SAIDEEP
HEALTHCARE & RESEARCH PVT. LTD.

EMERGENCY UNIT

SAIDEEP
HEALTHCARE & RESEARCH PVT. LTD.

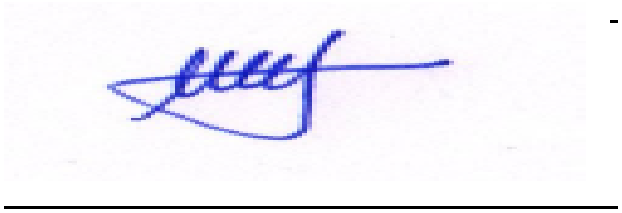
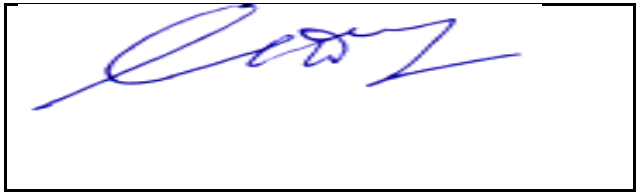
Annual Documents adequacy & Change Requirements Review

Sr.No	SOP /Doc No	Documents Name	Issue. No	Rev.No	Review Date	Change	Rev No	Revision Date	Reason for Change	Amendment
1	SDH/ER/01	Organgram	1	1	20-Nov-22	No Any Change Review Completed	1	20-Nov-23	No Any Change Review Completed	No any Amendment History
2		Scope of Services	1	1	20-Nov-22		1	20-Nov-23		
3		Emergency Preparedness & Triaging Process	1	1	20-Nov-22		1	20-Nov-23		
4		Consent For Treatment in Emergency Care	1	1	20-Nov-22		1	20-Nov-23		
5		Initial Assessment Of Emergency Patient	1	1	20-Nov-22		1	20-Nov-23		
6		Admission In ECU	1	1	20-Nov-22		1	20-Nov-23		
7		Patient Transfers in ECU	1	1	20-Nov-22		1	20-Nov-23		
8		Managing Medico Legal Cases	1	1	20-Nov-22		1	20-Nov-23		
9		Managing Brought Death Cases	1	1	20-Nov-22		1	20-Nov-23		
10		Managing Death & Dead Bodies	1	1	20-Nov-22		1	20-Nov-23		
11		Issue Of Death Certificate	1	1	20-Nov-22		1	20-Nov-23		
12		Adult CPR Protocol	1	1	20-Nov-22		1	20-Nov-23		
13		Pediatric CPR	1	1	20-Nov-22		1	20-Nov-23		
14		Management of Acute Pulmonary Edema	1	1	20-Nov-22		1	20-Nov-23		
15		Guidelines for Management of Trauma	1	1	20-Nov-22		1	20-Nov-23		
16		Protocol For Management Of Lower GI Bleeding	1	1	20-Nov-22		1	20-Nov-23		
17		Protocol for Management Of Upper GI Bleeding	1	1	20-Nov-22		1	20-Nov-23		
18		Protocol for Endotracheal Intubation	1	1	20-Nov-22		1	20-Nov-23		
19		Protocol for Management of Stroke Cases	1	1	20-Nov-22		1	20-Nov-23		

20		Protocol for management of Bradycardia	1	1	20-Nov-22		1	20-Nov-23		
21		Protocol for Management of Tachycardia with pulse	1	1	20-Nov-22		1	20-Nov-23		
22		Protocol for Management cardiac Arrest	1	1	20-Nov-22		1	20-Nov-23		
23		Protocol for Management of COPD	1	1	20-Nov-22		1	20-Nov-23		
24		Protocol for Management of Fractures	1	1	20-Nov-22		1	20-Nov-23		
25		Protocol for Management of pelvic Fractures	1	1	20-Nov-22		1	20-Nov-23		
26		Protocol for Management of spinal cord injuries	1	1	20-Nov-22		1	20-Nov-23		
		Original Date	**Effective Date**		**Next date of revision**		**Issue NO**			
		05 March 2021	**20 November 2023**		**20 November 2024**		1			

Reviewed & Prepared By		**Recommended By**	**Approved By**
Dr.Kalgaonkar	Mrs.Shraddha suryavanshi	Dr.H.Kalgaonkar	Dr.S.S.Deepak
Chief Medical Administartor	Quality Co-ordinator	Chief Medical Administartor	Chairman & Managing Director



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Annual Documents adequacy & Change Requirements Review

Sr.No	SOP /Doc No	Documents Name	Issue. No	Rev.No	Review Date	Change	Rev No	Revision Date	Reason for Change	Amendment
1	SDH/ER/01	Organgram	1	1	05-Mar-21	No Any Change Review Completed	1	20-Nov-22	No Any Change Review Completed	No any Amendment History
2		Scope of Services	1	1	05-Mar-21		1	20-Nov-22		
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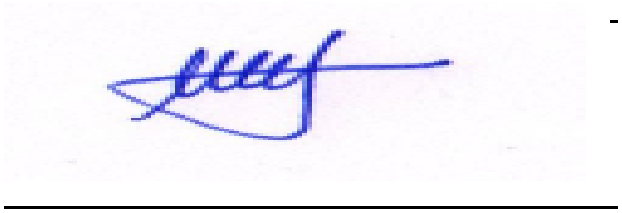
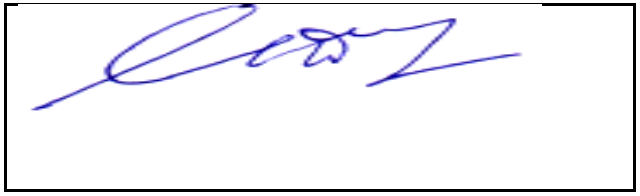
Dr.Kalgaonkar	Mrs.Shraddha suryavanshi	Dr.H.Kalgaonkar	Dr.S.S.Deepak
Chief Medical Administartor	Quality Co-ordinator	Chief Medical Administartor	Chairman & Managing Director



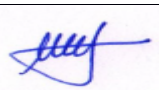
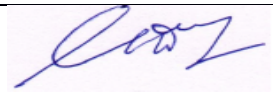



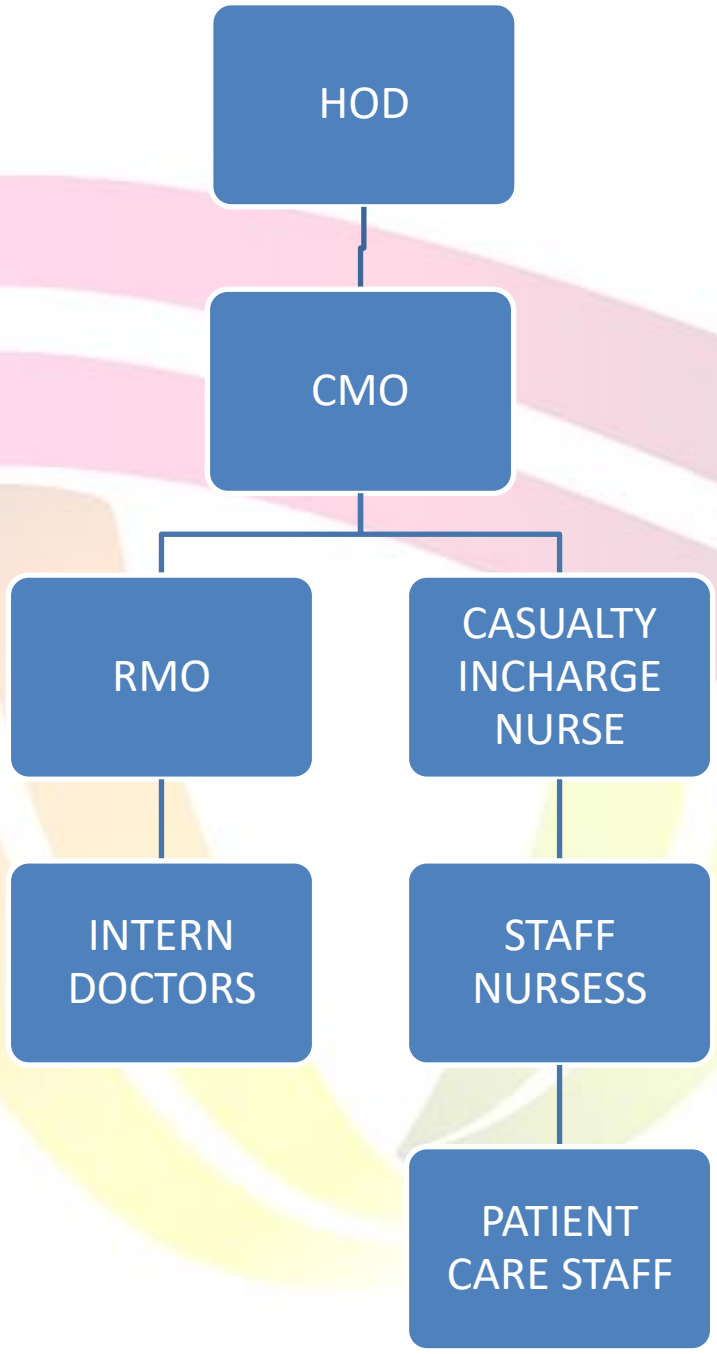
SAIDEEP HEALTHCARE & RESEARCH PVT. LTD.	**SAIDEEP HOSPITAL** **AAC CHAPTER MANUAL**	Doc No	SDH/AAC/01
		Issue No	01
		Rev No.	01
		Date	1 /11/ 2020
		Page	1
	Amendment Sheet		

Sr. No	Page No	Clause No	Date of Amendment	Amendment Made	Reasons	Signature of Approval Authority

Recommended By	Signature	Approved By	Signature
Dr. Hrishikesh Kalgaonkar		Dr. S. S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	

Contents

Recommended By	Signature	Approved By	Signature
Dr. Hrishikesh Kalgaonkar		Dr. S. S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	


HOD
CMO
RMO
CASUALTY INCHARGE NURSE
INTERN DOCTORS
STAFF NURSESS
PATIENT CARE STAFF

PURPOSE AND SCOPE

The purpose of the policy is to define scope of service provided in the Emergency Care unit of the hospital.

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HODs / Unit Heads
They are responsible for implementing the various guidance in terms of ordering and administration of medications.

HOD - Pharmacy
Is responsible to ensure that the policies pertaining to pharmacy services are implemented.

POLICIES

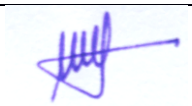
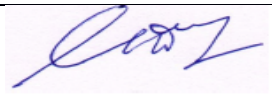
The ED service covers evaluation, resuscitation and treatment of all the emergency conditions; it involves both pre-hospital and in-hospital emergency services of the following types:

- Cardio-pulmonary emergencies.
- Surgical Emergencies
- Medical Emergencies
- Trauma Related Emergencies
- Medico Legal Emergencies
- Obstetrics & Gynecological Emergencies
- Psychiatric
- Pediatric
- Infectious Emergencies
- Ambulance Services

- Daycare patients if beds are available and non-ambulatory OPD patient
- ED Services not provided at Saideep Hospitals
- Burns which is more than 30 %
- Emergency Major Vascular surgeries

REFERENCES

Standards----

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PURPOSE AND SCOPE

This policy and procedure aims to ensure readiness of the unit to handle emergency patients and use an established triaging process for resource utilization as per the medical needs of each case

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the policies pertaining to preparedness and triaging are implemented.

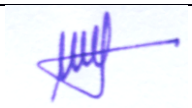
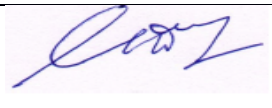
POLICIES
Emergency Preparedness Plan

Response Time

All patients will come to the CASUALTY for emergency medical evaluation or treatment will receive care by qualified personnel in a timely manner consistent with the acuity of their illness. The Nurse assessment at the triage is done immediately. All patients arriving in the CASUALTY are examined and attended by doctors without delay. The Consultants of respective specialty are called & they attend to the patient immediately during the regular hours of operations of the OPD. During after hours, Consultants on call are contacted immediately upon need. Treatment to patients who are critical is initiated immediately without any delay for the purpose of documentation and consent

Triage Process

Emergency Department patients will receive prompt initial assessment by a registered nurse/doctor and will have emergency care initiated according to their level of acuity. The desired outcome of the triage process is that all Emergency Care Unit patients will receive expedient treatment according to established priorities.

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

Emergency patients requiring immediate intervention are transferred to the appropriate bed station in the CASUALTY to initiate the patient assessment & care process.

The registration process of the patient is also initiated in the CASUALTY if the patient condition permits. In case of limb and life threatening situations the registration and consent process are postponed so as to facilitate the initiation of appropriate emergency care.

1. The most severe patients are treated and transported first, while those with lesser injuries are transported later.
2. Decision is made about who will be managed first.

In a choice between a patient with a catastrophic injury, such as severe open head trauma, a patient with an acute intra-abdominal hemorrhage, the proper course of action in an Multiple Emergency Incidents (MEI) is to manage first the salvageable patient : - The one with the abdominal hemorrhage. Treating severe head injury patients first probably will cause loss of both the patients as it is not salvageable because of time, equipment and personnel spent managing the unsalvageable patient. Provide the salvageable patient simple care to keep her/him alive long enough to reach definite surgical care.

The following “Sorting Scheme” is used in the ED for prioritizing the emergency patient care according to the acuity of the patient’s condition:

Guidelines for Triage

Category	**Response**	**Description of Category**	**Clinical Description (Indicative only)**
Category 1 **Code color RED**	Immediate simultaneous assessment and treatment	**Immediately life threatening** Conditions that are threats to life (or imminent risk of deterioration) and requires	Cardiac arrest Respiratory arrest Immediate risk to airway-impending arrest

		immediate aggressive intervention	Respiratory rate < 10/minute Extreme respiratory distress BP< 80(adult) or severely shocked child /infant Unresponsive or responds to pain only (GCS<9) Ongoing/prolonged seizure IV overdose and unresponsive or hypoventilation Severe behavioral disorder with immediate threat of dangerous violence
Category 2 **Code Color Yellow**	Assessment and treatment within 10minutes (assessment and treatment often simultaneous)	**Imminently life threatening** The patient's condition is serious enough or deteriorating so rapidly that there is the potential of threat to life, or organ system failure, if not treated within 10 minutes of arrival **Or** Important time –critical treatment The potential for time-critical treatment (eg.	Airway risk- severe strider or drooling with distress Severe respiratory distress Circulatory compromise • Clammy or mottled skin, poor perfusion • HR<50 or > 150(adult) • Hypo tension with hemodynamic effects • Severe blood loss Chest pain of likely cardiac nature BSL <50 mg/dl Drowsy, decreased responsiveness (any

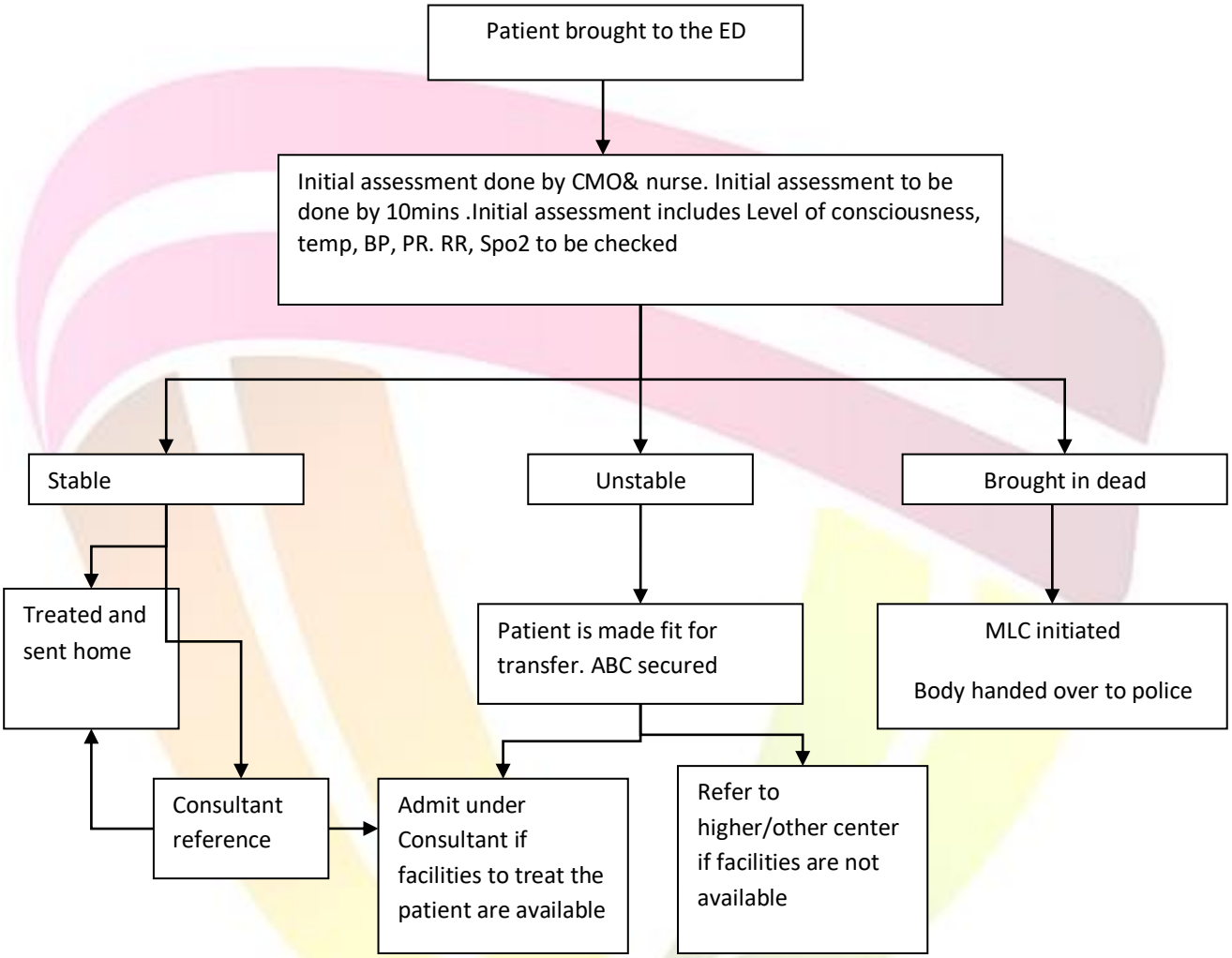
		thrombolysis, antidote) to make a significant effect on clinical outcome depends on treatment commencing within a few minutes of the patient's arrival in the EMS **Or** Very severe pain. Human practice mandates the relief of very severe pain or distress within 10minutes	cause) (GCS <13) Acute hemi paresis /dysphasia) Fever with signs of lethargy in any age Acid or alkali splash to eye – requiring irrigation Major multi trauma (requiring rapid organized team response) Severe loss of consciousness, generalized trauma – major fracture amputation High risk history • Significant sedative or other toxic ingestion • Significant /dangerous envenomation • Severe pain suggesting Pulmonary Embolism or ectopic pregnancy Behavioral Psychiatric: violent or aggressive • Immediate threat to self or others • Requires or has required restraint • Severe agitation or aggression
Category 3 Color Code	Assessment and treatment start within 30minutes	**Potentially life Threatening** The patient's condition may progress to life or limb threatening, or may lead to significant morbidity, if assessment and treatment are not commenced within	Severe Hypertension Moderately severe blood loss-any cause Moderate shortness of breath SPaO2 90-95% BSL >400mg/dl

		thirty minutes of arrival **Or** Situational Urgency There is potential for adverse outcome if time-critical treatment is not commenced within thirty minutes **Or** Humane practice mandates the relief of severe discomfort or distress within thirty minutes	Seizure (now alert) Any fever if immuno-suppressed, eg. oncology patient, steroid Rx Persistent vomiting Dehydration. Head injury with short LOSS OF CONSCIOUSNESS-now alert Moderately severe pain- any cause- requiring analgesia Chest pain likely non cardiac and moderate severity Abdominal pain without high risk features- mod severe or patient age > 65 yrs Moderate limb injury – deformity, severe laceration, crush Limb- altered sensation, acutely absent pulse Trauma- high risk history with no other high – risk features Stable neonate Child at risk Behavioral/Psychiatric Very distressed, risk of self-harm • Acutely psychotic or thought disordered

			• Situational crisis, deliberate self harm • Agitated / withdrawn
Category 4	Assessment and treatment start within 60minutes	**Potentially serious** The patient's condition may deteriorate, or adverse outcome may result, if assessment and treatment is not commenced within one hour of arrival in EMS. Symptoms moderate or prolonged **Or** Situational urgency There is potential for adverse outcome if time-critical treatment is not commenced within hour **Or** Significant complexity or severity Likely to require	Mild hemorrhage Foreign body aspiration, no respiratory distress Chest injury without rib pain or respiratory distress Difficulty swallowing, no respiratory distress Minor head injury, no LOSS OF CONSCIOUSNESS Moderate pain, some risk features Vomiting or diarrhea without dehydration Eye inflammation or foreign body- normal vision Minor limb trauma-sprained ankle, possible fracture, uncomplicated laceration requiring investigation or intervention= Normal vital signs, low/moderate pain Tight cast, no neurovascular impairment Swollen hot joint Non- specific abdominal pain

		complex work up and consultation and /or management **Or** Humane practice mandates the relief of discomfort within one hour	Behavioral Psychiatric: • Semi –urgent mental health problem • Under observation and /or no immediate risk to self or others
Category 5	Assessment and treatment start within 2 hours	**Less urgent** The patient's condition is chronic or minor enough that symptoms or clinical outcome will not be significantly affected if assessment and treatment are delayed up to two hours from arrival **Or** Clinical administrative problems Results review, medical certificates prescriptions only	Minimal pain with no high risk features Low risk history and now asymptomatic Minor symptoms of existing stable illness Minor symptoms of low risk conditions Minor wounds-small abrasions, minor lacerations (not requiring sutures) Scheduled revisit eg wound review, complex dressings Immunization only Behavioral/psychiatric: • Known patient with chronic symptoms • Social crisis, clinically well patient

Triage Decisions



REFERENCES

Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

	SAIDEEP HOSPITAL EMEREGENCY CARE UNIT MANUAL	Doc No	SDH/ER/01
		Issue No	01
		Rev No.	01
		Date	5/3/2021
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	Document Title : Consent for Treatment in Emergency Care		

PURPOSE AND SCOPE

This policy and procedure aims to discuss the handling of consent for treatments provided in emergency care situations

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure the compliances in terms of ensuring that consent for treatments provided are ensured.

POLICIES

1. The Hospital requires consent for all invasive or therapeutic procedures. The general consent form is filled and signed either by the patient if possible or the patient representative if the patient is not in a state to give his consent. In case of a patient incapable of giving consent, it is taken from the patient representative or guardian.
2. Life-sustaining measures are not withheld for lack of formal consent if there is no time to obtain the consent for urgent procedures. The consent process is postponed and treatment is started immediately in such cases. In case of non-availability of a relative or a guardian, consent of a medical social worker is obtained to initiate immediate emergency care.
3. Consent is required for elective blood transfusions that are not life threatening.

REFERENCES

Standards

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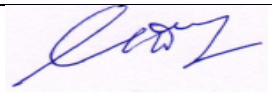
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PURPOSE AND SCOPE

This policy and procedure aims to guide the ECU staff on the initial assessment of patients in the units

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the policies pertaining to initial assessment are followed

POLICIES

a) The initial assessment will be done by the ED CMO/ nurse for emergency patients.

b) The time frame for the initial assessment will be as per the triage categories.

c) The Initial assessment will include ascertaining the level of consciousness, checking the blood pressure, Pulse, temperature, Spo2, GRBS in case of diabetics.

d) The initial assessment will ascertain the condition of the patient whether stable or unstable and appropriate measures will be taken.

e) Initial Assessment will include nutritional assessment of patient

f) initial assessment by the medical officer will include the following criteria:

a. Assessment criteria for non Road Traffic Accident patients include:

- Presenting History:
- Past Medical History:
- Allergies:
- Temp. ,BP , PR, Spo2-,
- CVS/RS/ABD/CNS:
- LMP in females
- Investigations required:

- Provisional diagnosis:
- Treatment required:

b. Assessment criteria for Road Traffic Accident patients include:

- Presenting history:
- Past medical history:
- LMP in females
- Allergies:
- Last meal:
- Level of consciousness- , GCS, Pupils, Temp-, BP- ,PR
    - CVS/RS/ABD/CNS:
    - Local examination
- Investigations required:
- Provisional diagnosis:
- Treatment required:
- Possible Course of action: outpatient/admission/transfer out/references
- MLC related requirements
- The initial assessment will result in documented plan of care.

REFERENCES

Standards

	SAIDEEP HOSPITAL EMEREGENCY CARE UNIT MANUAL	Doc No	SDH/ER/01
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	Document Title : Admissions in ECU		

PURPOSE AND SCOPE

This policy and procedure aims to guide the process of admitting the patients in the ECU

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

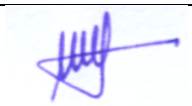
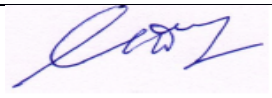
HOD – Emergency Care Unit
Is responsible to ensure that the policies pertaining to admissions

POLICIES

- In case admission of the patient is necessary, the CMO / Consultant on duty makes the decision for admission and authorizes it. The CMO admits the patient under the specialty Consultant on duty (during peak hours) and on call basis (during non-peak hours).
- The ED nurse is informed if the patient is to be admitted.
- Admission to the ICU is approved by the attending Consultant.
- After the patient representative makes the necessary admission procedure & admission is confirmed, necessary arrangements are made to transfer the patient to the floor by the ED nurse staff on duty in collaboration with the housekeeping staff.
- The ED nurse communicates with the nurse in charge of the floor and confirms the availability of the bed and initiates the transfer of the patient to the floor admitted.
- Patient is transferred to the floor by transport by the housekeeping staff as per patient's acuity. Monitored patients are transferred with a Nurse. All documents and reports of the patient are transferred to the floor along with the patient.

  Exceptions occur in cases of life and death emergencies. The patient will be transferred to the ICU directly from the ED and registration & documentation may be postponed.

REFERENCES
Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PURPOSE AND SCOPE

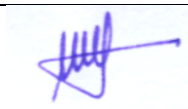
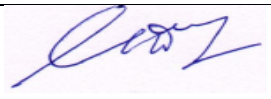
This policy and procedure aims to guide the process of transfers of patients in ECU

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the policies pertaining to admissions

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

POLICIES A. Transfer out of stable patients from ED/Ward (at request /non availability offacilities)

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Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
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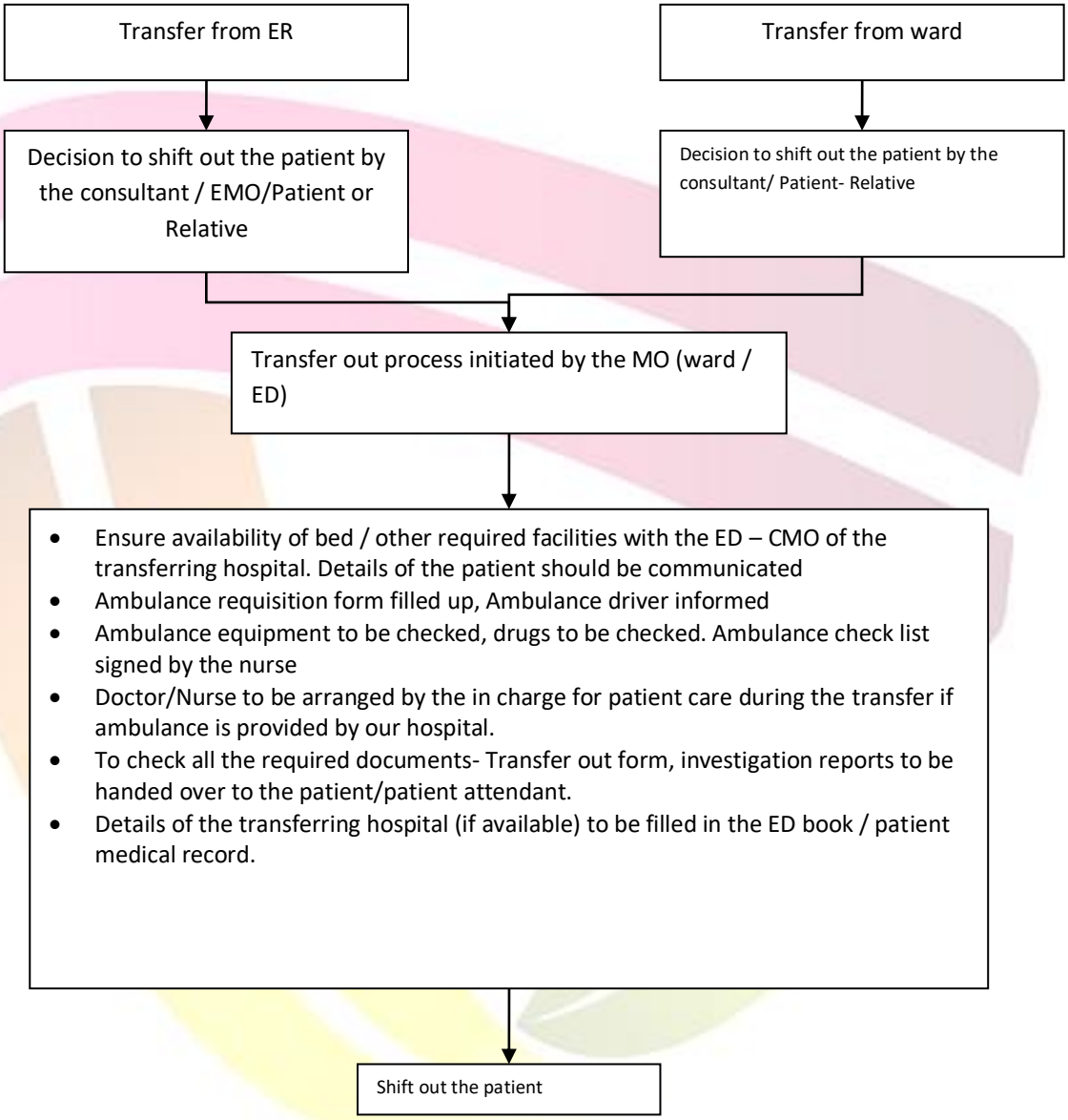
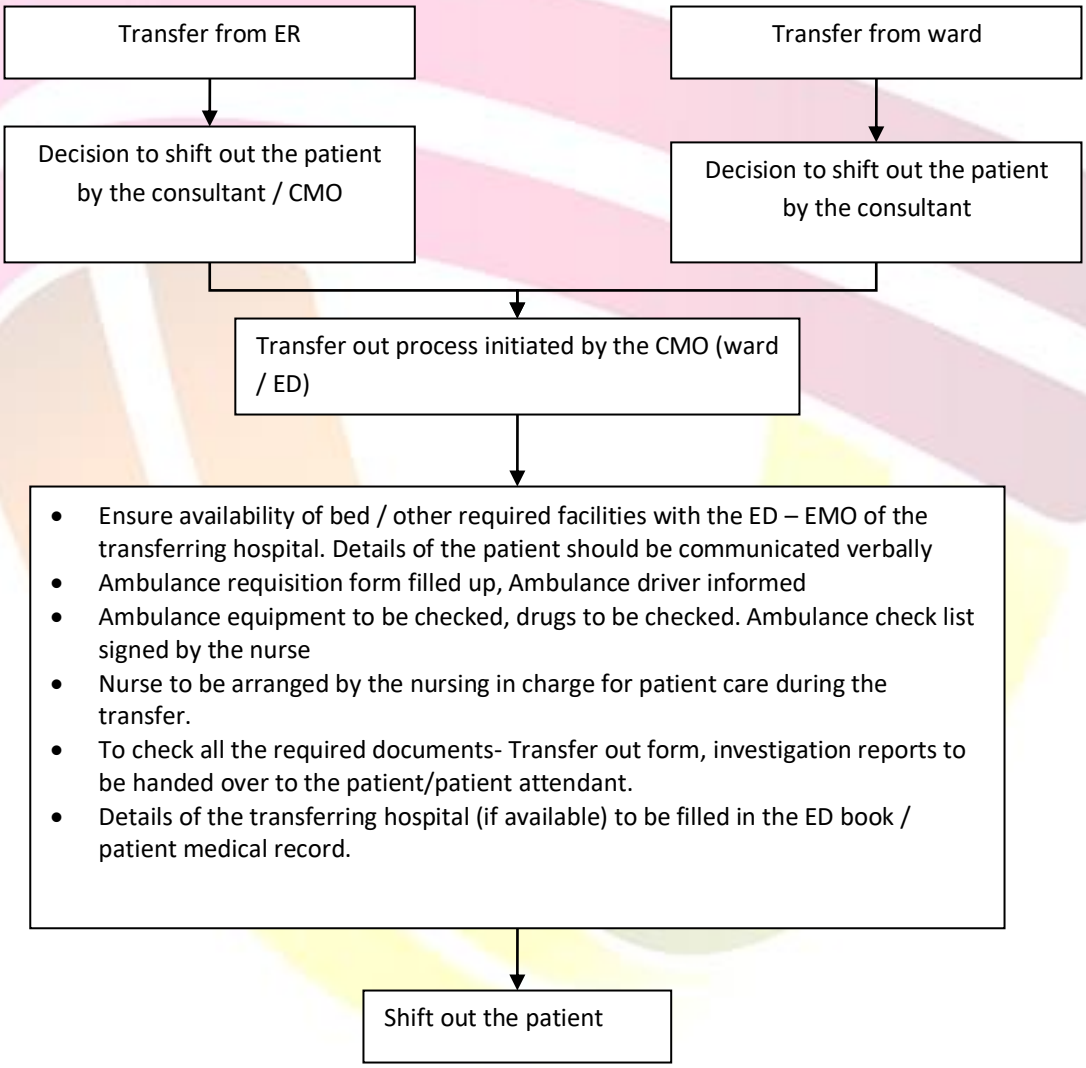

Transfer from ER
Transfer from ward
Decision to shift out the patient by the consultant / EMO/Patient or Relative
Decision to shift out the patient by the consultant/ Patient- Relative
Transfer out process initiated by the MO (ward / ED)
Ensure availability of bed / other required facilities with the ED – CMO of the transferring hospital. Details of the patient should be communicated
Ambulance requisition form filled up, Ambulance driver informed
Ambulance equipment to be checked, drugs to be checked. Ambulance check list signed by the nurse
Doctor/Nurse to be arranged by the in charge for patient care during the transfer if ambulance is provided by our hospital.
To check all the required documents- Transfer out form, investigation reports to be handed over to the patient/patient attendant.
Details of the transferring hospital (if available) to be filled in the ED book / patient medical record.
Shift out the patient

B. **Transfer of unstable patient from ED/ward (on request /non availability of services)**



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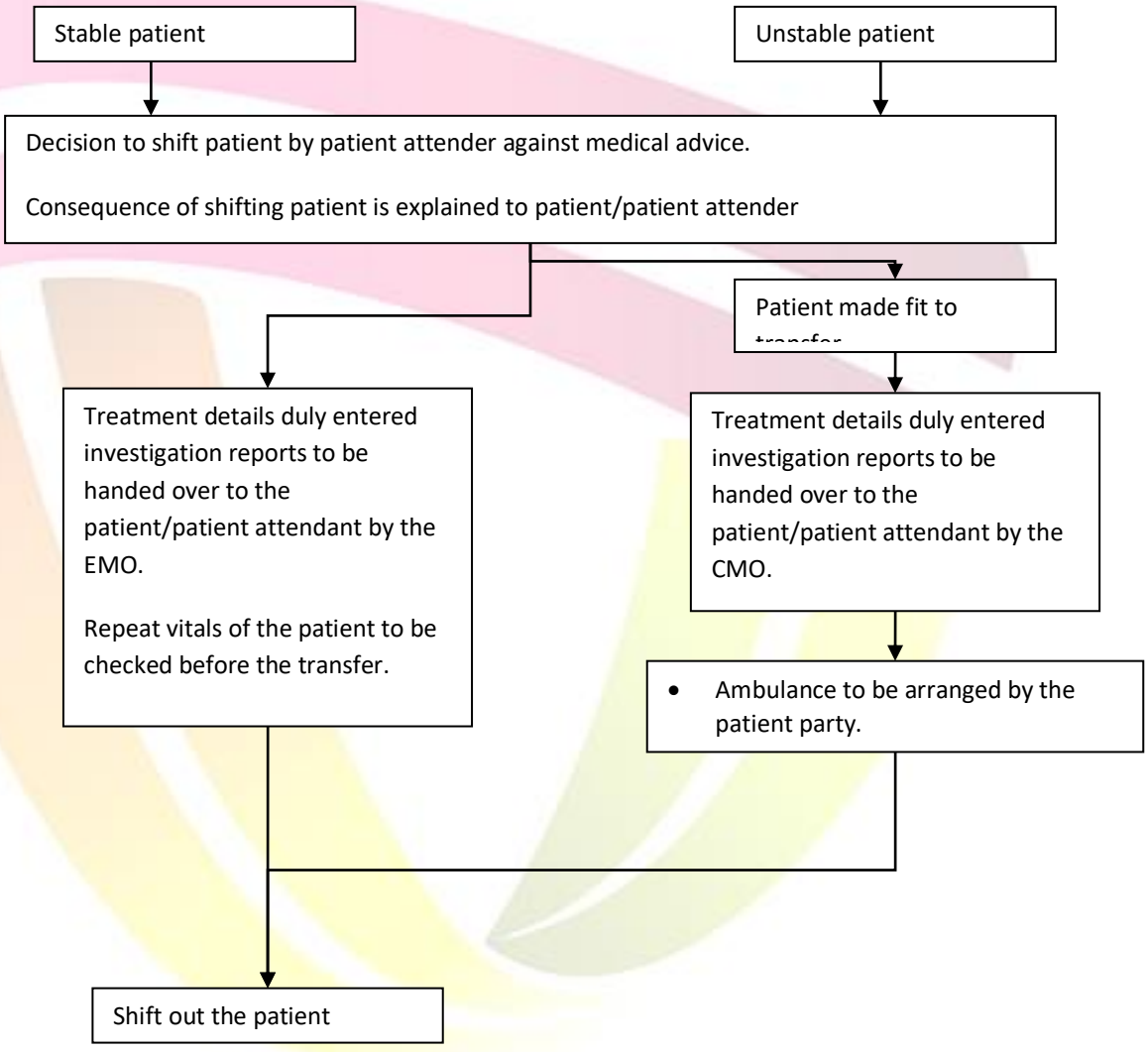
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

C. Transfer out in case of discharge against medical advice – ED/Ward.



REFERENCES:
Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

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	Document Title : Managing Medico Legal Cases		

PURPOSE AND SCOPE

This policy and procedure aims to guide the process of managing Medico Legal Cases

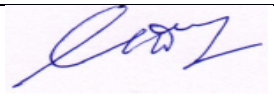
RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the policies pertaining to MLC are ensured

POLICIES

- On suspicion/ identification of a case as medico legal, doctor on duty dealing with the case is required to raise MLC report after consultation with Emergency Medical Officer. Treatment to stabilize the patient is initiated immediately.
- Patient requiring specialized treatment not provided in Saideep Hospital should then be referred to the facility or hospital where that particular illness / injury can be managed. While referring the patient, care should be taken to see that he/she is sent with discharge card / referral letter stating presenting complaints / injury / illness, initial management and treatment given in the hospital). Simultaneously information about the referral is sent by CMO for police intimation.
- In case patient is admitted at Saideep Hospital, then doctor on duty shall admit as per the policy addressing to casualty with a MLC stamp on every page of IPD file.
- In case of suspected toxicity / poisoning appropriate samples will be taken by doctor on duty in two parts , one part is given to police for legal investigations and second is processed at hospital lab for initiation of treatment within the hospital .
- All relevant specimens should be collected and after proper labeling, are to be sealed under the doctor's supervision. These should be handed over to the police official concerned, along with the medico legal report and a proper requisition letter detailing the tests to be conducted on such samples.

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

- Appropriate treatment is initiated on the basis of initial lab investigation reports and as per consultant In-charge's advice. At the time of discharge of MLC patient concerned Ward In charge will inform to the security supervisor for police intimation.
- At the time of discharge of MLC patient, concerned ward in charge will inform CMO to give police intimation.
- All the investigations reports (IN ORIGINAL) pertaining to MLC will be kept in under lock and key in the custody of the Medical Record Officer and no report should be handed over to patient/attendant/family except copies of reports and discharge summery in case of hospital admission.
- Medico Legal allied certificates and registers
  - Accident Register cum Wound/Injury Certificate – in a book form with Original (perforated to make detachable) for issuing to the Police/Judicial authorities, duplicate (perforated to make detachable) for issuing to the injured person or to person nominated by the injured person and triplicate to be retained as office copy.
  - Police intimation – in a book form with Original (perforated to make detachable) for issuing to the Police Officer and duplicate to be retained as office copy.

REFERENCES

Standards

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	Document Title : Managing Brought Dead Cases		

PURPOSE AND SCOPE

This policy and procedure aims to guide the process of managing Brought Dead Cases

RESPONSIBILITIES

Medical Director

The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

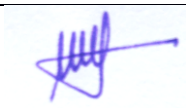
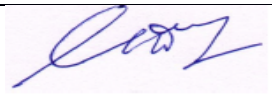
Is responsible to ensure that the policies pertaining to MLC are ensured

POLICIES

- Register all brought dead cases as medico-legal cases and should be intimated to police.
- On arrival, the Emergency Medical officer should examine the patient thoroughly. Medico Legal Case has to be registered.
- After complete examination and confirmation by clinical evaluation and electrocardiographic examination, death is confirmed, the individual should be declared as Brought in Dead (BID) and the accompanying relatives/friends must be explained. Care should be taken to ensure the presence of security staff at the time of declaration of death. The local police should be informed immediately as a policy. The police will do the further disposal of the dead body after inquest. The Emergency Medical Officer will render necessary assistance.

REFERENCES

Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PURPOSE AND SCOPE

To guide ECU staff of handling situations of death and dead bodies

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the policies pertaining to handling of death and dead bodies are followed

POLICIES

- When a patient is brought to ECU and dies immediately after, it is referred as 'Dead on Arrival'. If the clinical history, clinical presentation and investigations (if any) correlate and the CMO/concerned consultant have confirmed the cause of death then a 'Cause of Death' certificate (Form no. 4) is issued.
- In case of maternal deaths, infant deaths or any case which is a medico-legal case, they are referred for a post mortem examination and relevant steps to intimate the district hospital and the police department is followed.
- The death certificate is issued with cause of death mentioned only as 'As per Post- Mortem Examination'.
- Death of a patient is handled carefully with concern without complacency. Counseling of next of kin with sympathy is given at most importance.
- All help in shifting the body from the hospital is extended to the next of kin. The dead body is released as soon as possible after completion of all formalities.

- Care should be taken while moving the dead body by causing minimal disturbance to the adjoining patients and their relatives.
- Acknowledgement for receipt of the body and the Death Certificate is obtained from Next of Kin/Legal representative.
- Handing-over of the body is a solemn occasion and it is ensured that hospital staff takes due care and concern in this respect.
- Due arrangements are made if preserving the body in the mortuary is found necessary.

Security staffs of the hospital are present till the departure of the deceased and ensure orderliness in handing over the body to the next of kin.

REFERENCES

Standards

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	Document Title : Issue of Death Certificates		

PURPOSE AND SCOPE

To specify the policies for issue of death certificates in ECU

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

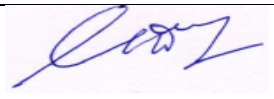
HOD – Emergency Care Unit
Is responsible to ensure that the policies pertaining to death certificates are followed

POLICIES

- CMO should certify the cause of death in the Death Certificate after careful and thorough examinations of the patient after discussing with the concerned consultant.
- Death certificate is initiated if the death occurs within the hospital for known natural causes and non MLC cases.
- If death has occurred outside the hospital by natural causes then the treating doctor is expected to give the cause of death, intimation form (which is available at local governing bodies) to obtain the death certificate. The hospital shall not issue the death intimation certificate in case of outside hospital deaths under any circumstances.
- In case of all MLC, the death intimation certificate is issued and the cause of death certificate shall bear the mention **"As per Post-Mortem Examination Report"**.
- If death occurs within 24 hours of onset of admission, then the treating doctor decides whether to give Cause of Death Certificate or not.
- The cause of death should be well documented and a copy of the Death Intimation certificate should be filed along with the medical documents of the deceased patient.

REFERENCES

Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
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	Document Title : Adult CPR Protocol		

PURPOSE AND SCOPE

To specify the protocol for adult CPR

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the protocol is ensured by staff in all cases

POLICIES

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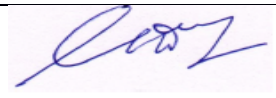
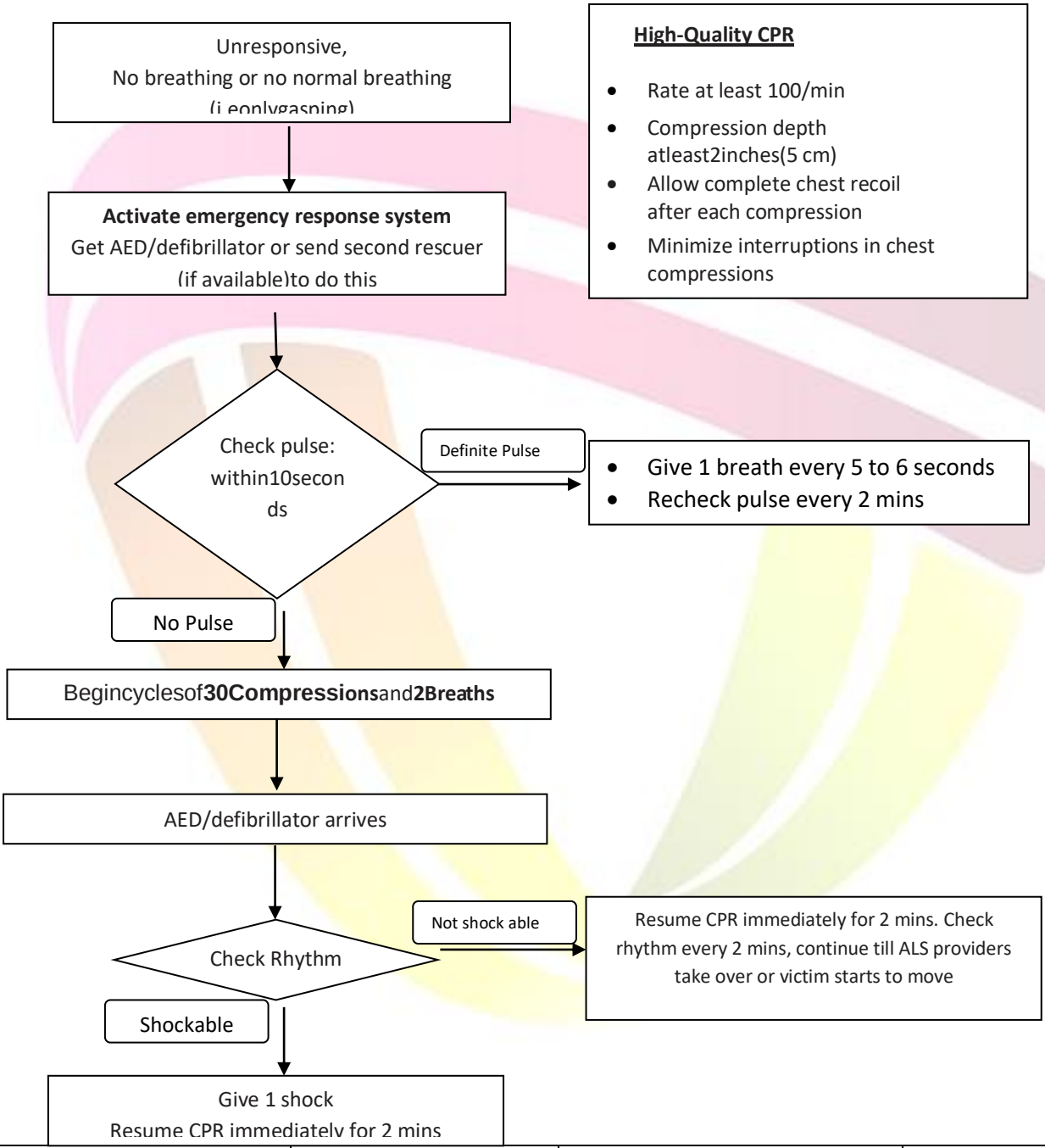
Dr. Hrishikesh kalgaonkar		Dr. S.S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	

1. ADULT CARDIO PULMONARY RESUSCITATION (CPR)



Recommended By	Signature	Approved By	Signature
Dr. Hrishikesh kalgaonkar		Dr. S.S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	

BLS – Critical Concepts

High-quality CPR improves a victim's chances of survival. The critical characteristics of high-quality CPR include

a. Start compressions within 10 seconds of recognition of cardiac arrest
b. Push hard, push fast: Compress at a rate of at-least 100/min with a depth of at-least 2 inches (5cm) for adults, approximately 2 inches (5cm) for children, and approximately 1and1/2 inches (4cm) for infants
c. Allow complete chest recoil after each compression
d. Minimize interruptions in compressions (try to limit interruptions to <10 sec.)
e. Give effective breaths that make the chest rise
f. Avoid excessive ventilation

REFERENCES:

AHA Standards

PURPOSE AND SCOPE:

To specify the protocol for pediatric CPR

RESPONSIBILITIES:

Medical Director

The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

POLICIES:

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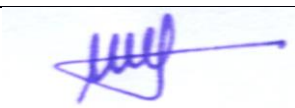
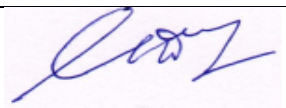
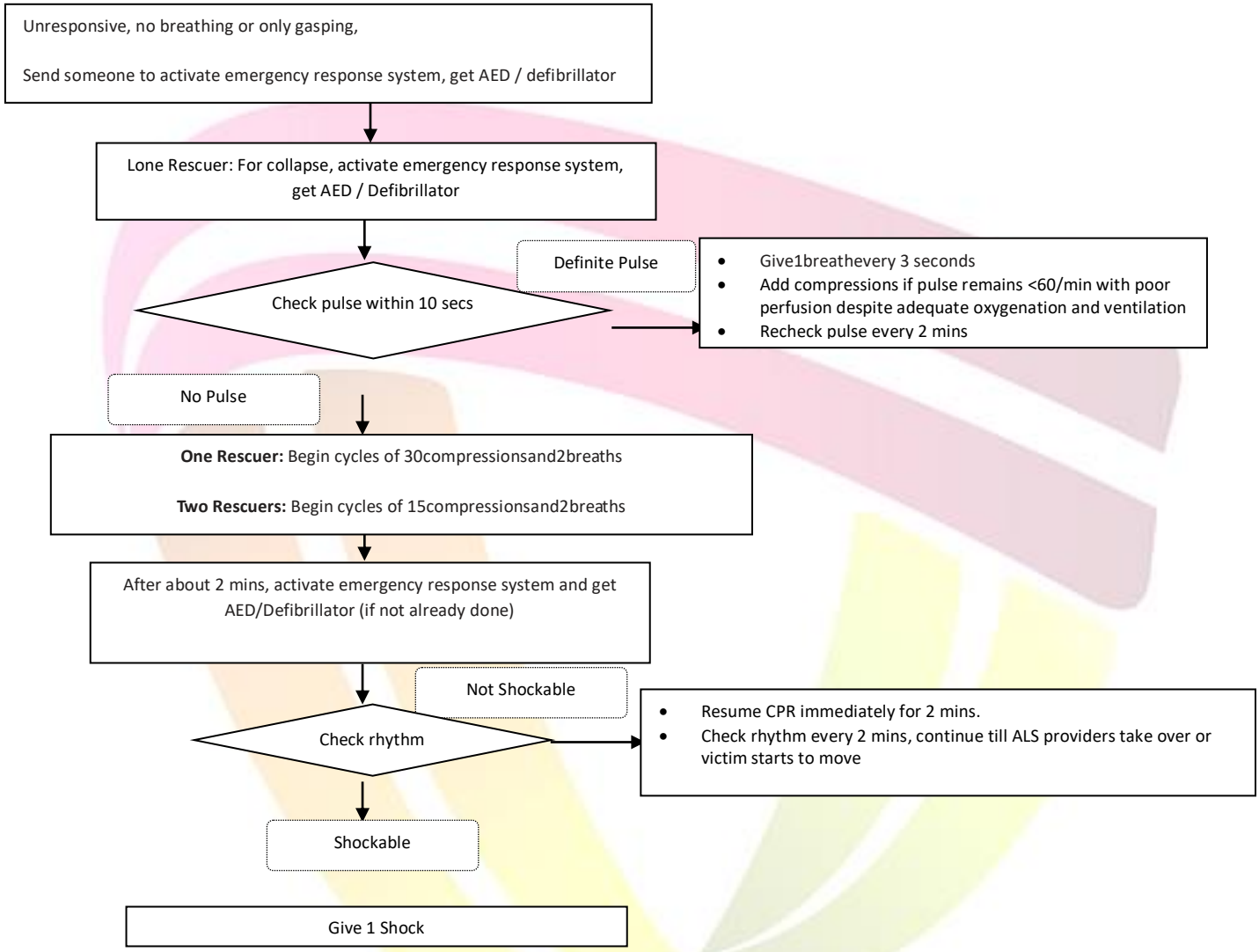
Dr. Hrishikesh kalgaonkar		Dr. S.S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PEDIATRIC CARDIO PULMONARY RESUSCITATION (CPR)



REFERENCES

Standards

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Dr. Hrishikesh kalgaonkar		Dr. S.S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	

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	Document Title : Management of Acute Pulmonary oedema		

PURPOSE AND SCOPE

To specify the protocol for pediatric CPR

RESPONSIBILITIES

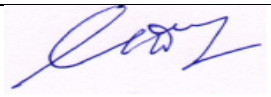
Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the protocol is ensured by staff in all cases

POLICIES

- Keep the patient comfortable bed position immediately (propped up)
- Start O2 inhalation/NIV to maintain SPaO2 > 94%
- Connect to the monitor
- Secure IV access
- Record vital signs
- IV Lasix/Dytor as per order
- 12 L ECG and bedside echocardiography.
- IV Nitroglycerin infusion 5 microgram /minute if systolic BP is greater than 160mmHg or diastolic BP is greater than 120mmHg.
- Treat underlying cause.

REFERENCES
Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PURPOSE AND SCOPE

To specify the protocol for management of Trauma Cases.

RESPONSIBILITIES:

Medical Director

The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases.

PROTOCOL

RESPONSIBILITY:

- **Doctors** - The ER doctors should follow the Trauma resuscitation protocol and then contact the trauma team. The ER doctor and the trauma team doctors should fill up the trauma case sheet.
- **Nurses** – Shall assist the ER doctors and Trauma Team.
- **Trauma Team** – The team members include Duty Surgeon, Duty Orthopedician, Duty Anesthetist and duty Neurosurgeon, if required.

B. DESCRIPTION: Significant mechanism of injury

Adults:

- Ejection of person from vehicle
- Death of an occupant in the same vehicle
- Roll over of vehicle
- High speed vehicle collision
- Occupant trapped in a vehicle
- Vehicle-pedestrian collision
- Motorcycle crash
- Fall from height >15 feet.
- Mass casualty incident

Infants & Children:

- Fall from height >10 feet
- Medium speed vehicle collision
- Bicycle collision

Types of injury

- Poly-trauma patient
- Moderate and severe head injury patient
- Spine injury with neurological signs.
- Penetrating injury to head, neck, chest, abdomen or groin
- Proximal long bone fracture
- Pelvic fracture with instability
- Traumatic amputation
- Blunt injury or crush injury to chest or abdomen
- Burns to face, neck, airway and burns covering >15% of body surface area
- Severe uncontrolled bleeding from wounds
- Patient with hemodynamic instability

Signs of physical derangement

- GCS <13
- SBP <100 mmHg
- Respiratory rate <10 or >30 / min
- Stridor
- Severe respiratory distress

PRIMARY SURVEY WITH RESUSCITATION

Airway with cervical spine stabilization

a) Perform Jaw thrust or Chin lift (never perform head tilt) to make the airway patent. Airway is patent, if the patient is talking and if stridor / noisy breathing is absent.
b) If the patient is unconscious, remove secretion or vomits by suction.
c) Remove any solid object in the airway using Magill forceps/fingers

d) Assume that the c-spine is damaged in all trauma patients with significant mechanism of injury. Apply rigid c-collar if indicated (unconscious, disoriented or intoxicated patients, patients with head & neck injury, patients with c-spine tenderness or focal neurological deficits).
e) Every poly-trauma patient must receive 100% oxygen
f) Insert an Oropharyngeal / Nasopharyngeal airway
g) If patient is tolerating the airway (Gag reflex absent) – Endotracheal Intubation

Indications for Definitive Airway:

a) GCS 8 or less
b) Severe maxillo-facial fracture
c) Risk of aspiration – bleeding, vomiting
d) Risk of obstruction – neck hematoma, laryngeal or tracheal injury
e) Apnea
f) Inadequate respiratory efforts
g) Hemodynamic instability

Breathing & Ventilation

a) Record RR, SPO2. Maintain SPO2 > 95% with 100% oxygen.
b) Auscultate for bilateral air entry.
c) If suspecting pneumothorax, immediately perform needle thoraco-centesis at 2nd IC space at mid-clavicular line using large-bore cannula, connected to underwater seal. Prepare for ICD insertion.

Circulation with Haemorrhage control

a. Control any major external bleeding by direct pressure to the bleeding site. Pulse, BP and cardiac monitoring.
b. Start 2 large-bore IV access (18 G or 16G cannulae) in uninjured extremity.
c. Start IV crystalloids (NS/RL) 30ml/kg stat, for all trauma patients (except in isolated injury with minimal or no bleeding), followed by 100 ml/hr and titrate according to the BP).
d. Hemorrhagic shock (SBP less than 100 mmHg) – 1000-2000 ml of NS/RL to be rushed for intravascular volume expansion before administering colloid, followed by colloid to a maximum of 1000 ml (caution in age >65years, CCF patients). Uncrossmatched 'O' Negative group blood 2 units to be transfused at the earliest (O negative blood for females of reproductive age).
e. Send PA panel and request for 4 units group specific PRBC and 2 units of FFP.

f. Arterial Blood gas analysis.
g. Bladder catheterization & urine output monitoring.
h. Assess patient's response to fluid resuscitation and evidence of end-organ perfusion (level of consciousness, peripheral perfusion and urine output with MAP target ~ 65 mmHg) and titrate accordingly.
i. **Fluid resuscitation in Pediatric patients with shock**: NS 20 ml/kg. Maximum 3 boluses (titrate according to response). Colloid, blood and IV Fluid in children with cardiogenic shock – 10 ml/kg
j. **Look for the 5 commonest causes for hemorrhagic shock**: Thoracic trauma, Blunt trauma abdomen, Pelvic trauma, Long bone fracture & External hemorrhage.

Disability

a) GCS assessment
b) Pupils examination
c) Neurological examination of the patient

Exposure / Environment –

a. Expose patient fully for secondary survey
b. Prevent Hypothermia.

Secondary Survey (Head to toe examination) –

a. Assess individual areas in detail for **DCAP BTLS** (Deformity, Contusion, Abrasion, Penetrating injury, Burns, Tenderness, Laceration, and Swelling).
b. Look for positive chest compression, flail chest and subcutaneous emphysema, all suggesting possible rib fracture.
c. Look for abdominal distension, tenderness and guarding, all suggesting possible blunt injury abdomen.
d. Look for signs of pelvic trauma (positive pelvic compression or distraction, blood in urethral meatus, ecchymosis/swelling over scrotum, perineum and/or genitals). Apply pelvic binder if pelvic trauma is suspected.
e. Assess movement, vascularity and neurological status of the injured and uninjured extremities.
f. Perform Log roll so that injuries over the back of the patient are not missed.

Radiological Investigations – All trauma patients (except patients with isolated injuries) shall be sent for relevantX-Rays and CT fast, and USG exam.

***Indications for CT- Brain*:**

1. All moderate and severe head injuries (GCS <13)
2. Mild head injury (GCS 13-15) with :
   a. GCS <15 at 2 hours after injury
   b. Open or depressed skull fracture
   c. Vomiting (2 or more episodes)
   d. Age 65yrs or more
   e. Signs of Base of skull fracture:
   f. Hemotympanum
   g. Periorbital ecchymosis (Raccoon's Eyes)
   h. Mastoid process ecchymosis (Battle's Sign)
   i. CSF leakage from ear or nose

C. Measures: Skeletal injuries – Apply appropriate splint, send for X-rays as required and inform orthopedic surgeon.

External wounds (Abrasion/Laceration/Degloving injury etc.) - Thorough wash using Normal Saline & administer Tetanus prophylaxis.

TETANUS PROPHYLAXIS FOR INJURED PATIENTS				
HISTORY OF ADSORBED TETANUS TOXOID (DOSES)	**NON-TETANUS-PRONE WOUNDS**		**TETANUS-PRONE WOUNDS**	
	TT (0.5 ml IM)	**TIG (250 U)**	**TT (0.5 ml IM)**	**TIG (250 U)**
Unknown or < 3	Yes	No	Yes	Yes
3 or more	No #	No	No ##	No

Tetanus prone wounds: e.g.Wounds >6 hrs, wound depth >1 cm, puncture, avulsion or crush wounds, wounds from missiles, burns or frostbite, wounds contaminated with soil, saliva, dirt, feces, presence of devitalized, denervated or ischemic tissue.

- Yes, if more than 10 years since the last dose.
- Yes, if more than 5 years since the last dose.

Traumatic Amputation of finger/limb – inform plastic surgeon.

Head Injury – inform neurosurgeon.

Analgesia – Trauma patients with pain score 4 and above shall be administered parenteral analgesics as follows:

a) **Pain score 4-7**: Inj. Tramadol 100mg IV & Inj. Ondansetron 4mg IV

b) **Pain score 8-10:** Inj. Morphine 4mg IV OR Fentanyl 40 microgram IV (Titrate according to patient response, Monitor BP and Respiration) & Inj. Ondansetron 4mg IV.

Empirical Antibiotics should be started in ER for open wounds

Inj.Gentamicin 80 mg IV stat

Inj.Cefotaxime (Taxim) 1 gm IV stat

Inj.Metronidazole 500 mg IV stat

D. Police Intimation : Police intimation and Wound certificate to be entered by the ER doctor who documents the trauma case sheet.

REFERENCES

Standards

PURPOSE AND SCOPE

To specify the protocol for management of lower GI Bleeding Cases.

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the protocol is ensured by staff in all cases.

PROTOCOL: Inform On duty surgeon or gastroenterologist.

Guidelines

- Haemochezia – When frank blood or dark blood with clots per rectum. (We are considering only Haemochezia and not Melaena in this discussion)
- If blood is separate from faeces and not mixed with faeces, the source is distally placed – Rectum or Anal canal.
- Haemodynamic instability is more common when blood is mixed with faeces.
- If rectal bleeding is also associated with haematemesis – cause is UGI.

First Consideration is to restore haemodynamic stability

1. Good Venous Access – IV infusion of NS / Ringer Lactate (Colloid if Hypotension)

2. Large sample of blood for
    a. Blood Cross match
    b. CBC
    c. Serum Electrolytes
    d. RBS, Blood Urea, Serum Creatinine
    e. BT, CT, PT,APTT
    f. LFT
    g. HBsAg
    h. HIV with consent

3. History
    a. Mixed with faeces; separate from faeces

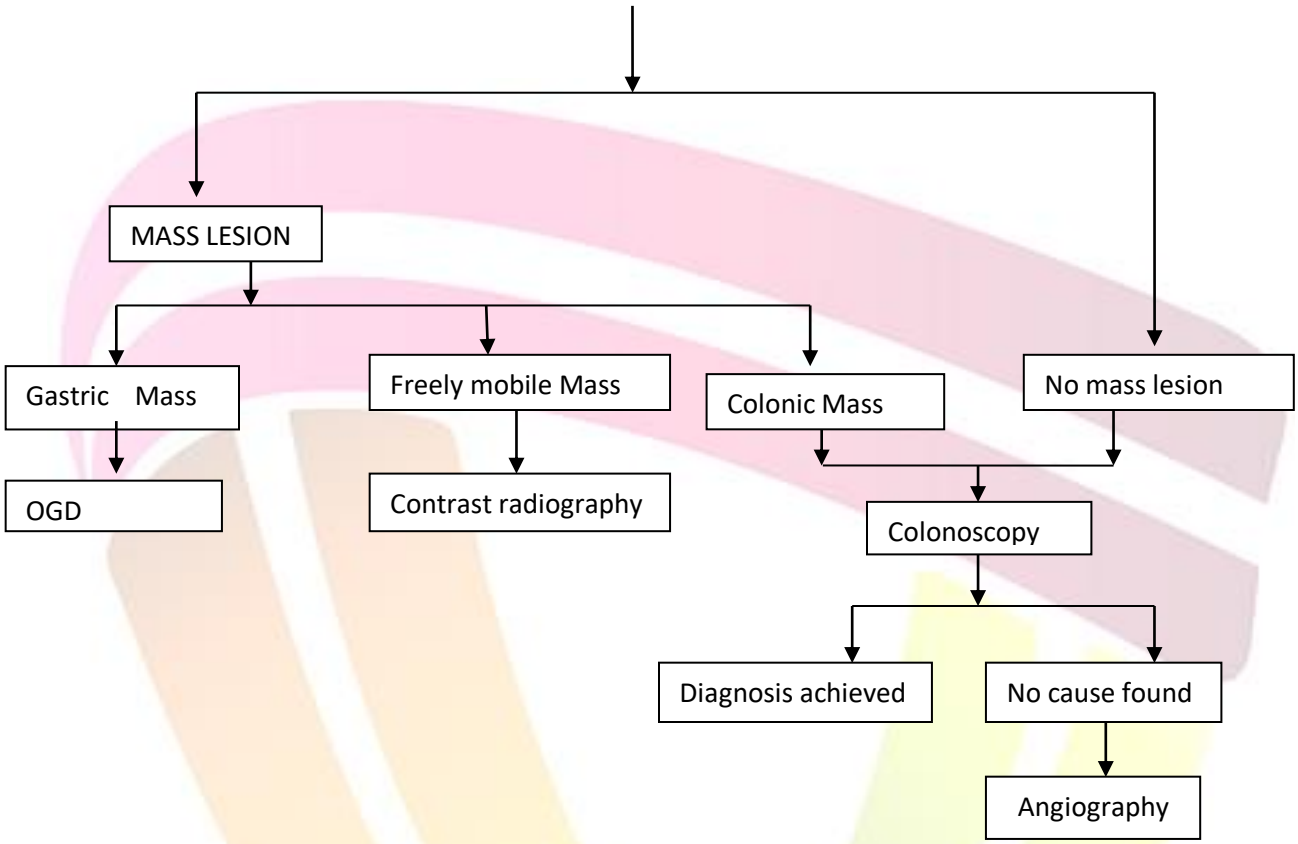
b. Any medication
c. Previous dyspepsia, Colic
d. Bowel habits
e. Alcohol Consumption

4. Physical Exam
   a. Altered sensorium (Liver failure)
   b. Anasarca (CRF)
   c. Stigmata of Liver insufficiency
      (Palmar Erythema, spider naevi, gynaecomastia, Foetor Hepaticus)
   d. Palpable firm liver (cirrhosis)
   e. Ascites (?cirrhosis)
   f. Abdomen-Pelvic Mass Ca stomach Ca colon)
   g. PR – mass RV pouch

Presence of Internal /External Hemorrhoids does not exclude more serious cause as above

5. U S Scan (bedside if haemo dynamically unstable)

- If positive for cirrhosis – treat as variceal bleeding
- If negative for cirrhosis liver



- Avoid Barium studies (which will miss “surface lesions” and interfere with angiography)

REFERENCES

Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PURPOSE AND SCOPE

To specify the protocol for management of upper GI Bleeding Cases

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

PROTOCOL:
Inform On duty surgeon or gastroenterologist.

First step is Resuscitation and Restoration of Haemodynamic Stability

1. Good Venous Line if necessary Central Vein, start Ringer Lactate. If hypotension presents start colloids (Haemoceal) and blood/Albumin when ready. Secure 2 IV lines 16 – 18 gauge.

2. Draw a large sample of blood for
    a. Grouping and Cross matching
    b. L.F.T
    c. Complete haemogram (including platelet)
    d. RBS-Blood Urea-Sr. Creatinine
    e. Bleeding time, Coagulation time, Prothrombin Time, APTT
    f. Sr. Electrolytes
    g. HBsAg
    h. HIV with consent

3. Perinorm 10 mg IV stat and 8 hourly

4. Quick brief history and physical exam:
    a. Sudden large haematemesis (without any forewarning) suspect variceal bleeding)
    b. In forceful retching/vomiting, consider Mallory – Weiss tear, avoid NGT.
    c. Altered sensorium, oedema, ascites – suspect cirrhosis and variceal bleeding

d. Palpable firm liver; may be cirrhotic – variceal bleeding
e. Palpable spleen, most likely to be variceal bleeding
f. Epistaxis, Bleeding gum – "spurious haematemesis"

5. Start IV infusion of Somatostatin or Octreotide (suppresses all GI secretions and induce Splanchnic Vasospasm)

Somatostatin 250 µg bolus and at
100 µg per hour
Octreotide 100 µg bolus and at
Octreotide 100 µg per hour
OR
Terlipressin 2 mg IV stat and then 1mg every 4 hrs.

6. Indwelling Catheter

7. Give Nasal O2 keep suction, SB Tube and "Crash Trolley" ready.

8. If haematemesis is profuse, alert the anaesthetist, may require immediate E. T. Intubation to prevent aspiration of the vomitus (and Cardiac arrest) and may require passage of Sengstaken – Blakemare Tube.
   - 90% of bleeding will be controlled by Somatostatin / Octreotide.
   - A small bleed may be the fore runner of a massive one (admit in ICU)
   - No advantage in passing a Naso gastric tube; the patient may retch while attempting of passing N G Tube and bleeding that had stopped may restart.
   - The only use of N G tube is in an unconscious patient to administer medicines or nutrients.
   - In case the patient requires intubation and passage of SB Tube, he is better ventilated overnight. Next morning, with the ET tube in situ and under light anaesthesia relaxation, SB Tube can be deflated and removed and patient endoscoped. Most probably visualization of the stomach and duodenum will be possible and banding / sclerotherapy etc. can be carried out, and patient extubated if not immediately a few hours later.

REFERENCES

Standards

PURPOSE AND SCOPE

To specify the protocol for endotracheal intubation

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the protocol is ensured by staff in all cases.

PROTOCOL

a. Indications:

1) **Need for Airway Protection**
   a. GCS < 9/15 (Reversible causes for low GCS has to be ruled out before intubation. E.g. Hypoglycemia, Post-ictal state etc.)
   b. Severe maxillo-facial fracture
   c. Upper airway obstruction – Impending laryngeal oedema, Neck hematoma, Laryngeal or Tracheal injury
   d. Dysphagia

2) **Need for Oxygenation or Ventilation**
   a. Inability to Oxygenate patient – Desaturation, PaO2 < 60mmHg
   b. Inability to Ventilate patient – Rising PaCO2, Worsening respiratory acidosis, Altered mental status
   c. Inadequate respiratory effort

3) **Status epilepticus**

b. Contraindication: (Relative)

   a. Neck immobility
   b. Inability to open mouth e.g.Trismus, Surgical wiring etc.
   c. Cervical spine injury - For all Trauma / Hanging patients with suspected c-spine injury, perform manual in-line stabilization during intubation.

d. Equipment:

e. *Note:* *Ensure well-functioning equipment before intubation.*

a. Patient positioning equipment
- Bed or procedure table that can be raised and lowered

b. Monitoring equipment
- Pulse oximeter
- NIBP
- Cardiac monitor

c. Oxygenation equipment
- Oxygen source
- Self-inflating AMBU-bag with connected face mask, reservoir and oxygen tubing OR Mapleson 'C' circuit
- Oropharyngeal airway (Adult 2- green,3-Yellow,4-red, Paeds 1-white,0-black & 00 blue)
- Functioning suction apparatus, Suction catheter with Yankauer tip

d. Pre-medication and induction equipment
- Intravenous access
- Premedication agents (discussed below)
- Induction agents (discussed below)
- Paralytic agents (discussed below)

e. Intubation equipment
- Laryngoscope handle and blades of different sizes and shapes (ensure functioning light bulb on each blade):
  - Curved blades (Macintosh blade)
  - Straight blades (Miller blade) – for pediatrics < 2yrs of age
- Endotracheal tubes
  - Male adults - 8,8.5mm, Female adults – 7,7.5mm and small Paediatric size tubes
  - 10ml Disp. syringes
  - Ensure no cuff leak in the ET tube
- Means of securing tube in place
  - ET Tube holder / Adhesive tape or ties

f. Equipment for verifying tube position after placement

1. Stethoscopes
2. Carbon dioxide detector or End-Tidal CO2 monitor
3. Chest x-ray to verify position is also required

d. Preparation & Anaesthesia:

1. Assemble equipment
2. Calculate doses and draw medications into syringes
3. Check IV access and flush fluid
4. Do you predict a difficult airway?
5. Position patient
6. Bed at comfortable height
7. Consider manual in-line stabilization, in suspected c-spine injury patient
8. Pre-oxygenate patient for 5 minutes with 100% oxygen via Bag-Mask Ventilation
9. Consider pre-medications, usually given 2-3 minutes prior to intubation

Pre-treatment Medications

Drug Name	Adult Dose	Onset of Action	Duration of Action	Advantages	Cautions
Fentanyl	1-2 mcg/kg slow IV push (over 1-2 min)	Immediate	0.5-1 h	Primary pretreatment drug to provide sedation and analgesia; decreases hypertensive response to intubation	Hypotension; chest wall rigidity at high doses (ie, >15 mcg/kg)
Lidocaine	1.5 mg/kg IV push	1-2 min	10-20 min		Hypotension
Atropine	0.02 mg/kg (usually about 0.4 mg) IV push	2-4 min	Up to 4 h	Prevention of vagal response (especially children younger than age 5 often have bradycardic response to laryngoscopy)	Tachycardia

Vecuronium	Defasciculating dose: 0.01 mg/kg IV push (typically about 1 mg, or 10% of intubation dose)	...	...	Decreases fasciculation and potassium release from cells; particularly useful if intend to use succinylcholine	Avoid higher doses that may produce paralytic effect
Rocuronium	Defasciculating dose: 0.06 mg/kg IV push (typically about 10% of intubation dose)	...	...	Decreases fasciculation and potassium release from cells; particularly useful if intend to use succinylcholine	Avoid higher doses that may produce paralytic effect

Administer a pre-calculated dose of an induction agent:

Induction agents

Drug Name	**Adult Dose**	**Onset of Action**	**Duration of Action**	**Advantages**	**Cautions**
Etomidate (ultra short-acting non-barbiturate hypnotic agent)	0.3 mg/kg IV push (normal adult dose about 20 mg)	30-60 sec	3-5 min	Does not alter hemodynamics or intracranial pressure (ICP); useful for patients with multiple trauma and hypotension (does not alter systemic BP)	Commonly causes myoclonus; pain upon injection; adrenal suppression (typically no clinical significance); nausea; vomiting; lowers seizure threshold; does not provide analgesia
Ketamine (phencyclidine	1-2 mg/kg slow IV push (not to exceed 0.5	30-60 sec	5-10 min	Bronchodilatory effects advantageous if hypotension or lung disease present (leaves	Reported to increase ICP (avoid in head injury); increases sympathetic tone, potent cerebral vasodilation,

derivative)	mg/kg/min)			airway and other protective reflexes intact)	cardiovascular stimulation (do not use with ischemic heart disease); emergence phenomenon – when used for conscious sedation with painful procedures in adults <65 yrs. This effect can be blunted with concomitant use of a benzodiazepine
Propofol	1-2 mg/kg IV push Decrease dose if patient unstable	<1 min	3-10 min	Provides rapid onset and brief duration; cerebroprotective (decreases ICP); extremely potent	Causes cardiovascular depression and hypotension; respiratory depression is dose-dependent
Midazolam	0.1 mg/kg IV	2-5 min			Slow onset, decrease CPP, has minimal cardiovascular and respiratory effect

Administer a pre-calculated dose of a paralytic agent:

Paralytic agents

Drug Name	Adult Dose	Onset of Action	Duration of Action	Advantages	Cautions

Succinylcholine	1-1.5 mg/kg IV push (average dose 1.5 mg/kg)	1-2 min	3-8 min	Depolarizing NMB; drug of choice for emergency pediatric intubation; rapid onset and short duration of action	Muscle fasciculation, malignant hyperthermia, cardiac arrest in children with muscular dystrophy, dysrhythmia with multiple doses. Caution in hyperkalemia, renal failure, extensive burns, crush injury, elevated ICP or IOP
Rocuronium (0.6-1 mg/kg) Atracurium (0.4-0.5 mg/kg) Vecuronium (0.08-0.15 mg/kg)		<1 min	30-60 min	Fast onset, non-depolarizing; no fasciculation, minimal effect on hemodynamics	Longer-acting, may be problematic if intubation fails, so ensure that a proper Bag-Mask Ventilation is possible before giving the medicine. Duration of action prolonged with hepatic impairment

this point until the endotracheal tube position is confirmed and secured, an assistant must apply pressure to the cricoid cartilage to prevent aspiration (sellick maneuver).

e.<u>Laryngoscope Techniques:</u>

a. Keep suction ready
b. Check to verify effect of induction and paralytic agent
c. Optimize patient position: a) Position patient to the level of the intubator's xiphysternum
d. Place a head pillow ofinches
e. Pre-oxygenate with 6 L/min of oxygen for 3 minutes
f. Holding the laryngoscope in left hand, insert the laryngoscope blade on the right side of the mouth and use it to sweep the tongue to the left

g. Advance the blade until landmarks are recognized - tip of the blade at the vallecula

h. Lift (not lever) the laryngoscope in the direction of the handle to lift the tongue and posterior pharyngeal structures out of the line of sight, bringing the glottis into view. Insert the ETT (applied with lignocaine jelly on the stylet) using right hand.

i. Fix at approximately 19 or 20 cms (females) and 21 or 22 cms (males), after checking bilateral equal air entry.

j. Inflate 10-15ml air into the cuff

k. Attach bag-mask to ETT and verify tube position immediately

a) 5-point auscultation – epigastrium, bilateral mammary areas and bilateral infra-axillary areas

b) Attach end-tidal CO_2 detector to verify return of carbon dioxide with each breath

REFERENCES

Standards

PURPOSE AND SCOPE

To specify the protocol for management of stroke cases

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

PROTOCOL

PROTOCOL:
Identify signs of possible stroke (FAST)

The signs & symptoms of Stroke include:

a) Sudden weakness or numbness of the face, arm, leg especially on one side of the body
b) Sudden confusion
c) Sudden Trouble speaking or understanding
d) Sudden trouble seeing in one or both eyes
e) Sudden trouble walking
f) Sudden Dizziness or loss of balance or coordination
g) Sudden severe headache with no known cause

Immediate general Assessment & Stabilization

This needs to be done within 10mins of arrival of the patient to Emergency room

a) Assess & support ABC's and vital signs
b) Provide Oxygen, if Hypoxemic (SpaO2<94%, <84% in COPD and related cases)
c) IV access, Collect Blood samples (CBC, RBS, Urea, Sr. Creatinine, Sr. Electrolytes, HBsAg, HIV with consent)
d) 12 lead ECG.
e) Check glucose on glucometer, treat, if indicated (RBS<50mg/dl or >400mg/dl)
f) Perform neurologic screening assessment (NIHS Score, GCS Score)

g) Inform Neurologist
h) Order Emergency CT brain if within window period of thrombolysis, if outside the window period then plan MRI Brain, SOS MR Angiogram if acute ischemic stroke.

Immediate Neurologic Assessment by Stroke team which comprises of

1. **Physician MD Medicine/Neurophysician**
2. **Intensivist trained in Acute Stroke Management**
3. **RMO trained in Acute Stroke Management**
4. **CMO**
5. **Nursing Staff, Experienced & Trained in Acute Stroke Management**

This should be done within 15 mins from the arrival of the patient
a) Review patient history
b) Establish symptom time onset
c) Perform neurologic examination

CT Brain should be done within 20 mins

If CT Brain shows hemorrhage
a) Consult Neurologist or Neurosurgeon
b) Begin Stroke Pathway
c) Admit to Stroke unit
d) Monitor BP, treat if indicated
e) Monitor Neurologic status(GCS Scale), emergency repeat CT, if deterioration is observed
f) Monitor Blood glucose, treat if needed
g) Initiate supportive therapy, treat co morbidities

If CT Brain doesn't show hemorrhage

Probable Acute Ischemic Stroke : Consider Fibrinolytic therapy
(Door to needle time should be <45 min). Check for contra-indications for Fibrinolysis and repeat neurologic exam to check whether deficits are rapidly improving to normal.
If the patient is a candidate for Fibrinolytic therapy, the following needs to be done:
a) Review risks / benefits with the patient family.

b) If acceptable to the family, give TPA within 4.5 hours of stroke onset, maintaining Door-to-needle time less than 45 min)

c) No anti coagulants or antiplatelet treatment should be given for 24 hrs

d) If the patient is not a candidate for Fibrinolytic therapy, on account of the following reasons:

- General contra-indications for Fibrinolytic drugs
- Out of window period (Exception Posterior Circulation Stroke)
- Doubtful diagnosis of stroke
- NIHS score >22 (Relative contraindication)
- Non consent by the relative

e) the following needs to be done

- Administer loading doses of Aspirin Chewable 325mg, Atorvastatin 40/80mg, dual Antiplatelet therapy and heparin (conventional/LMWH).
- Begin Stroke pathway
- Admit to Stroke unit
- Monitor BP, Do not treat aggressively without approval of the concerned neurologist/physician, treat if indicated
- Monitor neurologic status, emergency repeat CT if deterioration is found
- Monitor Blood glucose, treat if needed
- Initiate supportive therapy, treat co morbidities

REFERENCES

Standards

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		Issue No	01
		Rev No.	01
		Date	5/3/2021
		Page	1
	Document Title : Protocols for Management of Bradycardia		

PURPOSE AND SCOPE

To specify the protocol for management of bradycardia

RESPONSIBILITIES

Medical Director

The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases.

PROTOCOL

Stage I : Maintain Airway; Assist breathing with Oxygen, Secure IV access, BP, Pulse Oximetry, Cardiac Monitoring & ECG

Stage II : Look for signs & symptoms of poor perfusion (CHAPS) i.e. Chest pain, Hypotension, Altered mental status, Pulmonary signs, Sweating, Shock.

Stage III : Incase of Adequate Perfusion

a) Observe & monitor
b) Inform Cardiologist

In case of Poor Perfusion

a) Consider **Atropine 0.5 mg IV stat**,
b) May repeat this to a total dose of 3 mg
c) Prepare for Transcutaneous Pacing if Type 2 – II* A-V block or III* A-V Block
d) Consider **Dopamine 2 – 10 microgram / kg /min**

Or

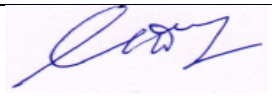
Epinephrine 2 – 10 microgram /min while awaiting pacer

or if pacing is ineffective

e) Inform Cardiologist
f) Prepare for Transvenous pacing

REFERENCES

Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

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		Issue No	01
		Rev No.	01
		Date	5/3/2021
		Page	1
	Document Title : Protocols for Management of Tachycardia with Pulse		

PURPOSE AND SCOPE

To specify the protocol for management of tachycardia with pulse

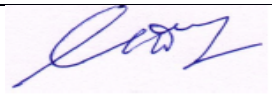
RESPONSIBILITIES

Medical Director

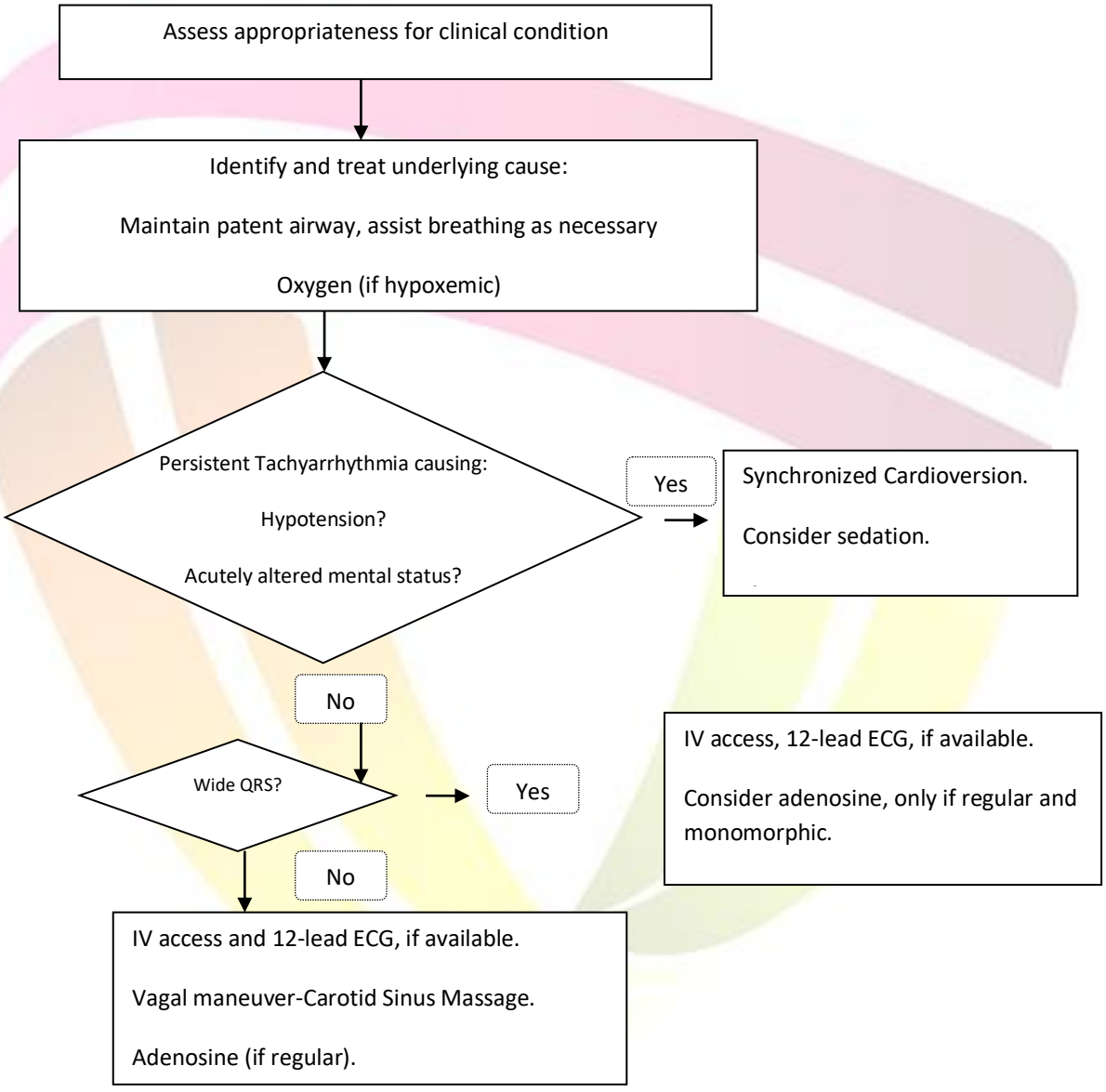
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PROTOCOL PROCEDURE



Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

1. **Doses / Details**

Synchronized Cardioversion

Initial recommended doses:

- Narrow regular (SVT/Atrial Flutter) 50-100 J
- Narrow irregular (Atrial Fibrillation) 120-200 J biphasic or 200 J monophasic
- Wide regular (Ventricular Tachycardia) 100-200 J

Adenosine IV Dose

First dose: 6mg rapid IV push followed with NS flush

Second dose: 12mg, if required

Antiarrhythmic infusions for stable Wide QRS Tachycardia

Procainamide IV dose: 20-50mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases >50%, or maximum dose 17mg/kg given.

Maintenance infusion 1-4mg/min. Avoid if prolonged QT or CHF

Amiodarone IV dose

First dose: 150mg over 10 mins. Repeat as needed, if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hrs.

Sotolol IV dose: 100mg (1.5 mg/kg) over 5 mins. Avoid if prolonged QT.

REFERENCES

Standards

PURPOSE AND SCOPE

To specify the protocol for management of cardiac arrest

RESPONSIBILITIES

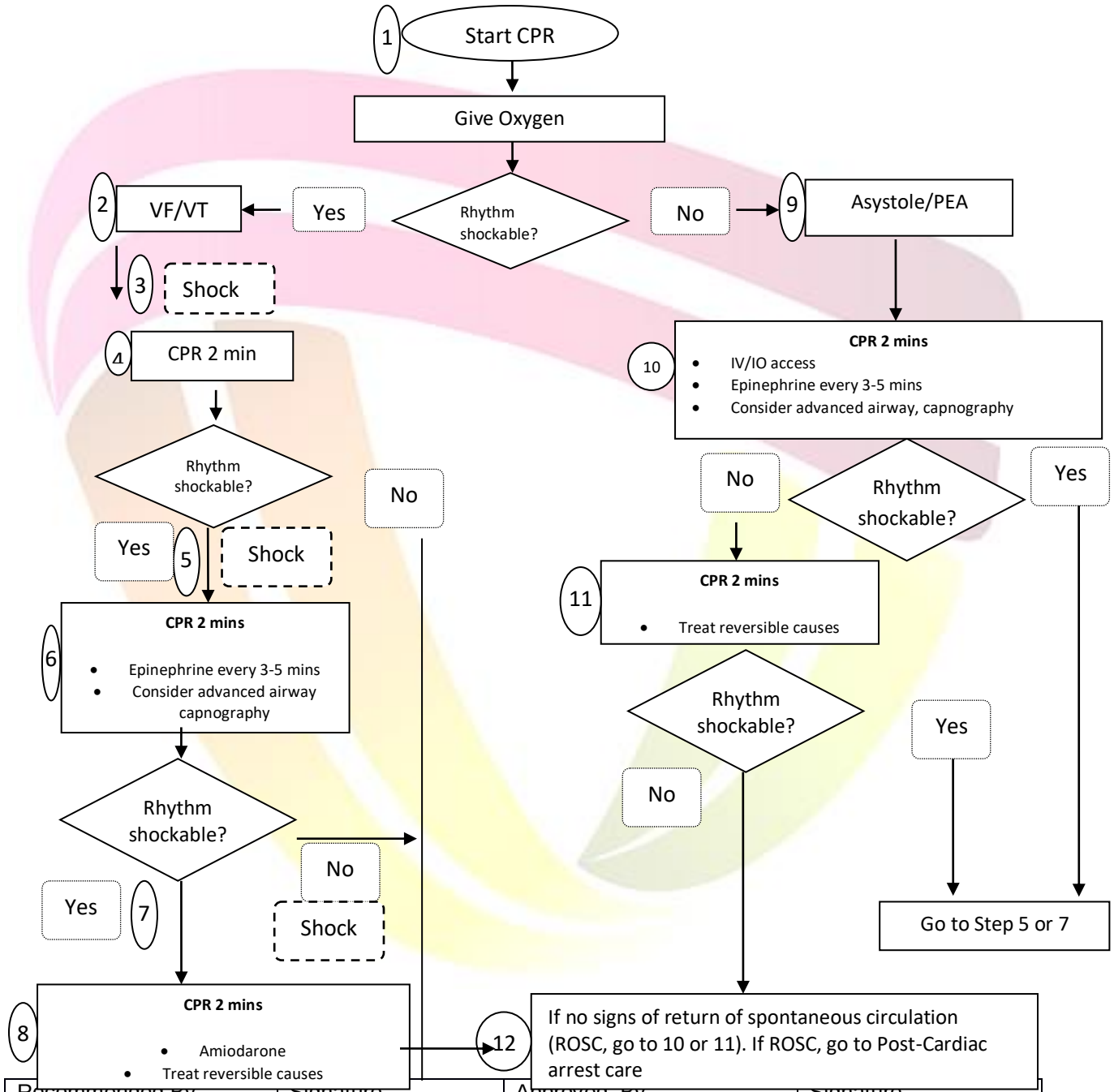
Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

CARDIAC ARREST PROTOCOL: Shout for help or activate Emergency Response System



Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

Doses / Details for the Cardiac Arrest Algorithm

CPR Quality

a. Push hard, Push fast (≥100/min) and allow complete chest recoil.

b. Minimize interruptions in compressions

c. Avoid excessive ventilation

d. Rotate chest compressor every 2 mins

e. If no advanced airway, 30:2 compression – ventilation ratio

f. Quantitative waveform capnography

- If PET CO_2 is <10mmHg, attempt to improve CPR quality

Return of Spontaneous Circulation (ROSC)

a. Pulse and blood pressure

b.PET CO_2 (typically ≥40mmHg)

c. Spontaneous arterial pressure waves with intra-arterial monitoring

Shock Energy

a. Biphasic:
   Initial dose of 120-200J. If unknown, use maximum available.
   Second and subsequent doses should be equivalent and higher doses may be considered

b. Monophasic: 360J

Drug Therapy

a.Epinephrine IV/IO Dose: 1mg every 3-5 mins

b.Vasopressin IV/IO Dose: 40 units can replace first or second dose of epinephrine

c.Amiodarone IV/IO Dose:

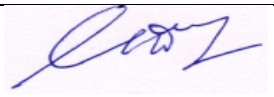
- First dose 300mg bolus
- Second dose: 150mg

Advanced Airway

a. Supra-glottic advanced airway or Endotracheal Intubation

b. Waveform capnography to confirm and monitor ET tube placement

c. 8-10 breaths per minute with continuous chest compressions (1 breath every 6-8 secs)

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
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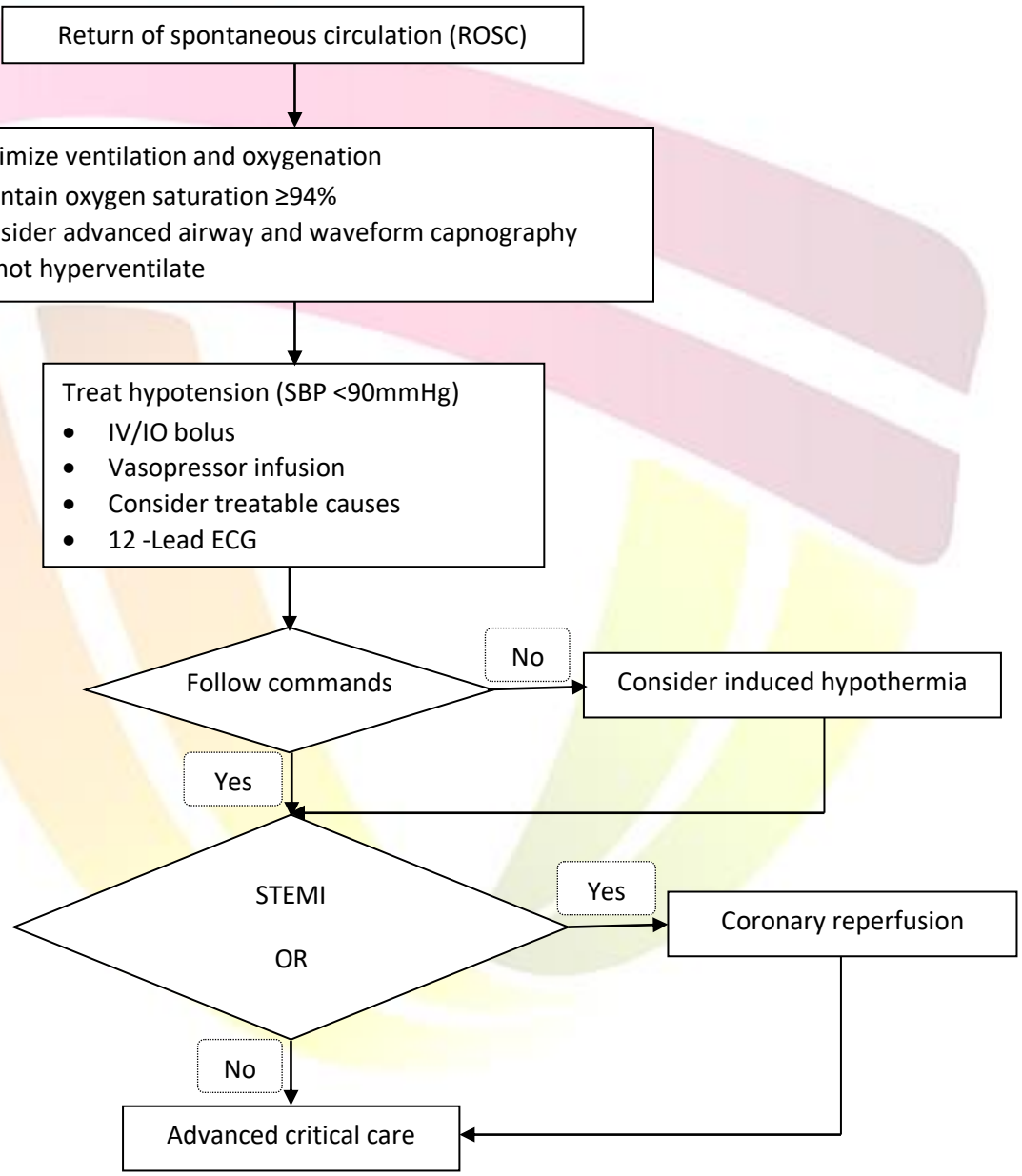
IMMEDIATE POST-CARDIAC ARREST CARE



Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

Doses / Details for Immediate Post-Cardiac Arrest Care

Ventilation / Oxygenation

- Avoid excessive ventilation
- Start at 10-12 breaths/min and titrate to target PETCO2 of 35-40 mmHg
- Titrate FIO_2 to minimum necessary to achieve SpO_2 ≥94%

IV Bolus

- 1-2 liter NS or RL
- If inducing hypothermia, may use 4˚C IV fluid

Epinephrine IV infusion

0.1-0.5 mcg/kg per minute (in 70 kg, 7-35 mcg per minute)

Dopamine IV infusion

5-10 mcg/kg per minute

Nor-epinephrine IV infusion

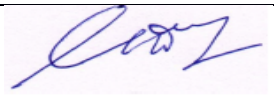
0.1-0.5 mcg/kg per minute (in 70 kg adult, 7-35 mcg per minute)

Reversible Causes(5H5T)

- Hypoxia
- Hypovolemia
- Hydrogen ion (acidosis)
- Hypo/Hyperkalemia
- Hypothermia
- Tension Pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

REFERENCES

Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

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		Rev No.	01
		Date	5/3/2021
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	Document Title : Protocols for Management of COPD		

PURPOSE AND SCOPE:

To specify the protocol for management of Chronic Pulmonary Obstruction Disease (COPD).

RESPONSIBILITIES:

Medical Director

The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

DEFINITION

Chronic obstructive pulmonary disease is one of the most common lung diseases where the patient will experience difficulty to breathing. COPD is of 2 types namely: Chronic bronchitis and Emphysema

PROTOCOL

Assess the severity of the patient (History, signs and symptoms, vitals, ABG, CXR)

Administer Nebulization Duolin without O2 (3 times)

↓

Administer Nebulization Budecort without O2 STAT

↓

Methylprednisolone 125 mg IV STAT

If SpO_2 still <85%, start NIV (BIPAP)

If SpO2 improved to 90%, apply nasal cannula at 2-4 Lt/min. Maintain SpO_2 at 90-92% Pulmonology consultation

Repeat ABG within 60 mins of starting treatment and modify O_2 flow rate and respiratory rate according to PaO_2, pH and PCO_2.

↓

Add antibiotics in case of fever, copious sputum and sepsis.

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PLAN

1. Chest X Ray if any complication of COPD like pneumothorax, atelectasis, pneumonia or mass lesion suspected.
2. ECG to rule out cor pulmonale and cardiac cause for dyspnoea

REFERENCES:

Standards

PURPOSE AND SCOPE

To specify the protocol for management of Anaphylaxis.

RESPONSIBILITIES

Medical Director

The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

PROTOCOL

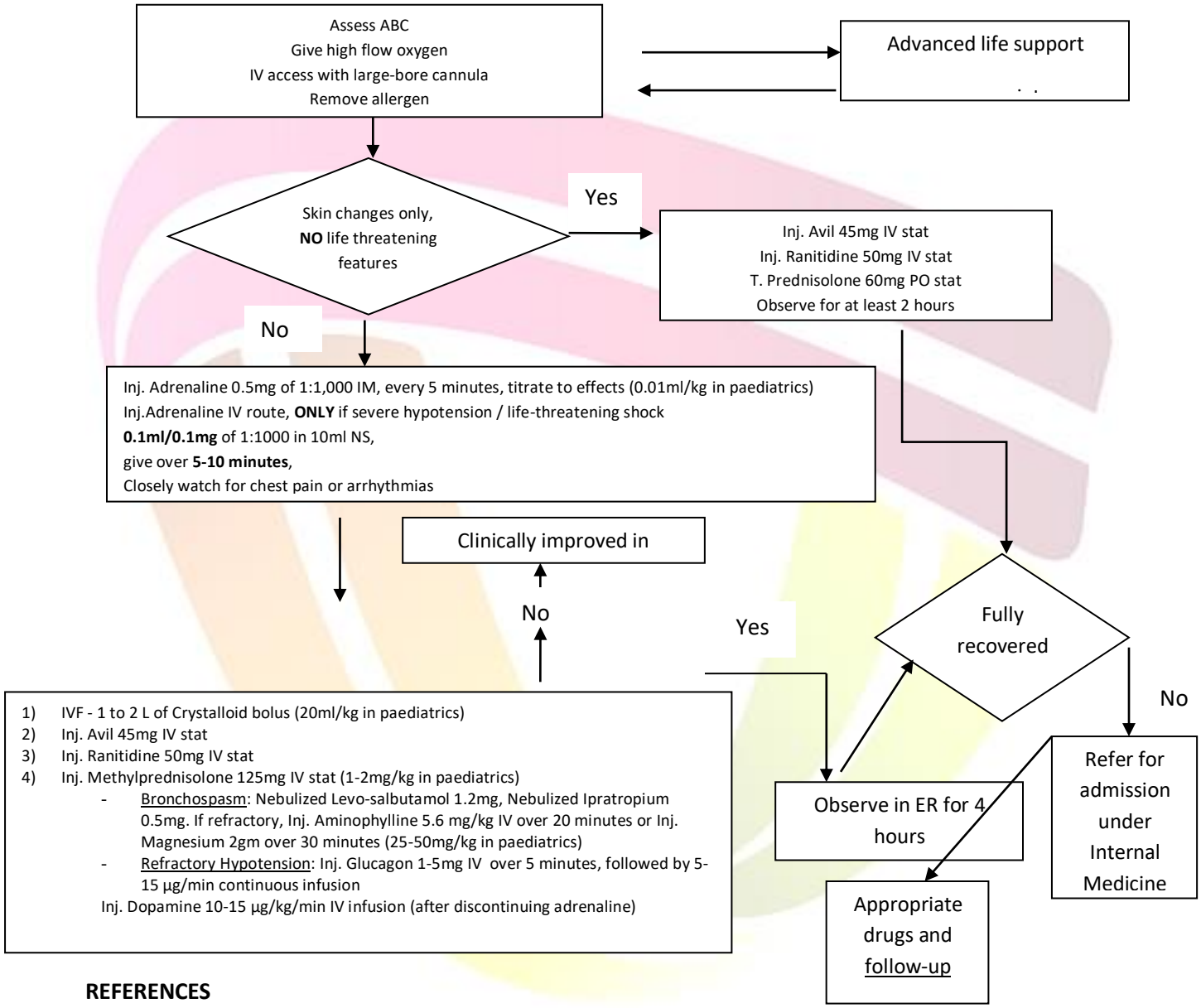
PROCEDURE:

a. Articles required:

Anaphylactic trays shall consist of:

Item	Quantity	Item	Quantity
Epinephrine 1:1000 for IM or subcutaneous use	2 vials	Lancets	5
Inj. Avil 45 mg	1 vial	Syringe (1 ml)	2
Inj. Hydrocortisone 100 mg/2 ml	1 vial	Syringe (3 ml)	2
Inj Aminophylline	2	Tongue blade	4
Inj Ranitidine 50 mgm	1		
Tourniquet	1	Airway (child)	2
Alcohol swabs	5	Airway (infant)	2
Dry gauze (2*2)	5	Drip set	1
LevoSalbutamol	1	Normal Saline	1

b. Protocol to be followed



REFERENCES

Standards

Recommended By	Signature	Approved By	Signature
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

PURPOSE AND SCOPE

To specify the protocol for management of fractures

RESPONSIBILITIES

Medical Director
The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit
Is responsible to ensure that the protocol is ensured by staff in all cases

PROTOCOL

Fracture: is the break in the continuities of the bone as a result of high force impact or stress or certain medical conditions.

GUIDELINES: Closed Fracture – Femur

a. Primary survey and management (Follow ATLS guidelines for management of hypovolemic shock)
b. Up to 1.5 liter of blood loss can occur in closed fracture shaft of femur
c. Analgesia
d. Apply Thomas splint for shaft and distal femur fractures
e. Secondary survey and log roll - to look for other injuries
f. Assess and document neurovascular status of the injured limb
g. Bladder catheterization
h. NPO
i. Send PA Panel, arrange 4 units PRBC and 2 units of FFP
j. X-ray femur, including hip and knee – AP and lateral view
k. X-ray pelvis is mandatory in all Femur fractures

Closed Fracture – Other Bones

a. Apply L – splint / SAM splint
b. Analgesia
c. Assess and document neuro vascular status of the injured limb.
d. Limb should be elevated so that affected portion is above the heart level.
e. Look for other injuries.
f. NPO.
g. Inform Orthopedic surgeon.
h. Watch for signs and symptoms of Compartment Syndrome – severe pain, paresthesia, painful passive finger / toe movement.
i. Presence of arterial pulse, distal to the fracture does not exclude Compartment Syndrome.
j. X-rays of the affected bone must cover one joint above and below.

Open fracture

a. Recognize open fractures by
    i. Puncture wound with bleeding in a fractured limb
    ii. Small / large wounds with exposed bone
b. Primary survey and management
c. Analgesia
d. Splinting must be done
e. Look for other injuries
f. Assess and document neurovascular status of the limb
g. Tetanus prophylaxis has to be given
h. Antibiotics – Inj. Gentamycin 80 mg IV stat

Inj.Cefotaxime 1 gm IV stat

Inj.Metronidazole 500 mg IV stat

i. Patient has to be on NPO

j. X-rays have to be taken

REFERENCES

Standards

PURPOSE AND SCOPE

To specify the protocol for management of fractures.

RESPONSIBILITIES

Medical Director
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PROTOCOL

PROCEDURE:

Suspect Pelvic Fractures In:

a. High speed RTA
b. Polytrauma patients
c. Fall from height
d. Trauma patients who are unconscious / Hypotensive
e.

Assessment-As Per ATLS Protocol

Primary Survey

A. Airway with C-spine control
B. Breathing
C. Circulation with hemorrhage control

D. Disability

E. Exposure: expose the patient fully, prevent hypothermia

Secondary Survey

Suspect pelvic fracture if any of the following are present

1) Positive pelvic compression/distraction.(Do not perform pelvic distraction, if pelvic compression is positive)
2) Blood in urethral meatus
3) Bruising, swelling or laceration of scrotum, penis, vagina, rectum, buttocks and perineum

Management in Emergency Room

1) Monitor vital signs- PR, BP, RR, SPO2
2) 2 large bore IV cannulae, preferably cephalic vein. If not accessible, then median cubital vein. Avoid securing IV access in an injured limb.
3) Rapid infusion of crystalloids (NS/RL). If suspecting head injury, give IV fluids in a controlled manner.
4) IV analgesics
5) If pelvic instability is present and if hemodynamically unstable, apply pelvic binder/sheet.
6) Send for blood grouping and PA panel.
7) Arrange 4 units of PRBC and 2 units of FFP. Transfuse 2 units of PRBC in ER at the earliest, if patient is hemodynamically unstable.
8) Inform duty surgeon and orthopedic surgeon.
9) Shift to X-ray/CT if hemodynamically stable (SPB 100 mmHg).

10) If persistently Hypotensive, portable X-ray pelvis in ER.
11) Persistent hypotension-alert OT and Radiology for external fixation/Open pelvic packing, arterial embolization.
12) Bladder catheterization- should not be done if there is blood in urethral meatus or if suspecting urethral injury.

REFERENCES

Standards

PURPOSE AND SCOPE

To specify the protocol for management of Spinal Cord Injuries

RESPONSIBILITIES

Medical Director

The overall responsibility of implementing the policy rests with the MD of the hospital.

HOD – Emergency Care Unit

Is responsible to ensure that the protocol is ensured by staff in all cases

PROTOCOL

PROCEDURE:

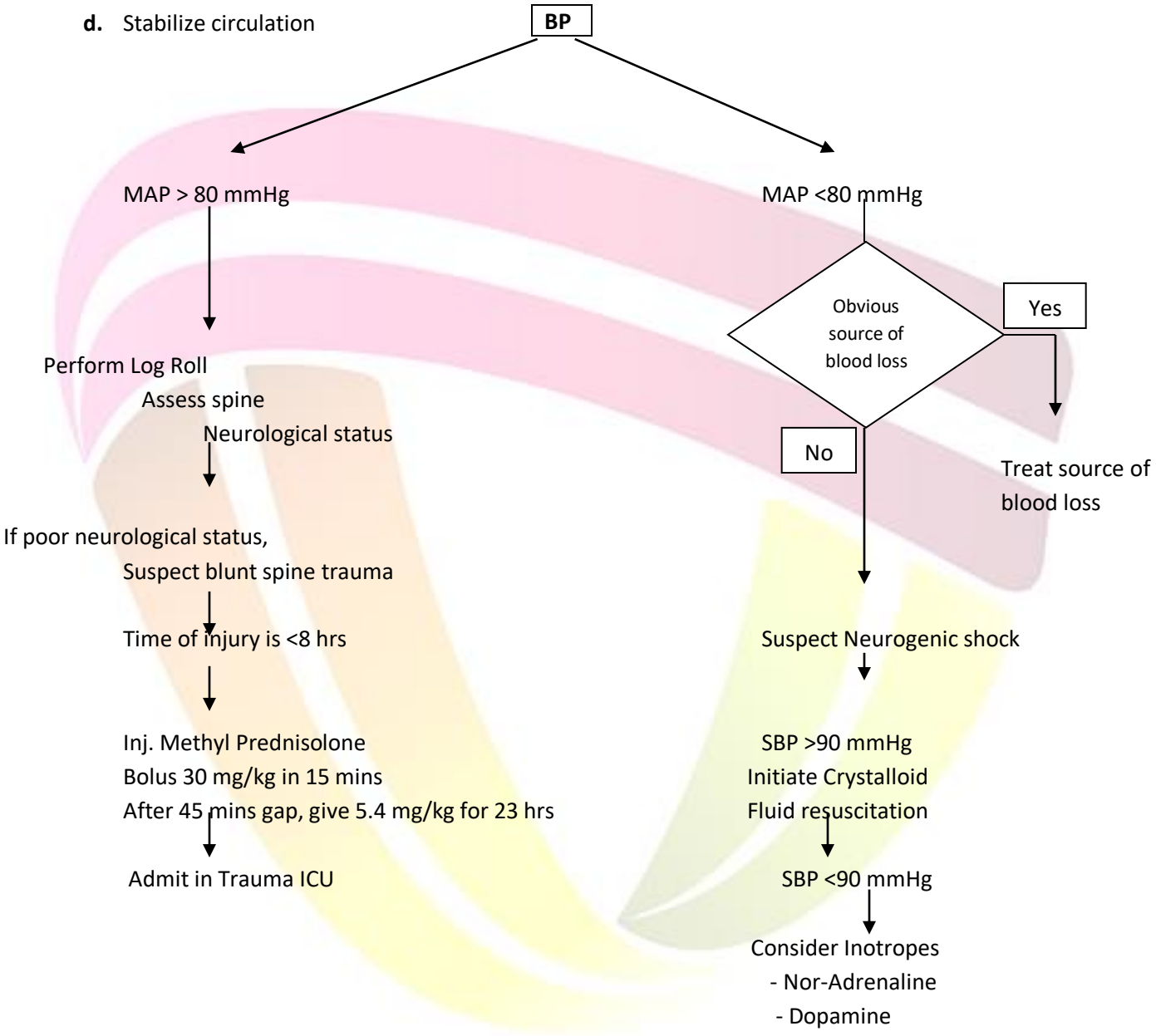
DEFINITION

Spinal Cord: is a long, thin, tubular bundle of nervous tissue and support cells that extends down from the brain.

1. PROTOCOL

a. Receive patient in spinal board, immobilize with straps
b. Maintain airway, immobilize cervical spine with cervical collar, if indicated
c. Maintain breathing and ventilation- endotracheal intubation, if indicated
(The roots of the phrenic nerve, which supply the diaphragm, emerge at the third, fourth, and fifth cervical vertebral levels. **Any patient with an injury at C5 or above should have his or her airway secured via endotracheal intubation-after discussing with neuro-surgeon**)

d. Stabilize circulation



(Always maintain MAP >70 mmHg to avoid secondary spinal cord injury). Avoid aggressive fluid resuscitation and fluid overload.)

REFERENCES Standards

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SAIDEEP HEALTHCARE & RESEARCH PVT. LTD.	**SAIDEEP HOSPITAL** **HOSPITAL MANUAL**	Doc No	SDH/COP/2B
		Issue No	01
		Rev No.	00
		Date of Revision	8/4/2024
		Pages	1 TO 6
	Policy for Crowd Management		

JCI Standard LD.04.03.11: The hospital manages the flow of patients throughout the hospital

Prevention of patient over-crowding is planned, and crowd management measures are implemented

Introduction: According to the Australasian College for Emergency Medicine (ACEM) **access block** is defined as "the situation where patients are unable to gain access to appropriate hospital beds within a reasonable amount of time, no greater than 8 hours" and 'overcrowding' refers to "the situation where ED function is impeded by the number of patients waiting to be seen, undergoing assessment and treatment, or waiting for departure, exceeding the physical or staffing capacity of the department"

1. **Initial causes of crowding:**
   - Fewer ED beds
   - Growing ED volumes
   - Unnecessary visits or visits for conditions that could be addressed at the primary care/ambulatory care level
   - Delay in decision making for getting admitted by the patient/relatives for various non-clinical reasons

2. **Crowding occurs when the number of patients exceeds treatment space capacity**
   - It impedes efforts of ED personnel to provide care to patients, stretching resources, delaying treatment and leading to poorer patient outcomes. It also causes patients to leave prior to being evaluated by a physician or other provider, and may lead to ambulance diversion. Due to the unscheduled nature of emergencies, ED crowding will probably never be completely eliminated, but efforts can be made to mitigate boarding of patients and the crowding which boarding creates.

   - *ED crowding correlated with bottlenecks in hospital flow, and specifically identified ED **boarding of inpatients** as a primary contributor to crowding. Crowding creates operational inefficiency in the ED, and has particularly concerning consequences on critically ill patients, where compliance with sepsis bundles has been adversely affected. It has been associated with delay (or failure) to administer antibiotics in community acquired pneumonia, poor analgesia management in patients with severe pain, increased medical errors, and increased in-hospital mortality.*

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- ED boarding increases length of stay (LOS) for all patients, leading to decreased staff and patient satisfaction. The experience of boarding in ED hallways leads to lower satisfaction scores for ED care, and is predictive of low satisfaction scores for the entire hospital stay. Crowding also decreases access to emergency services, leading to increased walkout and left without being seen (LWBS) rates, and increased ambulance diversion events. Significant opportunity costs ensue as revenue from potential patients is turned away for lack of space or inefficient bed turnover.

3. Measures to prevent patient over-crowding in the emergency department:

A. Effective and standardized triage of all patients visiting ED: The hospital ED as a policy uses a standardized triage system to facilitate early initiation of the medical treatment based on 'Emergency Severity Index' from Level-1 to Level-5.

B. Community Emergency Department Overcrowding Score (CEDOCS): To score in every shift especially during a surge and analyze sp as to plan and allocate adequate resources.

Also the following data is to be analyzed for better insights

- Time to provider (TTP) : From ED arrival to initial assessment in ED
- Dwell time: Duration of boarding in the ED awaiting an inpatient bed
- Overall ED LOS
- Left without being seen (LWBS)

C. Appointing Bed coordinators and a Bed Director (who can mobilize additional resources in real time to augment hospital capacity to address emergency department throughput problems): All floor managers are given a responsibility to keep track of ADT (Admission-Discharge-Transfer) activities in real time and coordinate among themselves to expedite bed allocation according to the needs of the patients.

D. Early in-patient discharge policy: Clinicians are encouraged to plan discharges (preferably decided 24 hours prior) and floor staff is expected to execute the procedure before 12PM. 75% of the total planned discharges should be completed between 12PM and 4PM.

E. **Full capacity protocols: NABH Standard AAC 2d:** The hospital has a written guidance which addresses managing patients during non-availability of beds, this should be used whenever there is a surge of cases and bed allocation is not possible according to their clinical needs within the stipulated time.

CEDOCS Score for Emergency Department Overcrowding: Estimates severity of overcrowding in community emergency departments.

When to use: ED is using these scores every shift, or at times on shift with drastic changes in crowding (large influx of patients, for example), this activity is carried out for a fortnight in every quarter. If the scores indicate persistent overcrowding then the scoring is done more frequently.

Pearls/Pitfalls:

- CEDOCS was created as an improved analysis over the NEDOCS scoring system; both assess and quantify ED overcrowding.
- CEDOCS was developed specifically with community emergency departments in mind.
    - NEDOCS only targeted large, academic trauma centers.
- Interestingly, its score was calibrated by comparing “busy-ness” to ratings by emergency physicians and emergency department charge nurses.
- CEDOCS is calibrated to score 0-100, but usually the score is doubled so it can be compared to NEDOCS (0-200).
- CEDOCS appears to be valid at EDs with at least 18,000 patients per year.

Points to keep in mind:

- These scores are "best guess" estimates to objectify over-crowding but will not always be able to account for all causes of over-crowding.
    - For example, as mentioned by its authors, "'psych patients awaiting admission' were not a problem in the particular hospitals in the original NEDOCS study but have become more of a recent problem in community-based hospitals."

Why use: Providing an objective, quantitative score can help EDs and their hospitals provide appropriate resources to the ED and rest of the hospital to reduce delays in care and boarding, which have been shown to have significant impacts on patient morbidity and mortality.

FORMULA

CEDOCS Score = –29.53 + (3.14 x critical care patients in the ED) + (0.52 x waiting time of longest admitted patient) + (1.14 x number of patients in waiting room) + (20.55 x ratio of total ED patients to number of ED beds) + (0.00124 x ED visits per year) + A + B + C + D (additional variables based on ED visits per year) as follows:

Threshold	**Additional variables***
If ED visits per year ≥18,811	$A = -[(1.09 \times 10^{-12}) \times (\text{ED visits per year} - 18{,}811)^3]$
If ED visits per year ≥43,012	$B = [(8.18 \times 10^{-12}) \times (\text{ED visits per year} - 43{,}012)^3]$
If ED visits per year ≥49,466	$C = -[(8.18 \times 10^{-12}) \times (\text{ED visits per year} - 49{,}466)^3]$
If ED visits per year ≥67,273	$D = [(1.08 \times 10^{-12}) \times (\text{ED visits per year} - 67{,}273)^3]$

*Include all variables in scoring where "ED visits per year" is greater than or equal to the threshold. If "ED visits per year" does not meet the threshold requirement, count variable as 0. For example, if ED visits per year is ≥43,012, final CEDOCS Score = CEDOCS Score + A + B.

Note: Final CEDOCS Score is multiplied by the scaling factor specified. If no scaling factor or a scaling factor of 0 is specified, final CEDOCS Score is multiplied by 2.

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FACTS & FIGURES

Score interpretation:

Level	Score	Interpretation
Level 1	1-20	Not busy
Level 2	21-60	Busy
Level 3	61-100	Extremely busy but not overcrowded
Level 4	101-140	Overcrowded
Level 5	141-180	Severely overcrowded
Level 6	181-200	Dangerously overcrowded

REFFERANCE – COP 2.B

1.0 Purpose

To guide the staff when beds are not available for patients needing admission.

2.0 Scope:

Hospital wide

3.0 Policy:

3.1 In case a bed is not available under the preferred category of the patient then for ensuring that the patient is not sent back, the patient is admitted in the category that is available provided the patient is willing for this category

3.2 Patients are at times admitted in categories other than their preference and in these cases the front office mentions that the patient needs to be shifted to the preferred category at the earliest

3.3 If the room is not available for the patient to be shifted than he or she is charged accordingly. e.g. if the patient had opted for a ward bed but is kept in a higher category then he or she is charged for a ward bed only and in cases where the room category in which the patient is kept is lower, patient is charged for the lower category.

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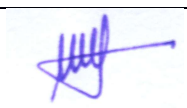
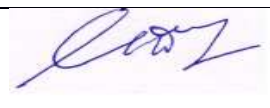
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
Chief Medical Administrator		Chairman & Managing Director	

4.0 Summary Guidelines

4.1 Patients shall be offered a choice of patient rooms / beds. In the event of non-availability of the room of choice, the patient shall be allotted the best alternative rooms available.

4.2 The patient shall be upgraded and the charges shall be charged of his desired category of room

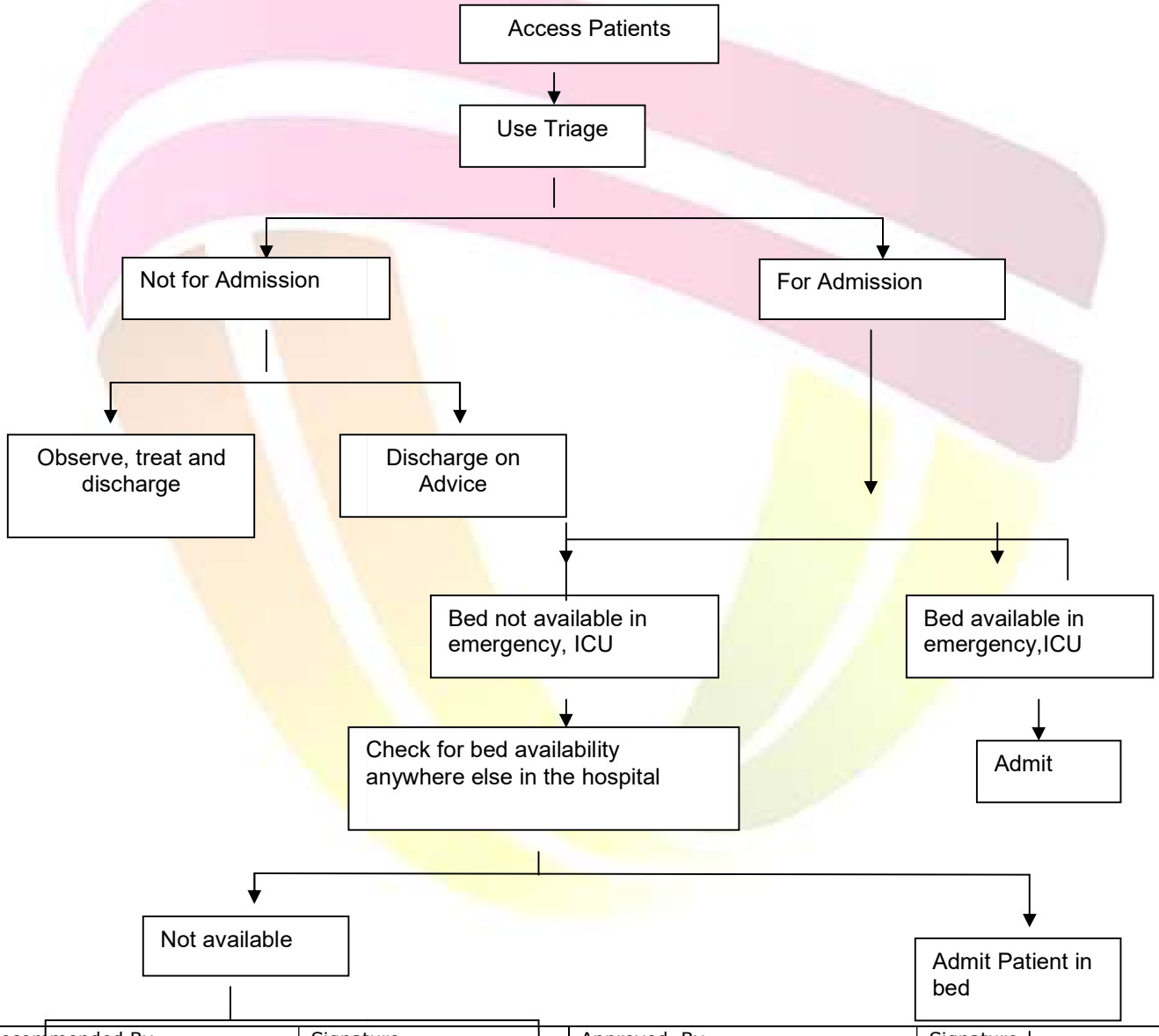
.

4.3 A waiting list is maintained for allocation of patient beds in case of non-availability.

4.4 Intensive care units: These beds are meant for critically ill patients.

4.5 In case beds are not available in any category, the patients shall be stabilized in emergency and immediately sent to the associated hospital / nearest hospital by choice with same kind of facilities.

5.0 Procedure for managing patients during non-availability of beds in case of an emergency



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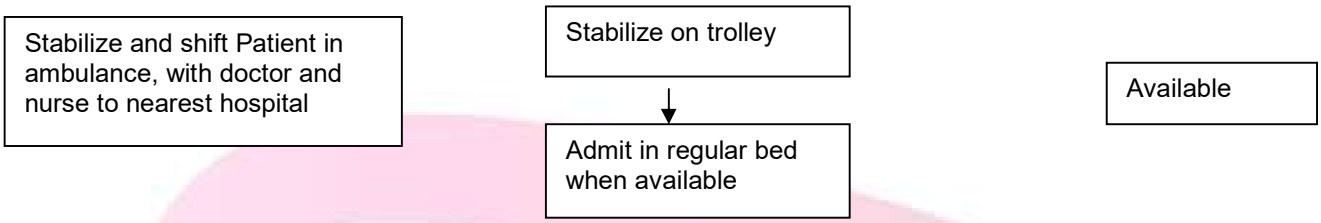
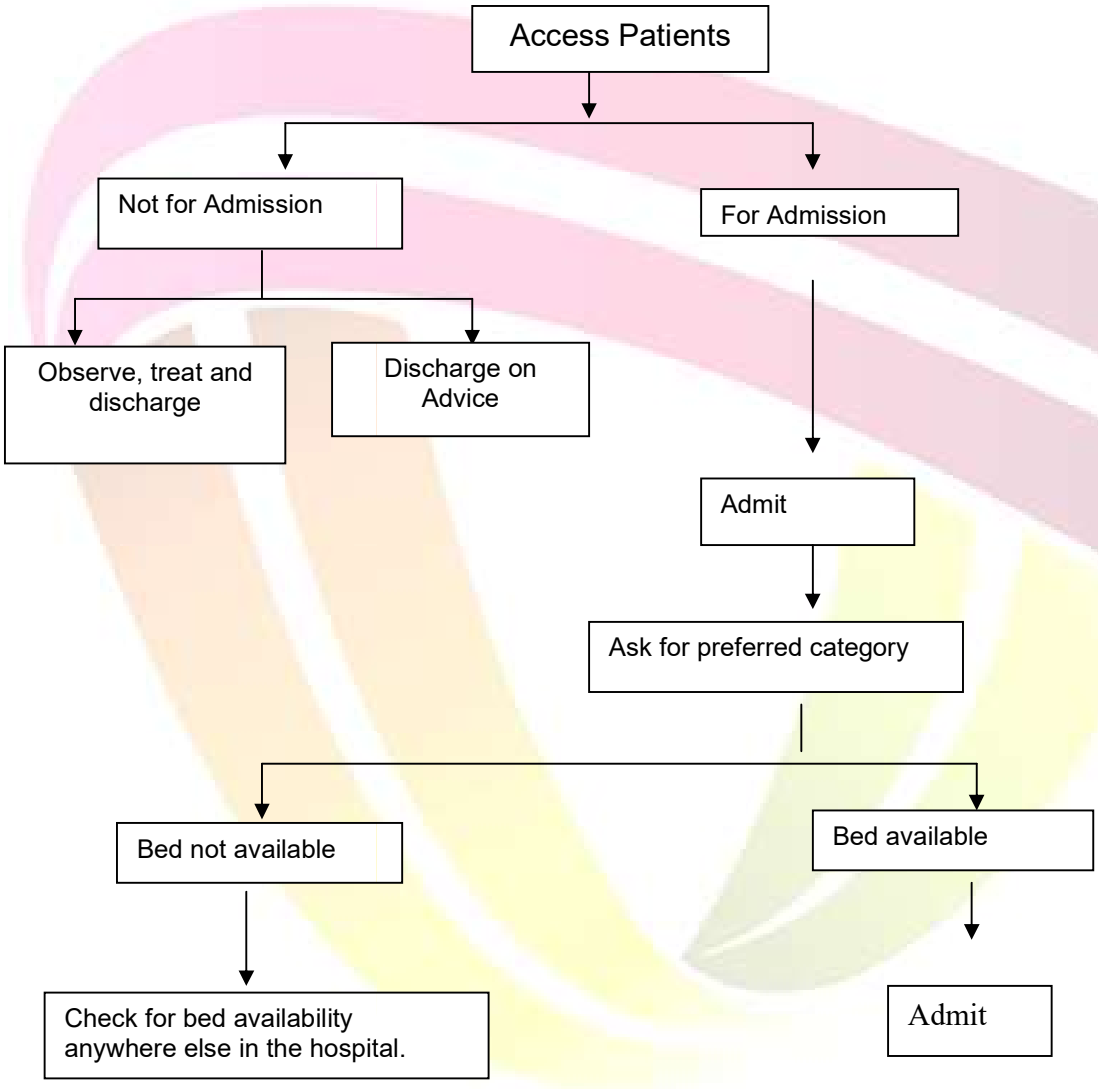


6.0 Procedure addressing shortage of beds in Intensive care

1. A call is made to CCU for checking the availability of bed and if available the patient is shifted there.
2. The condition of all the patients in the CCU is checked. If stable they are shifted to the wards and the unstable patients' could be provided with the vacant bed.
3. Incase of the non-availability of bed, a stabilized patient is shifted to the trolley and the unstable patient is provided with the bed or Stabilize and shift the Patient in ambulance, with doctor and nurse to other hospital.

7.0 Procedure for managing non-emergent patients during non-availability of beds



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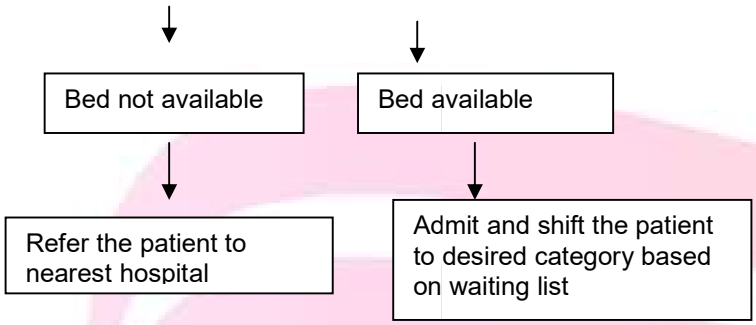

Reference – AAC 2d, COP 9e

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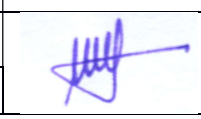
Dr.Hrishikesh kalgaonkar		Dr.S.S.Deepak	
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