



# KARPAGA VINAYAGA INSTITUTE OF MEDICAL SCIENCES AND RESEARCH CENTRE

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## DOCUMENT PERTAINING TO QUALITY HEALTH CARE



KARPAGA VINAYAGA INSTITUTE OF MEDICAL SCIENCES & RESEARCH CENTRE,  
CHINNAKOLAMBAKKAM


Document Name :	POLICIES & PROCEDURES ON CARE OF PATIENTS
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	<b>CHINNAKOLAMBAKKAM</b>	<b>Issue No.</b>	<b>01</b>
	<b>COP:1-2:POLICIES &amp; PROCEDURES ON UNIFORM CARE OF PATIENTS &amp; EMERGENCY CARE</b>	<b>Rev. No</b>	<b>00</b>
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### COP-POLICY ON UNIFORM CARE OF PATIENTS

#### 1.0 Purpose

To delineate policy for the planning and providing of uniform patient care, for following clinical practice guidelines in line with the laws and regulations prevailing in India.

#### 2.0 Scope

To ensure uniform care to all patients using the services of the hospital. The scope includes policies and procedures for:

- The care of Emergency Patients (COP.2)
- Use of Blood and Blood Products (COP.3)
- Care of ICU& High Dependency Unit patients (COP.4)
- Care of Obstetric patients (COP.5)
- Care of Paediatric patients (COP.6)
- Care of patients requiring anaesthesia (COP.7)
- Care of patients undergoing surgical procedures(COP.8)

### 3.0 POLICY

#### COP.1-UNIFORM CARE OF PATIENTS

3.1 The planning and provision of care shall be based on individual patient assessment and shall focus on the patient's response to actual or potential alterations to health.

3.2 All patients are treated alike irrespective of their religion, cast, social status, financial ability etc. The safety of all patients seeking health care at this hospital is the prime responsibility of this hospital. A uniform patient care system is laid down in all areas so as to provide excellent service

3.3 Similar care is given in different settings which are guided by applicable laws and regulations; care delivery shall be uniform in emergency and ambulance services, Cardio Pulmonary Resuscitation, while using blood and blood products, during care of patients in the ICUs, and other high dependency areas, Post-surgical recovery rooms, etc.


3.4 The Hospital has the policy for delivering uniform care to all patients irrespective of the care setting right from the admission to discharge for IPD cases, in OPD services and emergency services.



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3.5 Laboratory facility, OT facility, Diagnostics, Nursing Care and Dietary Services are uniformly provided to all patients irrespective of category of patients.

3.6 All protocols are uniformly given in the same manner to all patients irrespective of the category status.

3.7 Uniform care is guided by all laws & regulations.

3.8 It is further ensured that the care and treatment orders are legibly signed, named, timed and dated by the concerned doctors and nurses, the main idea being that the authors of these orders are identifiable by all and the chronology of care process is maintained.

3.9 Clinical practice guidelines are adopted to guide patient care whenever possible.

**COP.2-POLICY ON EMERGENCY SERVICES**

**1. Purpose**

Policies and procedures guide the admission of patients coming to the emergency department of KIMS including Medico Legal cases.

**2. Scope**


All patients coming to the emergency department for care

Goals of the Department	To provide immediate stabilization and treatment of all patients who come to Emergency Department.
Scope & Complexity of Services Provided	<p>To provide early stabilisation, diagnosis, treatment and pain relief.</p> <p>Types of Service:</p> <p>Outpatient, observation, inpatient, Emergency Daycare</p> <p>Triage – Stabilisation of</p> <ul style="list-style-type: none"><li>• Unconscious patients 2 – 120min</li><li>• Unstable vitals 2 – 60min</li><li>• ECG Abnormalities 2 – 45min</li><li>• Poly trauma including Head injury 2 – 120min</li></ul> <p>Medico Legal Procedures</p> <p>Complexity of care/service:</p>

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	Intimation of primary to secondary care
Methods Used to Assess the Community and /or Patient needs in order to Customize the Services Provided	Through outpatient feedback form  Through consultants feedback
Types & Ages of Patients Served	All types of patients from pediatric to geriatric, both sexes.
Extent to Which Level of Care/Service provided to meet Patient's Needs	Investigations; EMO Opinion; Consultant's Opinion;  Physical, Psychological needs of the patient and family are met
Appropriateness, Clinical Necessity and Timeliness of Services Provided	24 hours Emergency.
Regulatory Agencies Relevant to Department / Service	<p style="text-align: center;"><b>Intradepartmental regulation:</b></p> <p>Regular meetings - Nurses by Nursing In-charge – EMO –HOD</p> <p style="text-align: center;"><b>Interdepartmental regulation:</b></p> <p>Monthly Meeting with MD – HOD's</p> <p style="text-align: center;"><b>Outside Agency Reporting:</b></p> <p>Medical Legal Cases – Police – to Court Infectious disease to MRD</p>
Days and Hours of Operation	24 hours x 7 Days
Staffing Plan	<ul style="list-style-type: none"> <li>• HOD</li> <li>• EMO'S</li> <li>• Nursing Staff</li> <li>• Secretaries</li> <li>• Securities</li> </ul>






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### 3. Procedure

- To aid clinical diagnosis, samples are collected and sent to various labs for analysis and reporting. Reports shall be sent back to the Emergency department on a priority basis.
- Screening and diagnostic tests shall be recommended and carried out as and when required in the Triage, keeping in mind the patient's immediate medical needs; for example, in the case of a head injury, the CMO shall have to make a quick appraisal of the criticality of the case and recommend an X-Ray or a CT Scan if he so decides. Tests are also carried out in concurrence with the consultant for arriving at the clinical diagnosis.
- Patients are not transferred or admitted or discharged without the CMO reading the reports of all tests recommended by him or the consultant in the Emergency, unless the critical nature of a patient's condition warrants immediate transfer to the operating theater or a critical care unit.

#### 3.1 Reception of patient

- 3.1.1 Emergency staff shall ensure availability of wheelchairs and stretcher trolleys at the Emergency room (ER) main door.
- 3.1.2 In cases where the patient is unaccompanied / unconscious, life, sight and limb saving measures shall be instituted.
- 3.1.3 After examining the patient and immediate resuscitative and stabilization care, the chief medical officer (CMO) shall contact the Consultant on-call in the relevant specialty by means of the telephone, PA -system and inform the Registrar on call in the relevant specialty. Registrars/CMO shall apprise the Consultant of the patient's condition and take instructions regarding investigations and treatment.
- 3.1.4 CMO/Registrar/Consultant shall fill out the Admission Request Form if the patient requires admission. A patient is to be admitted only when the Consultant advises admission.
- 3.1.5 CMO shall contact Blood bank Reception and inform whenever Blood is required.
- 3.1.6 Patients shall be discharged or transferred to the allocated bed at the earliest after screening diagnostic test results are available or earlier if the patient condition so requires.



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## WORK INSTRUCTION FOR OUT PATIENT

1. Receive the patients.
2. Make the patient comfortable in the bed, observe general condition, and check vital signs and record.
3. Inform duty EMO.
4. Enter the patient data in emergency register.
5. Follow EMO's instructions.
6. Do the necessary investigations as advised.
7. Send the samples along with the OP bill.
8. Send the patients' attender for registration.
9. Administer stat medication.
10. Assist the doctor for minor dressings.
11. Receive the Light green folder from admission.
12. Get the replacement things used for the patient.
13. Collect all the payment bills.
14. Record all activities in the chart.
15. OP file given to patient
16. Investigation reports will be given to the patient delivery counter of the laboratory

## WORK INSTRUCTION FOR PATIENTS REQUIRING ADMISSION


1. Receive patients in stretcher, wheel chair or by walk(hospital staff will accompany the admitted patient) with admission file
2. Make the patient comfortable and assess the general condition, record vitals.
3. Enter the patient's data in the register.
4. In case of MLC enter in to 'MLC' in red on the outer cover
5. Enter allergic status on the outer cover
6. Follow the orders given by MO.
7. Start IV access and draw blood samples as advised by MO
8. Inform the concerned consultant and carry out his orders.



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9. Intimate dietician

10. Stat dose medicines will be administered.

11. Indent medicines, prescribed for the patients.

12. Arrange for investigations

13. If the patient is undergoing the surgery inform the Anesthetist, pre-operative assessment and pre-operative orders will be carried out.

14. Ensure the informed consent is taken by the Anesthetist and Surgeon

15. After the completion of the treatment the detailed discharge summary given to the patient

16. In case of dying patient the a senior staff of the hospital remains with the patients relatives and permits them to complete the religious formalities.

### 3.2 Handling Medico legal Cases

3.2.1 All cases of accidents, bur ns, assaults, alleged suicide or homicide, poisoning, road traffic accident, rape, drowning, etc shall be registered as medico legal cases (MLC).

3.2.2 For All MLC cases accident register entry must be made and police must be informed.

3.2.3 All cases registered as medico legal in hospitals where he/she reported first must also be registered as Medico legal and the outside MLC number recorded on the case file.

3.2.4 When a case identified as medico legal is brought to Emergency Dept. CMO shall provide medical care as required.

3.2.5 The time of call and the police personnel spoken to shall also be documented in the police intimation register. Police intimation report is to be made in duplicate, one copy retained in register and one for police.

3.2.6 Wound certificate will be issued by the treating doctor on the request of the police.

3.2.7 Custody of Medico legal case records shall be under the CMO on duty. If more than one CMO is on duty the senior CMO is responsible for the custody of the records. MLC records after completion shall be kept under lock and key in the custody of the Medical Record Officer.

1. Receive the patient.






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2. Check the level of consciousness.
3. Connect all monitoring devices as per needed
4. Check the injuries or trauma, if any.
5. Monitor vitals.
6. Collect history from the person who is accompanying the patient.
7. Make AR entry and inform to police
8. Emergency treatment is given and send to emergency ward/ OT for treatment
9. Minor cases treated in emergency.
10. Seal MLC in all the records in case file.
11. Enter all details in case file and as well as air-accident and injury report.
12. Intimate hospital security and as well as police.
13. Help the police while they are investigating the case.
14. In case of poison follow work instruction for taking care of poison cases.
15. Do necessary investigations.
16. Explain all formalities to be followed to the patients' relatives.
17. Collect all the reports as early as possible and inform the doctor.
18. Start treatment as per the orders.
19. Shift the patient to ward or ICU as needed.
20. Enter all activities in the case file.
21. In case of death in MLC patients follow the general work instruction followed for handling death and finally all records will be handed over to MRD.
22. Death certificate and death summary will be handed over to the police.
23. Body to be handed over to police to be shifted for Post Mortem.
24. If the patient is posted for surgery follows all relevant work instruction for surgery. Shift the patient to OT without any delay.
25. Arrange for blood; follow work instruction for blood transfusion.






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## *WORK INSTRUCTION FOR HANDLING PATIENTS AFTER DRUG OVER DOSAGE / POISONING*


- 1) Receive the patient
- 2) Check the level of consciousness
- 3) Connect the necessary monitoring devices
- 4) Monitor vitals
- 5) Collect history from the person accompanying the patient
- 6) Insert Ryle's tube, aspirate all stomach contents, then connect normal saline to the Ryle's tube (optional as required)
- 7) After administering 200 ml of NS, wait for 5 minutes and then aspirate the contents.
- 8) Repeat the above until the return fluid is clear and then connect the Ryle's tube to continuous drainage
- 9) Inform the duty consultant
- 10) Start peripheral IV access
- 11) Start infusing IV fluids
- 12) catheterize the bladder if necessary
- 13) After stabilizing the patient, shift towards as per consultants' advice
- 14) If the patient becomes critically ill, follow resuscitative measures, stabilize and then shift the patient to ICU
- 15) File MLC, follow work instruction for handling MLC cases



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**Work Instruction for Arranging Investigations**

- 1) Follow EMO's orders.
- 2) Raise the slip in the computer and take a print out.
- 3) Arrange for necessary sample containers near the bedside of the patient
- 4) Label the containers properly.
- 5) Explain the procedure to the patients.
- 6) Wash hands thoroughly and use anti-microbial agents.
- 7) Use gloves before starting the procedure.
- 8) Take adequate amount of samples. {Blood urine, stools, nasogastric aspiration, throat secretions}.
- 9) Thank the patient for their cooperation
- 10) Send the sample along with requisition slip to the lab.
- 11) Document in the chart.

**Radiology Investigation:**

- Raise the slip in the computer
- If necessary send the patient to the department on call
- Explain the procedure to the patient or to the relative, if the patient is unconscious.
- Ensure that the report is available.
- Collect provisional report for special investigations like CT scan and MRI.

**WORK INSTRUCTION FOR HANDLING ELECTRO CARDIOGRAPH**


1. Check that the power cords are charged, if not connect it to main power supply.
2. Check that the ECG cable firmly connected to the machine
3. If the Cardiograph is not on, press on / Stand By button.
4. Explain to the patients and apply electrodes as per the direction.
5. Press Manual twice to record a ECG rhythm or
6. Press A Twice to record 12 lead ECG rhythm
7. The screen then displays the output form the selected 3 leads.



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8. Before connecting the electrodes, each leads displays on the screen as a dotted line, indicating that at least one of the electrodes associated with the lead is not connected.

9. As the electrodes are connected to the patients, the lead wave are displayed on the screen, if needed patient can be entered by pressing

10. Check the signal quality on all leads.

11. The leads recorded by the Auto ECG, the Chart speed sensitivity and filter status can be changed before the Auto ECG starts.

12. To change these settings simply select Format, leads, speed, size or filter keys appropriate.

13. Cardiograph automatically checks for a patients ID each time before it start an ECG, unless it is configured for number of patients ID information. To bypass this check and use the last entered patients' ID information presses second time.

14. The status message "Acquiring ECG, Processing, Analyzing, and Printing - "are displayed.

15. Inform the Doctor's about the ECG Record & place it safe in the patient's Case file.

**WORK INSTRUCTION FOR MONITORING ARTERIAL PRESSURE**

- 1) Assemble all the necessary articles.
- 2) Explain procedure to the patient and get written consent.
- 3) Assist the doctors in procedure with aseptic technique. Connect the monitor with transducers set.
- 4) Position comfortably.
- 5) Record date and time of procedure and label the arterial line in red.
- 6) Read and record arterial pressure
- 7) Flush line every 2<sup>nd</sup> hourly (as appropriate) with Normal Saline to ensure patency.
- 8) Watch for any abnormalities and inform doctor immediately.

**WORK INSTRUCTION FOR ENDOTRACHEAL INTUBATION**


1. Explain procedure if patient is conscious/patient's relative.



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2. Ensure written consent is taken from the attender by the EMO
3. Keep the medication ready for sedation / Paralysis / analgesic / Emergency drugs
4. Keep the Bain's circuit and Yankauer suction ready
5. Position patient in supine with head extended by keeping sand bag or towel roll under the occiput.
6. Check for loose teeth / dentures, if so remove with Magill's forceps.
7. Seal mouth and nose with mask and Ambu bag using E-C technique and ventilate with oxygen.
8. Provide laryngoscope to physician (switched on).
9. Suction oral cavity(if required).
10. Provide lubricated endotracheal tube.
11. Press crico thyroid cartilage with thumb and index finger against esophagus.
12. Assist while endotracheal tube is introduced into trachea.
13. Verify placement of tube by auscultation,capnography/ listening/feeling for airflow through tube and observe for bilateral chest movements, and check for cuff leak.
14. Connect Ambu bag or Bain Circuit with oxygen to endotracheal tube
15. Inflate cuff of the endotracheal tube with 8 to 10 ml of air (25 mm – 30 mm pressure).
16. Insert an oral airway or Bite Block and apply endotracheal suctioning if necessary.
17. Fix endotracheal tube in position by cotton tape.
18. Connect to ventilator if indicated.
19. POST-PROCEDURE CARE
20. Arrange for a chest x-ray to be taken in order to check placement of ET tube.
21. Apply endotracheal suctioning if secretions are present.
22. Watch for chest movements, ET tube kinking obstruction with secretion and blood, leakage of tube cuff, change in position of tube and over inflation of cuff.
23. Document type and size of tube used, chest movements, vital signs and patients' tolerance to procedure.

**WORK INSTRUCTION FOR HANDLING ECG MONITOR**






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- 1) Connect the power cord to the mains AC power is indicated by the AC power – Green Light indicator.
- 2) Attach the parameter module rack to the display module by a cable connected on the left side of the display module.
- 3) Check that the correct patient cable and transducers plugged into the modules, the modules and connectors are color coded to the patient's cable and transducers for easy identification.
- 4) Attach the electrodes, probes, transducers and insert pressure catheters as required for monitoring the patients.
- 5) Connect the electrodes, probes, and transducers to the appropriate modules.
- 6) Monitor the patients ECG rhythm and inform the doctor's if any abnormalities are noted.

## VARIOUS MODULES AVAILABLE ARE:

- ECG Wave form with HR
- SPO2 Wave form with Oxygen Percentage
- NIBP Wave form with sys / dias pressure
- Arterial Wave form and CVP Wave Form – if particular module is connected

## WORK INSTRUCTION FOR HANDLING DEFIBRILLATOR


- 1) It is definite method for termination of variety of potentially total Arrhythmias.
- 2) Keep the AC mode charged when charged, the green light will glow at all times to deliver when no power supply.
- 3) Check the power cord in site.
- 4) Keep the electrodes and jelly at the side of the defibrillator.
- 5) Check for ECG printer paper inside.
- 6) Check that the paddles are in good condition.
- 7) Snap the lead wire into the electrodes.
- 8) Touch and turn manual mode control from Off to On.
- 9) Adjust the volume of voice prompts and QRS, Beeper.



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- 10) Press AED mode with ECG and SpO2 monitor capabilities.
- 11) Adjust the size of ECG waveform displayed in the screen.
- 12) Select the energy to be charged by turning the energy-selecting knob to the required joules of energy.
- 13) Remove paddles simultaneously by pulling them up, apply jelly and keep the paddles on the patients' chest using the anterior apex placement.
- 14) One paddle apex and one on sternum.
- 15) If shock is advised press yellow button in the paddles – denotes shocks with selected joules then keep the paddles on apex and sternum press orange button – denotes which deliver the shock.
- 16) Make sure no one is touching the patient or anything connected to patient, call out clearly and loudly “STAND.CLEAR”.
- 17) ECG rhythm will be printed automatically no need to press mark or strip to get printed ECG after use clean the paddles check for any breakage and charge it by AC mode on.

**WORK INSTRUCTION FOR INSERTION OF CENTRAL VENOUS LINE**


- 1) Explain the procedure if the patient is conscious
- 2) Ensure written consent is obtained from the relative by the doctor.
- 3) Inform the technician to bring the line cart
- 4) Assemble all necessary articles by the bedside.
- 4) Open the tray and give necessary instruments to clean the area.
- 5) Select the catheter as per doctor's advised.
- 6) Assist the doctor to insert the catheter inside the subclavian or internal jugular or femoral vein.
- 7) Make sure all the ports are patent. Keep line patent with hepblood.
- 8) Assist the doctor to secure the lines with the sutures.
- 9) Secure the line with sterile dressing and write insertion date.
- 10) Wash and replace all the articles.



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- 11) Follow aseptic technique throughout the procedure.
- 12) Check X-ray chest to make sure that the catheter is in position.
- 13) Remove the line after 5 to 7 days or as per necessity.
- 14) Follow aseptic techniques always prior to touch the catheter.



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## WORK INSTRUCTION FOR HANDLING NARCOTIC DRUGS (ND)

1. Narcotic drugs are kept under double lock and key system ND cupboard has two containers for used and unused ampoules
2. Narcotic drugs key is only with the senior nurse in charge [or] the supervisor on duty to be handled by other nurses
3. Narcotic drugs are taken over in each shift by [2] senior nurses and supervisor and the same is tallied and signed in the book.
4. When there is a doctor's prescription for Narcotics [2] senior nurses are to check the Do's order and then prepare the drug and give it to the patient following [6] rights.
5. After administration of the drug the broken ampoule is preserved and taken to the pharmacy for replacement by the supervisor
6. Documentation is done both by administered nurse and witnessed nurse.
7. Patient's name, Bed no dosage and I.P. No. is entered in the narcotic book and signed by the [2] nurses.
8. The remaining which is not used for the patient narcotic is discarded in front of the doctor in the running tap water and signature of the Doctor is taken in the narcotic book.






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## WORK INSTRUCTION FOR LUMBAR PUNCTURE

1. Explain the procedure to the patient
2. Ensure written consent is obtained from the relative by the doctor.
3. Inform the incharge for indent of articles and arrange the articles
4. Position the patient in lateral decubitus position to one side of the bed
5. Open the tray
6. Pour solution [AHD 3000] to clean the area
7. Hold the xylocaine solution in an inverted manner for the doctor to give anesthesia. [local]
8. The procedure is done by the Doctor,
9. Keep containers ready for collection of sample
10. Apply dressing and place patient in supine position, replace article
11. Send samples to the appropriate labs with slips raised by the secretary after documenting in the specimen book.
12. Document the procedure, investigation, patient condition and vital signs
13. Pressure extra samples in the fridge with appropriate labeling, date and time of collection

## WORK INSTRUCTION FOR ARTERIAL LINE


1. To monitor Systolic BP and frequent ABG sampling continuously
2. Explain the procedure to the patient / family
3. Ensure written consent is obtained from the relative by the doctor.
4. Arrange the articles by the bedside



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5. Inform the technician to bring the line cart.
6. Position the patient and open the sterile trays first flap and leave the rest for the doctor to open
7. Local anesthesia is administered
8. The leader cath is opened and given to the doctor
9. The radial artery (or) femoral, artery is punctured and the catheter is connected to the N.S. and pressure bag connected
10. The line is protected with sutures
11. Clean the area and central guard or transparent dressing is applied
12. Make the patient in a comfortable position
13. Replace the articles
14. Document the procedure in the master chart

**WORK INSTRUCTION FOR ENDOTRACHEAL EXTUBATION**


1. Wean off sedation
2. Explain the procedure to the patient
3. Arrange all the articles by the bed side and give fowlers position
4. Apply good suctioning orally and through ET for the patient
5. Remove the cotton tape i.e. securing the ET tube
6. Deflate the ET cuff
7. Assist the doctor to slowly pull out the ET tube
8. Check the SPO2 in the monitor continuously
9. Connect the patient to nebulizer mask



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10. Check vital signs
11. Document the same in the master chart and process chart

**WORK INSTRUCTION FOR BLOOD TRANSFUSION**

1. Check the Doctors orders
2. Explain the procedure to the patient / relatives and obtain written consent
3. Reserve the blood - Check the blood grouping and RH typing report of the patient, if not done send the same
4. Check with the blood bank if the blood is ready then fill the blood issue slip and send the housekeeping boy to collect the blood products
5. Get the blood counter checked with the doctor (patient name UHID and blood grouping).
6. Before transfusion identify the patient and check the vital signs
7. Start the transfusion at slow rate and watch for allergic reaction
8. If found to have any adverse reaction stop the transfusion and inform the Doctor / blood bank and fill the blood reaction form and return to the blood bank
9. PRC to be transfused within 4 hrs
10. Platelets and FFP to be transfused within 30 minutes
11. No other infusion should be given through the same line in which blood is being transfused
12. After Transfusion – Check the vitals
13. Document in the master chart in blood product column and nurses chart
14. Keep the blood bag card in the blue folder

**WORK INSTRUCTION FOR CARE OF CENTRAL LINE**


1. Use connectors as appropriate.



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2. Wash hands, apply hand rub, wear gloves before touching the central line [each time]
3. Clean the port with alcohol swab
4. Use transparent dressing always to inspect oozing or hematoma. If you notice anything abnormal, report to CCU doctor immediately.
5. Note date and time of dressing change. Change dressing every 48 hours, less than that when the dressing gets soiled
6. Always check whether the line is patent before using
7. While using multi-lumen catheters, save a lumen for TPN if at all possible
8. Use dedicated line for infusing TPN at all times.

**WORK INSTRUCTION FOR THROMBOLYSIS**

1. Explain procedure to the patient and attenders and written consent is obtained by the doctors
2. As per the Doctors order the thrombolytic is selected
3. Premeditation if any according to Doctors advise
4. The diluted medicine is given according to the Doctors order
5. During the thrombolysis vitals signs to be checked frequently
6. The ECG monitor should be watched for arrhythmias
7. Document the procedure in the master chart.
8. Post thrombolysis - watch for symptoms of bleeding.

**WORK INSTRUCTION FOR TRANSFER OF PATIENT TO WARD**

1. Check the primary consultants order
2. Inform the admission department / secretary / incharge nurse
3. Inform the attender to go the admission counter





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4. Return all the stop medications and unused articles to the pharmacy
5. Check if all the documents are completed and the reports are collected
6. Check in the admission counter if room is available
7. Check with the house keeping whether the room is ready for patients
8. Inform the concerned ward sister for the arrangement of all the articles necessary before shifting
9. Inform the family members the room number and ward
10. Shift the patient to the ward with the family members
11. Make the patient comfortable in the room
12. Hand over the patients, medication and the case file to the ward nurse
13. Document the transfer of patient to the ward in the master chart

**WORK INSTRUCTIONS FOR COLLECTING BLOOD**

**(AEROBIC & ANAEROBIC CULTURE)**


1. Bring the bottles top room temperature.
2. Label the bottles with patient information.
3. Clean the venipuncture site with 70% alcohol and 5 – 10% povidone iodine.
4. Remove plastic flip – top from culture bottle and disinfectant with alcohol.
5. Draw 10ml blood from the patient and inoculate into bottle using aseptic technique.
6. In anaerobic culture is requested along with aerobic culture draw 20ml of blood and inoculate 10ml into anaerobic bottle first to prevent the transfer of oxygen from the syringe into the bottle, followed by the aerobic bottle.
7. If more than one set of blood cultures are requested then draw blood from separate sites for each culture set.
8. Give an interval of ½ - 1 hour between the collections.
9. Do not stick any label on the bottle barcode.



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<p>10. Transport the inoculated bottles to the lab as soon as possible.</p> <p>11. If there is any delay, keep the bottles at room temperature or inside the incubator (If available).</p> <p>12. Do not refrigerator the bottles.</p> <p><b>WORK INSTRUCTION TO TRANSFER THE PATIENT TO CRITICAL CARE AREAS (ICU, OR)</b></p> <ol style="list-style-type: none"><li>1) Receive the patient in Emergency</li><li>2) Stabilize the patient</li><li>3) Carry out the EMO's instructions.</li><li>4) Discuss to the primary consultant regarding patient condition.</li><li>5) Inform the relatives regarding transferring the patient.</li><li>6) Get the consent for Procedure/Surgery by the physician</li><li>7) Arrange for the blood products if needed.</li><li>8) Make the transfer request in the system</li><li>9) Confirm the bed in case of transferring to ICU.</li><li>10) Inform the particular unit nurse regarding shifting</li><li>11) Fill the Transfer Information Sheet / Pre op check list before transferring</li><li>12) Attach the transport monitor</li><li>13) Use the portable O2 cylinder (if needed)for shifting</li><li>14) Use the patient lift for shifting.</li><li>15) Shift the patient to the respective areas.</li><li>16) Hand over to the respective area nurse.</li></ol> <p><b>WORK INSTRUCTION TO TRANSFER THE PATIENT TO WARDS</b></p> <ol style="list-style-type: none"><li>1. Receive the patient in Emergency.</li><li>2. Stabilize the patient.</li><li>3. Carry out the EMO's instructions.</li><li>4. Discuss to the primary consultant regarding patient condition.</li></ol>			



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5. Inform the relatives regarding transferring the patient to the ward.
6. Make the transfer request in the system
7. Confirm the bed in the respective ward.
8. Fill the Transfer Information Sheet.
9. Attach the transport monitor
10. Use the portable O2 cylinder if needed for shifting
11. Use the patient lift for shifting.
12. Shift the patient to the respective ward.
13. Attach the monitor if needed.
14. Hand over to the respective ward nurse.

## WORKING PROTOCOLS

### PROTOCOL FOR EMERGENCY DEPARTMENT


1. Assessment of patients (ABCDE)
2. Check the vitals
3. Stabilize the patient
4. Initiate investigation
5. Investigation sent for emergency analysis
6. Monitor / Observation of the Patient
7. Initiate appropriate treatment
8. Inform the concerned Department / Consultant



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9. Brief the patient attenders about patient's condition in a courteous manner
10. Patients who can be discharged off with a prescription is sent as OP with discharge summary / prescription.
11. Patient needed to be shifted towards Wards/ ICU/ OR are shifted to the respective areas
12. Patient who is needing admission and further management and who are not willing for admission are given DAMA

## PROTOCOL FOR MLC

1. Assessment of Patient (ABCDE)
2. Check the vitals
3. Record the external injury at the time of entry
4. Record the persons who brought the patient and their relationship
5. Record the exact time of entry
6. Record the person who gives the information regarding the event (place, date & time)
7. MLC Data sheet to be filled by patient / attendant for documentation
8. Record the GCS
9. Medico legal entry made in the A-R & PIR given to police through Security officer
10. Blood, urine and gastric aspirate samples immediately and sent to Forensic Medicine department in case of poisoning / unconscious patient( if appropriate)
11. Inform / refer concerned department / consultants
12. Based on summons by court, attend court session for expert witness
13. In case of MLC death hand over the body to PMR reporting






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## PROTOCOL FOR BROUGHT DEAD - MLC

1. If the deceased earlier treated with KIMS is consistent with the demise death, death certificate is issued in accordance with the respective consultant.
2. If the deceased earlier treated with KIMS is not consistent with demise death, death certificate is not issued
3. Death certificate is not issued if the patient is not registered under in KIMS ,opt for PMR to ascertain the cause of death.
4. MLC dead body to be handed over to the police for PMR

## PROTOCOL FOR BROUGHT DEAD PATIENTS – NON MLC

1. If a person is brought dead to the Emergency and if the deceased is a registered patient for some time with the KIMS and is presently undergoing treatment on a regular basis from one of the consultants, the Death Certificate is issued after ascertaining the cause of Death corresponding to the pre-existing condition or in the event of reasonable doubt DC is issued with the immediate cause of death to be ascertained by PM (POST MORTEM).
2. If the deceased is a registered patient of the KIMS,had consulted a consultant only a few months then the consultant or his team should be contacted and asked for the cause of death and DC is issued.
3. If the deceased has never attended the KIMS and had been brought dead, then “NO” DC is issued. If the next of kin or relatives insist, it should be clearly explained to them that the Death Certificate can only be issued after a post mortem examination and if the relatives agree, a standard MLC sheet should be prepared and the police notified.



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In the above said column for “cause of the death” – the phrase “to be ascertained after the PM” should be written. In similar cases the “Immediate cause of death” is given by the Government doctor (Pathologist) performing the PM.

### 3.3 Triaging

- 3.3.1 Through regular modules, held for both Doctors and nursing staff, the staff shall be trained in the technique of Triaging
- 3.3.2 The policy of prioritizing patients is based on the urgency of their individual need for medical care.
- 3.3.3 Under normal working conditions, patients shall be triaged and allotted beds in the ER as per the urgency of their medical needs, using the ESI scores.
- 3.3.4 During external disasters (Code Red) patients shall be triaged as Red, Yellow, Green and Black according to the following criteria:

#### **Red**

First Priority, Most urgent, Life-threatening shock or hypoxia is present or imminent, but patient can be stabilized and, if given immediate care, shall probably survive.

#### **Examples Red:**


- Compromised airway
- Respiratory arrest or severe respiratory distress or SpO<sub>2</sub> < 90
- Cardiac arrest
- Hypotension (BP < 90 mm Hg)
- Trauma patient who is unresponsive or requires immediate fluid resuscitation
- Overdose with a respiratory rate of 6.
- Severe bradycardia or tachycardia with signs of hypo-perfusion.
- Chest pain, pale, diaphoretic, blood pressure 70/palp.
- Anaphylactic reaction.
- Baby that is flaccid.
- Hypoglycemia with a change in mental status



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**Yellow**

Second Priority, Urgent, Injuries have systemic implications or effects, but patient is not yet in life threatening shock or hypoxia; although systemic decline shall ensue and given appropriate care, patient seems able to withstand a 45 to 60 minute wait without immediate risk.

**Examples of Yellow:** Following diagnosis with stable blood pressure. Tachycardia / dyspnea may or may not be present

- Acute abdominal pain
- Gastro-intestinal bleeding
- Acute arterial occlusion
- Fever in immuno-compromised patients
- Testicular torsion
- Acute renal failure
- Ectopic pregnancy
- Spontaneous abortion
- Rule out meningitis
- Acute Cerebro-vascular accident
- Vomiting / diarrhea in children
- Acute asthmatic attack
- Pleural effusion
- Spontaneous pneumothorax
- Road traffic accident with transient loss of consciousness

**Green**

Third Priority, Non-urgent, Injuries are localized and without immediate systemic implications; with a minimum of care, patient generally does not deteriorate for upto several hours.

**Black**

Dead, No distinction can be made between clinical and biologic death in a mass casualty incident, and any unresponsive patient who has no spontaneous ventilation or circulation is classified as dead.

**The above color coded ID Bands shall be used during a Code Red.**

**3.4 Transfer of patients for Diagnostic tests / other hospitals**






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	<b>KIMS</b>		Doc.	ENABH/HCO/KIMS/COP/1-2
	<b>CHINNAKOLAMBAKKAM</b>		Issue No.	01
	<b>COP:1-2:POLICIES &amp; PROCEDURES ON UNIFORM CARE OF PATIENTS &amp; EMERGENCY CARE</b>		Rev. No	00
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3.4.1 To aid clinical diagnosis, samples are collected and sent to various labs for analysis and reporting. Reports shall be sent back to the emergency on a priority basis.

3.4.2 Screening and diagnostic tests shall be recommended and carried out as and when required in the Triage, keeping in mind the patient's immediate medical needs, for example, in the case of a head injury, the CMO shall have to make a quick appraisal of the criticality of the case and recommend an X-Ray or a CT Scan if he so decides. Tests are also carried out in concurrence with the consultant for arriving at the clinical diagnosis.

3.4.3 Patients are not to be transferred or admitted or discharged without the CMO reading the reports of all tests recommended by him or the consultant in the Triage, unless the critical nature of a patient's condition warrants immediate transfer to the operating theater or a critical care unit.

3.4.4 Entry to or transfer to critical care units shall follow the admission criteria of the ICUs as detailed in the ICU Manual.

3.4.5 Patient information is transferred between CMOs, nurses and other staff – whether concerning transfer, transport or medical condition- from one shift to the next through detailed handovers, which include written or verbal communication.

3.4.6 The information includes medical status of the patient, the treating doctor's comments, the CMO's notes, and special information like transport and transfer information, discharge information, etc.

3.4.7 When a transfer within the hospital is done, the patient's condition is communicated to the consultant/ treating doctor / registrar / duty doctor / floor doctor of the area where the patient is being transferred to. The medical condition of the patient, his medical care requirements and the reason for his transfer is communicated to the concerned person by the CMO.

3.4.8 Transfer to another facility on patient and family request or non-availability of resources like beds etc, shall follow policies on transfer of stable and unstable patients.

**POLICY ON ISOLATION**

**POLICY FOR MRSA**

If an index case is identified from an MRSA (Methicillin-resistant Staphylococcus aureus) positive clinical specimen, then that patient is screened; nose, perineum and throat plus all wounds / skin lesions; a CSV if catheterized and a sputum specimen if expectorating.






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MRSA protocol is commenced of daily washes of stelliccept or microshield body wash and mupirocin nasal ointment three times daily. The patient will be placed under contact isolation and the bed space is cleaned as per terminal cleaning recommendations. Repeat screening is carried out after 5 days and if negative the precautions are relaxed.

**POLICY FOR PATIENTS SUSPECTED TO HAVE TUBERCULOSIS**

Any patient admitted to the hospital who is suspected to have open pulmonary tuberculosis is notified to the infection control nurse.

Each patient is assessed on an individual basis in consultation with the infectious disease physician to decide on merits for respiratory isolation. Based on the assessment the patient may be subject to respiratory isolation till results of sputum tests are available.

**QUALITY PALN**

Input


1. New Patient
2. Already registered patients
3. Referred patients
4. Pickup by Ambulance
5. Walk in / Brought in Patients
6. Sent from OPD



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## Activities


1. Receiving the patient in the bed(Triage)
2. Patient assessment,
  - Stabilization
  - Monitoring / Observation
  - Informing the treatment
3. Investigation to be carried out on EMR basis
4. Information to all concerned Consultants / Departments on EMR basis
5. To coordinate with Network system
6. Filing
  - Patient Information Record for MLCs
  - Accident Reporting
7. To attend court session as expert witness for MLC's
8. In case of death of MLC patients, body will be handed over to police for Postmortem
9. Issue death certificate (as appropriate)



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	<p align="center"><b>KIMS</b></p> <p align="center"><b>CHINNAKOLAMBAKKAM</b></p> <p align="center"><b>COP:1-2:POLICIES &amp; PROCEDURES ON UNIFORM CARE OF PATIENTS &amp; EMERGENCY CARE</b></p>	Doc.	ENABH/HCO/KIMS/COP/1-2
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<p align="center"><b>Output</b></p> <ol style="list-style-type: none"> <li>1. Treated and sent as outpatient</li> <li>2. Admission</li> <li>3. Stabilization &amp; CCU</li> <li>4. Operation Room</li> <li>5. Brought dead - as per protocol</li> <li>6. Discharge Against Medical Advice/ Discharge at request</li> </ol>	<p align="center"><b>Control Points</b></p> <ol style="list-style-type: none"> <li>1. Case file – History and findings on admission</li> <li>2. Doctors endorsement in registration / admission</li> <li>3. Referral sheets</li> <li>4. Progress Note</li> <li>5. Accident register and Police intimation register</li> <li>6. Endorsement in the respective clinical charge</li> <li>7. Emergency admission / registration record</li> <li>8. Ambulance movement register</li> <li>9. DAMA Consent form</li> <li>10. High risk ambulance transfer consent form</li> <li>11. Consent and premed form for surgery</li> <li>12. Death Certificate – Corporation intimation through MRD</li> <li>13. Blood Transfusion forms</li> <li>14. Patient Clinical register</li> </ol>
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<p><i>Responsibility</i></p> <ol style="list-style-type: none"> <li>1. Consultant</li> <li>2. Medical Officers</li> <li>3. Nursing Officer/EMS</li> <li>4. Charge Nurse</li> <li>5. Staff Nurse</li> <li>6. Secretary</li> <li>7. Attender</li> </ol>
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**3.5 Ambulance Services**



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- The hospital shall provide a well-equipped ambulance with emergency medicines and basic life support equipments to facilitate efficient and timely transportation of a patient to and from the hospital under the care of trained nursing staff / doctors.
- The ambulance is designed and is appropriately equipped to respond to medical emergencies.
- Checklists of all equipments and emergency medication shall be checked on a daily basis.
- The hospital shall ensure that the ambulance is manned by trained personnel.

### 3.5.1 PROCEDURE:

#### 3.5.1.1 Procedure on Ambulance services

- 1) Hospital's ambulance is equipped to ensure smooth, safe and efficient transfer of patient to and from a Health Care Facility.
- 2) Hospital's ambulance shall be available at the hospital for meeting any emergencies. The ambulance drivers and the drivers on call are provided with cell phones. Drivers shall promptly respond when called upon from the hospital or from the emergency site.
- 3) If there is any delay in reaching the site, the reason shall be mentioned in "Ambulance register".
- 4) In the event of these ambulances being busy, the drivers, front office staff, security staff on duty must call for help from other private ambulance services.
- 5) Before transporting the patient, hospital shall ensure that appropriate communication regarding the referral of patient is given to the receiving hospital.
- 6) The complete address regarding the location of referring HCF(health care facility), demographic data of patient, his/her illness and the complete address of referral HCF must be properly communicated to the staff of that ambulance service.
- 7) A transport ventilator shall be made available for use in special situations. Intubated patients connected to ventilator must be transported accompanied by a doctor and/or trained staff nurse.






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8) Designated clinical staff if required shall accompany the patient during the transfer and record in the patient file all care and treatment administered during transfer.

9) Names of staff accompanying the patient shall be recorded in the patient file.

10) Emergency drugs shall be available in the ambulance and ensured that no expired drugs are found available.

11) There shall be a checklist for emergency medicines and equipment that need to be checked in every shift by a staff nurse; in case of any equipment repairs, the same is brought to the notice of relevant bio-medical engineer for rectification. (Ref: Checklist for ambulance).

12) The emergency drugs shall be replenished from time to time.

13) Adequate consumables and drinking water shall be made available in the ambulance.

14) Availability of adequate number of medical gases cylinder (oxygen cylinder with regulator) shall be ensured.

15) The treating doctor shall also ensure that the ambulance is equipped to respond to medical emergencies as per the need of the patient.

16) While transporting a patient to another destination, if the medical condition of that patient becomes very serious, the driver shall take the ambulance to the nearest Hospital for immediate medical attention to that patient. This shall also be informed to the hospital and concerned doctors.

17) The hospital shall ensure that a designated person from the facility will coordinate this service effectively and ensure the timely transportation of the patients by ambulance in case of emergency.

18) The ambulance service contact numbers shall be displayed in front of the reception counter as well as other appropriate locations in the facility.


19) Treatment given to the patient from the referring/transporting HCF (health care facility) including demographic data of patient, diagnosis, reason for referral, medications administered, diagnostic test results, and all available procedural and



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therapeutic interventions must accompany with patient/guardian/relative/paramedic staff while transporting the patient through an ambulance.

- 20) Qualified clinical / paramedical staff must accompany the patient in an ambulance while transportation to the receiving facility.
- 21) It is the responsibility of management and staff of the referring / transporting hospital to check that the ambulance is well equipped and all equipments are functional to respond to medical emergencies during the patient transportation in a stipulated time frequency.
- 22) The referring hospital management will be responsible for any delay (if happened) in transporting the patient to the referred health care facility.
- 23) After each patient transfer by ambulance, it is the responsibility of the driver/In Charge Nurse to dispose of all used disposable and contaminated items and replace them with new.
- 24) All other items including emergency medicines should also be replaced.
- 25) The treating doctor shall stabilize the patient and ensure that the treatment given to the patient at the facility is documented and duly named, signed, dated and timed.
- 26) The necessary document shall be sent along with the patient at the time of transportation to the referred facility.

**3.5.1.2 List of equipments available in the ambulance:**


- 1) O<sub>2</sub> filled cylinder (small) with flow meter.
- 2) Stethoscope.
- 3) Ambu bag with mask- 3 sizes
- 4) Suction apparatus
- 5) Suction catheter.
- 6) Laryngoscope with blade
- 7) Glucometer
- 8) BP (Blood Pressure) apparatus
- 9) ET (Endotracheal tube) Stillett



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## POLICY ON RATIONAL USE OF BLOOD & BLOOD PRODUCTS

### 1.0 PURPOSE:

To define policies for rational use of blood and blood products.

### 2.0 SCOPE:

All the blood and blood products transfusion services.

### 3.0 RESPONSIBILITY:

Doctors,  
Blood bank staff  
Nursing staff  
Blood transfusion committee

### 4.0 ABBREVIATION:

NABH : National Accreditation Board for Hospitals and Healthcare providers  
COP : Care of Patients  
ACLS : Advanced cardiac life support  
BLS : Basic life support  
NACO : National Aids Control Organisation  
NOK : Next Of Kin  
UHID : Unique identification  
WHO : World Health Organisation

### 5.0 DEFINITION:

### 6.0 REFERENCE:

- 6.1 NABH: Pre Accreditation Entry Level Standards for Hospitals, First Edition, April 2014.
- 6.2 COP.3: Documented procedures define rational use of blood and blood products.

### 7.0 POLICY:






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7.1 All activities related to the transfusion of blood should be in accordance with the Drugs and Cosmetics Act, 1945 issued by the Government of India., and NACO guide lines.

7.2 A blood transfusion has the potential to be a hazardous and hence a transfusion should only be given if the potential clinical benefits outweigh the potential risks to the patients.

7.3 The blood and blood components are processed and issued only in the licensed blood bank and by trained and authorized personnel. The process and monitoring of the transfusion reaction process will be done only by nursing staff and medical officers authorized and suitably trained.

7.4 Without any requisition from medical staff, blood bag or any type of component shall not be issued to the recipient

7.5 At the time of transfusion consent for transfusion shall be obtained by the staff nurse after explaining the benefits and the risks involved in transfusion.

7.6 All transfusion processes will be monitored for adverse reactions, both hemolytic and non-hemolytic and all adverse outcomes are suitably documented and appropriately treated. All blood bags issued by the blood bank are traceable and such records are maintained by blood bank medical officer

7.7 Any type of blood bag once issued will not be accepted if returned to the Blood bank within 30 minutes.

7.8 On emergency blood will be issued after cross matching

7.9 All HIV, Hepatitis positive samples of blood shall be discarded as per Biomedical waste handling rules.

7.10 **Applicable Laws And Regulations:**

- o Drugs and Cosmetics Rules, 1945 Part X B and XII B.
- o Standards for Blood Banks & Blood Transfusion Services, NACO 2007


7.11 **TRAINING OF STAFF:**



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○ Hospital transfusion committee in coordination with HR department is responsible for training the staff on the policies of blood transfusion.

○ All staff in blood bank shall be trained in Blood transfusion medicine periodically.

**7.12 Mode Of Training:**

This policy document is available with Blood Bank, all the nursing stations, critical care units, operation theaters, nursing superintendent for the staff to be aware of. Additionally, the staff is trained through sessions periodically as defined below:

- Consultants- Orientation program once a year
- Registrars / residents / Duty Doctors -once in every 6 months
- Nursing staff-once in every 6 months

**7.13 Analyzing Transfusion Reactions:**

The policy documents details the management of transfusion reactions, the data is compiled by the Blood Bank Officer and is analyzed during transfusion committee meeting conducted quarterly. The committee has the authority to initiate the corrective and preventive actions along with the responsible person.

**8.0 PROCEDURE:**

**8.1 Blood and blood products used are as follows :**

- a) Fresh blood products: refers to red cell products (including autologous and directed donations), platelet products, fresh frozen plasma (FFP) and cryoprecipitate.
- b) Processed blood products: refers to products such as red blood cells, plasma, prothrombin, and coagulation factors.

**8.2** Treating doctors shall be responsible for ensuring the appropriateness of each blood / blood product they prescribe for an individual patient.

**8.3** Laboratory Supervisor shall be responsible for obtaining consent for donation and transfusion of blood and blood products.



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8.4 Treating doctors shall document the indication and outcome of transfusion in the patient's medical record.

8.5 Qualified and experienced staff nurse shall administer blood and blood products in accordance with the policy.

8.6 All blood and blood products must be checked by assigned staff prior to administration.

8.7 Before procurement the patient's blood group shall be checked in the hospital lab Cross matching shall be carried out at the Laboratory.

8.8 On receipt of the blood in the hospital (OT, ICU, Ward etc.) it shall be verified with labels and double checked by the duty nursing staff to ensure that correct blood with the correct group is used for the specific patient.

8.9 Test results are also checked.

8.10 Blood transfusion procedure shall be started only by a trained staff nurse in accordance the principles of right medications

8.11 Patient shall be constantly monitored by the staff nurses.

8.12 Staff administering blood and blood products shall havethe responsibility to observe and treat adverse reactions to blood products. All errors, 'near misses' and suspected adverse reactions shall be documented in the patient medical record and reported.

8.13 In case any adverse reaction is noticed the procedure shall be stopped and the treating doctor shall be informed immediately.

8.14 The patient is reassured and made comfortable during this period.

8.15 The treatment may be resumed after receiving further instructions from the doctor or when no further reactions are noticed.

8.16 The reason for transfusion should be explained to the patient or his relatives.

8.17 Staffs who are detailed to carry out the blood transfusion shall be trained to carry out transfusion procedures. **Lab Supervisor shall give** appropriate education to staff in relation to the handling and use of blood products. **All clinical staff involved in any transfusion procedures (e.g. prescribing, checking or administration)** is responsible for maintaining and updating their knowledge and practice.






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8.18 She / he shall remain with the patient till the whole procedure is completed. In case of reactions, the reason for it has to be analyzed which enables to take corrective action

8.19 **Nursing staff shall** check the blood and blood products and blood transfusion set attached to the patient under the direct supervision of the Nursing Supervisor. **Nurses shall be** responsible for the correct and safe administration of blood and blood products in accordance with policy.

8.20 **Medical staff shall be** responsible for the monitoring of the patient during blood transfusion.

8.21 The blood transfusion committee shall be intimated in case of any serious reaction taking place which results in stopping or postponing the transfusion.

8.22 Leftover blood if any or the empty plastic blood container needle and tubing shall be treated as biomedical waste and disposed off according to BMW management rules, 1998 and as per the Infection Control Policy of the organisation.

8.23 The department staff is educated through frequent training programmes and is strictly monitored on the adherence to best clinical practices and compliance to the operating procedures.

**9.0 Criteria for transfusion of Blood and Blood products**

**RBC Transfusion**

- HB  $\leq$  7g/dl
- Acute active coronary syndromes with Hb $\leq$  8g/dl.
- Adult critical care medical and surgical in-patients treated for sepsis during the First 6 hours of resuscitation with an Hb $\leq$  10g/dl.
- Patients with active and clinically significant bleeding
- Acute active upper Gastrointestinal bleeding

**Platelet Transfusion:**

- Severe Thrombocytopenia
- Patient with Temperature  $>$  or equal to  $38^{\circ}\text{C}$  or hemorrhage with platelet count less than 10000






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- Patient on heparin , has coagulopathy
- Anatomic lesion that are likely to bleed
- Bleeding patients or have a scheduled invasive procedure within the next 4 hours of platelet counts less than 5000.

**Plasma Transfusion:**

- Active bleeding in the setting of multiple coagulation factor deficiencies ( massive transfusion, disseminated intravascular coagulation)
- Emergency reversal of warfin in a patient with active bleeding where Prothrombin complex concentrate with adequate levels of factor VII is not available.
- Replacement of fluid in performing the plasma exchange
- Treatment of Thrombotic and Thrombocytopenic purpura.
- Elevated INR before a planned surgery or invasive procedure
- Hemorrhagic shock.

**10. Procedure for Blood and Blood Product Transfusion:**

**Red Blood Cell Transfusions**

A patient suffering from an iron deficiency or anemia, a condition where the body does not have enough red blood cells, may receive a Red Blood Cell Transfusion. This type of transfusion increases a patient’s hemoglobin and iron levels, while improving the amount of oxygen in the body.

**Platelet Transfusion**

Platelets are a component of blood that stops the body from bleeding. Often patients suffering from leukemia, or other types of cancer, have lower platelet counts as a side effect of their chemotherapy treatments. Patients who have illnesses that prevent the body from making enough platelets have to get regular transfusions to stay healthy.

**Plasma Transfusion**


Plasma is the liquid part of the body’s blood. It contains important proteins and other substances crucial to one’s overall health. Plasma transfusions are used for patients with liver failure, severe infections, and serious burns.



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### Equipment and Supplies

- **All blood components must be filtered** during administration.
- A blood component administration set containing an in-line blood filter is recommended. Either a "Y-Type" administration set or a single line set may be used.
- An add-on filter, such as a leukocyte reduction filter, may be used when the component was not leukocyte-reduced by the blood supplier.
- Because of the large number of filters available, the instructions for use on the package or on the product insert should be read to determine priming instructions and the maximum number of units that may be administered using the filter.

### Intravenous Solutions

- Only isotonic saline (0.9%) is recommended for use with blood components.
- Other isotonic electrolyte solutions that have been approved by the FDA for this purpose may be used.
- Other commonly used intravenous solutions will cause varying degrees of difficulty when mixed with red cells. For example, 5% dextrose in water will hemolyze red cells. Intravenous solutions containing calcium, such as Lactated Ringer's solution, can cause clots to form in blood.
- Prior to blood transfusion, completely flush incompatible intravenous solutions and drugs from the blood administration set with isotonic saline.

### Component Infusion Sets

Component and Platelet Administration sets with shorter tubing to be used for administration.

### Leukocyte-Reduction Filters

- With the exception of autologous units, the components stocked by the Blood Bank are leukocyte-reduced by the blood supplier.
- In rare circumstances, bedside leukocyte-reduction filters may be required.
- Granulocyte, hematopoietic progenitor cells, and mononuclear cell transfusions must NOT be administered through these white cell removal filters.
- Follow the priming instructions on the product package.


### Pressure Infusion Devices



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<p>Follow the filter, port or catheter manufacturer's instructions regarding the use of pressure infusion devices. The flow through some blood filters may be compromised and some catheters may cause catheter wall rupture if a pressure infusion device is used.</p> <ul style="list-style-type: none"><li>• Equipment for transfusion must be used in accordance with the manufacturer's instructions for use and quality control of the instrument.</li><li>• Do not use equipment that does not have a current Biomedical Engineering tag indicating it has been tested for appropriate function and safety.</li><li>• Cuffs for pressure infusion may be used if care is taken not to exceed the designated pressure.</li></ul> <p><b>Blood Warmers</b> Blood warmers may be used as long as the device has a temperature alarm and visible temperature monitor. Blood warming devices are most appropriate for massive and rapid blood replacement, such as exchange transfusion of the newborn.</p> <p><b>Patient Instructions and Preparation</b> Blood Bank personnel will notify patient unit personnel by telephone when ordered blood is ready for transfusion.</p> <p><b>Informed Consent</b></p> <ul style="list-style-type: none"><li>○ Informed consent for blood transfusion is a process in which the patient is informed of the medical indications for the transfusion, the possible risks, the possible benefits, the alternatives, and the possible consequences of not receiving the transfusion.</li><li>○ Informed consent may be obtained by a physician, a nurse, or a physician extender who is knowledgeable about blood transfusion and the patient's condition so as to be able to explain the elements of informed consent above.</li><li>○ The <b>risks of transfusion</b>, including adverse symptoms and alternatives to homologous (allogeneic) transfusion, must be discussed with the patient well before the transfusion.</li><li>○ The patient is then given a choice to accept or decline transfusion.</li><li>○ Consent should be obtained sufficiently in advance of the transfusion that the patient can truly understand what is said and have sufficient time to make a choice.</li><li>○ Consent should be documented in the medical chart using the form "Consent to Receive Blood Transfusion".</li><li>○ A single informed consent may cover many transfusions if they are part of a single course of treatment.</li></ul>			






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- It may be advisable, though, to **obtain a new consent when there is a significant change** in the patient's care status, such as a transfer for care to another service, an inpatient admission, or an outpatient transfusion.
- In **emergency situations** the physician ordering the transfusion must make a reasonable judgment that the patient would accept the transfusion. Transfusion should not be delayed in a life-threatening situation if it is likely that the patient would agree to transfusion. After the event, the circumstances of the transfusion decision should be documented in the medical chart.

**Refusal of Blood Transfusion**

- The patient's refusal of transfusion should be documented in the case sheet and witness signature to be obtained.

**Post Transfusion Instructions to the Patient**

- Outpatients or patients who will be leaving the hospital within one week of transfusion should be given written instructions regarding delayed transfusion reactions.
- The patient handout "Post-Transfusion Instructions for the Patient" may be used for this purpose.

**Release and Transport of Blood Components**

To reduce the potential for waste of the component, do the following before requesting that a blood component be issued from the Blood Bank:

- verify the physician's order for the product, volume and transfusion
- administer any pre-transfusion medication
- record the patient's vital signs
- initiate or verify patency of an intravenous line

**Transport of Blood Components**

- Transport personnel must present to Blood Bank personnel written notification indicating following:

- intended blood recipient's full name and CPI number






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2	blood component ordered														
3	number of units required														
	<ul style="list-style-type: none"><li>Blood components will be released to physicians and registered nurses on the basis of an oral request stating this information.</li><li>Patient care units <b>Without a Blood Refrigerator</b>: Only one unit of blood will be released at a time for a patient unless the patient has two intravenous lines in place that allow for the simultaneous administration of two components.</li><li>Patient Care Units <b>With a Blood Refrigerator</b>: Multiple blood units will be released only to patient care units with monitored blood refrigerators.</li></ul>														
	<b>Receipt of Blood Components</b> The person receiving the blood being transported or opening the tube at the receiving location must immediately upon receipt														
	<table border="1"><thead><tr><th>Step</th><th>Action</th></tr></thead><tbody><tr><td>1</td><td>Verify<ul style="list-style-type: none"><li>Product is designated for a patient at the receiving location</li><li>Name and bag no number recorded on the Transfusion Record Form attached to the unit correspond with that of the intended recipient</li><li>Unit has a normal appearance.</li></ul></td></tr><tr><td>2</td><td>The person receiving the blood component should:<ul style="list-style-type: none"><li>Record the date and time that the blood was received.</li><li>Sign the Blood Delivery form</li></ul></td></tr><tr><td>3</td><td>Return the signed and dated Blood Delivery Form to the Blood Bank through mail.</td></tr><tr><td>4</td><td>Verify that red blood cells and plasma components were received within 30 minutes of the dispensed time stamp on the form.</td></tr><tr><td></td><td>If Then</td></tr></tbody></table>	Step	Action	1	Verify <ul style="list-style-type: none"><li>Product is designated for a patient at the receiving location</li><li>Name and bag no number recorded on the Transfusion Record Form attached to the unit correspond with that of the intended recipient</li><li>Unit has a normal appearance.</li></ul>	2	The person receiving the blood component should: <ul style="list-style-type: none"><li>Record the date and time that the blood was received.</li><li>Sign the Blood Delivery form</li></ul>	3	Return the signed and dated Blood Delivery Form to the Blood Bank through mail.	4	Verify that red blood cells and plasma components were received within 30 minutes of the dispensed time stamp on the form.		If Then		
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<p>If more than 30 minutes have elapsed since the time stamp on the Blood Delivery Form</p> <p>The Red Blood Cells or plasma may be used for <b>immediate transfusion that will be completed within 4 hours of the time stamp</b>, transfuse the component.</p> <p><b>Do not store Red Blood Cells and plasma</b> that has been out of refrigeration for more than 30 minutes in patient care unit Blood Refrigerators.</p> <p>If the blood component is not needed for immediate transfusion, return the Red Blood Cells or plasma to the blood bank for proper disposal.</p> <ul style="list-style-type: none"><li>• Red Blood Cell and plasma components must be stored between 1 and 6 C and the temperature during transport cannot exceed 10 C. Refrigerated blood components will warm to above 10 C in approximately 30 minutes after removal from refrigeration.</li><li>• Platelets and Cryoprecipitate are stored at room temperature. These components may be used until the outdate time on the label.</li><li>• Consult with the Blood Bank if there is any question about the suitability or identification of a blood component.</li></ul> <p><b>Special Labels</b></p> <ul style="list-style-type: none"><li>○ When blood is released for transfusion under unusual circumstances a special notation will be indicated on the Transfusion Record Form.</li><li>○ This information will often suggest to physicians and nurses that particular caution must be exercised during transfusion, and that the blood transfusion should be terminated at the first sign of an untoward reaction.</li><li>○ Personnel initiating the transfusion who have questions concerning the significance of this information should contact the Blood Bank.</li></ul> <p><b>IMMEDIATELY PRIOR TO BLOOD TRANSFUSION</b> <b>Pre-transfusion Vital Sign Documentation</b></p> <ul style="list-style-type: none"><li>○ To provide a baseline, record the patient's blood pressure, pulse, respirations and temperature in the chart or on the transfusion record</li></ul>			



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<p>form</p> <p>If a patient is febrile, consideration should be given to postponement of blood transfusion, since the fever may mask the development of a febrile reaction to the blood component itself.</p> <ul style="list-style-type: none"><li>• Verify physician's orders for transfusion and any that any pretransfusion medications have been administered</li><li>• Perform bedside verification of patient and component Using the</li><li>• labels on the bag,</li><li>• the Transfusion Record Form and</li></ul> <p>the patients attached positive patient identifier.</p> <p><b><i>These steps must never be bypassed.</i></b></p> <ol style="list-style-type: none"><li>1. Ask the patient to state his or her name. Verify patient and component identification information.</li><li>2. Verify the blood type, donor number, component name</li><li>3. Verify compatibility: a compatibility chart is on the back inside cover of this booklet.</li><li>4. Verify the product is not outdated</li><li>5. Sign the Transfusion Record Form before blood transfusion is initiated.</li><li>6. The person who hangs the blood must record the date and time the transfusion was started</li><li>7. Record the date, time and component and unit number on the appropriate sheet on the patient's chart. Refer to unit policy and procedures.</li></ol> <p><b><i>DO NOT START the transfusion if there is any discrepancy.</i></b> <b><i>Contact the Blood Bank.</i></b></p> <p><b>Initiating the Transfusion</b></p> <ul style="list-style-type: none"><li>○ Immediately before transfusion, mix the unit of blood thoroughly by gentle inversion.</li><li>○ Follow the manufacturer's instruction for the use of special filters and</li></ul>			






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ancillary devices. Additional administration instructions for selected components are printed at the end of this chapter and are available upon request from the Blood Bank.

- If any part of the unit is transfused, the unit is considered transfused.

### Flow Rates

Initial Flow Rate	Slowly at no more 1 mL/minute to allow for recognition of an acute adverse reaction. Proportionately smaller volume for pediatric patients.
Standard Flow Rate – Adults	If no reaction occurs in the first 15 minutes, the rate may be increased to 4 mL/minute
Pediatrics	10-20 mL/kg over 30-60 minutes
Usual Infusion time	Red Blood Cells: two hours unless the patient can tolerate only gradual expansion of the intravascular volume  Platelets, plasma and cryoprecipitate: 10ml per minute. The transfusion may be administered as rapidly as the patient can tolerate, usually 30 minutes.
Maximum Infusion Time	Infusion time should not exceed 4 hours for any component.
If rate slows appreciably	investigate immediately  Consider measures that may enhance blood flow  repositioning the patient's arm, changing to a larger gauge needle, changing the filter and tubing, and elevating the IV pole, if gravity






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<p>rather than a pump is being used.</p>			
<p><b>During the Transfusion Document</b></p>			
<p>What</p>		<ul style="list-style-type: none"><li>• Temperature, blood pressure, respirations and pulse, and examine the skin for urticarial.</li><li>• Assess flow rate</li></ul>	
<p>When</p>		<ul style="list-style-type: none"><li>• before initiating the transfusion</li><li>• after the first 15 minutes</li><li>• after 30 minutes</li><li>• hourly until one hour after completion of the transfusion</li></ul>	
<p>Outpatient Post Transfusion Vital Signs</p>		<p>For outpatient transfusions, the vital signs may be taken at 30 minutes post transfusion.</p>	
<p><b>If the patient has a preexisting fever</b> The need for transfusion must be balanced with the risk of transfusion. Contact the patient's physician to determine if pre-transfusion medications should be administered.</p>			
<p><b>If a patient is being transported with blood hanging</b> Patients should not be transported with blood components infusing unless accompanied by a clinician who can monitor and respond to a potential reaction. Additionally, the receiving clinic/area must have a clinician who can manage a patient while they are receiving blood components.</p>			
<p><b>Medications</b></p> <ul style="list-style-type: none"><li>○ Do not add medications directly to a unit of blood during transfusion.</li><li>○ Medications that can be administered "IV Push" may be administered by stopping the transfusion, clearing the line at the medication injection site with 5-10 mL of normal saline, administering the medication, re-flushing the line with saline and restarting the transfusion.</li></ul>			
<p><b>Units entered and not transfused</b> If a unit of blood or a blood component has been entered for any reason by personnel</p>			



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not working in the Blood Bank, and the unit has not been transfused

- Record on the transfusion Record Form the volume transfused as "NONE"
- Indicate the disposition of the unit "Discarded on patient unit" and sign and date the notation.
- Return the Transfusion Record Form to the Blood Bank

#### If Components Are No Longer Needed

To avoid unnecessary waste of blood resources, notify the Blood Bank staff immediately if components are no longer needed for a patient, as the component may be suitable for transfusion to another patient. Return any unneeded units to the blood bank.

#### At the Termination of an Uncomplicated Transfusion

After the completion of each uncomplicated transfusion, the responsible physician or nurse should verify that the "Transfusers Must Complete" section of the Transfusion Record Form is complete, including

- Date And Time Transfusion Was Stopped
- Volume Of Blood Infused
- Check The Box Documenting The Presence/Absence Of A Transfusion Reaction.

Discontinue the isotonic saline solution used to initiate the transfusion after the completion of the transfusion unless specifically ordered.

Document the patient's response to the transfusion in the patient's medical record.

#### Procedure On Transfusion Reaction And Monitoring :

Reaction Type	Symptoms	Cause	Frequency	Prevention
Acute Hemolytic Reaction	Fever, chills and fever, the feeling of heat along the vein in which the blood is being transfused, pain in the lumbar region, constricting pain in the chest,	Human error such as mislabeled pre-transfusion specimen; the transfusion of properly labeled blood to the wrong person, or clerical errors occurring within	Rare	proper identification of patients, pre-transfusion blood samples and blood components at the time of transfusion



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	<p>tachycardia, hypo-tension, and hemoglobinemia with subsequent hemoglo-binuria and hyperbilirubin-emia.</p> <p>A "feeling of impending doom" is frequently reported by the patient as an early sign of this reaction.</p> <p>In an unconscious or anes-the-tized patient: Uncontrollable bleeding due to disseminated intravascular coagulation may be the only sign of a hemolytic transfusion reaction</p>	<p>the Blood Bank transfused red cells react with circulating antibody in the recipient with resultant intravascular hemolysis</p> <p>Most likely to occur when a group O patient is mistakenly transfused with group A, B, or AB blood. Patients receiving a major ABO-incompatible marrow or stem cell transplant with sufficient red cell content will likely develop an acute hemolytic reaction</p>		
<b>DELAYED HEMOLYTIC REACTION</b> Delay ed Hemolytic	<p>he most common signs are a falling hematocrit (due to extravascular</p>	<p>Many delayed hemolytic reactions will go undetected because the red</p>	Uncomon	






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<b>Reaction</b>	<p>destruction of the transfused red blood cells) and a positive direct antiglobulin (Coombs) test (DAT).</p> <p>"delayed" hemolytic reactions commonly occurs about 4-8 days after blood transfusion, but may develop up to one month later. There may also be hemoglobinuria and a mild elevation of the serum bilirubin. . Symptomatic patients may manifest fever and leukocytosis thus appearing to have an occult infection</p>	<p>cell destruction occurs slowly</p> <p>Delayed hemolytic reactions occur in patients who have developed antibodies from previous transfusion or pregnancy but, at the time of pretransfusion testing, the antibody in question is too weak to be detected by standard procedures. Subsequent transfusion with red cells having the corresponding antigen results in an anamnestic antibody response and hemolysis of transfused red cells.</p>		
<b>Notify the Blood Bank at the time the reaction is suspected, to allow prompt investigation. Care must be taken that subsequently transfused red cells lack the antigen corresponding to the patient's antibody.</b>				
<b>Febrile</b>	<p>fever or chill fever A temperature rise of 1.8 F or 1.0 C</p>	<p>Cytokines and antibodies to leukocyte antigens reacting</p>	<p>1 in 8 transfusions</p>	






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	from the baseline	with leukocytes or leukocyte fragments		
Allergic - urticaria	Allergic reactions may be associated with laryngeal edema and bronchospasm.  If coupled with another sign, such as fever, evaluation for a hemolytic reaction may be indicated.	this reaction is caused by foreign plasma proteins	1% of recipients	
Allergic - Anaphylaxis	anaphylactic or anaphylactoid Respiratory involvement with dyspnea or stridor may be more pronounced than is usually seen in typical allergic reactions.  Reactions manifest cardiovascular instability that includes hypotension, tachycardia,	may be due to anti-IgA	Rare	



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	loss of consciousness, cardiac arrhythmia, shock and cardiac arrest.			
<b>TRALI</b>	Abrupt onset of noncardiogenic pulmonary edema. Severe cases may require assisted ventilation with high FIO <sub>2</sub> .	TRALI has been associated with the presence of antibodies in the donor plasma reactive to recipient leukocyte antigens or with the production of inflammatory mediators during storage of cellular blood components	TRALI is a rare though under recognized complication of transfusion	Most cases of TRALI resolve within 72 hours although fatalities may occur in approximately 10 percent of cases.
<b>Volume Overload</b>		transfusion-related volume overload		Infuse smaller volumes more slowly
<b>Bacterial Contamination</b>	Hypotension, shock, fever and chills, nausea and vomiting, and respiratory distress. Diagnosis is established by Gram stain and blood culture of both the blood component and	Bacterial contamination occurs when a small number of bacteria enter a blood component during collection or processing. During storage, bacteria may proliferate,	rare but difficult to detect prior to transfusion. Autologous blood may be contaminated with bacteria, particularly	



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	the recipient distress	resulting in a large number of organisms, and possible endotoxin, being given with the transfusion	if the patient had an active infection at the time of donation.	
<b>Hypotension</b>	<p>A drop of at least 10 mm Hg in systolic or diastolic arterial blood pressure in the absence of signs or symptoms of other transfusion reactions</p> <p>if the immediate pre-transfusion blood pressure is elevated from the patient's typical blood pressure, and the arterial pressure does not fall below the patient's usual blood pressure, it should not be considered a hypotensive reaction. The onset of hypotension is during the</p>	<p>Some reactions have been associated with angiotensin converting enzyme (ACE) inhibitor drugs or the use of leukocyte reduction filters.</p> <p>Hypotensive reactions have been associated with red cell and platelet transfusions.</p>		



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	transfusion, and resolves quickly with discontinuation of the transfusion.  If hypotension persists beyond 30 minutes after discontinuing the transfusion, another diagnosis should be strongly considered.			
Post-transfusion purpura (PTP)	thrombocytopenia that is frequently profound, purpura, or bleeding  Febrile reactions have been reported retrospectively with the implicated transfusion  thrombocytopenia typically 7-48 days after transfusion  PTP must be	the patient makes an alloantibody in response to platelet antigens in the transfused blood that for a period of time causes destruction of autologous antigen negative platelets	Rare	Platelet transfusion is of very little value in PTP; however, therapeutic plasma exchange may be beneficial. Since autologous platelets do not survive in circulation, there is no expectation that transfused platelets regardless of





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		differentiated from the far more common all immunization to platelet antigens. Consultation with a Blood Bank physician is recommended in evaluating such patients.		antigen matching will do any better.  Reserved platelet transfusion for patients with active bleeding.
<b>Non-immune Hemolysis</b>	hemoglobinemia and hemoglobinuria Transient hemodynamic, pulmonary and renal impairment may occur. cardiac arrhythmia due to Hyperkalemia may occur, particularly in patients with renal failure.	Lysis of red cells can occur due to improper storage, handling, or transfusion conditions.  mishandling or storage of blood components  the contents of the blood bags are available for study. The blood bag together with attached tubing and intravenous fluids should be saved for further investigations.	Rare	



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<b>Graft-vs-Host Disease GVHD</b>	<p>rash, fever, diarrhea, cytopenia and liver dysfunction 3-4 weeks after transfusion</p>	<p>viable T lymphocytes in blood components are transfused, engraft and react against the recipient's tissues and the recipient is unable to reject the donor lymphocytes because of immunodeficiency, severe immunosuppression, or shared HLA antigens</p> <p>Associated with bone marrow transplantation. Transfusion associated GVHD occurs. It typically. Transfusion associated GVHD carries a very poor prognosis.</p>	Rare	<p>Irradiation of cellular components</p> <p>The Blood Bank must be appraised of the immune status, or diagnosis, of the patient so that cellular components intended for transfusion of immunocompromised patients and blood components from directed (designated) donors will be irradiated. Irradiation of blood red cell containing components decreases the red cell survival and increases the potassium of the component. There is no apparent effect on</p>
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			platelet survival. Fresh Frozen Plasma (FFP) and cryoprecipitate AHG (CRYO) need not be irradiated because these components do not contain enough viable lymphocytes to cause GVHD.
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## IF A TRANSFUSION REACTION IS SUSPECTED

**Stop** the transfusion immediately!


**Disconnect the intravenous line** from the needle. Do not disconnect the unit from the IV set. Attach a new IV set and prime with saline, or flush the line with the normal saline used to initiate the transfusion and reconnect the line. Open the line to a slow drip. In certain cases, such as a mild urticarial reaction or the presence of repeated chill-fever reactions, it may be possible to restart the blood transfusion after evaluation and treatment of the patient. To reinitiate the transfusion using a new IV tubing set, enter the second port to reduce the chance of bacterial contamination.



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**Seek medical attention** immediately. If the patient is suffering cardiopulmonary collapse, and medical attention is not immediately available, press the blue "Code" button and telephone the Cardiac Arrest Team (dial 143).

**Check** to ensure that the patient name and registration number on the blood bag label exactly with information on the patient's identification

**DO NOT BYPASS THIS STEP BY ASSUMING THAT THE PATIENT'S TRUE IDENTITY IS KNOWN.**

**Do not discard the unit of blood** that has been discontinued because it may be necessary for the investigation of the transfusion reaction.

- Notify the Blood Bank that a transfusion reaction has occurred and briefly describe the nature of the reaction.
- Blood Bank personnel will identify the Pathology House officer or staff pathologist who will assume responsibility for investigation of the reaction.
- Delay the transfusion of additional units until the possibility of serological incompatibility has been investigated. Consult a Blood Bank physician if there is an urgent need or transfusion.
- Initiate the Transfusion Reaction Report Form after Blood Bank personnel have been notified of a transfusion reaction. It is essential that this form be filled out completely, including the unit numbers of all blood transfused. The form will serve as a written request for investigation of the reaction by a Blood Bank physician.
- In the case of a **suspected hemolytic transfusion reaction** (not urticaria alone), the following items should be submitted promptly to the Blood Bank:

**Completed Transfusion Reaction Form**

- **Post-Transfusion Blood Specimens** (Adults: 7 MI Pink Top Tube, Lesser Volumes For Pediatric Patients), And **Incriminated Unit(S) Of Blood And Attached Tubing.**
- Restarting a Transfusion If the Blood Bank physician, after review of the clinical information, believes the transfusion can be restarted, do not disconnect the unit. This may apply to patients who might manifest urticarial reactions or repeated chill-fever reactions.
- Additional blood specimens may be requested, depending on the






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serological findings. The venipuncture to obtain these blood specimens must not be traumatic. Small lumen catheters should not be used to collect blood specimens for a transfusion reaction investigation. If red cells are hemolyzed during the venipuncture or collection, the serum will turn pink and it may be erroneously concluded that intravascular hemolysis has occurred.

- The IV tubing used to transfuse the blood components should be clamped and sent *without the needle attached*. A urine sample is not required for the routine evaluation of a transfusion reaction, but may be requested by the Blood Bank physician in the course of further assessment.
- Patient care personnel will be notified by telephone of significant findings of the reaction evaluation as soon as possible. A written report of the investigation, on the Blood Transfusion Reaction Form, will be returned to the patient care unit at a later date for inclusion in the patient's chart.

## TREATMENT OF TRANSFUSION REACTIONS

The following guidelines should be tailored to suit individual cases

Reaction Type	Treatment - Adult	Pediatric	Follow-up
ACUTE HEMOLYTIC TRANSFUSION REACTION	<b>Diuretic therapy:</b> Initially, give 40-80 mg Furosemide (Lasix) intravenously. This dose can be repeated once. Lack of response to furosemide in 2-3 hours indicates the presence of acute renal failure.	Pediatric dose: 1-2 mg/kg/dose. May repeat once at 2-4 mg/kg.	Treat shock and disseminated intravascular coagulation with appropriate measures if and when they appear.



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	<p><b>Water loading:</b> The patient should be hydrated to maintain urinary output of at least 100 mL/hr until urine is free of hemoglobin.</p> <p>Infuse a loading dose of 0.9% sodium chloride or 5% dextrose in 0.45% sodium chloride. Chart hourly urine output. Maintain the urine output by administering intravenous fluid at 100 mL/hour until the urine is free of hemoglobin. If the patient's urinary output does not increase, with this hydration any additional fluids should be infused with caution.</p>	<p>Pediatric patients should receive a smaller loading volume of fluid in proportion to their body surface area.</p>		
<b>DELAYED HEMOLYTIC TRANSFUSION REACTION.</b>	Specific treatment generally is not necessary			Supplemental transfusion of blood lacking the antigen corresponding to the offending antibody may be necessary to compensate for the transfused cells that have been removed from the circulation.



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<b>FEBRILE TRANSFUSION REACTION</b>	<b>Pre-medicate</b> the patient with acetaminophen or other antipyretic agents when previous reactions have been extremely bothersome. Pediatric dose: 10 mg/kg to a maximum of 600 mg.		Aspirin will adversely affect the patient's platelet function, so non-aspirin antipyretic agents are preferable.
<b>SEVERE SHAKING CHILLS</b>	(rigors) can be controlled by the sedative effect of Benadryl or Demerol (25-50 mg given intramuscularly or intravenously		Note: Demerol may cause acute respiratory arrest. An opiate antagonist (Narcan) should be immediately available.
<b>ALLERGIC TRANSFUSION REACTION</b>	<b>Antihistamines</b> (e.g. , Benadryl). Give 50-100 mg orally or intravenously. If urticaria develops slowly, antihistamines may be given orally.	Pediatric dose: 1-2 mg/kg intramuscularly or intravenously for 25-50 mg per average dose.	Routine use of Benadryl as premedication for all transfusions, regardless of a history of allergic reactions, is discouraged.
	<b>Aminophylline</b> for wheezing, at a dose of 125-250 mg intravenously slowly over a period of about five minutes	Pediatric dose: 3 mg/kg/dose in intravenous drip over of 20 minutes.	
	<b>Epinephrine</b> for severe, acute reactions including laryngeal edema or	Pediatric dose: 0.03 mL/M2 (0.03 mg/M2 of a 1:1000 solution) given subcutaneously. A single	



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		bronchospasm Give 0.1-0.5 mg (0.1-0.5 mL of a 1:1000 solution) subcutaneously. Subcutaneous dose may be repeated at 10-15 minute intervals. The total subcutaneous dose in a 24-hour period, with rare exception, should not exceed 5 mg.	pediatric dose should not exceed 0.3 mg.	
<b>SEPSIS DUE TO BACTERIAL CONTAMINATION OF DONOR BLOOD</b>		Treatment of septic shock includes: terminating the suspected transfusion immediately, cardio-vascular and respiratory support, blood culture of the patient, and administration of broad spectrum antibiotics including anti-pseudomonas coverage if the blood component involved is Red Blood Cells.		





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## POLICY ON CARE OF PATIENTS IN ICU / HDU

### 1.0 PURPOSE:

To define policies guiding care of patient in the Intensive Care Unit and High Dependency units.

### 2.0 SCOPE:

For all patient availing intensive and high dependency units services.

### 3.0 RESPONSIBILITY:

All medical and paramedical staff at critical care units,  
Infection control team,

Biomedical engineer,

Housekeeping staff

### 4.0 ABBREVIATION:

NABH : National Accreditation Board For Hospitals and Healthcare providers

COP : Care Of Patients

ACLS : Advanced cardiac life support

BLS : Basic life support

NOK : Next Of Kin

UHID : Unique identification

WHO : World Health Organization

### 5.0 REFERENCE:

5.1 NABH: Pre Accreditation Entry Level Standards for Hospitals, First Edition, April 2014.

5.2 COP.4: Documented policies and procedures guide the care of patients as per the scope of services provided by hospital in the intensive care and high dependency unit.

### 6.0 POLICY:

6.1 Intensive care admission and / or discharge shall be decided by treating doctor and as per admission and discharge criteria document. (Ref: ENABH/HCO/KIMS/ ICU).


6.2 Each patient shall be under the care of one nurse, always maintaining the patient to nurse ratio of 1:1 will be maintained for patients on ventilator support, 1:2 for other



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patients in ICU and 1:3 for HDU patient. Intensive care areas shall follow infection control practices as per procedure. (Ref: Infection control manual). Intensive care units shall follow the quality assurance programme (Ref: HCO / KIMS / CQI).

6.3 Visitors shall not be allowed in high dependency areas, except in special situations wherein restricted entry of one or two close relatives shall be permitted during visiting hours only.

6.4 As and when there is a shortage of beds, patients those who are normal will be shifted to the wards and priority will be given to the emergency patients.

6.5 One empty bed shall be kept reserved for all the time for receiving emergency patients who need ICU admission.

6.6 Quality assurance system is implemented and followed in ICU's.

**7.0 PROCEDURE:**

7.1 Patients needed emergency care is shifted to different Intensive Care Units depending up on the cases.

7.2 **Admission Criteria in ICU:** Admission criteria are used to select patients who are likely to benefit from care in ICUs. Patients who meet any of the following criteria shall be admitted to the ICUs at the request of the consultant. While we make every effort to strictly adhere to admission criteria, we accommodate requests from consultants who clinically feel that a patient would benefit from close monitoring in the critical care unit even through not strictly meeting the criteria stated below:

**7.2.1 Respiratory:**

7.2.1.1 Acute respiratory failure ( $\text{PaO}_2 < 60 \text{ mm Hg}$ ).

7.2.1.2 Respiratory rate  $> 30$  breaths/minute and  $< 8$  breath/mt.

7.2.1.3 Patients requiring ventilatory support (invasive or non-invasive).

7.2.1.4 Pulmonary emboli with haemodynamic instability.

7.2.1.5 Massive Haemoptysis

**7.2.2 Surgical:**


7.2.2.1 Post-operative patients requiring haemodynamic monitoring, ventilator support or extensive nursing care.



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7.2.2.2 Patients with surgical abdomen requiring preoperative fluid and/or electrolyte resuscitation.

7.2.2.3 Polytrauma with significant injury to thoracic / abdominal organs requiring surgical intervention

**7.2.3 Renal:**

7.2.3.1 Patient who has acute renal failure with accompanying respiratory or hemodynamic components require close monitoring & respiratory/ hemodynamic support.

7.2.3.2 Significant acidosis or alkalosis.

7.2.3.3 Hypo or hyperkalemia with dysrhythmias or muscular weakness.

7.2.3.4 Hypo or hypernatremia with seizures, altered mental status.

7.2.3.5 Severe hypercalcemia with altered mental status, requiring close neurological monitoring.

7.2.3.6 Hypo or hypermagnesemia with haemodynamic compromise or dysrhythmias or muscular weakness

**7.2.4 Drug Ingestion and overdose:**

7.2.4.1 Drug ingestion with significantly altered mental status & inadequate airway protection / hemodynamic instability.

7.2.4.2 Seizures following drug ingestion

**7.2.5 Endocrine:**

7.2.5.1 Diabetic ketoacidosis complicated by hemodynamic instability, altered mental status, respiratory insufficiency, or severe acidosis.

7.2.5.2 Thyroid storm or myxedema coma with hemodynamic instability.

7.2.5.3 Hyperosmolar state with coma with and/or hemodynamic instability.

7.2.5.4 Other endocrine problems such as adrenal crisis with hemodynamic instability

**7.2.6 Miscellaneous:**

7.2.6.1 Environmental injuries (lighting, near drowning, hyperthermia or hypothermia).






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7.2.6.2 Any other clinical conditions requiring ICU level nursing care

7.2.6.3 Suicidal gestures including partial hanging, drug overdoses and other self-inflicted injuries.

**7.3 Discharge Criteria:**

7.3.1 Written discharge order by the attending physician.

7.3.2 Substantial resolution of the problems responsible for admission.

7.3.3 Anticipation of prolonged medical stability.

7.3.4 Elimination of need for mechanical ventilation/ airway protection.

7.4 The admission of a patient to these units shall be done by the CMO who in turn shall inform the specialists / doctors who are trained to handle emergency care in Intensive Care Units.

7.5 The specialist shall give written instructions to trained nursing staff for the management and treatment of a particular patient in such units.

7.6 Each patient shall be under the care of one nurse, always maintaining the patient to nurse ratio of 1:1 / as advised by ICU doctor in-charge.

7.7 Emergency medicines with resuscitative equipments shall always be kept ready for use. (Ref: Checklist for emergency medicines and equipments).

7.8 Specialized life support equipments like, ventilators, defibrillators, infusion pumps, Central oxygen supply and suction, etc., are readily available.

7.9 The staff on duty is trained to handle and use this highly technical equipment properly and at the right time.

7.10 All staff shall be trained periodically on how to handle critical care equipments so as to minimize break down and loss.

7.11 Staff in charge of these units shall check that these equipments are kept in proper working condition at all times.

7.12 Bio medical engineer shall on a weekly basis check the equipments of the intensive care units.

7.13 Bio medical engineer shall also take care of the maintenance and calibration of equipments of the intensive care units.

7.14 This shall be reviewed by the head nurse and supervisor of the intensive care units.






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- 7.15 In the event of a large number of patients arriving to these units which exceed the capacity of the established beds, the nursing superintendent shall be contacted and she shall arrange for extra beds to be placed in the areas and provide more staff to meet the demand.
- 7.16 Sterility of these units shall be strictly maintained.
- 7.17 Restricted entry of one or two close relatives shall be permitted during visiting hours only. Whenever such visitors are allowed inside, measures shall be taken to maintain the sterility of the area. Foot wear shall not be allowed, and they shall wear only the foot wears provided for exclusive use inside the area. Cap, masks, shoe covers are also to be worn by the visitor/relative.
- 7.18 Transfer of the patients to the normal ward or the patient's home is done after the treating doctor gives specific orders for the same.
- 7.19 Proper instructions on further treatment, advice on preventive aspects and follow up are given to the patient / attendee by the doctor or senior staff nurse.
- 7.20 In order to maintain the quality of care in these departments, the recipients of these services are interviewed from time to time and their satisfaction in the treatment provided is assessed.
- 7.21 When a patient is discharged, details about the investigation, treatment given, condition on discharge, advice on discharge, medications, diet, exercise, follow up, when and how to seek care in case of emergency and details visit schedule shall be written in the discharge card duly named, signed, dated and time by the treating doctor.
- 7.22 A copy of all reports shall be given to the patient along with the discharge summary.
- 7.23 Infectious cases need isolation.
- 7.24 **Handling shortage of beds:**
- 7.24.1 In case of bed shortages, this information is given to the C.M.O./ M.S./ Dy.M.S immediately.
- 7.24.2 All stable patients will be transferred out to other wards with their or the attend consent and the same will be intimated to the patient attendant.
- 7.24.3 On arrival the patient /attendant will be informed about the non- availability of beds, if the patient is stable he will be transferred to other hospital of patient choices.



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7.24.4 In case of minor injury or unstable will be stabilized and transferred with the help of hospital ambulance to a hospital of patient choice.

7.24.5 At the time of transfer, transfer protocol is followed. (Refer: ENABH/HCO /KVMCH / DM / EM).

7.25 Quality Assurance Programme in ICU:


S.no	Quality objective	Performance indicator	Responsibility	Measurement criteria	
				Criteria	Frequency
1.	Service Quality	Staff availability doctors ,nurses and support staff nurses patient ratio 1:1	ICU incharge staff	Duty Roster / Attendance Record	Monthly
		Bed Availability and turnaround time for making bed	ICU incharge staff	Ward census book ,front office	Monthly
		Reporting time of investigations	ICU incharge staff	HMS investigations register	Monthly
		Medication administration (route, dose and frequency)	ICU incharge staff	Drug chart	Once in two months
		Coordination between staff in ICU	ICU incharge staff	Feedback form	Monthly
2.	Hospital Infection Control	Infection rates	Hospital infection control committee	UTI, Intra vascular device related infection, Respiratory tract infections, surgical site infections , VAP	Monthly



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		Issue No.	01
	<b>CHINNAKOLAMBAKKAM</b> <b>COP-5:POLICIES &amp; PROCEDURES</b> <b>ON CARE OF OBSTETRIC PATIENTS</b>	Rev. No	00
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**POLICIES & PROCEDURES ON CARE OF OBSTETRIC PATIENTS**

**1.0 PURPOSE:**

To define policies guiding the care of Obstetric patients.

**2.0 SCOPE:**

All obstetric patients, including high risk cases, undergoing treatment.

**3.0 RESPONSIBILITY:**

Anesthesiologist,  
Gynecologist,  
Pediatrician,  
Labour Room staff  
NICU staff,  
Nursing Superintendent,  
Dietitian

**4.0 ABBREVIATION:**

NABH : National Accreditation Board for Hospitals and Healthcare providers  
COP : Care of Patients

**5.0 REFERENCE:**

Pre AccreditationEntry Level Standards for Hospitals, First Edition, April 2014.

**COP 5:** Documented procedures guide the care of obstetric patients as per the scope of services provided by the hospital.

**6.0 POLICY:**

6.1 Gynecologist shall train medical officers and staff nurses in care of obstetric cases.

6.2 The assessment of obstetric cases shall include maternal nutrition, immunisations and education.

6.3 High risk obstetrical care shall be provided to required cases by Gynecologist and Trained Medical Officers and nurses.

6.4 **Definition and Display of obstetrical cases:**






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6.4.1 The hospital has defined and displayed the services it can provide for high risk obstetrics cases.

6.4.2 High risk obstetric cases includes emergencies like Shock, PIH (pregnancy induced hypertension), Anaemia, Previous LSCS, Twin, GDM, Fetal distress, PET (pre eclamptic toxemia), APH (ante partum hemorrhage), PPH (post-partum hemorrhage), Meconium aspiration, Ectopic pregnancy, Eclampsia, Inevitable abortion, Amniotic embolism etc.

6.5 **Assessment for Maternal nutrition:**

Diagnosis	Assessment criteria	Diet prescribed
Elderly primi / Grand Multi	30 yrs, screen for down's syndrome, PIH more, GDM	Normal diet / Diabetic diet
Habitual/Missed Abortion/ Threatened Labour	Previous history of habitual / missed abortion and threatened labor	Normal diet
Habitual/Missed Abortion/ Threatened Labour	Previous history of habitual / missed abortion and threatened labor	Normal diet
PIH or eclampsia	PIH	Salt restricted diet
Anaemia	History, weakness, breathlessness, fatigue, palor, puffiness of face, hemogram, stool examination, urine examination	Normal diet, Iron rich diet
Previous LSCS. (Lower segment caesarian section)	History	Normal diet
GDM (Gestational diabetic mellitus)	Family history of diabetes, previous history still born, pre mature labor, congenital anomalies	Diabetic diet
Preterm labour with or without PROM. (Premature rupture of membrane).	Pain, rashes on examination, cervical or not dilation, NST	Normal diet
IUGR/LBW	History, Examination & USG	High protein diet

6.6 **Facilities For Neonates:** KVMC Hospital has NICU (Neonatal intensive care unit) to take care of such neonates and is equipped and staffed adequately.

6.7 **Initial Assessment of patient:** All patients attending the obstetrics and gynecology OPD after obtaining a detailed History undergoes routine obstetric gynecology examination which





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includes: General examination for pallor icterus; Thyroid swelling; Pedaloedema followed by examination of breasts, abdomen. This is followed by speculum examination and pervaginal examination.

- 6.8 **List of High Risk Obstetric cases cared for:** All kind of **High Risk Obstetric** cases like pregnancy complicated by: Hypertension /PIH; Diabetes/ GDM; Renal Diseases with pregnancy; Neurological problems complicating pregnancy; Respiratory problems with pregnancy; Orthopedic problem with pregnancy; Rheumatic problem; Age of mother; Liver disorders, Infections disease.

## 7 PROCEDURE:


- 7.1 In a high risk pregnancy the fetus or neonate is at increased risk of morbidity or mortality before or after delivery.
- 7.2 Some of the risk factors for high risk pregnancy are hypertension, diabetes, sexually transmitted diseases, pyelonephritis, acute surgical problems, genital tract abnormalities, high or low maternal age, High maternal obesity, Exposure to teratogens (smoking, drugs, etc), prior still birth, prior pre term delivery, Hydramnios, Multiple pregnancy, prior birth injury and maternal nutrition.
- 7.3 Risk assessment is a part of prenatal care in this hospital. Risk is also assessed during or shortly after labour and at any time these events may modify the risk status.
- 7.4 High risk obstetrics care is provided by competent senior gynaecologist assisted by assistants and an experienced Neonatologist.
- 7.5 Hospital is well equipped and manned by competent doctors, nurses and para-medical staff to deal with any type of high risk cases.
- 7.6 High risk obstetrics patient's assessments shall include maternal nutrition. Maternal nutritional deficiencies are identified and the hospital dietician shall be consulted.
- 7.7 The dietitian counsels the patient about her dietary needs and the importance of a healthy diet in the long term health of the mother and child.
- 7.8 Dietary changes and diet substitutes, special care to be given for correction of maternal anemia are advised.



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7.9 The hospital has a well-equipped NICU with Baby ventilators, warmers, incubators, phototherapy machines, facilities for continuous monitoring and exchange transfusion etc. and it is manned by a well-qualified and trained Neonatologist and a group of neonatology trained nurses.


7.10 Antenatal period, every weeks counseling done by Obstetrician, Nutritionist and physiotherapist.



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## COP-POLICY ON CARE OF PEDIATRIC PATIENTS

### 1.0 PURPOSE:

To define policies guiding the care of Pediatric patients.

**VISION-** The vision of Department of Paediatrics is that all children should be able to enjoy the highest attainable standard of health through access to facilities for the promotion of wellness, prevention and treatment of illness and rehabilitation of health.

### MISSION

The paediatric medical department shall:

- provide quality healthcare which is effective, appropriate, timely and responsive to the needs of the patient, family, and community by a team of trained, committed, caring and innovative personnel.
- work with parents and the community as partners in the care of the children and promotion of wellness.

### OBJECTIVES

To provide quality care incorporating aspects of promotive, preventive, diagnostic, curative and rehabilitative care which is child and family friendly to all children up to 14 years of age.

### 2.0 SCOPE:

All the paediatric patients undergoing treatment in hospital.

1. To provide health and medical services to all children undergoing treatment in hospital from birth to 14 years of age which include:
  - a. In-patient paediatric medical services.
  - b. Out-patient paediatric medical services.
  - c. Paediatric medical ambulatory care.
  - d. Community and outreach paediatric medical services.
  - e. Immunisation for missed opportunities.
  - f. Speciality clinics in outpatient services
  - g. Paediatric emergency services
2. Training of doctors, nurses and allied health personnel in general paediatrics and paediatric medical subspecialties.






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## 3.0 RESPONSIBILITY:

Pediatrician,

- 1) Advise patients, parents or guardians and community members concerning diet, activity, hygiene, and disease prevention in children.
- 2) Collect, record, and maintain patient information, such as medical history, reports, and examination results.
- 3) Examine children regularly to assess their growth and development.
- 4) Examine children or order, perform and interpret diagnostic tests to obtain information on medical condition and determine diagnosis.
- 5) Explain procedures and discuss test results or prescribed treatments with patients and parents or guardians.
- 6) Monitor child's condition and progress and re-evaluate treatments as necessary.
- 7) Plan and execute medical care programs to aid in the mental and physical growth and development of children and adolescents.
- 8) Prescribe or administer treatment, therapy, medication, vaccination, and other specialized medical care to treat or prevent illness, disease, or injury in infants and children.
- 9) Refer the child to medical specialist for reference when necessary.
- 10) Treat children who have minor illnesses, acute and chronic health problems, and growth and development concerns.
- 11) Conduct research to study anatomy and develop or test medications, treatments, or procedures to prevent, or control disease or injury.
- 12) Direct and coordinate activities of nurses, students, assistants, specialists, therapists, and other medical staff.
- 13) Prepare reports for government or management of birth, death, and disease statistics, workforce evaluations, or medical status of individuals.



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Nursing Superintendent,

- 1.Planning and organizing nursing services in paediatric outpatient department and paediatric wards as well as paediatric intensive care units..
- 2.Participates and prepares in formulation of the Philosophy, objectives for the nursing department in accordance with those of the hospital.
- 3.Responsible for delegation of duties to paediatric nursing personnel working under her at various levels.
- 4.Responsible for allotment and rotation of the nursing staff to the various paediatric wards and units in planned manner depending on the suitability and qualification as well as the need of the hospital.
- 5.Responsible for adequate and qualitative nursing care of the patients receiving treatment in the paediatric outpatient as well as inpatient care.
- 6.Interview and recruits nursing staff trained in paediatrics and other staff whose duties are related to paediatric nursing.
- 7.Prepare and maintains annual statistics for paediatrics and projects manpower needed for patient care.
- 8.Conducts supervisory rounds of paediatric wards and departments everyday and ensures that all serious patients are looked after by the supervisory staff.
- 9.Prepare proposals for special equipments required for nursing services, giving specification and participates in purchase committee meeting as a member.
- 10.Holding departmental meetings allowing free exchange of ideas and reviewing ward staffing.
- 11.Sanctions or recommends leave to paediatric nursing personnel.
- 12.Maintains individual cumulative records of all nursing staff.
- 13.Writing reports -Confidential reports of nursing staff, annual report of the nursing department depicting achievements, future plans of expansion-any other report that may be required to be submitted.



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14. Analyses daily reports/census on hospital situation, e.g. admission, discharge etc. in order to replace nursing manpower or submit reports to higher authority.

15. Takes active interest in staff development program.

16. Provides guidance and counseling to the subordinate staff.

## Medical staff - Postgraduate

- History taking, examination, evaluating children, writing a case sheet, making an appropriate diagnosis, planning the treatment plan for children from birth till 14 years in inpatient as well as seeing children in outpatients departments
- Paediatric postgraduates do day duties and night duties by rotation in the respective units where they are posted.
- They take daily rounds in the wards and document the condition of the child, investigation plan and treatment in soap notes.
- They report the activities in the department, condition of patients and inform the reports in a timely manner to their unit faculty.
- They are responsible for delivering care to sick children in emergency ward-intensive care unit, in the wards or emergency department.
- Postgraduates in paediatrics prescribe drugs and medications to children, administration of drugs to children like intravenous or intramuscular injections.
- They are also responsible for doing procedures in children like putting intravenous lines, blood sampling, administration of vaccines and doing procedures in children like pleural fluid aspiration, bone marrow aspiration and lumbar puncture whenever indicated with all precautions.
- Paediatric postgraduates do counseling to the families, relatives and guardians regarding the diagnosis, problems, treatment plan, breaking bad news etc
- They regularly counsel the parents and guardians about diet advice, breast feeding, complementary feeding, immunization practices and development.
- They work closely with other health professionals during the rotatory postings.

## Paramedical staff, paediatric nurse

Paediatric nurses work as part of a multidisciplinary team of professional and medical staff that includes doctors, health visitors, social workers, therapists and technicians.

- Receiving the children in paediatric ward, intensive care unit for admission.






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- Checking the anthropometry like weight and height for admitted patients.
- Patient identification and putting the identification tag on the child's left wrist at admission.
- Monitoring and administering medication, injections, blood transfusions and intravenous infusions
- Attending the ward rounds along with the postgraduates and paediatricians daily.
- Treating wounds, providing care before and after operations
- Taking samples from patients and monitoring their pulse, temperature and blood pressure
- Checking patients' conditions and monitoring functions such as respiration.
- Dealing with emergencies, help in administration of CPR
- Supervising junior staff and tutoring student nurses
- Obtaining parental consent for treatment
- Writing reports ,daily notes on case sheet, documentation, keeping accurate records
- Providing information, emotional support and reassurance to patients and relatives
- Ensuring adherence to strict hygiene and health and safety rules
- To check all equipment is in good order, appropriately safe and clean, before use, on a daily basis and dispose of or repair any damaged equipment
- To indent and procure medicines for children in the wards periodically based on the requirements

## Security staff

Security guards routinely check badges and credentials to ensure a visitor, patient or doctor while entering the paediatric ward.

They help to regulate the entry of visitors into the ward only during hospital visiting hour. At the time of admission, the attender of patient is issued a yellow id pass with the child's name on it so security can easily identify the parent. Visitors are allowed to visit your child only during visiting hours which is 4 to 6 pm

They provide safety to children in wards, intensive care unit and emergency department.

## 4.0 ABBREVIATION:

NABH: National Accreditation Board For Hospitals and Healthcare providers

COP : Care Of Patients



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## 5.0 REFERENCE:

NABH: Pre Accreditation Entry Level Standards for Hospitals, First Edition, April 2014.

5.1 COP 6: Documented policies and procedures guide care of paediatric patients as per the scope of services.

## 6.0 POLICY:

- 6.1 The hospital has defined and displayed the services it can provide for pediatrics by competent medical staff trained in paediatrics.
- 6.2 All clinical staff working in the pediatric department shall receive special training in the care of the new born and pediatrics.
- 6.3 Care of neonatal patients shall be provided in accordance to IAP / WHO guidelines. Pediatric and Neonatal patient's assessments shall include detailed nutritional growth, psychosocial and immunization assessment.
- 6.4 Parents / Guardians shall be educated at the time of admission that protection and security of pediatric patients rest with the parents / guardians who stay with the patient. Security of Neonates shall rest with the NICU staff as long as they remain in the NICU and with the ICU in Charge for Pediatric patients during their stay at that unit.
- 6.5 Abduction safety: All admitted newborn babies are tied with identification tag on the leg of the baby. Staff on duty will ensure the security of the baby with above methods.
- 6.6 Children's family members are educated about the importance of breast feeding, weaning, rooming-in, nutrition, immunization, and safe parenting and this shall be documented in the medical record of the patient.

## 7.0 PROCEDURE:

- 7.1 Clinical Staff at paediatrics department shall ensure that they maintain paediatric assessment, diagnosis and treatment skills (as appropriate) in accordance with their training.
- 7.2 Staff shall manage paediatric pain appropriate to their skills, training and scope of practice. If the management of pain for a particular paediatric patient is beyond them, they should promptly consider seeking advice or the attendance of a clinician with more advanced skills.
- 7.3 General Instructions: Recognition of the seriously ill or injured child involves the identification of a number of key signs affecting the child's airway, breathing, circulatory or



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neurological systems. If these signs are present, the child must be regarded as critical. Then the staff will follow the assessment, diagnosis and treatment regimes as per procedures:

- 1) Medical Emergencies in Children
- 2) High Risk New born babies
- 3) Trauma Emergencies in Children
- 4) Anaphylaxis and Allergic reactions in Children
- 5) Asthma in Children
- 6) Convulsions in Children
- 7) Hyperbilirubinemia & Glycaemia Emergencies in Children
- 8) Overdose and Poisoning in Children
- 9) Child Basic/advanced Life Support
- 10) Newborn Life Support
- 11) Foreign Body Airway Obstruction
- 12) Dealing with the Death of Children including sudden infant death syndrome

#### 7.4 Management of Pain in Children:

- 1) Analgesia shall be normally introduced in an incremental way, considering timeliness, effectiveness and potential adverse events.
- 2) Pain management should always include the non-pharmacological methods of treatment as a starting point and may be administered by all attending staff.
- 3) However it may be apparent from the assessment that a stronger analgesia is necessary from the outset and, therefore the appropriately trained staff would need to administer it.
- 4) Non pharmacological methods include psychological, dressings and splintage. (Necessary restraints without any harm).
- 5) Pharmacological methods include topical analgesia, oral analgesia, and inhalational analgesia, parenteral and enteral analgesia. These methods are administered by appropriately trained staff.





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	<b>KIMS</b> <b>CHINNAKOLAMBAKKAM</b> <b>COP-7: POLICIES &amp; PROCEDURES</b> <b>ON ADMINISTRATION OF</b> <b>ANESTHESIA</b>	Doc. No.	ENABH/HCO/KIMS/COP/7
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## 1.0 PURPOSE:

To provide guidelines on administration of anesthesia.

## 2.0 SCOPE:

All patients undergoing administration of anaesthesia at this hospital.

## 3.0 RESPONSIBILITY:

Anesthesiologist,  
Medical Staff  
Nursing staff and  
Para medical staff

## 4.0 ABBREVIATION:

NABH : National Accreditation Board For Hospitals and Healthcare providers  
COP : Care Of Patients

## 5.0 REFERENCE:

- 5.1 NABH: Pre Accreditation Entry Level Standards for Hospitals, First Edition, April 2014.
- 5.2 COP 7: Documented policies and procedures guide the administration of anaesthesia.

## 6.0 POLICY:

- 6.1 **Administration of Anesthesia:** In order to achieve patient safety, the Anesthesia Care Team is responsible for the following:

**6.1.1 Pre-anesthetic evaluation of the patient:** A pre-anesthesia evaluation allows for the development of an anesthesia plan that considers all conditions and diseases of the patient that may influence the safe outcome of the anesthesia. Although non-physicians may contribute to the preoperative collection and documentation of patient data, the



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	<b>KIMS</b> <b>CHINNAKOLAMBAKKAM</b> <b>COP-7: POLICIES &amp; PROCEDURES</b> <b>ON ADMINISTRATION OF</b> <b>ANESTHESIA</b>	Doc. No.	ENABH/HCO/KIMS/COP/7
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anesthesiologist is responsible for the overall evaluation of each patient, and needs to documentation if in written.

**6.1.2 Prescribing of anesthesia plan:** The anesthesiologist is responsible for prescribing an anesthesia plan aimed at safety of each patient. The anesthesiologist discusses with the patient (when appropriate), the anesthesia risks, benefits and alternatives, and obtains **informed consent**.

**6.1.3 Management of the anesthesia:** The management of an anesthesia is dependent on many factors including the unique medical conditions of individual patients and the procedures being performed. Head of the Department should determine which peri-operative tasks, if any, may be delegated. The anesthesiologist will delegate specific tasks to qualified anesthesiologist to provide quality of care and patient safety. In critical parts of the anesthesia the Head of the Department anesthesia immediately informed for management of emergencies regardless of the type of anesthesia.

**6.1.4 Post-anesthesia care:** Routine post-anesthesia care is delegated to nurses. The evaluation and treatment of post-anesthesia complications are the responsibility of the anesthesiologist. Whether the need is preoperative medical clearance or intra-operative resuscitation from an unexpected complication, the surgeon, both ethically and according to training and ability, should be expected to provide medical oversight or supervision of all peri-operative health care provided.

**6.2 Check list for Administration of Anesthesia:** All patients for anesthesia have a pre-anesthesia assessment by a qualified anesthesiologist. There is a pre anesthesia assessment which results in formulation of an anesthesia plan which is documented. There is an immediate pre-operative reevaluation and it is documented. Informed consent for administration of anesthesia is obtained by the Anesthetist. During anesthesia there is regular and periodic monitoring and recording (documentation) of heart rate, cardiac rhythm, respiratory rate, blood pressure, oxygen saturation, airway security and patency and level of anesthesia. Each patient's post anesthesia status is monitored and documented. The anesthesiologist applies defined criteria to transfer the patient from the recovery area. All adverse anesthesia events are recorded and monitored.



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- 6.3 Pre Anesthesia evaluation:** An Anesthesiologist shall be responsible for determining the medical status of the patient and developing a plan of anesthesia care. The Anesthesiologist is responsible for: Reviewing the available medical record; Interviewing and performing a focused examination of the patient to: Discuss the medical history, including previous anesthetic experiences and medical therapy; Assess those aspects of the patient's physical condition that might affect decisions regarding peri-operative risk and management; Prescribing and reviewing of available tests and consultations as necessary for administration of anesthesia care; Prescribing appropriate preoperative medications; Ensuring that consent has been obtained for the anesthesia care; Documenting in the patient case sheet that the above has been performed.
- 6.4 Routine Pre-operative Laboratory and Diagnostic Screening:** Discovery or identification of a disease or disorder which may affect peri-operative anesthetic care; Verification or assessment of an already known disease, disorder, medical or alternative therapy which may affect peri-operative anesthetic care, and; Formulation of specific plans and alternatives for peri-operative anesthetic care; Routinely Hb%, TLC, DLC, ESR, Blood Sugar, Blood Urea, Urine analysis, CXR, ECG before any anesthesia exposure. Appropriate indications for ordering tests include the identification of specific clinical indicators or risk factors (e.g., age, pre-existing disease, magnitude of the surgical procedure).
- 6.5 Intra Procedural Monitoring:** Immediate review prior to initiation of anesthetic procedures: Patient re-evaluation; Check of equipment, drugs and gas supply; Monitoring of the patient (e.g., recording of vital signs); Amounts of drugs and agents used, and times of administration; The type and amounts of intravenous fluids used, including blood and blood products, and times of administration; The technique(s) used; Unusual events during the administration of anesthesia; The status of the patient at the conclusion of anesthesia.
- 6.6 Post Anesthesia Care:** Patient evaluation on admission and discharge from the recovery area. A time-based record of vital signs and level of consciousness. A time-based record of drugs administered their dosage and route of administration. Type and amounts of intravenous fluids administered, including blood and blood products. Any unusual events including post-anesthesia or post-procedural complications. Post-anesthesia visits.





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## 6.7 Criteria for transfer of patient from recovery area:

**6.7.1 Post Anesthesia Discharge Scoring (PADS): Moderate Sedation:** Get for discharge score  $\geq 9$ .

Parameters	Scoring	Description Status
Vital signs	2	20% of pre operative value
	1	20-40% of pre operative value
	0	40% of pre operative value
Ambulation	2	Steady gait /no dizziness
	1	With assistance
	0	No ambulation / dizziness
Nausea + vomiting	2	Minimal
	1	Moderate
	0	Severe
Pain	2	Minimal
	1	Moderate
	0	Severe
Surgical bleeding	2	Minimal
	1	Moderate
	0	Severe

## 6.8 Regional Anesthesia:

**6.8.1 Phase I Recovery to Phase II Recovery Discharge Criteria following Regional/Neuraxial Anesthesia:** The patient is suitable for transfer from Phase I Recovery when your institution's discharge criteria following General Anesthesia are met (see Tables one and two below) and the Motor and Sensory Assessments as outlined below in Table Three have been met:

### 6.8.2 Modified Aldrete Scoring System:

Category	Description of Status	Aldrete Score
Respirations	Breathes, coughs freely	2
	Dyspnea	1
	Apnea	0
O2 Saturation	O2 Saturation > 92% on Room Air	2



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	Supplemental oxygen	1
	O <sub>2</sub> Saturation < 92% on O <sub>2</sub>	0
<b>Circulation</b>	BP +/- 20 mmHg pre-op value	2
	BP +/- 20 - 50 mmHg pre-op value	1
	BP +/- 50 mmHg pre-op value	0
<b>LOC</b>	Awake & oriented	2
	Wakens with stimulation	1
	Not responding	0
<b>Movement</b>	Moves 4 limbs on own	2
	Moves 2 limbs on own	1
	Moves 0 limbs on own	0

**6.9 General Anesthesia: Modified Aldrete Scoring System:** A minimum score of 9/10 (and/or return to similar pre-op status) is achieved prior to transferring the patient to a Phase II recovery area.

Category	Score = 2	Score = 1	Score = 0
<b>Respirations</b>	Breathes, coughs freely	Dyspnea	Apnea
<b>O<sub>2</sub> Saturation</b>	SpO <sub>2</sub> > 92% on R/A	Supplemental O <sub>2</sub>	SpO <sub>2</sub> < 92% on O <sub>2</sub>
<b>Circulation</b>	BP +/- 20 mmHg pre-op value	BP +/- 20-50 mmHg pre-op value	BP +/- 50 mmHg pre-op value
<b>LOC</b>	Awake and oriented	Wakens with stimulation	Non-responsive
<b>Movement</b>	Moves 4 limbs spontaneously	Moves 2 limbs spontaneously	Moves 0 limbs spontaneously

## 6.10 Infection Control Protocols:

**6.10.1** A specified consultant in each department of anaesthesia should liaise with the Hospital Infection Control Teams and Occupational Health Departments to ensure that relevant specialist standards are established and monitored in all areas of anaesthetic practice.

**6.10.2** Precautions against the transmission of infection between patient and anaesthetist or between patients should be a routine part of anaesthetic practice.

**6.10.3** In particular, anaesthetists must ensure that hand hygiene becomes an indispensable part of their clinical culture.



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6.10.4 Anaesthetists must comply with local theatre infection control policies including the safe use and disposal of sharps.

6.10.5 Anaesthetic equipment is a potential vector for transmission of disease.

6.10.6 Policies should be documented to ensure that nationally recommended decontamination practices are followed and audited for all reusable anaesthetic equipment.

6.10.7 Single use equipment should be utilised where appropriate but a central sterile supplies department (CSSD) should process reusable items.

6.10.8 An effective, new bacterial/viral breathing circuit filter should be used for every patient and a local policy developed for the re-use of breathing circuits in line with manufacturer's instructions.

6.10.9 It is recommended that anaesthetic departments should consider changing anaesthetic circuits on a daily basis in line with daily cleaning protocols.

6.10.10 Appropriate infection control precautions should be established for each anaesthetic procedure, to include maximal barrier precautions for the insertion of central venous catheters, spinal and epidural procedures and any invasive procedures in high risk patients.

#### 6.11 Adverse Anaesthesia Events:

6.11.1 All post-operative patients shall be monitored for any adverse anaesthesia event.

6.11.2 The patients shall be shifted from the recovery area as per the Scoring by the Anaesthesiologist.

## 7 PROCEDURE:

7.1 Preliminary preparation should be made before conscious sedation. Services are provided in a particular clinic :

7.1.1 **Administrative:** If the provision of conscious sedation services is being considered in a clinic, the department Chair should review the policy for Conscious Sedation and make a decision regarding the clinic's ability to meet staffing, educational and equipment requirements.






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**7.1.2 Medical Staff:** The physician supervising the administration of conscious sedation should be qualified to rescue patients from deep sedation and must obtain specific privileges from the Core Committee through the Medical Staff Office credentialing procedure. As per Department of Anesthesia recommendations, the following general anesthetic agents are not considered appropriate for IV conscious sedation. These agents include, but are not limited to: Etomidate (Amidate); Thiopental (Pentothal); Methohexital (Brevital); Ketamine; Propofol (Diprivan); and anesthetic gases (Isoflurane, Halothane, Nitrous Oxide, Desflurane, Sevoflurane). The physician will direct the administration of conscious sedation to achieve the desired level of sedation and have available the necessary equipment and trained staff required in the event of an adverse reaction to the medication or procedure.

**7.1.3 Assisting Staff:** Health care providers assisting and monitoring the patient before, during, and after a procedure should have specific training in conscious sedation and have no other duties assigned until the patient is ready for discharge (usually a minimum of one hour post-procedure monitoring).

## **7.2 Planning for Care:**

**7.2.1 Pre-anaesthesia assessment:** All the anaesthesia has a pre-anaesthesia assessment by the qualified individual. The pre anaesthesia assessment results in formulation of an anaesthesia plan which is documented.

**7.2.2 Pre-operative re evaluation:** An immediate pre-operative re evaluation is documented. The physician will determine the appropriateness of performing the procedure(s) requiring conscious sedation based upon:

**7.2.2.1** The patient's medical, anaesthetic, and medication history.

**7.2.2.2** The patient's current medical condition.

**7.2.2.3** Available diagnostic data.

**7.2.2.4** Risks, benefits and alternatives of the procedure


**7.3 Consent:** The physician will discuss the purpose, options, and risks for conscious sedation with the patient and family prior to the procedure; and will obtain and document informed



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consent. The informed consent for the administration of anaesthesia is obtained by the anaesthetist.

- 7.4 Pre-anesthesia assessment: All patients posted for elective surgery should be admitted one day prior to surgery so that the anesthesiologist can do pre-anesthesia assessment and plan anesthesia procedures accordingly. During the anesthesia monitoring includes regular and periodic recording of the heart rate, cardiac rhythm, respiratory rate, blood pressure, oxygen saturation, airway security and the patency and the level of anesthesia.

#### 7.4.1 History:

7.4.1.1 History of previous illness (Diabetes, HT, renal or liver disease, bronchial asthma, epilepsy etc) and history of drug intake for the same should be taken. History of allergy to any drug should be elicited. History must be taken of any previous surgery and any adverse effect after anesthesia such as delayed recovery from anesthesia or severe bronchospasm after anaesthesia. A family history of somebody having problems with anaesthesia should be taken. History of blood disorders, prolonged bleeding and clotting time should be taken. History should be taken of cardiac disease, chest infection, jaundice, alcoholism, smoking and urinary problem. History of having any pacemakers implanted inside the body should be elicited. History should be taken on the hours of starvation

#### 7.4.2 Examinations:

7.4.2.1 Detailed examinations of all systems are necessary to assess the pre-operative physical status of the patient. Pulse, BP, RR and temperature must be taken. Cardiovascular and respiratory system must be extensively examined. Airway examination includes mouth, protruding tooth, and shaky tooth, visibility of fauces, uvula and opening of mouth. History of the use of artificial dentures should be elicited and it has to be removed before the anaesthesia procedure. Along with the assessment of the physical status of the patient, the anesthesiologist has to assess the mental status of the patient. The anesthesiologist has to explain in a reassuring manner how the anaesthesia procedure is planned,



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the approximate duration of surgery, how long the patient will be inside the post op ICU, when he can take food or water. When a patient is thus educated he can be mentally and psychologically prepared to tolerate better the stress and strain of an anesthesia and surgery.

**7.4.3 Investigations:** Routine blood investigations such as Hb, TC, DC, ESR, Blood sugar, blood urea, S. Creatinine, CT, BT, PCV, HIV, HBS Ag, Urine routine are done. In indicated patients, LFT, PT, PTT, and S. electrolytes are also done. Pulmonary function tests are done preoperatively in COPD patients to assess respiratory status and improve functional vital capacity before being taken up for surgery. ABG analysis in indicated patients, chest X-ray and ECG are also done. If ECG changes are seen, detailed cardiac evaluation by a cardiologist including echocardiography, TMT etc. Patients are routinely examined by physicians / paediatricians to assess all systems. The concerned super-specialists such neurologists, nephrologists, cardiologists etc. are consulted as the case may arise. All the relevant details of the patient are documented in the case sheet during this pre anesthesia visit.

**7.5 Premedication:** Reasons for premedication: Patient's comfort for anxiolysis sedation, amnesia, and analgesia. Drugs used are Diazepam, Alprazolam, Midazolam, Opioids etc. Decrease in gastric volume and increase in PH. Drugs used are antacids, Ranitidine, Omeprazole, Pantoprazole, Rabeprazole etc. Decrease in airway secretion, e.g. Glycopyrrolate, Atropine. Decrease in autonomic response e.g. Atropine. Prophylaxis against allergic reactions e.g. Dexona, Betnesol etc. Continue therapy for concurrent disease. Decrease in incidence of nausea and vomiting e.g. Ondansetron, metocloperamide, Phenergan etc.

**7.6 Restriction of Oral Intake before Surgery:** Vomiting and aspiration of gastric contents during induction of anaesthesia can cause pulmonary damage, if volume of aspirate reaches 25ml/Kg and smaller volume can also produce damage. Patients who are pregnant, obese, smokers and Patients who have hiatus hernia are at a greater risk of






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aspiration. Usually the patients are instructed to take nothing orally for 6 to 8 hours before surgery to reduce the risk of aspiration of gastric contents. Children and new born are advised only 4 hours of starvation.

**7.7 Documentation:** All the relevant history, investigation reports and examination findings are documented by the anesthesiologist which including an immediate pre operative re-evaluation, In addition to this, the pre anesthesia assessment results in formulation of an anesthesia plan , Pre-medication and pre-op. orders should also be documented.

**7.8 Informed Consent:** Written informed consent should be obtained from the patient before any surgery and anaesthesia. In the case of a child aged less than 16 years or unconscious/ mentally retarded patient, the parent's guardian signs the form. Explanation of the hazards of surgery and anaesthesia should be given to the patients and bystanders.

**7.9 Anaesthesia Procedure:** During anaesthesia induction and maintenance, regular and periodic recordings of heart rate, temperature, Respiratory rate, and Oxygen saturation should be done. In laparoscopic surgeries, end tidal capnography to detect CO<sub>2</sub> levels is used. Urine output and CVP should be recorded for prolonged cases.

**7.10 Post Anaesthesia Care:** Patient is shifted to the recovery room and the patient's vitals should be monitored. ECG monitor, Pulse oxymeter, central oxygen supply, intubation equipment, airway maintenance equipments, and emergency drugs should be always kept ready in the recovery room. After the patient has sufficiently recovered from anaesthesia, the patient is shown to the bystanders and shifted to the post OP / ICU, where the patient is usually kept for 24 hours. In the post OP/ICU the patient's vitals are regularly monitored and recorded. The patient is shifted to the ward according to the surgeon's discretion. All the drug anesthesia events are recorded and monitored.


**7.11 Adverse anaesthesia events CA / PA:** Adverse anaesthesia events are recorded and monitored as below: (Give below the Hospital's practices.....)



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**7.12 Post Operative Pain Management:** Post operative pain is mainly managed by Opioids, epidural analgesia, NSAIDS. Epidural analgesia for labour pain is also done. Opioids commonly used are Fortwin, Pethidine, Morphine. and fentanyl. For epidural analgesia drugs used are Sensorcaine (0.25%), Fentanyl, and Tramadol. All adverse anaesthesia events are recorded and analysed by the Pharmacy and therapeutic committee for taking preventive actions in the future.



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**COP-POLICY ON SURGICAL CARE OF PATIENTS**

**1.0 Purpose**

To guide the uniformity of care for patients undergoing surgical procedures.

**2.0 Scope**

The operative procedure is only one part of the total surgical care of the patient. Total surgical care includes establishing or confirming the diagnosis, preoperative preparation, the operative procedure, and postoperative care.

**3.0 RESPONSIBILITY:**

3.1 Surgeons

3.2 Anaesthesiologist

3.3 Nursing Staff

3.4 Paramedical staffs

**4.0 ABBREVIATION:**

4.1 NABH : National Accreditation Board For Hospitals and Healthcare providers

4.2 COP : Care Of Patients

4.3 OT : Operation Theatre

**5.0 REFERENCE:**

5.1 NABH: Pre Accreditation Entry Level Standards for Hospitals, First Edition, April 2014.

5.2 COP-8: Documented policies and procedures guide the care of patients undergoing surgical procedures.

**6.0 POLICY:**

**6.1 Surgical procedures and competency levels:**

6.1.1 All surgical procedures shall be undertaken by the surgeons as per the list of surgical procedures prepared by the OT in-charge in consultation with the surgeons and based on the list received from the concerned wards.

**6.2 Pre-operative assessment and provisional diagnosis:**

6.2.1 All patients undergoing surgical procedure (either routine or emergency) shall have an assessment done preoperatively and a provisional diagnosis and that should be documented.





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6.2.2 The pre-operative assessment shall be done by the surgeon performing the surgery or a credentialed doctor from the team.

6.2.3 All patients planned for routine surgical procedure are to get admitted at least 24 hours in advance to monitor their vitals, medical fitness or Anaesthetic assessment and preparation for procedure by the ward staff. This period is considered as necessary to make available the OT and required staff assisting the surgery.

**6.3 Informed consent:**

6.3.1 The concerned surgeon or a doctor member of his team shall obtain an informed consent for surgery from the patient/relative prior to the procedure.

6.3.2 The consent shall be sought after proper explanation of the benefits, risks and complications involved performing the said procedure.

6.3.3 In case, the operative plan is changed intra-operatively, a fresh consent shall be sought from the patient/relative.

**6.4 Prevention of adverse events:**

6.3.4 All patients undergoing surgical procedure shall be properly identified through MRD number and name and preoperative checklist should be verified by the Pre-OP in charge / OT in-charge.

6.3.5 Site of surgery on patient shall be marked by surgeon prior to surgery.

6.3.6 Preoperative note shall explain the procedure to be performed and should be documented prior to surgery.

**6.5 Qualification of performing surgeons:**

6.3.7 Doctors qualified by law shall be permitted to perform the procedures.

6.3.8 Such doctors shall be credentialed and given privileges to conduct the said procedures in this hospital.

6.3.9 The HR, Credentialing and Privileging Committee shall do the needful.


**6.6 Documentation of procedure – operative note and post-operative plan of care:**



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	<b>KIMS</b> <b>CHINNAKOLAMBAKKAM</b> <b>COP-8:POLICIES &amp; PROCEDURES</b> <b>ON CARE OF PATIENTS</b> <b>UNDERGOING SURGICAL</b> <b>PROCEDURES</b>	Doc. No.	ENABH/HCO/KIMS/COP/8
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6.3.10 Post-operative notes shall be prepared by the surgeon which includes procedure performed, post-operative diagnosis, plan of care and status of the patients and documented prior to transfer out of patient from recovery area.

6.3.11 The post-operative care plan shall be prepared by the operating surgeon in collaboration with the anaesthesiologist and shall include advice on:

6.3.11.1 I.V. Fluids

6.3.11.2 Medications

6.3.11.3 Care of wound

6.3.11.4 Nursing care

6.3.11.5 Monitoring of patient vitals

6.3.11.6 Observation for any complications

**6.7 Infection control protocols:**

- The theatre layout shall minimize the mix of sterile and unsterile patients.
- The OTs shall be cleaned and carbolised after every case.
- All OT staff shall adhere to standard precautions, handwashing, donning the PPEs and safe handling of the patients.

**6.8 Equipped Operation Theatre:**

- The Operation Theatre complex shall have the necessary facilities for conducting the said procedures, changing rooms, equipments, appliances and instrumentation

**7.0 PROCEDURE**

7.1. All the patients who are to undergo surgery have full details of their medical condition in their case records.


7.2. Depending on his medical condition the patient may need either elective or emergency surgical procedures.



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7.3. The elective procedure could either be minor in nature or major. Emergency surgical procedures though usually major, could also be minor in nature.

7.4. Surgical patients have the preoperative assessment and the provisional diagnosis documented prior to the surgery.

7.5. Before either elective or emergency procedures, the surgeon examines the patients and makes an assessment of his/her condition based on the clinical presentation of the case, signs and symptoms, and results of the investigations.

7.6. A provisional diagnosis is made and this is documented in the patient's case notes before he is taken up for surgery. This is done mainly to avoid adverse events like wrong site, wrong patient and wrong surgery etc.

7.7. All patients admitted for elective major surgery should undergo the following tests: Blood Hb., blood grouping & Rh typing, Random blood sugar estimation, blood urea, serum creatinine, HIV, HbsAg. They should also have ECG and chest X-ray taken.(Optional)

7.8. Elective minor cases need to have the following tests done: Hb, Random blood sugar, HIV and HbsAg. They should also have their ECG and chest X-ray taken.

7.9. Preoperative initial assessment has to be done for all patients undergoing elective major and emergency operations.

7.10. If the surgeon comes across any abnormal findings in the pre operative tests, it has to be documented in the patient's records and this has also to be informed to the patient's relatives.

7.11. Patients with obvious ECG changes or patients with history of cardiac problems should be seen by the cardiologist before being taken up for surgery. The patient should be informed by the cardiologist of the potential cardiac risks during or after surgery.

7.12. Patients with poor renal function or chronic renal disease should have consultation with the nephrologists. The bystanders or relatives must be informed by the nephrologists about the possible postoperative or intra operative complications.






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7.13. Apart from the general consent which is obtained routinely from all in-patients, patients undergoing surgery should be informed about the procedure, its probable outcome, and its possible outcome and its probable rare complications. Following this informed consent from the patient is taken. The name of the surgical procedure, site of surgery and complications of surgery should be written in capital letters.

7.14. Patients with cardiac or renal problems should be given their informed consent in his/her handwriting and signed with a witness other than a hospital staff. One of the witnesses should be the ward nurse in charge.

7.15. The patient is prepared for surgery as follows:


- The patient should not take anything orally at least 6 to 8 hours before the actual surgery.
- The patient's weight is recorded.
- The skin of the operation site is prepared by shaving the hair and cleaning with antiseptic.
- Bowel preparation is done by giving enema.
- Artificial dentures and jewellery are removed (and receipt given or handed over to authorized people), Nail polish is cleaned.
- The patients dress is changed to a clean one.
- Patients ID tag is kept in place.
- The patients depending on their physical condition are shifted to the OT by wheel chair or trolleys.
- A Staff nurse from the ward accompanies the patient with the case sheet to the OT. The OT nurse takes over the patient after checking the case sheet and making identification and documents.
- Here after the OT staff is responsible to take care of the patient till he/she leaves the recovery room.
- Once the patient has been received at the OT, his/her dress is changed to OT gown/dress supplied by the CSSD.



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7.16. All type of surgeries performed in this hospital are by well qualified, experienced surgeons who have had extensive training and expertise in their particular fields. Complex surgeries are sometimes performed by a team of doctors, each dealing with his /her specialty.

7.17. Prior to surgery the case file shall be reviewed, the condition of the patient shall be checked and surgical safety checklist before induction of anaesthesia, before skin Incision and before the patient leaves the operating room shall be completed by the surgeon and anesthesiologist.(Refer: **Annexure A: SURGICAL SAFETY CHECKLIST**)

7.18. After the surgery is completed, before the patient is transferred back to the ward, the surgeon writes down and documents a brief operative note and post operative plan of care. The anesthesiologist on his/her part also notes down the details of the anaesthesia procedure starting with the pre-medication, induction till the end of anaesthesia, extubation etc.

7.19. All the events during the stages of anaesthesia are recorded and documented. The anesthesiologist will follow the patient in the recovery room and the surgical ICU/ward till the patient fully recovers from anaesthesia.

7.20. As a quality assurance programme, the OT and its surrounding areas like the recovery room, CSSD etc are under the strict supervision by the infection control nurse and OT manger and the hospital infection surveillance team who ensures absolute sterility of the operation areas so as to avoid the risk of transmission of infection.

7.21. The plan also includes monitoring of surgical site infection rates. All the post operative patients shall be screened for the same.

7.22. The hospital infection control team conducts regular documented surveillance which includes monitoring of surgical site infection sites. Culture swabs are taken from infected or suspected wound sites to analyze them with the aim to prevent or reduce the risk of hospital associated infections.


7.23. **Surveillance Of Operation Theatres:**



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- Each health care establishment undertaking surgery must have a specific protocol for operating room procedures, including specific requirements for surgical hand washing routines and handling of sharps.
- When individuals are being admitted to hospital or presenting at an emergency unit, a detailed medical and surgical history should be collected from them or their careers to identify conditions that may require additional precautions.
- All articles used in an operation must be sterile. The principles of sterile aseptic technique must be applied to all operating room procedures. The principle of ‘confine and contain’ must be applied at all times for all patients.
- Sterile drapes must be used for the patient; staff must wear full sterile operating room personal protective clothing.
- Patients should inform their doctor of their infectious status. Preoperative testing of patients should be on clinical indication.
- All staff in the surgical team should be vaccinated against hepatitis B. Surgical staff should not perform exposure-prone procedures if they are considered actively infectious with human immunodeficiency virus, hepatitis B virus or hepatitis C virus .
- Staff with dermatitis or skin wounds should be excluded from the operating team
- Operating lists should allow sufficient time for adequate infection control activities, including routine cleaning and the appropriate disposal of clinical waste.
- The operating room should be cleaned as soon as practicable after surgery, including the correct disposal of sharps and clinical waste and cleaning of all surfaces.
- Reusable instruments should be immersed in warm water and detergent as soon as possible after use and must then be thoroughly cleaned in a designated clean-up area before sterilization.





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## ANNEXURE A: SURGICAL SAFETY CHECKLIST

BEFORE INDUCTION OF ANAESTHESIA → BEFORE SKIN INCISION → BEFORE PATIENT LEAVES THEATRE → OPERATION

SIGN IN	TIME OUT	SIGN OUT
Patients has confirmed <ul style="list-style-type: none"> <li>Identity</li> <li>Site</li> <li>Procedure</li> <li>Consent</li> </ul>	Confirm all team members have introduced themselves by name and role	Nurse verbally confirms with the team:
Site marked / not applicable	Surgeon, anaesthesia professional and nurse verbally confirm	The name of the procedure recorded
Anaesthesia safety check completed	<ul style="list-style-type: none"> <li>Patient</li> <li>Site</li> <li>Procedure</li> </ul>	That instrument, sponge and needle counts are correct (or not applicable)
Pulse oximeter on patient and functioning	Anticipated critical events	How the specimen is labeled (including patient name)
Does patient have a: Known allergy?	<ul style="list-style-type: none"> <li>Surgeon reviews: what are the critical or unexpected steps, operative duration, anticipated blood loss?</li> <li>Anaesthesia team reviews: are there any patient-specific concerns?</li> <li>Nursing team reviews: has sterility (including indicator results) been confirmed? are there equipment issues or any concerns?</li> </ul>	Whether there are any equipment problems to be addressed
Difficult airway/aspiration risk	Has antibiotic prophylaxis been given within the last 60 minutes	Surgeon, anaesthesia professional and nurse review the key concerns for recovery and management of this patient.
<ul style="list-style-type: none"> <li>No</li> <li>Yes</li> <li>Yes, and equipment/assistance available risk of &gt; 500ml blood loss (7ml/kg in children)</li> <li>No</li> <li>Yes. And adequate intravenous access and fluids planned.</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Not applicable</li> </ul>	
	Is essential imaging displayed?	
	<ul style="list-style-type: none"> <li>Yes</li> <li>Not applicable</li> </ul>	

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