pasien/personel dari ancaman bahaya atau bahaya yang nyata misalnya kebakaran, ledakan, gempa dsb.

B. Implementasi pada bencana internal

- Seluruh RS diinformasikan tentang pemberlakuan "interna disaster plan".
- Pasien dipindahkan dari daerah berbahaya kedaerah yang "aman".
- Keputusan pemberlakuan rencana bahaya internal dilakukan oleh "person in charge".
- Bila memungkinkan lakukan absensi sebelum, selama, dan sesudah bencana

C. SOP

§ Protap

Patient Referral

Koordinasikan dengan RS lain untk kemungkinan merujuk pasien, perlu tambahan perbekalan atau tambahan personel.

RS rujukan harus diberi informasi jumlah pasien yang dirujuk dan catatan medisnya.

3. Equipment & Tools

- Emergency Drugs
- Portable Pulse Oxymeter
- Triage Tag (P1-P2-P2, different colors)
- Pts Observation Charts
- Non-Rebreathing Masks (adults & Paeds)
- Nasal Canules (adults & Paeds)
- Nebulizer Masks (adults & Paeds)
- Portable Ventilator
- Airway Management Set
- Oxygen Regulator
- Name tag with logo for team personnel
- TED Vest
- Sterile Gel
- Laboratory Labels
- Sticky Labels
- Disposal Bags (Yellow)
- Trays for paperworks flow



Tools



- Rapid Health Assessment
- Sign Boards
- Triage Tag
- Medical Record
- Registration Form
- Observation Chart
- Nursing Progress Note
- Emergency Drug List
- Non-emergency Drug List
- Informed Consent

Medical Record



DISASTER MEDICAL RECORD

Division of Disaster Medicine
 Department of Emergency Medicine
 Faculty of Medicine - University of Indonesia, INDONESIA

DATE: [][][][][][]

NAME: _____

ADDRESS: _____

PHONE NO: _____

BOYS: _____

AGE: [][] SEX: [] M [] F GRADE: [] High [] Tertiary

EDUCATION: Finished Correct Finish Discontinued

BY: _____

REASON: Intentionally Delivered (P) Other (P)


REASON: Trauma Non-Trauma

Disasters/accidents Non-Disasters

TIMELOG	Time Call received: [][][][][][]	Time First Seen: [][][][][][]
	Time Arrival: [][][][][][]	Time Admission: [][][][][][]
	Time Discharge: [][][][][][]	Time of Case: [][][][][][]

POSITION ON ARRIVAL <input type="checkbox"/> standing <input type="checkbox"/> sitting <input type="checkbox"/> prone lying <input type="checkbox"/> supine lying <input type="checkbox"/> propped	PATIENT DISPOSITION <input type="checkbox"/> No Treatment Allowed <input type="checkbox"/> Patient Refused Care <input type="checkbox"/> dead on scene <input type="checkbox"/> Careless <input type="checkbox"/> no return home	PHYSICAL APPEARANCE <input type="checkbox"/> fair <input type="checkbox"/> poor HAIR <input type="checkbox"/> Normal <input type="checkbox"/> Unkempt <input type="checkbox"/> None <input type="checkbox"/> Greasy <input type="checkbox"/> Clean	CHIEF COMPLAINT (NON-TRAUMA) <input type="checkbox"/> chest pain <input type="checkbox"/> SOB <input type="checkbox"/> Chest <input type="checkbox"/> Back <input type="checkbox"/> Neck <input type="checkbox"/> Abdomen <input type="checkbox"/> Unspecified Other specify: _____ <input type="checkbox"/> vomiting <input type="checkbox"/> weakness (specify acute/chronic/intermittent) Other specify: _____ <input type="checkbox"/> diarrhea <input type="checkbox"/> Headache <input type="checkbox"/> Fever <input type="checkbox"/> Chills <input type="checkbox"/> Myalgia Other specify: _____ <input type="checkbox"/> Difficulty breathing <input type="checkbox"/> Dizziness <input type="checkbox"/> Cardiac History <input type="checkbox"/> Other Other specify: _____ <input type="checkbox"/> Others
ARRIVAL <input type="checkbox"/> Clean <input type="checkbox"/> Partially Contaminated <input type="checkbox"/> Completely Contaminated <input type="checkbox"/> Unclear <input type="checkbox"/> Other	RELIGION <input type="checkbox"/> Normal <input type="checkbox"/> Anxious <input type="checkbox"/> Religious <input type="checkbox"/> Religious <input type="checkbox"/> Other	CIRCULATION Capillary Refill: [] Good [] Poor <input type="checkbox"/> Normal <input type="checkbox"/> Warm <input type="checkbox"/> Delayed <input type="checkbox"/> Cool <input type="checkbox"/> None Pulse: []	

Registration Form



Ministry of Health and Family Welfare, Government of Karnataka

Registration Form

Ref. No. _____

No.	Ref. No.	Name of Candidate	Age	Sex	Religion	Address	Signature
1			17-8		Hindu		
2			17-8		Hindu		
3			17-8		Hindu		
4			17-8		Hindu		
5			17-8		Hindu		
6			17-8		Hindu		
7			17-8		Hindu		
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97			17-8		Hindu		
98			17-8		Hindu		
99			17-8		Hindu		
100			17-8		Hindu		

* Refer page 10/1010

Observation Chart

OBJETIVO DE LA OBSERVACIÓN: _____

FECHA:	_____
HORA:	_____
LUGAR:	_____

CIRCUITO DE PENSAMIENTO


Nombre: _____ Sexo: _____
Ejemplo: _____ Ejemplo: _____
Edad: _____ Edad: _____

CONTEXTO DE LA OBSERVACIÓN

Indicador	Observación	Valoración
Signos		
Síntomas		
Reacciones		
Emociones		
Percepciones		
- Ver		
- Oír		
- Sentir (táctil)		
- Gustar		
- Oler		
- Saborear		

Indicador	Observación	Valoración
Act. Cogn. (Categorización)		
Act. Cogn. (Evaluación)		
Act. Cogn. (Resolución)		
Act. Emoc. (Identificación)		
Act. Emoc. (Regulación)		
Act. Emoc. (Manifestación)		
Act. Soc. (Interacción)		
Act. Soc. (Cooperación)		
Act. Soc. (Resolución)		
Act. Soc. (Participación)		
Act. Soc. (Liderazgo)		
Act. Soc. (Seguimiento)		
Act. Soc. (Cooperación)		
Act. Soc. (Resolución)		
Act. Soc. (Participación)		
Act. Soc. (Liderazgo)		
Act. Soc. (Seguimiento)		
Act. Soc. (Cooperación)		
Act. Soc. (Resolución)		
Act. Soc. (Participación)		
Act. Soc. (Liderazgo)		
Act. Soc. (Seguimiento)		

Nursing Progress Note

 Think globally, act locally, improve with local capabilities

NURSING PROGRESS NOTE

Patient Name : _____ Nurse : _____
Age : _____ Sex : _____

Date	Nursing Diagnosis	Remarks

Emergency Drug List



Think globally, act locally, in partnership with local capacities

Emergency Drug List

Field Hospital Waslor, Fakultas Kedokteran Universitas Brawijaya

Kelompok	Nama Generik	Merek Dagang	Dosis	Frekuensi	Jumlah
Antibiotik	Ceftriaxone	Ceftriaxone	1g/10ml	3x1	30
	Cefazolin	Cefazolin	500mg	3x1	30
Antibiotik	Amoxicillin	Amoxicillin	500mg	3x1	30
Analgesic Agent	Paracetamol	Paracetamol	500mg	3x1	30
	Acetylsalicylic Acid	Aspirin	100mg	3x1	30
Sedatif/Anestesiologi	Morphine	Morphine	10mg	3x1	30
	Propofol	Propofol	100mg	3x1	30
	Etomidate	Etomidate	20mg	3x1	30
Kardiologi	Atorvastatin	Atorvastatin	20mg	1x1	30
	Simvastatin	Simvastatin	20mg	1x1	30
	Diltiazem	Diltiazem	120mg	1x1	30
	Verapamil	Verapamil	120mg	1x1	30
	Nifedipine	Nifedipine	30mg	1x1	30
Antihypertensi	Lisinopril	Lisinopril	10mg	1x1	30
	Amlodipine	Amlodipine	5mg	1x1	30
Antidiabetik	Insulin	Insulin	100 IU	1x1	30
	Glimepiride	Glimepiride	2mg	1x1	30
Antikoagulan	Warfarin	Warfarin	5mg	1x1	30
	Heparin	Heparin	1000 IU	1x1	30
Antiepileptik	Phenytoin	Phenytoin	300mg	1x1	30
	Carbamazepine	Carbamazepine	200mg	1x1	30
Antiparasitik	Metronidazole	Metronidazole	500mg	1x1	30
	Clindamycin	Clindamycin	300mg	1x1	30
Antiparasitik	Albendazole	Albendazole	400mg	1x1	30
	Mebendazole	Mebendazole	100mg	1x1	30
Antiparasitik	Primaquine	Primaquine	750mg	1x1	30
	Chloroquine	Chloroquine	500mg	1x1	30
Antiparasitik	Triclabendazole	Triclabendazole	600mg	1x1	30
	Levamisole	Levamisole	150mg	1x1	30
Antiparasitik	Diethylcarbamazine	Diethylcarbamazine	100mg	1x1	30
	Moxidectin	Moxidectin	100mg	1x1	30
Antiparasitik	Permethrin	Permethrin	500mg	1x1	30
	Deltamethrin	Deltamethrin	500mg	1x1	30

Informed Consent

**FORMULA PERFORMANSA JAWA TIMUR
"RUMAH SAKIT ANWAR"
di JALAN PRAPTIHO 2 MALANG
TEL. (0341) 83911, 82798, 8344144-188784**

BUKTI PARTISIPASI TERHADAP UJI KEHAKIMAN

1. DATA DIRI

Nama : _____
Alamat : _____
No. Telp : _____

2. DATA PENELITIAN

1. Malesu Ya Tidak
2. Tidak Ya Tidak

3. DATA LAINNYA

1. Ya Tidak
2. Ya Tidak
3. Ya Tidak

PERnyataan

1. Saya telah membaca dan memahami isi dari formulir ini dan bersedia untuk mengikuti penelitian ini dengan sukarela dan tanpa paksaan. Saya telah menandatangani formulir ini dengan kesadaran penuh dan tanpa paksaan. Saya telah menandatangani formulir ini dengan kesadaran penuh dan tanpa paksaan.

2. Saya telah membaca dan memahami isi dari formulir ini dan bersedia untuk mengikuti penelitian ini dengan sukarela dan tanpa paksaan. Saya telah menandatangani formulir ini dengan kesadaran penuh dan tanpa paksaan.

4. DATA LAINNYA

1. Ya Tidak
2. Ya Tidak
3. Ya Tidak

WE NEED TO ALWAYS BE PREPARED!

